

Female Genital Mutilation, Sexual Quality of Life and Marital Relationship: A Case-Control Study From Iran

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Abstract

Objective: Studies on the sexual consequences of female genital mutilation is mostly related to sexual function, while sexual quality of life is a more objective criterion for studying the effects of genital mutilation on the women's sexual life. The purpose of this study was to compare the sexual quality of life and marital relationship in the mutilated women with other women living in the Kurd region of Mahabad (Iran).

Materials and methods: In a case-control study, 600 married women (300 mutilated and 300 non-mutilated women) who referred to the health centers completed the sexual quality of life questionnaire (SQOL-F) as well as demographic questionnaires. Data analyzed using chi-square, independent t-test, and linear regression model with stepwise method at 95% confidence level.

Results: The mean total score of sexual quality of life in the mutilated group (40.28 ± 16.76) was significantly lower than the control group (45.29 ± 19.16). The chance of having a higher score of sexual quality of life in the mutilated group was 0.13 times lower than the control group. This value was 0.16 times for self-worthlessness area, 0.10 for sexual repression, 0.12 for psycho-sexual feeling, and 0.32 for sexual and marital satisfaction areas ($p < 0.05$). In the mutilated group, the total score of sexual quality of life was significantly correlated with age, income, spouse's violence, spouse's infidelity, intercourse frequency, and residence status ($P < 0.05$).

Conclusion: Female genital mutilation can decrease the sexual quality of life and increase the chance of negative consequences such as spouse violence, infidelity, and intercourse reduction.

Keywords: Female Genital Mutilation; Quality of Life; Sexuality; Women's Health

Introduction

Female genital mutilation (FGM) is still one of the challenges of reproductive health, which its economic, social, and health consequences threaten

the achievement of sustainable development goals. According to the report of UNISEF, near to 200 million women suffered from the mutilation in 30 countries including 27 African and 3 Asian countries, such as Iraq, Kurdistan, Indonesia and Yemen, and the more girls are being exposed to the mutilation per year due to the increasing rate of population in such

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countries (1). More than a half of these women are 3-10 years and many were mutilated under 15 (2). In Iran, FGM (Known as SONNAT) is common in some southern and western districts, and is mainly the 1st grade and rarely the 2nd grade. Its prevalence was reported from 55.7% (3) to 70% (4) among the girls of Arab and Kurd districts respectively. The prevalence of FGM among Arab and Kurd tribes may mostly refer to the common culture and religious beliefs of two tribes in western and southern Iran.

FGM which is defined as cutting and removing all or a part of the clitoris to removing the large lips of the external genitalia, is almost traumatized and without any health advantage (5, 6) and the range of its complications is not only physical (from bleeding, infection to death), but psychological (such as anxiety and post-traumatic stress) and also sexual (7, 8). Urinary infections, sexual transmitted diseases, bleeding after intercourse, necrotizing fasciitis and long-term side effects in the form of ascariasis, genital lesion, dyspareunia, and infertility, labor and delivery disorders, and reducing the quality of sexual relations are some complications of female mutilation (9-11). Even the researchers indicated that the vulnerability of mutilated women to HIV is more by 2.1 times (11). Researchers who analyzed the data of 15 studies including 1267 samples from 7 countries, found that the mutilated women were reported to have more dyspareunia by 52%, less desire for twice more than others, and less sexual satisfaction for one third (12).

Despite FGM being implicated with sexual complications, the results of the studies on the sexual consequences of FGM are controversial. Some confirmed that the mutilation reduces the women's sexual satisfaction, orgasm frequencies and sexual tendency (11-15); on the contrary, others didn't find any significant relation between mutilation and sexual intercourse and sexual satisfaction (16-19). In the meantime, limited studies have been conducted on the effects of FGM on the general quality of life and sexual quality of life. Sexual quality of life as a key topic in the sexual and reproductive health issues is a context-based concept originating from human behaviors and interactions, and socio-cultural norms and refers to activities related to sexual and affective relations with partner and sexual satisfaction (20). According to Rosen, the constituents of sexual quality of life are the sexual function, sexual ability, sexual self-sufficiency, sexual satisfaction, satisfaction to the relations and general satisfaction

(21). Today, there is a consensus that the sexual quality of life has an interconnected and mutual relationship with general life quality so that the sexual quality of life may show the health status and general quality of life (22). In a case-control study, Andersson et al in London compared the life quality of mutilated African women with a non-mutilated group. According to the results, the sexual quality of life of the mutilated women was lower than the control group (14). In Sena et al.'s study, the total score of sexual quality of life, general quality of life, and physical, psychological, and social dimensions were significantly different between the two groups, so that Egyptian mutilated women were worse than the control group in terms of the above mentioned cases (19). In Daneshkhah et al.'s study in Piranshahr, the quality of life of mutilated women was not significantly different from that of women without mutilation. However, the mean of quality of life was inversely correlated with women's general health and sexual function (23).

