REVIEW ARTICLE

Dysfunction and Sexual Self-concept in Infertile Women: A Narrative Review

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Abstract

Aim: To summarize the scientific evidence on sexual dysfunction and self-concept in infertile women.

Methods: We conducted a theoretical review of articles in PubMed on sexual dysfunction and self-concept in infertile women. The search was carried out using a strategy based on MeSH terms and Boolean operators, which identified 47 articles. The selection of articles was done independently, according to the selection criteria, and finally four articles were included.

Results: The review showed results indicating that adequate self-concept positively influences sexual functioning and its domains. Studies agree that infertility negatively affects sexual function, and that sexual function plays an important role in depression and quality of life. Sexual self-concept in infertile women represents a fundamental aspect of improving their psychosocial well-being.

Conclusion: Infertility generates a significant impact on health. Specifically, research has demonstrated that sexual dysfunction is a prevalent issue among women with this condition. Furthermore, studies have indicated a relationship between sexual dysfunction and the sexual self-concept of these women.

Keywords: Female sexual dysfunction, Infertility, Self-concept, Women.

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Introduction

Infertility is defined as the absence of a woman's ability to achieve pregnancy after a period of 1 year or more of sexual intercourse without the use of contraception, and can affect women as well as men.[1,2] The repercussions of infertility are varied and can include consequences at the social and individual level, especially at the psychological level.[3] In women, the ongoing impact on mental health represents a factor that is closely related to sexual dysfunction.[4]

Sexual dysfunction in women tends to be a common problem with a negative impact on daily life, the problem that could trigger the situation is usually multifactorial and requires focus to be evaluated.[5] Women with this condition experience stress and ultimately it impacts on their quality of life due to disruption of arousal, desire, pain during intercourse and/or orgasm.[6] Lack of sexual satisfaction can affect self-esteem and self-image, as they are closely tied to self-concept, which is a person's perception of themselves based on their interactions with others and how they interpret their own behavior. This aspect is fundamental to personality development and also as a part of the recognition of sexuality, since it influences a person's social competence, emotions, thoughts, learning, and self-esteem, which favors self-acceptance, confidence, and attitude towards physical appearance.[7]

The condition of infertility in women represents an important factor of general affectation to sexualhealth and requires comprehensive attention by healthcare providers.[8] In this regard, Lotfollahi et al. consider that a fundamental aspect to promote its improvement in these women is sexual self-concept and all its components, which have shown a significant association with sexual function.[9,10] In this same sense, another study concludes that sexual satisfaction and discomfort with oneself are worse in infertile women.[11]

Infertility represents a significant personal, social, and economic challenge for many women, which has a significant impact on the sexual and reproductive health of future families, as it is not only affects the ability to conceive, but can also influence emotional and psychological aspects. Understanding how this impacts on women's sexuality is essential to develop support strategies that address both sexual health and overall quality of life by identifying key areas, such as sexual motivation and satisfaction, that may be linked to improved sexual functioning and thus improved well-being for these women and their partners.

In this sense, the aim of this study is to summarize the scientific evidence on sexual dysfunction and self-concept in infertile women.

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Methods

A narrative review was conducted of articles indexed in PubMed in the last 10 years that addressed the issue of sexual dysfunction and self-concept in infertile women.

For the manuscript search, a search strategy included MeSH terms and Boolean operators that were created as follows: ("Female Infertility" OR "Infertile Women" OR "Infertile Woman" OR "Subfertility Female" OR "Female Subfertility" OR "Sub-Fertility Female" OR "Female Sub-Fertility" OR "Sub Fertility Female" OR "Sterility Female" OR "Female Sterility" OR "Women with Infertility" OR "Infertility") AND ("Sexual Dysfunction" OR "Sexual Function" OR "Physiological Sexual Dysfunction" OR "Physiological Sexual Dysfunctions" OR "Female Sexual Dysfunction" OR "Sexual Disorders Physiological" OR "Physiological Sexual Disorder" OR "Physiological Sexual Disorders" OR "Sexual Disorder Physiological" OR "Sexual Dysfunctions Physiological" OR "Sex Disorders" OR "Psychosexual Dysfunction" OR "Dysfunction Psychosexual" OR "Dysfunctions Psychosexual" OR "Psychosexual Dysfunction" OR "Psychosexual Disorders" OR "Disorder Psychosexual" OR "Disorders Psychosexual" OR "Psychosexual Disorder" OR "Orgasmic Disorder" OR "Disorders Orgasmic" OR "Orgasmic Disorders") AND ("Concept Self" OR "Self-Perception" OR "Self-Perceptions" OR "Self-Perception" OR "Perception Self" OR "Perceptions Self" OR "Self-Perceptions" OR "Sexual Self-concept" OR "Sexual Self-Perception" OR "Sexual Concept Self" OR "Sexual Perception Self").

