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Review Article

The use and impact of contraceptives in women: a critical review

Success C. David[1], Shadrach C. Eze[2]*, Catherine C. Eleje[1], Evaristus C. Odoh[3], Faith O. Omotayo[1,4], Onyinyechi L. Kalu[1], Cynthia C. Eze[1]

[1]Faculty of Pharmaceutical Sciences, University of Nigeria Nsukka, Enugu State, Nigeria
[2]Department of Pharmacy, Federal Medical Centre, Hospital Road, Makurdi Benue State, Nigeria
[3]Department of Pharmacy, Federal Medical Centre, Suleja-Lapai-Bida Road, Bida Niger State Nigeria
[4]Department of Public and Community Health Science, University of the People, California, USA

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***Correspondence:**
Shadrach C. Eze,
E-mail: shadrachchinecheremeze@gmail.com

ABSTRACT

Around 40% of the 210 million human conceptions occurring globally each year are unplanned. Contraception involving the use of devices, medications, and sexual techniques have been the bail out. This has empowered women to make positive decisions about their life and sexual health. Various methods of contraception in use today include the barrier method, the fertility awareness method, hormonal method and permanent contraception. In the United States and in most parts of the world, oral contraceptives (OC) have been the most used contraceptive method. Their use however comes with its pros and cons. OC failure is already an issue of concern in the reproductive health of women. More serious concerns are the impact of the use of these OC's on the woman's quality of life. Women all over the world are becoming increasingly conscious of the ability of OC to either aid or interfere with their health and overall well being. There is paucity of data in recent times looking critically at how OC has been a factor in altering the quality of life of women. Hence this review highlights contraceptive preferences of women, Success and failures of OC use, perception of women towards OC and how the use of OC has impacted their quality of life. Overall, contraceptives have a positive impact on the quality of life of women due to many other benefits it offers apart from contraception including relief of menstrual blood loss, dys-menorrhea, and premenstrual syndrome.

Keywords: Oral contraceptive, Quality of life, Contraception, Research, Review

INTRODUCTION

Around 40% of the 210 million human conceptions that occur each year are unplanned.[1,2] Contraception, commonly known as birth control, is the intentional prevention of pregnancy by the use of various devices, techniques, sexual practices, chemicals, and medications.[3] Contraceptive methods may be temporary (birth control pills or intrauterine device) or permanent (vasectomy or tubal ligation). These treatments work through a variety of processes, including blocking sperm from accessing the eggs, preventing the ovaries from releasing eggs, inactivating the sperm, and sterilization.[4]

Use of contraception gives women the privilege to make the decision of when to become pregnant. This reduces the need for unsafe abortions and helps to prevent pregnancy-related health concerns in women.[5] As inter-pregnancy intervals are increased, maternal outcomes are improved and infant mortality rates are greatly reduced. Children born within 18 months of an older sibling have more than 50% higher chance of dying in infancy than those born more than 18 months later. Contraception

allows young women to complete their education, pursue professional opportunities, and eventually, achieve their ambitions without unnecessary distractions by preventing unintended pregnancies. It also allows couples to choose the number of children that perfectly matches their average income and the favorable spacing, thus living happier lives. Certain contraceptive methods, like the male and female condoms, can go further to protect one from sexually transmitted infections like HIV.[6]

Despite the benefits of contraception outlined, users are still at risk for some health conditions. Women who use oral contraceptives have a twofold increased risk of heart attack. It's also linked to a three-fold rise in the chance of ischemic stroke, as well as a higher risk of blood clots and pulmonary embolism.[7] Oral contraceptive pills have been formally classified as a group 1 carcinogen for breast, cervical, and liver cancers by the WHO's International Agency for Research on Cancer.[8] Oral pills also put women at a 60% higher risk for having HIV and a double risk of contracting the human papilloma virus, which causes cervical cancer.[9] All types of contraceptive methods, with the exception of fertility awareness methods, are linked to a variety of moderate to severe side effects. In general, the form of contraception chosen is determined by personal preferences, the level of reliability required, and medical considerations.

