Study the Effect of Hormonal Contraceptive Methods on Female Sexual Function

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Abstract

The hormonal contraceptive methods using by women of reproductive age can have negative influences on the female sex lives. So, the women should be aware of the effects of duration of using these methods on their sexual lives to be able to improve the quality of their life.

Design: A descriptive exploratory research design was adopted for this research.

Aim of the Study: This research aims to assess the effect of duration of using hormonal contraceptives on female sexual function.

Setting: The study conducted at family planning clinic at Elgalaa hospital and MCH (Maternal Child Health Center).

Sample: A convenient sample of 430 women were selected based on inclusion criteria. A structured interviewing tool and Female Sexual Function Index (FSFI Arabic version) were used to collect the data.

Results: Revealed statistical significant differences was found (χ² =12.689, p=.005) between female sexual function and duration of hormonal contraceptive methods used. The sexual dysfunction increased by increasing the duration of hormonal contraceptive used as the following: The female who used hormonal contraceptive for (6 months up to one year, one year, three years and more) were risky for female sexual dysfunction as (53.60%, 70.80%, 73.90% and 77.80%, respectively).

Conclusion and Recommendations: The female sexual function in hormonal contraceptive user’s decreases as the duration of uses increased. So, the healthcare providers must be aware of negative effects on female sexuality in order to provide a counsel and care for their patients appropriately.

Key Words: Hormonal contraceptive – Female sexual function.

Introduction

SEXUALITY is an important and integral part of every woman's life. Female sexual function is a state of ability to achieve sexual arousal, lubrication, orgasm, and satisfaction and result in well-being and state of wellness, with good quality of life [1]. The sexual response cycle refers to the sequence of physical and emotional changes that occur as a person becomes sexually aroused and participates in sexually stimulating activities, including intercourse and masturbation, which is mediated by the complex interaction of Bio-psycho-social factors as reported by Robert and Phillips [2].

Some women experience difficulty in responding sexually, and how wish their sexual responses could be healthier, and more sexually satisfying. Sexual dysfunction (SD) is an important public health problem that is more prevalent in woman than men, so female sexual dysfunction is defined as disorder of libido, arousal, orgasm, and sexual pain that lead to personal distress (or) interpersonal difficulties [1].

Female sexual dysfunction (FSD) is an underestimated problem with an overall prevalence between 20% and 50%, according to The Global Online Sexuality Survey-Arabic Female (GOSS-ARF) in Middle East (2011) [3], which accomplished by Department of Andrology, at Kaser Eleini, Faculty of Medicine, Cairo University, Egypt reported that the prevalence of risk for female sexual dysfunction about 59.1% of participant. But the Study results did not generalize this finding due to small size sample used.

Enjoying the healthy body and mind will cause the sexual relationship to run their normal course in life. One of the problems that couples are faced within their sexual relationship is the issue of employing family planning methods [4]. The prevalence of women using family planning methods worldwide about (57%) of women in child bearing age. While, in Egypt is (60.3%) from this range...
Study the Effect of Hormonal Contraceptive Methods

Subjects and Methods

Research design: A descriptive exploratory research design adopted in this study to achieve the stated aim.

Aim: The aim of the current research was to assess the relationship between duration of using hormonal contraceptives and female sexual function.

Research question:
1- What are the effect of hormonal contraceptives methods on female sexual function?
2- What is the duration of utilizing contraceptives methods that had effect on the female sexual function?

Sample: A convenient sample of 430 women who using hormonal contraceptive methods recruited for the study based on the following inclusion criteria; women within age range of (20 to 40 year), at least 6 months had proper, continuous use of one of the hormonal contraception method, sexually active and use contraception only for pregnancy prevention and not for any other medical or gynecological causes as well as free from any medical disease or congenital abnormality and not suffering from any sexual problems before starting the hormonal contraceptive methods. Sample size was calculated through the following sample equation:

\[ n = \frac{T^2 \times P (1-P)}{M^2} \]

n = Sample size.
T = Table value.
P = Prevalence of phenomenon.
M = Margin of error at 5% (standardized value of 0.05).

