Evaluating the Relationship Between Structural Determinants of Health and Quality of Sexual Life in Women: A Systematic Review

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Abstract
Objectives: Quality of sexual life can be influenced by cultural and social contexts. This study aimed to investigate the relationship between structural determinants of health (such as education, income level, job, culture, and ethnicity) and quality of sexual life in women.
Methods: In this systematic review, we searched six databases, including Web of Science, Scopus, ProQuest, PubMed/Medline (NLM), Cochrane, Embase, and Cochrane Central Register of Controlled Trials (CENTRAL) to obtain all the related observational studies (cross-sectional, cohort, and case-control).
Results: Nine studies met the inclusion criteria. Based on the Newcastle-Ottawa Scale (NOS), the risk of bias in most of the included studies was fair. According to the results, the relationship between education level and quality of sexual life among women was significant in four studies. Also, in one study, job and income level were significantly correlated with women's quality of sexual life.
Conclusions: Based on the results, structural determinants of health, including education, job, and income level were significantly related with women's quality of sexual life.
Keywords: Quality of sexual life, Social determinants of health, Women

Introduction

As a substantial portion of life's quality, the quality of sexual life is often overlooked (1). The quality of life refers to people's perception of their cultural position, value system, goals, expectations, standards, and priorities. Likewise, the quality of sexual life is a subjective concept which depends on one's perception of one's sexuality (2). Quality of sexual life, thus, functions as a means of examining the relationship between sexual problems and quality of life (3). Optimal quality of sexual life causes more positive sexual feelings, thereby leading to life satisfaction and happiness (4). It has been observed that decreased quality of sexual life can increase anxiety, depression, and marital disorders (5). Moreover, as one of the causes of stress in couples, sexual dysfunction can affect the perceived quality of sexual life (6), self-confidence, and the relationships between them (7). Therefore, paying attention to the determinants of sexual intercourse and its quality seems to be substantially necessary. Currently, there is a wide perspective towards health and more attention is paid to non-medical determinants of health (8).

Social determinants of health are the conditions in which a person is born, grows up, lives, and works. Either alone or interacting with each other, each of these determinants can strongly affect health and cause more injustice in health conditions (9). Structural determinants refer to factors such as education, job, income level, culture, religion, and ethnicity, which create a social class. These factors are also known as social determinants of health injustice (10).

Being determined by cultural and social contexts of any society, quality of sexual life plays a significant role in satisfaction, public health, improvement of interpersonal relationships, and maintenance and promotion of family and community health (11). Accordingly, this systematic review study was conducted to investigate the relationship between structural determinants of health and quality of sexual life in women.

Methods

Information Sources and Search Strategy

In this study, were systematically searched six electronic database, including Web of Science, Scopus, ProQuest, PubMed/Medline (NLM), Cochrane. Embase, and Cochrane Central Register of Controlled Trials

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(CENTRAL) to obtain the related observational studies (cross-sectional, cohort, and case-control). Firstly, synonyms were excluded using the MeSH (Medical Subject Headings) in PubMed, EMTREE in EMBASE, and key words in the preliminary studies. Next, the PubMed search syntax was translated into other databases, using a controlled vocabulary. Details of syntax can be found in Supplementary file 1. We also evaluated the references of the reviewed articles and the main journals publishing the related studies.

Inclusion Criteria

We included all observational studies (cross-sectional, cohort, and case-control) investigating the relationship between structural determinants of health and quality of sexual life published in prestigious English or Persian journals from 2010 to 2021. We considered all preliminary studies whose subjects were non-pregnant women in the age range of 15-65 years, six months had passed from their delivery, had no risk of genital or breast cancer, and no chronic disease (diabetes, hypertension, cardiovascular disease, kidney disease, etc). All abstracts, conference papers, website material, review articles, qualitative studies, interventional studies, case series, and case reports were excluded. Since the primary objective was to determine the relationship between structural determinants of health and quality of sexual life in women, we considered all studies evaluating this issue through using the Sexual Quality of Life-Female (SQOL-F) questionnaire developed by Symonds et al. The secondary objective was to determine the relationship between age, marriage duration, spouse's job, and spouse's education level with quality of sexual life.

