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A Review Study: Knowledge, Attitude and Practice of oral contraceptive pills among women respondents

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A B S T R A C T

Objectives: Objective of this study was to assess the knowledge, attitude and practice of oral contraceptive pills among women of all ages and to understand their beliefs and knowledge about side effects of contraception from the available literature.

Method: A systematic search of Pub. Med, EMBASE, Cochrane CENTRAL, Med Scape and Google Scholar were done. We performed a systematic review of primary research from Aug 2003 to February 2022. Studies were audited for study characteristics, knowledge, attitude, practice about OCP in India and other countries (Brazil, Thailand, Saudi Arabia, Germany, and Pakistan). Auditing of the women's belief, experience of post partum women, behaviour about the oral contraceptives, and emergency contraceptive pills was also done.

Result: We reviewed 16 studies: 15 studies were observational cross-sectional studies while 1 is interventional cross-sectional study, by the counselling. For assessment of OCP knowledge out of 16 studies, 13 studies were based on self administrated, semi structured, questionnaire which was validated by the ethics committee and experts. Other 3 studies were based on interview of the participants.

Conclusion: If we look at the studies from 2003 to 2014, in females of village, college going students, and gynaecological patients had poor knowledge about OCP. Because of low level of literacy and awareness, also low socioeconomic status of their families. Education is positively associated with the positive attitude and behaviour of oral contraceptive. Studies done between 2015 and 2022 show moderate and good level of knowledge about OCP because of good education level, awareness and information source facility.

Keywords: Hormonal pill, Birth control pill.

1. Introduction

In today's time, the population growth has become one of the leading problems in the world. According to 2019 data, nearly 7.7 billion people are living in the world. India contributes to 1210 million populations every year; it is adding 17.5 million people newly. At present, over population is the major problem in the country, which leads to problems like poverty, illiteracy, decrease in the economic growth, starvation, malnutrition, depletion of natural resources and unemployment. Practicing family planning and to choose the correct contraceptives is very much essential. Literacy is positively associated with family planning related knowledge and practice. Even though the knowledge about contraception improved after first childbirth, many women were still not practicing it. Other than social factors, illiteracy and lack of sex education may be the reason for poor knowledge about contraception. It is well known now that family planning is important not only for achieving population stabilization but is also central to improve the maternal and new born health and survival. Even though India has made considerable progress in reducing maternal mortality ratio, it still contributes to 20% of maternal deaths worldwide, according to the 2012 report of World bank, UNFPA, WHO. Family planning can avert more than 30% of maternal deaths and 10% child mortality if couples spaced their pregnancies more than 2 years apart. In India, a large number of pregnancies are unplanned resulting in unsafe and illegal abortion. For every legal abortion, 10 to 11 illegal abortions are occurring which endangers the health and survival of the women.[1]

Oral contraceptives Pills

Couples can use the option of an oral contraceptive method, both hormonal and non-hormonal ones, for delaying, spacing and limiting births. Oral contraceptives are safe, effective, reversible methods to prevent pregnancy and need to be taken regularly. It is consider as an important part of the National Family Planning Program. It will not disrupt an existing pregnancy and does not interfere in sexual intercourse.[1]

Types of contraceptive Pills:

Two types of contraceptive pills A. Hormonal B. Non-hormonal

Hormonal: Two main types of hormonal contraceptives are available in market. COC contain both an estrogens (usually ethinylestradiol) and progestin. Progestin-only contraceptives contain only progesterone a synthetic analogue (progestin).[1]

Combined Oral Contraceptive (COC): Taken daily, irrespective of intercourse. It releases low dose of both oestrogen and progestin into the bloodstream. Effectiveness depends on regular intake at the same time on every day basis. **Progestin-Only Pill (POP):** Taken daily, irrespective of intercourse. It releases low dose progestin into the bloodstream. Effectiveness depends on regular intake at the same time every day basis (within a window of 3 hours). It is safe for breastfeeding women. The available product is **Levonorgestrel** (LNG) and **Desogestrel** POPs are also known as "**Minipills**". Levonorgestrel Emergency Contraceptive Pill (ECP) prevents pregnancy in emergency situation (unprotected /accidental intercourse) to be taken within 72 hours as a single dose (1.5 mg). Emergency contraceptive pills do not provide ongoing protection against pregnancy. If 2 pills of Levonorgestrol or COCs are used as an emergency contraceptive, second dose to be taken after 12 hours of first dose. **Centchroman (Ormeloxifene):** A non-steroidal, non-hormonal contraceptive, Centchroman (Ormeloxifene), the first pill of it should be taken on the first day of period. Second pill is to be taken after 3 days. This pattern of Centchroman is repeated through the first three months. Starting from fourth month, the pill is to be taken once a week **which gives** action as **selective oestrogen receptor modulator.** In some tissues/organs of the body, it has weak estrogenic action (e.g, bones) while in others it has strong anti-estrogenic action (e.g, uterus, breasts). Following condition in which contraceptives use are safe for females, in menstrual cycle, after pregnancy**,** during breast feeding**,** without breast feeding**,** after miscarriage or abortion and menopause.[1]