The selection process included original articles that addressed the issue of sexual dysfunction and self-concept in infertile women, that were published in scientific journals indexed in PubMed in the last 10 years and that were freely accessible. Articles whose study population was couples were excluded, in addition, review articles, books, book chapters, case reports, editorials, and letters to the editor were not considered.

The PubMed search was conducted on 13 October 2023, and 40 articles were identified, whose metadata were exported in. csv format for import into the online tool Rayyan. The blinded evaluation of each article was performed by two authors (Leslie Martinez Herrera and Nicole López Diaz) who were responsible for reviewing the articles independently; any discrepancies were discussed with a third author (John Barja-Ore). At the end of this process, according to the established selection criteria, four articles were included.

The data extraction process was carried out by one author (Kleider Livias-Moya), and validated by two more authors (Jhaneiza Matos Canchanya and Alejandra Lopez-Vera) in a matrix containing information on authorship, year and country of publication, study objective and sample size, study design and data collection, and finally the main findings of the selected studies (Table 1).

Results

Of the 47 articles identified by the search strategy no duplicates were identified, 27 were subsequently eliminated because they were published prior to the last 10 years and 6 because they were review articles, after which 14 articles were obtained, of which 10 were excluded because they did not comply with the subject of the research. Finally, four articles were included in this review (Fig. 1).

Impact of Infertility on Women

Women with fertility problems experience multiple changes in the normal course of their lives, leading to physical, emotional, psychological, and even social problems.[12,13] In this regard, the study

Table 1: Table for extracting characteristics and information from scientific publications

Authors	*Country and year of publication*	*Aim*	*Sample size*	*Study design and data collection*	*Main findings*
Riazi et al.[10]	2020, Iran	To assess the association between sexual function and self-concept in women with infertility in Iran.	Participants were 250 women with infertility for at least 1 year who were between 18 and 45 years old at an infertility center.	Cross-sectional study, the Female Sexual Function Index (FSFI) questionnaire and the Multidimensional Sexual Self-concept Scale (MSSCQ) were applied.	It is shown that there is a significant association between some aspects of sexual self-concept and sexual function in infertile women, and that sexual motivation and sexual satisfaction were the most important components of sexual self-concept and contributed to sexual function in infertile women.
Agustus et al.[15]	2017, India	To explore the sexual functioning of women with infertility problems, their beliefs about sexuality and their quality of life.	There were 30 married women between the ages of 18 and 45 years with infertility problems undergoing treatment at an infertility clinic.	An exploratory study, and the Female Sexual Functioning Inventory (FSFI), Sexual Dysfunctional Beliefs - Female Version (SDBQ), the World Health Organization's Quality of Life Scale-BREF version (WHOQOL-BREF) and the General Health Questionnaire-12 (GHQ-12) were administered.	About 50% of the participants had sexual dysfunction, mainly related to pain during intercourse. In addition, factors associated with this problem were lack of knowledge about sex, lack of sexual stimulation, and lack of communication. On the other hand, negative childhood experiences, financial difficulties, and parental marital discord affected self-perception.

(Contd...)

Table 1: *(Contd...)*

Authors	*Country and year of publication*	*Aim*	*Sample size*	*Study design and data collection*	*Main findings*
Stenyaeva et al.[16]	2017, Russia	To evaluate sexual dysfunction and assess the need for sexual care to improve the quality of life of women with infertility.	There were 329 infertile women aged 21–46 years attending an infertility center and 722 fertile women attending the same clinic for gynecological consultation.	A descriptive, cross-sectional study in which the Female Sexual Function Index (FSFI) questionnaire was administered.	Sexual dysfunction was identified in 16.1% of infertile women, specifically related to libido disorder (84.9%), dyspareunia (30.2%), and orgasmic dysfunction (13.2%). To improve the quality of life of infertile women, a preventive and therapeutic approach to each need is necessary.
Kulaksiz et al.[14]	2022, Turkey	To assess the effect of male and female factor infertility on anxiety, depression, self-esteem, quality of life and sexual function of women in Turkey.	There were 480 women with infertility and 242 fertile women.	Prospective cross-sectional study using validated questionnaires Beck Anxiety Inventory (BAI), Beck Depression Inventory-II (BDI-II), Rosenberg Self-Esteem Scale (RSES), Fertility Quality of Life (FertiQol) and Female Sexual Function Index (FSFI).	Both female and male factor infertility in women were associated with higher anxiety, depression, lower self-esteem, poorer quality of life, and sexual dysfunction in women. Male factor infertility had a greater impact on female sexual dysfunction. There is little concern about the negatives of infertility in centers, specifically during infertility treatment.