Selection Process

All searched studies were entered into Endnote software and duplicate studies were removed. Two researchers (M.B. and Z.M.) independently evaluated the title and abstract of the studies in terms of inclusion criteria. If the information included in the title and abstract was inadequate, the full texts were reviewed. Moreover, all contradictions appeared in the evaluation of the title and abstract of the articles were resolved by discussion, so that a consensus could be achieved. Additionally, arrangements were made to use a third person to reach a unified conclusion if the conflict was not resolved through discussion. In this review study, meta-analysis was impossible due to the impossibility of extracting the

effect size (RR or OR) from the studies to determine the relationship between quality of sexual life and structural determinants of social health after categorizing and reviewing the included studies.

Risk of Bias Assessment

The Newcastle-Ottawa Scale (NOS) was used to evaluate the quality of the studies. This scale has versions for cohort and case studies, and a modified version for cross-sectional studies. According to this scale, the minimum and the maximum scores are zero and 9 (stars), respectively. Articles with a score of 6 or higher are considered as low-risk and high-quality articles, whereas those with a score of <6 are considered as low-quality. Based on the version modified for cross-sectional studies, the minimum and maximum scores are zero and 10, respectively; it evaluates the studies in three parts of selection process, comparability, and results. The selection process part examines the articles for sample visibility, sample size, non-response, and measurement tools, with the maximum score of 5. The comparability part examines studies in terms of confounding factors based on study design or analysis, with the maximum score of 2. The results section evaluates the results and statistical tests of the studies through using two questions, and has a maximum score of 3 (12).

Results

In the present systematic review, our search strategy yielded a total of 2453 initial studies (PubMed = 391, Scopus = 653, Embase = 636, Web of Science = 379, Cochrane = 311, ProQuest = 58, other sources = 25). All the retrieved studies were entered into Endnote software. After removing duplicate studies, 1012 studies remained. Then, the title and abstract of the studies were reviewed and unrelated studies were removed in the first stage of screening. Next, the full text of 24 related studies were evaluated in terms of inclusion and exclusion criteria. Finally, nine studies with a sample size of 90 to 800 subjects and a total number of 2789 samples were included in the study (Figure 1).

Among the included studies, eight studies were cross-sectional (13-20) and one study was case-control (21). Of the mentioned studies, four cases had been conducted in Iran, four in Turkey, and one in South Korea. The full texts of seven studies were in English and two in Persian (Table 1).

Based on the score obtained for the evaluation of the methodological quality of the selected studies using the NOS, four studies (13-16) had a score of 6 or higher (high quality), and five studies had a score lower than 6 (low quality). While seven studies had used non-random sampling method, two studies had used randomization method.