Problem reported as side effects

COC: Following are the reported side effects of different oral contraceptive pills. Irregular and unexpected bleeding, no monthly bleeding, ordinary headaches (non-migraines), nausea or dizziness, breast tenderness, weight change, mood changes or changes in sex drive, acne in the type of **POP** same side effect like COC's, heavy or prolonged bleeding (twice as much as usual or longer than 8 days) , severe pain in lower abdomen (suspected ectopic pregnancy or enlarged ovarian follicles or cysts) **Centchroman** (Ormeloxifene) causes delayed periods in few women. Periods can get scanty over time in some women. Some women using Centchroman (Ormeloxifene) have such problem. This is not harmful and will subside on its own. **Emergency pills:** Nausea, vomiting, slight bleeding.[1]

2. Method

We have searched the following computerized databases: Medline, Pub Med, Cumulative and Psychosocial Instruments and Google Scholar®. We have used the search terms "contraception, "contraceptives" and "knowledge" with various combinations along with the synonymous terms: "birth control pills," "oral contraceptive pills," "hormonal contraception" and "combined contraceptive pills." We combined these search terms with the following key mention words: measurement, survey, questionnaire, instrument awareness, we also examined retrieved articles' references for relevant citations. We excluded editorials, articles in which knowledge of oral contraceptive was missing.

We extracted information with different aspects like population characteristics, sample size, study design, level of evidence, intervention strategies and other relevant variables. All studies were categorized by their primary purpose for measuring OC knowledge, attitude and practice to describe the factors associated with knowledge; to asses association between knowledge and behaviour; to test an intervention to update knowledge; and to test a knowledge-based intervention to change behaviour. We assessed related key findings within these categories.

Using a structured data abstraction form, we have analyzed eligible articles for any information on the following specific measurement characteristics: the extent to which each of the OC knowledge domains (risks, benefits, side effects, use, efficacy).

3. Result and Discussion

3.1 Assessment of Knowledge among women:

Assessment of knowledge among women was based on the questionnaire and interviews. Most frequently used question format was on multiple stem with answer list. Most studies demonstrated that oral contraceptive knowledge is low to moderate in level.

Some of the studies are completed within the student population. Thomas Hansen et.al conducted a study among Norwegian students in 2003. Result reveal that female students had good level of knowledge about contraception.Among them 83% female students had good knowledge while 54% male students had good knowledge about contraception.[2] Another study conducted at Tanzania 2019 suggested 96% undergraduate students had high level of knowledge.[3] Two studies performed in Tamil Nadu andThailand regading use of on emergency contraceptive pill conclude similar results about knowledge of oral contraceptive as moderate level. [3][4]

Other studies were conducted among women in Pakistan and Brazil in 2005 and 2010 respectively. These two studies were conducted based on the interview. It was found that 75% Pakistani women and 81% Brazilian women had good knowledge regarding oral contraceptives.[5][6] In , Hayat Humara

et.al conducted a study among rural women from during 2006-2008. This study observed that, 97% women had fairly good knowledge about contraception method as compared previously mentioned studies.[7] Reason of low level knowledge in 2010 study in Brazil was misunderstanding and lack of knowledge about contraceptives, which was affected due to socioeconomic variable and less use time.[6] Three more other studies were conducted in region of Saudi Arabia. One study was carried out at the hospital and other two studies were community based. These were completed during 2017 to 2022. Mahmmed I. Alameer conducted a study in Jazan region in 2022 where 98.4% women had good knowledge level compared to studies done during 2017- 2018 which were done in Riyadh**.** Women with high socioeconomic status and high literacy level showed more good knowledge. [8][9] In 2018-2019 Meenakshi Gothawal et.al conducted a study among nursing staff and reported that they had moderate level of knowledge about contraception. [10] Additional two studies were conducted in post partum women population which were done in 2014-2015 by Jyanti Nath et al and another one in 2020-2021 by Ajit Kumar et. al. Comparison between these two studies showed that the level of knowledge regarding contraception was higher in the study of Ajit Kumar etl al in 2020-21 i.e., 91% [16] than the earlier study done by Jayanti Nath et. al.[11, 12]