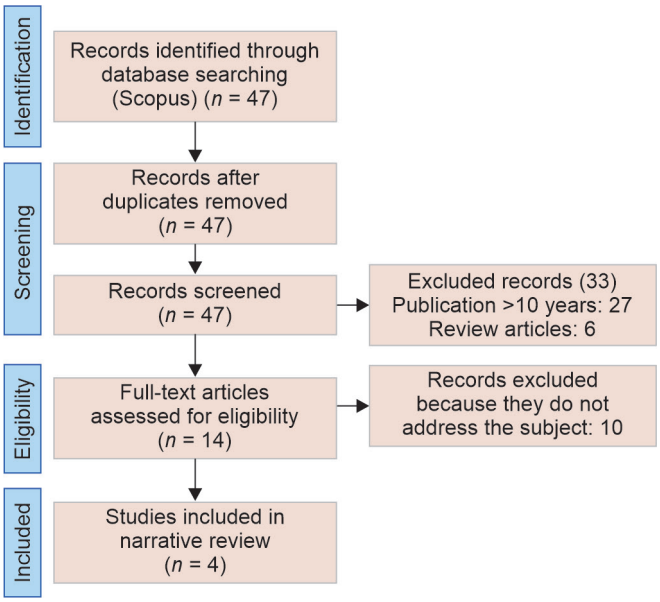

Fig. 1: Flowchart for the selection of scientific publications

conducted in Turkey found that women with female infertility had high levels of depression, anxiety, and low self-esteem, as well as a significantly lower quality of life compared to the male infertility group.[14] Similar research, such as the study by Agustus et al., revealed that the quality of life of infertile women was poor and 56% experienced psychological distress.[15] This emotional impact is also reflected in sexual dysfunction as 16.1% of patients with fertility problems had sexual dysfunction, with symptoms generating stress over a 3-month period, highlighting the emotional complexity associated with infertility and the duration of treatment having a negative impact on women's desire and arousal.[14–16] Women with female factor-related infertility face a risk of sexual dysfunction almost three-times higher than those with infertility linked to other factors.[10]

Female Sexual Function

Sexual function is inherent to the personality and crucial in couple relationships; its complexity, influenced by sociological, neurological, cultural, economic, organic, psychological, and ethical conditions, contributes to the richness and diversity of sexual experience.[17] In addition, sexual function is highlighted as a key factor in quality of life, impacting emotional, and mental well-being, and its connection to satisfaction in personal relationships underscores its integral importance.[18]

Agustus et al. in their study, found that 47% of infertile women had problems in their sexual functioning, while 53% did not.[15] The desire domain was reported to have a direct relationship with arousal ($p < 0.001$; $r = 0.76$), as well as the pain and lubrication domains ($p < 0.001$; $r = 0.63$). On the other hand, the study by Stenyaeva et al. revealed that sexual dysfunction was detected in 16.1% of women with infertility, specifically in each domain, libido disorder was present in 84.9%, dyspareunia in 30.2%, and orgasmic dysfunction in 13.2%.[16]

In the article by Riazi et al.[10] it is revealed that 60.8% of infertile women reported sexual dysfunction; furthermore, it was shown that the age of the woman and husband, the cause of infertility, sexual motivation, and sexual satisfaction were determinant factors for this problem. In addition, sexual satisfaction and motivation were found to improve sexual dysfunction. Kulaksiz et al. showed that women with female factor infertility had better ratings of desire, orgasm, arousal, and satisfaction than women with male factor infertility.[14] The assessment of lubrication was similar in both groups.

Sexual Self-concept

Sexual self-concept, which encompasses subjective perceptions and emotions about one's sexuality, has been studied in women with infertility problems. In a study conducted in Iran, the Multidimensional Sexual Self-Concept Questionnaire was used to examine this relationship. The results revealed significant associations between specific dimensions of sexual self-concept, such as sexual anxiety, motivation and satisfaction, and factors such as age, cause of infertility, sexual satisfaction, and motivation.[10] In another investigation it was reported that only 35.4% of women believed they had a sexual disorder, 34.2% denied the presence of a disorder and 30.4% found it difficult to respond to these aspects of their sexuality.[5] These findings underline the importance of addressing sexual self-concept to improve their psychosocial well-being during treatment.

Sexual Function and Self-concept

In a study by Agustus et al. it was found that approximately 50% of women with infertility had sexual dysfunction, associated with lack of knowledge about sexuality, inadequate sexual stimulation, and communication problems.[15] In addition, it is evident that women with an adequate self-image have better scores on their sexual functioning. On the other hand, Riazi et al. found that there was an association between sexual motivation and satisfaction, as components of sexual self-concept, with sexual function in women with infertility.[10] Thus, it is evident that having a positive perception of sexuality and feeling motivated to have satisfying sexual relations is associated with better sexual functioning. In contrast, women who were less sexually motivated and dissatisfied with their sexuality were more likely to exhibit sexual dysfunction at various stages of sexual response.

Conclusion

In conclusion, infertility is a complex problem for women's physical, psychological, and social health; specifically, sexual dysfunction represents a frequent affectation, with main affectation in the dimensions of sexual satisfaction, orgasm, and desire. This, in turn, has shown a significant relationship with the sexual self-concept of women with infertility problems. Research in this thematic area requires further investigation to generate a better understanding of sexuality in women with this problem and adequately address the challenges it represents.

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