Methods of contraception

Barrier methods

These methods prevent the sperm from entering the vagina and thus include male and female condoms, spermicides, sponge, cervical cap and diaphragm. Condoms are physical barriers that prevent sperm from contacting the egg.[10] Spermicides inactivate sperm. Spermicides come in various forms, including gels, foam, film, and suppositories. Vaginal burning and discomfort are some of the side effects of spermicides. Sponge is a spermicide-containing round device made of soft foam. It is inserted into the vaginal canal to cover the cervix and keep sperm out of the uterus. It should be applied 24 hours before sex and left on for at least six hours following sexual activity.[10] A cervical cap is a reusable silicone dome that fits snugly over the cervix and is held in place by suction. It should be used in combination with spermicide and should be inserted by a medical practitioner. The cap should be worn for at least six hours after sexual activity but no more than 48 hours in total.[10] A diaphragm is a reusable dome-shaped silicone or latex device that sits inside the vaginal canal and covers the cervix. It must be used in conjunction with spermicide and must be left in place for at least six hours after sexual intercourse but no more than 24 hours in total. Only condoms, out of all of these barrier techniques, can prevent both pregnancy and the transfer of sexually transmitted illnesses like HIV.[10]

Fertility awareness methods

These are natural contraception methods that uses the indicators of fertility during the menstrual cycle to avoid conception. Fertility awareness methods (FAMs) are one of the least reliable forms of contraception due to its unpredictability.[11] They include the calendar method, temperature method, cervical mucus method, standard days method and symptom-thermal methods. The calendar rhythm method uses previously observed menstrual data to forecast future ovulation dates, allowing women to avoid sexual activity or use backup contraception on such days. Temperature method uses an extremely sensitive thermometer to take the basal body temperature (BBT). BBT rises after ovulation as a result of hormonal surges. The days leading up to the temperature increase are the most fertile. As a result, this approach is far from reliable, as it only detects ovulation after it has already occurred.[12] The cervical mucus method monitors fertility by measuring the color, thickness, and texture of cervical mucus. When ovulation occurs, cervical mucus becomes thinner, more slippery, and more stretchy.[11] The standard day method uses a set of rules to determine which days of the menstrual cycle are the most fertile. The standard days method considers 8-19 to be the most fertile days during which sexual intercourse is avoided or a barrier method is utilized if the cycle is typically between 26 and 32 days long.[13] FAMs are inexpensive, safe to use, do not involve drugs, have no side effects, and can be quickly terminated when contraception is no longer required. However, these methods require at least six months of constant monitoring of the menstrual cycle before being deemed reliable, and fertility signs can be altered by stress, sickness, lifestyle, and hormone medications.[11]

Hormonal contraceptive

Oral contraceptive pills, injections, vaginal rings, skin patches, and hormone-releasing contraceptive coils/IUCDs and implants are all examples.[14] Combination hormonal contraceptives (CHCs) are hormonal contraceptives that combine estrogens and progestins. Estrogens decrease follicle stimulating hormone (FSH) secretion by preventing the growth of the dominant follicle, and stabilizing the endometrial lining, thereby reducing breakthrough bleeding. By reducing luteinizing hormone (LH) secretion, progestins inhibit ovulation. Progestin-only contraceptives hamper the transport of sperm through the cervical canal by thickening cervical mucus and causing alterations in the endometrial lining and in the fallopian tubes. Intrauterine devices (IUCDs) and sub-dermal implants are examples of long term contraception. Copper IUCD, Paragard®, is a non-hormonal IUCD that can be used for up to ten years. By creating a chemical alteration in sperm and egg before they interact, the copper bearing IUCD hinders fertilization. Examples are Mirena® (52 mg levonorgestrel approved for five years), Liletta® (52 mg levonorgestrel approved for three years), Skyla (13.5 mg