Limited studies on the sexual consequences of FGM in Iran is mostly related to sexual function (3, 4, 23), while sexual quality of life is a more objective criterion for studying the effects of FGM on women's sex life. On the other hand, some researchers have reported that there is a significant relationship between women mutilation and psychological and social marriage problems (24). This study aimed to compare the sexual quality of life, as well as marital relationship, in the mutilated women with other women living in Kurd region of Mahabad (Iran).

Materials and methods

Study design and participants: The present case-control study was performed in Mahabad city (capital of Mahabad County), in West Azerbaijan Province, in Iran, in 2019. Study participants were married women of reproductive age referring to health centers for routine health care services such as outpatients' clinics or children vaccinations. The inclusion criteria were sexually- active married women, passing at least one year from marriage life, and exclusion criteria were pregnant and lactating women, sexual inactivity within the last 6 months, suffering from the physical and mental illness, smoking or drug use. Women who did not answer more than 10% of the questionnaire questions were omitted from the study.

Sample size: To determine the number of samples

from the indices obtained from previous studies (15), taking into account $\sigma_1 = 13.73$, $\sigma_2 = 27.93$, $d = 6.5$, type error = 5%, and test power = 90%, with regard to 10% sample drop probability; the number of samples in each group was calculated as 300 women.

Sampling: Using convenience sampling method through 4 randomly selected rural health centers, 300 mutilated and 300 non-mutilated women were selected. For determining the type of FGM in the present study, participants were asked about which parts of their genital organs were removed. In case of needing to determine the grade of FGM, participants were examined by a midwife working in the health center. It should be noted that all mutilated females in our study had the first-grade genital circumcision, in which the external part of the clitoris is cut off. Informed consents were obtained from all participants and they were assured about the confidentiality of their information.

Data collection instruments

Socio-demographic characteristics questionnaire: Socio-demographic variables included age, educational level, and occupation status of women and their spouses, duration of marriage, housing status, family income status, and number of pregnancies. In addition, underlying factors included contraceptive method, spouse's smoking and alcohol consumption, spouse's violence and type of violence, spouse's infidelity as well as intercourse frequency per month.

Sexual Quality of Life Questionnaire (SQOL-F): The SQOL designed and psychometrized by Symonds et al (25). It has 18 questions in 4 subscales (Psychosexual feelings, Sexual and relationship satisfaction, self-worthlessness, and Sexual repression). This questionnaire is rated on a six-point Likert scale (ranging from 1 to 6), the score of the questionnaire ranges from 18-108, with higher scores reflecting the more desirable sexual quality of life. Validity and reliability of questionnaire was confirmed by Pakpour in Iran (26), and in the present study, the reliability of the SQOL-F Questionnaire was calculated using the Cronbach's alpha and it turned out to be 0.73.

Statistical analysis: SPSS software version 20.0 was used for data entry and analysis. Data were analyzed using Chi-square, independent t-test, linear regression model with Stepwise method at 95% confidence level. Values of $P < 0.05$ were considered statistically significant.

Results

The results indicated that the highest percentage of participants in both groups was 20-40 years old, housewife and education of high school to diploma. Also, their spouses were 20-40 years old, self-employed with education of high school to diploma. Their marriage period passed less than 10 years, they lived in their own houses, the family income was in sufficient level, and they had the experience of less than 3 previous pregnancies. There was a significant difference between two groups about the variables of education of women and their spouses, while there was not any significant difference between other variables (Table 1).

There was no significant difference between two groups regarding smoking and alcohol consumption by spouse, violence by spouse, type of violence (physical-psychological-sexual) and type of contraception. However, the percentage of infidelity was significantly higher in the mutilated group than in the control group, and the percentage of having no sexual relation in month was higher in control group than the mutilated group ($P < 0.05$) (Table 2).