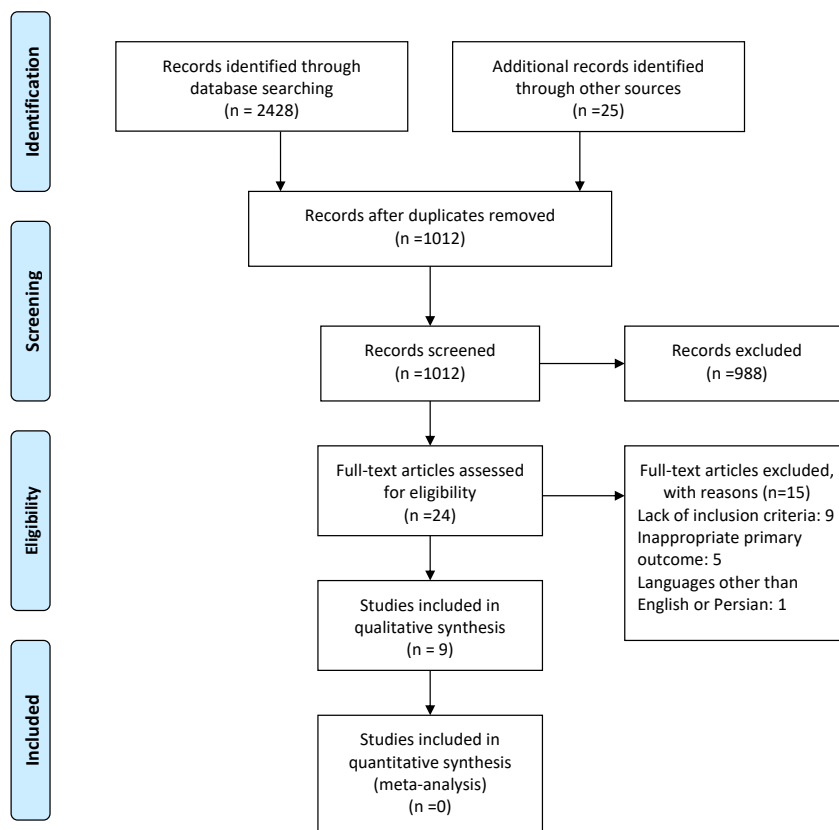In this systematic review, the mean age of women was

Figure 1. Flowchart of the Study.

35.2 ± 2.6 years and the mean score of quality of sexual life was 73.8 ± 10.6 in the included studies. Because of the impossibility of calculating the effect size, meta-analysis was not performed.

The relationship between women's education level and quality of sexual life was evaluated in all the selected studies. A statistically significant relationship was observed between education and quality of sexual life in four studies (13, 14, 17, 21), while no significant relationship was observed between these two variables in five other studies (15, 16, 18-20).

Among the studies included in this review, six studies (13, 16-20) had evaluated the relationship between job and quality of sexual life in women. Of these studies, only one study (13) reported a statistically significant relationship between job and quality of sexual life in women.

Six studies (13, 16-20) had evaluated the relationship between income level and quality of sexual life in women. Among the included studies, the relationship between income level and women's quality of sexual life was significant only in one study (13).

Also, no study had examined the relationship between culture and ethnicity with the quality of sexual life.

Discussion

The present systematic review aimed to determine the relationship between structural determinants of health and women's quality of sexual life. Most of the eligible studies included in this review had evaluated the effect of three factors (education level, job, and income level) on quality of sexual life. In most studies, no relationship was found between these factors and quality of sexual life. In terms of education level, only four studies and in terms of job and income level, only one study reported a statistically significant relationship between these variables and women's quality of sexual life.

Zhang et al investigated the role of education in improving quality of sexual life. Based on their results, there was a direct and significant relationship between education and sexual disorders, so that people with low level of education were more likely to have sexual dysfunction and their sexual life had a lower quality (22). Accordingly, incorrect attitude towards sexual issues and the rise of sexual problems in couples are caused by inadequate knowledge and awareness. By contrast, education provides better access to information that, in turn, is more likely to improve one's quality of sexual life. In this regard, Erdogan found a relationship between high levels of education and marital satisfaction. Thus, the higher the marital satisfaction, the better will be sexual function and quality of sexual life (23). Moreover, more educated women have more job opportunities and higher income levels. Improving the standard of living in women and optimal economic level of the family increase women's peace and life satisfaction in life, thereby leading to their better marital relations. This, in turn, will positively affect