levonorgestrel approved for three years), and Kyleena® (19.5 mg levonorgestrel approved for five years).[15] Contraceptive implants are small flexible rods placed under the skin in the upper arm by a health professional and inhibit pregnancy by secreting hormones that block the release of eggs from the ovaries and thicken cervical mucus. The single rod etonogestrel implant (Implanon®, Nexplanon®) with a three-year effect and the two-rod levonorgestrel implant (Jadelle®, Norplant®) with a five-year effect are the two most used. Bleeding between periods, headaches, and weight gain are the most prevalent LARC adverse effects. Mild headaches, weight gain, irregular bleeding, breast tenderness, and mood changes are all common adverse effects of oral pills.[16] Abdominal pain, chest pain, severe headaches, eye issues (blurred vision), and swelling or soreness in the legs and thighs are more serious side effects (ACHES). Blood clots in the arms or legs, severe heart disease, breast or uterine cancer, uncontrolled high blood pressure, and migraines with aura are all contraindications to these drugs.[17]

Emergency contraception

Emergency contraceptive pills delay ovulation and should be taken within 72 hours of unprotected sex to avoid pregnancy. They are utilized in conditions of unprotected sex, worries about contraceptive failure, inappropriate contraceptive use, and sexual assault if contraception coverage is not available. Ulipristal acetate (UPA), levonorgestrel (LNG), or combined oral contraceptives (COCs) including ethinyl estradiol and levonorgestrel are the emergency contraceptive pill regimens recommended by WHO. Nausea, vomiting, minor irregular vaginal bleeding, and exhaustion are some of the side effects.[18,19]

Permanent contraception

Permanent contraception, or sterilization, is a surgical procedure that prevents future pregnancies. Tubal ligation involves cutting the fallopian tubes and tying the ends to prevent sperm from meeting the eggs in the female, while vasectomy involves blocking the vasa differentia, which transports sperm from the testes to the penis, to prevent sperm from being released into the semen during ejaculation in the male.[20,21]

Contraceptives preferred by women

According to the study conducted by Nelson et al in the US among women aged 16-50 years, oral contraceptives were the most prescribed method of contraception either as first or subsequent choice.[22] Katherine et al observed that out of 363 respondents, the hormonal methods of contraception was the most preferred method of contraception (34%).[23] This was followed by those who do not prefer any method of contraception (23%) while those who prefer the long acting reversible contraceptive method (LARC) was 18%. The United Nations department of economic and social affairs further opined that hormonal contraceptives especially the oral contraceptive pills (OCPs) are among the most widely used method of contraception by women aged 15 to 49 years worldwide.[24] Guha et al observed that oral contraceptive pills have continued to be a popular contraceptive choice among the urban population in Eastern India and that emergency contraceptive pills have the highest preference followed by combination oral pills.[25] Meanwhile a prospective questionnaire-based study conducted by Bamniya et al which had 513 participants (women aged 15-49 years) at Ahmedabad tertiary care hospital India stated that the method of contraception that was commonly preferred was the barrier method.[26] The male condoms have also been reported as the highest form of lifetime contraception.

The CHOICE (contraceptive health research of informed choice experience) study discovered that the most commonly used method of contraception was the oral contraceptive pills (38.7%) then followed by the use of condoms (24.9%).[27] In another study by the European CHOICE to evaluate the choice of women for hormonal contraceptive methods which covered the combined daily pill, weekly transdermal patch and monthly vaginal ring before and after counselling, higher preference was observed for the monthly ring (23.8% post counselling) followed by the weekly patch (7.8% post counselling). Reasons for this preference includes ease of use, convenience as well as improved compliance.[28]