Setting: The study was conducted at El-Galaa Hospital and MCH in El-Hadary (Maternal Child Health Center).

Tool:
1- Structured interviewing tool which developed by the researcher and included two parts. (a) The first socio-demographic data for women and husband such as age, educational level, occupation, residence and family income; (b) The second Obstetrical and Gynecological data which included data related to (genital mutilation, menstrual history, duration of menses, mode of previous delivery, obstetrical code, past history of gynecological surgery and contraceptive methods).
2- The female sexual function index (FSFI) tool formulated by Rosen and Meston [10] this tool was used to analyze female sexual function. It translated into Arabic to suit Egyptian culture and the Arabic (FSFI) validated, reliable, and locally accepted tool for use in the assessment of female sexuality in the Egyptian population by Anis TH. [11], the cutoff point of total female score is (28.1) according to the Arabic female sexual function index.

Tool validity and reliability: Tools submitted to a panel of five medical and nursing experts in the field of obstetrics and gynecology to test the content validity. Face validity through an extensive review of literatures about hormonal contraception and its effect on female sexual function.

Ethical consideration: For ethical consideration, obtained primary permission was taken from the ethical committee at faculty of nursing Cairo University and then from authoritative personnel at each setting. Written consent was obtained from all study participants. Also, the purpose and nature of the study were explained to them. The investigator emphasize that the participation in the study is entirely voluntary, anonymity and confidentiality also will be assured.

Pilot study: A pilot study was conducted on 10% of the sample to assess the clarify, feasibility, and objectivity of the tools. Modification was carried out based on the results of the pilot.

Procedure: After the permission was obtained from the family planning clinic in each setting, after that explain the aim of study to the women and acceptance of the women who will participate in the study will be obtained. Data were collected through a period of 12 months from March (2013) till the end of March (2014). Data collection was carried out during routine follow-up of contraceptive visit using interviewing sheet to women and her responses were documented by the researcher. Session of interview was last 15-30min. Any data obtained was kept in confidential way to maintain the privacy of data. Women were informed about how to contact the investigator to know the result of the study if they interested in that issues and they had a right to withdrawn from the study at any time they wanted without reflecting that on them or on the type of care they received.

Statistic analysis: Using Statistical design, the collected data-coded, tabulated and analyzed using Statistical Package for the Social Science (SPSS) program version 21. Chi-square and ANOVA test was used in inferential statistics.

Results

Results of the current research revealed that the mean age of women was 31.25±5.44 years. While the mean age of husband was 36.03±5.97. Concerning the age at marriage, the mean woman’s age at marriage was (24.95±5.04), while the mean husband’s age at marriage was (29.72±5.35) and marital duration was (6.31±4.46) (Table 1).

Table (1): Distribution of the sample according to their socio-demographic characteristics (N=430).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>31.25</td>
<td>36.03</td>
</tr>
<tr>
<td>Age at marriage</td>
<td>24.95</td>
<td>29.72</td>
</tr>
<tr>
<td>Marriage duration</td>
<td>6.31</td>
<td>4.49</td>
</tr>
<tr>
<td>Monthly income</td>
<td>1726.04</td>
<td>550.98</td>
</tr>
<tr>
<td>Number of children</td>
<td>2.26</td>
<td>1.15</td>
</tr>
</tbody>
</table>

The majority of women (98.8%) had less than 5 children with mean number of 2.26±1.15. Over half of the sample (52.8%) lives in urban areas. Ninety three point three of the sample lived in separate apartment, as regarding the level of education, more than half of the women (56%) had secondary school and (76.5%) of women was house wife.