Table 1. Data extracted From the included Studies

Author	The Location of the Study	Type of Study and Sampling Methods	Sample Size	Main Results	Quality Score (NOS)
Shekhani et al (14)	Iran	Cross sectional Random (cluster) sampling	800	The variables of age, level of education, perceived stress, sexual violence, and high-risk behaviors were related to quality of sexual life.	8
Eftekhar et al (21)	Iran	Case-control Convenience sampling	150	The variables of age, duration of marriage, level of education, body image, and sexual function predicted the quality of sexual life in women and were able to predict 60% of the variance in the women's quality of sexual life.	5
Kim and Kang (13)	South Korea	Cross sectional Convenience sampling	367	The demographic variables of age, level of education, job, and income level predicted the quality of sexual life, as well as 40% of the variance in the quality of sexual life. Moreover, quality of life, depression, and body image had a statistically significant relationship with the quality of sexual life.	6
Samimi et al (17)	Iran	Cross sectional Convenience sampling	121	Level of education, quality of sleep, duration of marriage, and physical activity had a statistically significant relationship with the women's quality of sexual life ($P<0.05$). According to the regression model, the variables of education level, duration of marriage, and sleep quality were predictors of the quality of sexual life in women.	5
Türkben Polat and Kaplan Serin (19)	Turkey	Cross sectional Convenience sampling	90	The results showed that unhealthy behaviors (alcohol consumption and smoking), access to family planning, job, income level, and education were not related to the quality of sexual life. The results of multivariate regression showed that age, self-confidence, physical activity, body mass index, and number of deliveries predicted the quality of sexual life in overweight women.	5
Tugut et al (20)	Turkey	Cross sectional Convenience sampling	100	No statistically significant relationship was observed between demographic variables and the quality of sexual life ($P>0.05$). There was also a negative relationship between depression and the quality of sexual life (r = -0.52, $P<0.05$), as well as between general health status and the quality of sexual life (r=-0.47, $P<0.05$).	5
Taskin Yilmaz et al (18)	Turkey	Cross sectional Random sampling	538	No statistically significant relationship was observed between education level, job, and income level. There was also a statistically significant relationship between body image and the quality of sexual life ($P<0.05$). The results of linear regression model revealed that body image was the only predictor of sexual quality in women which predicted 15% of the variance of the quality of sexual life in women.	4
Tuncer et al (16)	Turkey	Cross sectional Convenience sampling	365	There was a statistically significant relationship between marital compatibility and the quality of sexual life (r=0.545, $P<0.001$). Among the demographic variables, only age, age of spouse, number of children, and duration of marriage were significantly related with the quality of sexual life ($P<0.05$).	6
Ahmadian Chashemi et al (15)	Iran	Cross sectional Convenience sampling	258	A statistically significant relationship was found between the quality of sexual life and the variables of age, age of spouse, duration of marriage, work experience, and sexual self-efficacy, which predicted 44% of the variance in women's quality of sexual life score.	6

NOS, Newcastle-Ottawa Scale.

women's various aspects of life, including their sexual relationship and the quality of sexual life (24). However, a poor socioeconomic status may decrease self-esteem and increase psychological problems, thereby reducing sexual function and satisfaction (25). As a complex structure measured by education and income levels, socioeconomic status is commonly used to describe social inequalities. Nonetheless, lower socioeconomic status cannot be considered as a direct and independent factor influencing sexual problems. It rather may lead to sexual problems in couples and reduce the quality of their sexual life by creating unhealthy behaviors, stress, and psychological reactions to stress (26). A similar finding was also reported in the studies by Afzali et al (27) and Gazibara et al (28). Indeed, it should be noted that when people's basic needs, such as financial needs, are not met, sexual life and sexual relationship are not given priority.

Conclusions
Based on the results of the present systematic review, structural determinants of health, including education, job, and income level were significantly related with women's quality of sexual life. However, it should be noted that only four studies reported this relationship for the variable of education level and only one study for the job and income level. No relationship was reported in other studies included in this review. Given the limited studies in this area, further studies are required to evaluate the relationship between structural determinants of health and quality of sexual life among women and report more accurate results.

Supplementary files

Supplementary file 1. Search Strategies in the Studied Databases.

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