Irala et al identified that choosing a birth control method over another method was affected by both personal and sociocultural factors.[29] They observed that in a cross-sectional study of 1137 women aged 18 to 49 years in five European countries (Germany, France, The United Kingdom, Romania and Sweden), the oral contraceptive pills were widely used in Germany, France and Sweden each having 54.3%, 50.5% and 34.6% respectively. Condoms were mostly used in the United Kingdom (29.6%) and Romania (22.9%). Of the five European countries studied, the highest use of the intrauterine device was in Sweden (19%). Following the variations in preference of method of contraception adopted by various women, Ayorinde et al identified that the key barriers and facilitators to choose of contraceptive method includes the environmental context, social factors, knowledge base on the methods of contraception, consequences or effects of the method as well as the resources available.[30]

Uses and adverse effect of oral contraceptives

A major use of oral contraceptive is to prevent pregnancy. Aside contraception, Onah posits non-contraceptive benefits of oral contraception.[31] These are the incidental benefits that follows oral contraception or the benefits that results from the use of these agents for the treatment of some problems or disorders. Some of these benefits include achievement of effective contraception thereby reducing the incidence of therapeutic abortion or surgical sterilization, decreased

risk of endometrial cancer, reduced risk of ovarian cancer, reduction in benign breast disease, decreased risk of ectopic pregnancy, lowered risk of pelvic inflammatory disease (salpingitis), decreased risk of rheumatoid arthritis due to increased bone density. Oral contraceptives also find application in the treatment of some diseases such as dysfunctional uterine bleeding, dysmenorrhea, as a prophylaxis for endometriosis, in the management of acne and hirsutism, as hormone replacement for hypothalamic amenorrhea as well as in the prevention of premenstrual syndrome (premenstrual dysphoric disorder).

Although rare, venous thrombi-embolism is a serious side effect of combination oral contraceptive and the risk of this increases with age, obesity, smoking and other comorbidities.[32] The main metabolic effects due to estrogen in oral contraceptives is increased hepatic globulin production and this can lead to hyper coagulation in some users thus resulting in elevated blood pressure. Other effects of estrogen include breast tenderness, fluid retention and depression. The androgenic effects of progesterone lead to adverse effects such as peripheral insulin resistance, reduction in high density lipoprotein-cholesterol (HDL-c) as well as nervousness. Levonorgestrel a common mini pill oral contraceptive has been shown to have adverse reactions that are not often severe.[33] Its uncommon adverse effects include ectopic pregnancy, miscarriage, weight gain, exanthema, anorexia as well as chloasma. Reported adverse effects include convulsion, stroke, febrile neutropenia, abdominal hernia, ectopic pregnancy, suicidal tendency, serious infections, rupture of ovarian cysts.

The use of oral contraceptives also have adverse effect on periodontal health thus increases the risk of gingival disease. There are varying findings on the risk of breast cancer with the use of oral contraceptives; from zero increase in risk of breast cancer to about 30% to 40% elevation in the risk. There don't seem to be an increase in risk of breast cancer among users of oral contraceptives however its use prior to a first-full term pregnancy or for a duration greater than five seems to modify the development of breast cancer. OCPs are also associated with definite risks for developing cervical cancer especially with prolonged duration of use.[34]

Success and failure of oral contraceptives

According to a report published by United Nation's sexual and reproductive health agency on March 2022, roughly 121 million unintended pregnancies occurred each year between 2015 and 2019 of which 61% ended in abortion. This translates to 73 million abortions per year.[35] Preservation of fertility and optimizing health before pregnancy is becoming increasingly important in societies where childbirth often is postponed. The average age of first childbirth has steadily been rising in the OECD countries, with first-time mothers' mean age being 28.2 years in 2014. Research shows that as women postpone childbirth, they achieve higher levels of education and higher incomes. This leads to advantages for their children and for society. The use of the contraceptive pill increased very rapidly in the 1970s. Almost simultaneously, fertility started to decline in many developed countries: the total fertility rate (TFR, sum of the age-specific fertility rates) of the 15 member countries of the European Union decreased from an average of 2.72 children per woman in 1965 to 1.96 in 1975 and is currently below 1.50.[35] Demographic changes in the last two centuries, along with fundamental changes in lifestyle, technology development and various rising of expectations in promoting physical, mental and social welfare have led to the further consideration of population issues and developing strategies to manage the population.[36] The birth of oral contraceptives, has in no small measure curbed incidence of unintended pregnancies, maternal mortality and has improved the physical, social and mental welfare of women. A report from 2013, revealed that approximately 88% of sexually active women not desiring pregnancy admit to using oral contraceptives at any given time, showing its high rate of acceptance thus far.