In relation to obstetric history, (74.2%) of the sample had regular menstrual cycle, (54.2%) of the sample had cesarean section and (84.9%) of them had a genital cutting (circumcised) (Table 2). Concerning to hormonal contraceptive methods used, the result revealed that, the most common method used was sub dermal capsules (Norplant) and combined oral contraceptive as (27.70% & 23.30% respectively), while hormonal intrauterine device and hormonal patch were less used as (1.9% & 0.2% respectively). In relation to the duration of using contraceptive methods, more than half of the sample (55.8%) used it for one year, 16% of women used it for three years, about quarter of the sample (25.6%) used it more than 6 months up to one year, and 2.6% of women only used it more than three years Fig. (1).

The result reported every increase in duration of using hormonal methods that affect negatively on female sexual function as the following: The sample who used hormonal contraceptive for (6 months up to one year, one year, three years and more than three years) risky for female sexual dysfunction as (53.60%, 70.80%, 73.90% and
77.80%, respectively) with statistical significant differences ($\chi^2=12.689, p=.005$) was found between female sexual function index and duration of hormonal contraceptive methods used Fig. (2).

Table (2): Distribution of the sample according to their obstetric profile (N=430).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Freq (n=430)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularity of menses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1- Regular</td>
<td>319</td>
<td>74.2</td>
</tr>
<tr>
<td>2- Irrgular</td>
<td>111</td>
<td>25.8</td>
</tr>
<tr>
<td>Circumcision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Yes</td>
<td>365</td>
<td>84.9</td>
</tr>
<tr>
<td>- No</td>
<td>65</td>
<td>15.1</td>
</tr>
<tr>
<td>Mode of delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cesarean Section</td>
<td>232</td>
<td>54.2</td>
</tr>
<tr>
<td>- Normal Vaginal Delivery</td>
<td>149</td>
<td>34.8</td>
</tr>
<tr>
<td>- Vaginal delivery with episiotomy</td>
<td>47</td>
<td>11</td>
</tr>
</tbody>
</table>

![Fig. (1): Distribution of the sample according to the duration of using hormonal contraception (N=430).](image1)

![Fig. (2): The relationship between duration of using hormonal methods and female sexual dysfunction (N=430).](image2)

Discussion

The present study reported statistical significant differences was found ($\chi^2=12.689, p=.005$) between the female sexual function index and duration of hormonal contraceptive methods used, and show how the sexual dysfunction increased by increase the duration of hormonal contraceptive used whatever its mode of administration. These findings are agree with other studies, such as that by Martin-Loeches; Pallas & Sanchez [8] who showed that statistically significant relationship between period of using oral hormonal contraceptive and its effect on reducing female sexual desire. The women who use it (between 6 months and 1 year) reported reducing sexual desire in comparison with who use it (less than 6 months) (OR=0.24; CI: 0.09-0.64) and Graham et al., [9] who found Significant decreases in free testosterone and desire d after 3 months of using hormonal contraceptive methods.

The effect of hormonal contraceptives on female sexual function investigated in many studies, as Panzer et al., [12] studied 124 premenopausal women in a sexual health clinic who had already been diagnosed with female sexual dysfunction. These women had much lower total scores on the FSFI compared with non-combined oral contraceptive users, and the subscale for desire was significantly lower as well. In addition, more recent large scale community-based studies of sexual function done by Davison [13] have demonstrated a negative effect of COC on libido.

On the other hands, Caruso et al., [14] prospectively assessed the effects of (COC) on sexual behavior in 80 women age 19-31. Compared with baseline, women reported increased sexual enjoyment, orgasm frequency, and satisfaction with sexual activity; desire did not change while on medication. Also, recent study by Kelly [15], comparing (COC) with another pill with (30mg EE and 150mg levonorgestrel) found that in both groups the majority of women experienced no change in libido with a small percentage of women in each group experiencing either an increase or a decrease.