The mean total score of sexual quality of life in the mutilated group (40.28 ± 16.76) was significantly lower than the control group (45.29 ± 19.16). The relationship of sexual quality of life with FGM was studied using the linear regression model. The results showed that the chance of having a higher total score of sexual quality of life in the non-mutilated women was 0.13 (2.12-7.90) times higher than the mutilated group. This value was 0.16 (0.64-1.80) times greater for self-worthlessness, 0.10 (0.22- 1.48) times for sexual repression, 0.12 (0.71-3.39) times for psychosexual feeling, and 0.32 (0.25-1.51) for sexual and marital satisfaction areas compared to mutilated group ($p < 0.05$) (Table 3).

The relationship between total score of sexual quality of life with demographic characteristics and underlying variables were evaluated by Stepwise method using linear regression model.

The results showed that in the mutilated group, the total score of sexual quality of life was significantly correlated with age, income, spouse violence, intercourse frequency, infidelity, and residence, so that the chance of having a high sexual quality of life score increased with age. Additionally, women with lower levels of income, having spouse violence, low rate of intercourse, the spouse infidelity, and personal residence were less than other group ($P < 0.05$) (Table 4).

Table 1: Comparison of the demographic characteristics between two groups (n=600)

| Variable | Group | FGM (n=300) | | Control (n=300) | | p-value |
|-----------------------------|------------------------------|-------------|------|-----------------|------|-----------|
| | | n | % | n | % | |
| Women's age (year) | <20 | 16 | 5.3 | 21 | 7.0 | 0.56 |
| | 20-40 | 241 | 80.3 | 242 | 80.7 | |
| | >40 | 43 | 14.3 | 37 | 12.3 | |
| Spouse's age(year) | <20 | 1 | 0.3 | 0 | 0 | 0.34 |
| | 20-40 | 224 | 74.7 | 235 | 78.6 | |
| | >40 | 77 | 25.0 | 64 | 21.4 | |
| Duration of marriage (year) | <10 | 192 | 64.0 | 206 | 68.7 | 0.13 |
| | 10-20 | 62 | 25 | 83 | 27.7 | |
| | >20 | 42 | 11 | 11 | 3.7 | |
| Number of pregnancy | 1-3 | 271 | 90.3 | 283 | 94.3 | 0.05 |
| | 4-6 | 25 | 8.3 | 17 | 5.7 | |
| | >6 | 4 | 1.4 | 0 | 0 | |
| Spouse's occupation | Unemployed | 10 | 3.3 | 16 | 5.4 | 0.12 |
| | Staffer | 67 | 22.3 | 81 | 27.1 | |
| | Worker | 41 | 13.7 | 47 | 14.7 | |
| | Self-employed | 182 | 60.7 | 151 | 51.5 | |
| | Retired | 0 | 0 | 4 | 1.3 | |
| Family income status | Poor | 102 | 32.7 | 107 | 34.7 | 0.08 |
| | Moderate | 174 | 59.3 | 171 | 58.3 | |
| | Good | 24 | 8.0 | 21 | 7.0 | |
| Housing statuses | Owner | 148 | 47.7 | 129 | 40.4 | 0.12 |
| | Renter | 110 | 38.3 | 114 | 38.6 | |
| | Living with her parents | 12 | 4.7 | 25 | 8.3 | |
| | Living with spouse's parents | 30 | 12.3 | 32 | 12.7 | |
| Women's Occupation | Self-employed | 60 | 20.0 | 68 | 22.7 | 0.0001*** |
| | Staffer | 67 | 22.3 | 62 | 20.7 | |
| | Unemployed | 173 | 57.7 | 170 | 56.7 | |
| Women's Education | Under diploma | 108 | 36 | 61 | 20.3 | 0.0001*** |
| | Diploma | 103 | 34.3 | 165 | 55 | |
| | Collegiate | 89 | 29.7 | 74 | 24.7 | |
| Spouse's education | Under diploma | 83 | 27.7 | 49 | 16.3 | 0.0001*** |
| | Diploma | 186 | 62 | 172 | 57.3 | |
| | Collegiate | 31 | 10.3 | 79 | 26.3 | |

P values calculated using Chi-square /Fisher's Exact Test.
FGM, female genital mutilation

Discussion

The results of the present study showed that the mutilated women had a worse sexual quality of life than the control group. This is in line with the results of the Anderson et al study in London (14). The mutilated women were reported to have various sexual problems including disorder in the whole or a part of their sexual stages (4). It seems that they are resulted from the painful trauma, sense of humiliation, and being deceived by parents, negative genital imagination, lack of sense of body ownership, and sexual life vandalism (27, 28).