Source of information is positively associated to the knowledge, attitude and practice. Correct information is more important for the practicing of contraception. Some of the studies have reported that women were mainly using a mass media as a source of information.[3,4,5,] while in other studies family and husband were the common source of information.[13,8] Other common source of information were health professional , hospital, academic institution and pharmacies.[8]

It has been observed that over the years, the level of knowledge about contraception has continuously increased in women because of improved education, literacy level and socioeconomic status.

3.2 Attitude among women toward OC

Results of study done by Rozina Mustufa et.al. Among rural women in 2005 reported that women had favourable attitude regarding contraceptives where as another study done in Kashmir (2006-2008) reported that women had unfavourable attitude towards OC despite having good knowledge of contraceptive methods.[5,7]

Sanaa K. Bardaweel had reported a positive attitude among female respondents in a study done in 2013 and because these positive attitude women were using OCPs more confidently. 50% of these women were using an OCP pill for birth control [13].

We came across 3 studies done related to emergency contraception (EC). Results of all the three studies are variable in the sense that one study has reported positive attitude of female respondents towards EC, while the other two studies have reported unfavourable and negative attitude towards EC respectively .[8,14]

Two recent studies done in Saudi Arabia and Germany have reported more positive attitude among women related to contraceptives because of higher confidence in their knowledge and trust.[17][19]

The reason for not using and stopping the use of contraceptive by rural women as mentioned in a few studies was the need for having more children and a male child.[14,15]

3.3 Commonly used contraception method:

The education in general and female literacy level not only improves awareness but also help in acceptance of new OC techniques for spacing children. Practicing of contraceptives mainly depends on literacy, socio economic status, beliefs and the needs of the women. Rozina Mustafa et.al (2005) reported that only 11.3% women respondents were using oral contraceptives, while other studies have mentioned that a higher number of women were using contraceptive pills and with correct using method.[3,8,9,13,]

Similar results regarding use of contraception, studies have reported the use of barrier method by women for child spacing while another study done among rural women in Kashmir has reported tubule ligation, injection, intrauterine contraceptive device and contraceptive pills as per socioeconomic status and literacy level of kashmiri women. [5, 16, 7]

Other two studies were carried out in post partum population, which was performed in north India and south India. Women respondents in the South Indian study brief the history of prior use of contraception method mostly practicing withdrawal(31%), oral contraceptive pills (19%) and barrier method (9%). Ajit Kumar Nayak et.al conducted a study in north Indian past partum women and reported that they were using IUCD (37%), DMPA injection (27%) and barrier methods (17.4%) for contraception.[17, 12]

The reason for not using a contraception method and stopping the use of oral contraceptive pill among college students mentioned in one study was the fear of side effect and experience of side effect. In another study done among college students also stated similar reason for not using contraceptive as student were affair its side effects [3] while some students were unaware about side effects.[3] Tomas Hansen et al. reported that students believed cancer and thromboembolism was caused by contraceptive use.[2]

Various studies have reported side effects like changes in menstrual pattern, irregular bleeding, increased blood pressure, deep vein thrombosis, headache, mood swings, irritability and weight gain among women using contraceptive pills.[6, 13,18]

Dr Gayatri Aseri et.al had performed a study in Rajasthan, India in 2015 and pointed out that some who had taken MTP pill (Medical Termination of Pregnancy from pharmacies as over the counter drug came to the hospital with complications.[16]

4. Conclusion

This systematic review has included 16s articles covering from 2003 to 2022 for assessment of knowledge, attitude and practice of contraceptives among women. It is observed that during 2003 to 2014 the knowledge level of women were adequate or at moderate level. Comparably after 2014 till to 2022 the knowledge as well as attitude towards use of contraceptives is increasing among women. Because of good level of knowledge practicing of contraceptives is becoming more safe and effective. In India very few studies have been conducted in rural areas and among high school students.

Awareness programs for spreading the knowledge about contraception among girls and women are required. More studies need to be designed for the improvement of women health.

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