Zhila et al., [16] assessed the prevalence survey of sexual dysfunction among Iranian women in the reproductive age group agree with our study and reported no significant difference was detected between the contraception methods and female sexual dysfunction ($p=0.081$) on the other hand Elnashar [17] who assess female sexual dysfunction in Lower Egypt reported not statistically significantly associated between type of contraception and female sexual dysfunction and Ibrahim [18]
who assess prevalence and characteristics of female sexual dysfunction in a sample of women from Upper Egypt reported no significant difference between women with FSD and use of contraception ($\chi^2 =2.25, p=0.065$).

**Conclusion and Recommendation:**

Based on the results of the present study it could be concluded that the hormonal contraceptive methods affect negatively on the female sexual function. The most affected domains in the female sexual function index were the desire and pain domain. This affection increase by increasing the duration of using hormonal contraceptive methods.

**Based on the study results, the following recommendation is needed:**

1- Healthcare providers must be aware that hormonal contraceptives can have negative effects on female sexuality in order to prepare a health counsel sessions and care for their clients appropriately.

2- Assess the effect of hormonal contraceptive methods on female sexual function among large sample and different health settings.

3- Further study to assess another factor may be affect on female sexuality.

**References**


3- The Global Online Sexuality Survey (GOSS) Female Sexual Dysfunction Among Internet Users In The Reproductive Age Group In The Middle East, 2011.


الملخص العربي

المجردة: أن وسائل منع الحمل الهرمونية المستخدمة عن طريق النساء في سن الإنجاب يمكن أن تكون لها تأثيرات سلبية على حياتهم الجنسية. لذلك، ينبغي للمرأة أن تكون على بيئة من اثر طويل مدة استخدام هذه الوسائط على حياةهن الجنسية لتكون قادرة على تحصين حياتها.

التصميم: تم تصميم بحث إستكشافي وصفي لهذه الدراسة.

هدف الدراسة: يهدف هذا البحث إلى تقييم تأثير وسائل منع الحمل الهرموني ومرات استخدامها على الوظيفة الجنسية للسيدات.

مكانت الدراسة: أجريت هذه الدراسة في عيادة تنظيم الأسرة المستشفى الجلاء للنساء والتوليد وعيادة تنظيم الأسرة (مركز الحضري) لصحة الأم والطفل.

عينة الدراسة: قد تم اختيار عينة من 420 امرأة على أساس معايير الاشتغال. تم جمع البيانات اللازمة للدراسة من خلال الاستطلاعات.

التالية: استمارة البيانات الشخصية وإستمارة تقييم الوظيفة الجنسية للسيدات.

النتائج: من كشف البحث الحالي تم العثور على فروق ذات دلالة إحصائية (2.689, 0.005, χ²) بين الوظيفة الجنسية للإناث ومرات وسائل منع الحمل الهرمونية المستخدمة. وكشفت نتيجة الدراسة أن العجز الجنسي يزداد مع زيادة مدة استخدام وسائل منع الحمل الهرمونية التي تستخدمها السيدات. كما تبين: السيدات التي استخدمن وسائل منع الحمل الهرمونية ل (من 6 أشهر إلى سنة واحدة، سنة واحدة، وثلاث سنوات و أكتر) كانت محفوفة بمخاطر العجز الجنسية بنسبة (76.7, 78, 80, 82, 84 ساعات) على التوالي.

الخاتمة والتوصيات: بناءً على نتائج هذه الدراسة يمكن أن نقصص إلى أن وسائل منع الحمل الهرمونية تؤثر سلبًا على الوظيفة الجنسية للإناث. وهذا التأثير يزداد عن طريق زيادة مدة استخدام وسائل منع الحمل الهرمونية لذلك، يجب أن تكون مقدمة الرعاية الصحية على بيئة من الأثر السلبي لوسائل منع الحمل الهرمونية على الحياة الجنسية للسيدات من أجل توفير المشورة والرعاية الصحية بشكل مناسب.