Sexual quality of life and satisfaction of interpersonal relations have a close and mutual relationship with the couple's satisfaction and

general quality of life so that the disorder in sexual function reduces the general quality of life, and worsening the general quality of life has a negative effect on the couple's sexual quality of life (29). In the study of Sena et al., the negative effect of mutilation on both variables of health-related quality of life (HR-QOL) and sexual quality of life (SQOL-F) was shown (19). In this study, psychological domains of health-related quality of life were significantly impaired in mutilated women, which can be largely explained by significant decrease of sexual quality of life in the mutilated group, so that sexual dysfunction may lead the emotional distress which solely provides the requirements of partner separation.

Table 2: Comparison of the underlying factors between two groups (n=600)

| Variable | | FGM (n=300) | | Control (n=300) | | p-value |
|-----------------------------------|---------------|-------------|------|-----------------|------|---------|
| | | n | % | n | % | |
| Spouse's smoking | Yes | 89 | 29.7 | 92 | 30.7 | 0.79 |
| | No | 211 | 70.3 | 208 | 69.3 | |
| Alcohol consumption | Yes | 30 | 10.0 | 32 | 10.7 | 0.78 |
| | No | 270 | 90.0 | 268 | 89.3 | |
| Spouse's violence | Yes | 41 | 13.7 | 32 | 10.7 | 0.16 |
| | No | 259 | 86.3 | 266 | 89.3 | |
| Type of violence | Physical | 15 | 28.3 | 12 | 27.9 | 0.83 |
| | Psychological | 34 | 64.2 | 29 | 67.4 | |
| | Sexual | 4 | 7.5 | 2 | 4.7 | |
| Spouse's infidelity | Yes | 7 | 2.3 | 2 | 0.7 | 0.04* |
| | No | 277 | 92.3 | 270 | 90 | |
| | I don't know | 16 | 5.3 | 9.3 | 28 | |
| Contraceptive method | Withdrawal | 98 | 32.7 | 100 | 32.9 | 0.11 |
| | OCP | 69 | 23.3 | 84 | 28.7 | |
| | Condom | 27 | 8.7 | 27 | 9.1 | |
| | IUD | 41 | 13.7 | 28 | 9.1 | |
| | DMPA | 3 | 1.0 | 7 | 2.4 | |
| | Others | 62 | 20.7 | 54 | 18.0 | |
| Intercourse frequency (per month) | 1-2 | 19 | 6.3 | 31 | 10.3 | 0.03* |
| | 3-4 | 113 | 37.7 | 130 | 43.3 | |
| | >4 | 168 | 56 | 139 | 46.3 | |

P values calculated using Chi-square /Fisher's Exact Test.
FGM, female genital mutilation

In addition, depression, lack of self-reliance, weak self-imagination, and matrimonial conflicts may be caused by the sexual dysfunction (30). Likewise, Sexual dysfunction may reduce desire of sexual intercourse due to fear of partner's rejection, and more important, have negative influence on the social communication of a person. Laumann and Waite indicated that the sexual dysfunction influences on the quality of life especially the decrease of spiritual senses and happiness (31). Jeong et al confirmed the relationship of sexual dysfunction with serious depressive symptoms without any consideration to the age, health habits or comorbidities (32).

Unlike the study of Alsibiani and Rouzi (13, 33), total sexual quality of life in mutilated women was

different in our study. A study on African women reported the significant reduction of sexual quality of life in mutilated women (12). But the study of Daneshkhah et al in Piranshahr showed that the quality of life and mental health of mutilated women are in the same level of non-mutilated women in spite of disorder in sexual function of mutilated women (23). On the other hand, in the present study, the total score of sexual quality of life was significantly correlated with age, income, spouse's violence, intercourse frequency, spouse's infidelity, and residence, so that the chances of having a better sexual quality of life were higher in older women. Coital frequency probably due to dyspareunia and decrease of orgasm quality can influence on the sexual quality of life of both couple.