Recently, there has been concern with the failure rate of oral contraceptives. In the developing world, 74 million unintended pregnancies occur annually, of which a sizable share, 30%, are due to contraceptive failure among women using some type of contraceptive method (whether traditional or modern).[37] Ali et al assessed causes and consequences of contraceptive discontinuation using DHS data from married women in 19 countries.[38] Using single-decrement life tables, they found that median values for contraceptive failures by 12 months were 1.1% for the IUD, 1.5% for injectables, 5.6% for the pill, 7.6% for the male condom, 15.3% for withdrawal and 17.4% for periodic abstinence (the rate for sterilization was not assessed). The above figures make it evident that oral contraceptives have the highest failure rate among hormonal methods of contraception and the rate of failure increased with duration of use.

In a secondary analysis of data from an industry-supported study, researchers assessed OC effectiveness, as well as factors that might influence effectiveness. During 112,659 woman-years of OC use, 545 unplanned pregnancies were reported (0.5 pregnancies per 100 woman-years of use). The estimated failure rate was 0.8% after 1 year of use and 1.7% after 4 years. The most common factors associated with failures were inconsistent OC use (42.2%), vomiting, diarrhea, or both (18.3%), and antibiotic use (15.6%). Failure rates were unaffected by BMI, weight, or OC formulation (progestin type, estrogen dose, monophasic vs multiphasic dosing), and were highest in younger women (age range, 18–24).[39] The European CHOICE study was a cross-sectional survey that evaluated women combined hormonal contraceptive choices before and after contraceptive counseling in Austria, Belgium, Czech Republic and

Slovakia, the Netherlands, Poland, Sweden, Switzerland, Israel, Russia, and Ukraine. 'Easy to use', 'convenience', and 'regular menstrual bleeding' were important selection criteria. 'Daily use' and 'will forget to take it' were the primary reasons for not selecting the pill. So, it could be easily deduced from the above study that the primary reason for oral contraceptive failure is sub-optimal adherence and pill burden thereby making it a lesser choice. The type of use of oral contraceptives estimates its effectiveness. Perfect use means the pill is used correctly and consistently whereas typical use means the pill may not be used correctly and consistently and it results in failure.

Attitudes and perceptions of women towards the use of OCs

Many women portray a positive attitude towards the use of oral contraceptives usually as a result of factors such as: high efficacy, wide availability of OCs, ease of use, cost effectiveness, lower side effects and convenience.[40] OCs like pills are usually available at various government owned hospitals as well as private owned hospitals, for free or at a subsidized rate. Some of them may also be up for purchase in community pharmacies which are widely distributed in many districts.[41] Emergency contraceptives are frequently used by women especially those that could not use condoms, intrauterine devices, implants and other contraceptives. One major advantage which has increased the use of OCs when compared to other contraceptives is its immense availability and ease of use. This is not the same for certain contraceptives like intrauterine devices and implants which require a visit to the hospital, more rigorous processes and certified physicians to carry out certain procedures before they can be inserted.[41] This is one of the reasons why a lot of women prefer to use oral contraceptives.

Positive health effects are another core reason for the positive attitude towards the use of OCs. Various women have attested to the fact that OCs, when used under the supervision of a medical personnel, yield the desired health effects. Contrary to the concerns of some users with respect to the side effects of OCs, a lot more women believe that OCs are effective, convenient and pose little or no threat to their health when used as prescribed by a physician.[42] Additionally, some women choose pills regardless of all the available options because pills do not interfere with sexual intercourse.[41] Moreover, not all women experience the side effects of using oral contraceptives. Side effects such as irregular menstruation, depression, headache and anxiety were not experienced by a lot of women. With OCs, these side effects can be eliminated if the instructions are well understood and diligently followed by the user.

The negative attitude towards the use of oral contraceptives was majorly due to the perceived side effects and ignorance of the users. Side effects that have been commonly mentioned include increase in body weight, headache, nervousness, dizziness and irregularities in menstruation. Other notable side effects include: cardiovascular effects, cancer, infertility, mood changes, nausea, spotting and breast tenderness. These have greatly discouraged women from using oral contraceptives.[43] It has also been recorded that some women do not use oral contraceptives because during consultation, OCs were not recommended as the first choice by the physician which made a lot of women regard it as less effective.[41] Convenience also posed a major challenge as many women complained of having to take the pills frequently while noting the huge negative results that come with poor timing and missing a dose of the pill. Research also shows that a lot of doctors that specialize in family planning were biased against OCs and their attitude further influenced the belief of the society that oral contraceptives were harmful to women especially when used long-term.[44] Other reasons mentioned by women for their lack of trust in OCs include: lack of understanding and insufficient information, cost of contraceptive services, failure to deal with problems arising from pill use, and health professionals' attitude and bias towards pills.[41]

Quality of life and the use of OCs

More than 50 years ago, the WHO proposed the first definition of health-related quality of life (HRQOL) as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." HRQOL is a patient centered report and purely subjective. It has become one of the principal components of the PRO (patient related outcomes) for clinical trials by the FDA. HRQOL measures how patients feel or function as regards his or her health conditions and or drug treatment/interventions. HRQOL measures provides information on the disease state and physical symptoms; psychological and emotional conditions; ability to perform daily activities (daily functioning) and social functioning.[45]

There are studies where women's health in relation with their quality of life has been measured using standard questionnaires such as EuroQol-5D (EQ-5D), SF-36, WHOs quality of life (WHOQOL), psychological general well-being index (PGWBI) or quality of life enjoyment and satisfaction questionnaire (Q-LES-Q).[46-48] The use and choice of contraceptive methods among women is severely determined by the side effects profile, costs, accessibility and ease of usage of the said contraceptive. All these factors coupled with the woman's general life experiences informs her beliefs and perception about the impact of the contraceptive methods on her sexual life and overall quality of life.[49] Also, of note in the need for assessing the impact of contraceptive use on women's QOL is the shift in the overall focus of our healthcare system. A patient centered care has become the ultimate goal of our care delivery of which the quality of life measures is a key indicator. So, it's important to evaluate the inputs of contraceptive use on the quality of life in the

face of other competing health needs for our limited resource. Several studies have evaluated and reported on the impact of various contraceptive methods on the quality of life of women. The main onus of the impact of contraceptives on the quality of life of women is the ability of hormonal contraceptive to offer benefits that goes beyond preventing pregnancies.[50] Contraceptives were initially intended to offer protection against pregnancy but its benefit were far greater than mere contraception.

Among these advantages, hormonal contraception was found to reduce menstrual blood loss, dysmenorrhea, and premenstrual syndrome (PMS).[51] Furthermore, they appear to help protect future fertility by lowering the risk of acute pelvic floor inflammatory disease, endometriosis, and uterine fibroid. Premenstrual syndrome is common in women of reproductive age. PMS is defined as the cyclical occurrence of a set of distressing physical, emotional, or behavioral changes severe enough to interfere with interpersonal relationships and routine life, negatively impacting quality of life. According to epidemiological studies conducted in Spain, 73.7 percent of menstruating women experience some premenstrual symptoms during the menstrual cycle, including headaches and premenstrual mood changes, such as anxiety, irritability, or fatigue, that occur during spontaneous menstrual cycles and during the use of oral contraceptives with or without a hormone free interval. The impact of premenstrual symptoms on women's daily lives is determined by their severity.[52] Many PMS symptoms are linked to decreased health-related quality of life, affecting mental, emotional, and physical domains.[53]