Table 3: The relationship between female genital mutilation status and sexual quality of life and its areas (n=300)

| | B | OR | CI 95% | P- value |
|--|------|------|-----------|----------|
| Self-worthlessness | 1.22 | 0.16 | 1.80-0.64 | 0.0001* |
| Sexual repression | 0.85 | 0.10 | 1.48-0.22 | 0.008* |
| Psychosexual Feelings | 2 | 0.12 | 0.71-3.39 | 0.003* |
| Sexual relationship and satisfaction | 0.88 | 0.32 | 1.51-0.25 | 0.006* |
| Total scores of sexual quality of life | 0.5 | 0.13 | 7.90-2.12 | 0.0001* |

Table 4: The adjusted logistic regression analysis of sexual quality of life and demographic factors in each group

| | | B | OR | CI 95% | P- value |
|---------|-----------------------------------|---------|--------|----------------|----------|
| FGM | Age | 10.33 | 0.26 | 6.15, 14.50 | 0.0001 |
| | Family income | - 5.67 | - 0.17 | -9.16, -2.19 | 0.001 |
| | Spouse's violence | -17.57 | - 0.36 | - 7.44, -27.70 | 0.001 |
| | Intercourse frequency (per month] | - 11.71 | - 0.36 | -5.54, -17.88 | 0.0001 |
| | Spouse's infidelity | - 16.78 | - 0.27 | -4.75, -28.81 | 0.007 |
| | Housing statuses | - 10.88 | - 0.27 | -2.65, -12.19 | 0.01 |
| Control | Women's education | - 2.33 | - 0.13 | - 0.40, -4.26 | 0.01 |
| | Spouse's smoking | - 20.34 | - 0.44 | -9.47, -31.22 | 0.001 |
| | Intercourse frequency (per month] | - 14.49 | - 0.50 | -7.67, -21.30 | 0.0001 |

FGM, female genital mutilation

In study of Raheem et al, the mutilated women's husbands had impotence and premature ejaculation for twice more, and less sexual satisfaction was seen in 56%. There was a significant relationship between women mutilation and existence of psychological and social marriage problems (24). Peltzer and Pengpid found out that the mutilated women experience the sexual partner's violence two times more than others (34). Other researchers have confirmed these results (35).

In the present study, women with lower levels of income, having more spouse's violence, and decreased frequency of intercourse, spouse's infidelity, and non-private residence were less likely than other groups. In the study of Sena et al., the sexual quality of life in mutilated women with educated, employed, and age younger than 30 was better than the others. However, it was not significantly correlated with residence (19). The results of the present study were not in line with the results of the above study in relation to the variables of age and place of residence. The reason for the observed difference may be due to cultural differences, increased adaptation of women over time or religious reasons, and adherence to customs. In a study, despite the sexual dysfunction in mutilated women, there was no significant change in the quality of life and general health of mutilated women compared to non-mutilated ones. About 14% of women in the mutilated group reported a history of violence by their spouse, which was only 3.3 percent in the control group (11). Increasing violence by the spouse and decreasing closeness in the mutilated women is an alarm that threatens many young girls exposed to mutilation in the following years, so planning and designing appropriate interventions in this regard, should be considered by the authorities.

Generally, many different researchers reported the

negative influences of mutilation on sexual life and fertility of women (4, 5, 35), but the results of the present study indicate the mentioned negative effects as well as a general negative psychological effect by reducing SQOL-F score, and contribute to the existing literature on the sexual life of mutilated women. Since this study tried to find very private aspects of women's life, much bias and recall bias may exist. In addition, Shame, accompanying cultural problems and inadequate awareness of one's sexual responses may affect the responses of the participants, as mentioned by others. Similarly, some variables such as perceived violence have not been assessed with validated questionnaires. A wide confidence interval is noted in some of the variables as a result of a small sample size. Conducting further studies with larger sample sizes and in another setting are needed to increase the accuracy and generalizability of the findings obtained from this study.

Conclusion

Female genital mutilation can decrease the sexual quality of life of women and increase the chance of negative consequences such as spouse's violence, reduction of intercourse frequency, and spouse's infidelity. Designing and implementing community-based interventions should be considered to improve the sexual quality of life of mutilated women especially on young women with low income and no personal residence. Also, considering the key role of health professionals in preventing physical, mental and social complications of female mutilation, it is recommended to evaluate the sexual quality of life in mutilated women in health clinics and to provide appropriate and timely interventions.

Conflict of Interests

Authors have no conflict of interests.

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All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee (IR.UMSHA.REC.1396.682), and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

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