Some studies support the beneficial effects of hormones on mood and physical symptoms of PMS, while others do not.[54] Previous research has shown that using hormonal contraceptives can reduce PMS symptoms in all forms of hormonal contraception. These findings show that contraception should be considered in terms of quality of life, and this has become a major issue in all health-care system. On the other extreme, hormonal contraceptive use can cause breakthrough bleeding and changes in sexual function, which can have a negative impact on a woman's quality of life.[49] For example, in depot hormonal contraceptive, most discontinuations in the first 6-9 months of use are due to irregular bleeding.[55] Some have gone further to argue that the use of contraceptive creates a fear of unintended pregnancy (in case of the failure of the contraceptive) which can adversely affect the woman's quality of life.

Many studies on the impact of contraceptives on women's quality of life measure about five HRQOL domains *viz a viz* social symptoms, menstrual symptoms, breast symptoms, psychological symptoms and then sexual symptoms. The extent of the impact of the studies depend on the scales used, which are all standardized anyway, though comparability between studies can still be made. Most works reported that women who use any contraceptive methods especially oral contraceptive experience a higher quality of life across the various QOL scales used in the study.[46,47] In a work by Li among Hong Kong Chinese women, it was found out that hormonal contraception did not have sufficient impact on the quality of life and sexual function measures.[56] Possible explanations include that while oral contraceptive might reduce risk of undesired pregnancies and menstrual symptoms for the users, it's associated side effects and compliance requirements may overall reduce the quality of life. This is opposed to many studies that reported an improvement after the use of pills.[57] Zhao in his studies among rural Chinese women, reported a significant improvement in QOL from combined oral contraceptive (COC) use mostly due to the hormonal non contraceptive benefits.[58]

Impact of OC on the sexual domain of QoL have not been consistent among various reports. In the work by Zhao already cited above, sexual components of quality of life score was decreased among the study population.[58] This was same as reported by Leorns.[57] According to Zethraeus et al oral contraceptives had no negative effect on overall sexual function.[59] Leorn also reported in his study that women who used contraception methods had lower menstrual scores and higher sexual health-related QoL. He went further to find out that those women actually had more sex. Amidst these conflicting results, there is a multi-factorial influence on female sexuality which must have affected the reports in the different studies.[46] The impact of sexual steroids, particularly progesterone and estradiol, on depression in adolescents and young women has been controversially discussed, and it is unclear whether the development of mood changes and/or mental health disorders are clinically relevant side effects of hormone-based contraceptives.[60]

CONCLUSION

Hormonal contraceptives are the chief contraceptive method preferred by women. Among this, the OC pill is the most prescribed and used either as first choice or a follow-up drug. This choice is mostly due to safety of OC, social factors, knowledge of contraception and available resources. The widespread use of OC has greatly curbed unintended pregnancies, maternal mortality and on the other end enhanced the physical, social and mental well-being of women. Despite these successes, failure rate of OC has climbed steadily necessitating a gradual switch to other safer and more reliable hormonal contraceptives. The most likely culprit being pill burden leading to non-adherence. Women today take OC for myriads of benefits aside from contraception. Contraceptives were initially intended to offer protection against pregnancy but its benefit has gone far beyond mere contraception. This is a reflection of their perception and preference of the effects of OC on their overall quality of life. Many women strongly support the positive effect of OC on their quality of life.

These include the ability of OC to mitigate menstrual blood loss, dysmenorrhea, and Premenstrual Syndrome (PMS) which many women suffer heavily from. The sexual life of these women is also greatly improved. Overall, OC has had a positive impact on the quality of life of women and further studies will clearly reveal the levels of effect on the individual components of the quality of life.

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