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Review Article

The effects of psychological interventions on sexual function of women: A systematic review and meta-analysis

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ABSTRACT

Background & Aim: Despite expand using psychological interventions, there is no obvious evidence about the effects of them on sexual function. The study aimed to determine the effect of psychological interventions based on different approaches to the sexual function of women.

Methods & Materials: Pubmed, ISI, SCOPUS, EMBASE, Cochrane reviews, Science direct, SID, and Magiran were searched up to May 2019. Eligible studies were randomized controlled trials in which the effect of psychological interventions on the sexual function of women was assessed using the Female Sexual Function Index without any limitations based on age, ethnicity, language, and nationality. Two of the authors screened the titles/abstracts and obtained all full text of the candidate studies, independently. The quality of studies was assessed using the Cochrane checklist risk of bias. Meta-analysis performed via standardized mean differences with a random-effects model using Review Manager Software (RevMan) version 5.3.

Results: Twenty-one studies with 1460 participants were included. The most effective psychological intervention was individual and group type (SMD=3.82; 95% CI, 2.56, 5.08; P<0.001) with cognitive approach (SMD=2.50; 95% CI, 1.06, 3.95; P<0.001), especially in women with no specific condition (SMD=2.17; 95% CI, 1.20-3.15; P<0.001). The effect of psychological interventions on sexual function increased from 1.48 in one month to 2.30 and 3.78 in two and three months after the intervention; however, it decreased to 1.43 in six months or more follows ups (all Ps<0.001). There was a significant change in all FSFI domains (all Ps<0.01).

Conclusion: Based on the results, individual and group psychological interventions using the cognitive approach and multidimensional therapies with long term follow-ups are suggested for the treatment of sexual dysfunction.

Introduction

Sexual function has a positive relationship with physical, social, and functional dimensions of quality of life (1). According to new version of the Diagnostic and Statistical Manual of Mental Disorder (DSM-V), Sexual dysfunctions (SD) in women include female orgasmic disorder, female sexual interest/arousal disorder and, genito-pelvic pain/penetration disorder (2) Although sexual dysfunction is common worldwide (3), it varies largely in different cross-cultural groups. For instance, in 2016 published studies, it is 55.55% in Indian fertile females (4), 52.5% in Turkish (5), 27% in Hong Kong (6), and 51.2% in Britain (7). Also, sexual dysfunction is more prevalent in women with some diseases, like various types of cancers (60%), especially gynecological cancers (78.44%) (8) and resistant hypertension (72%) (9). There are different options for the treatment of sexual dysfunction in women including Biomedical

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Golbabaei (2019)	Iran	Moderate	Individual	Educational Intervention	Patients	28.7	29.7	33	33	21 (2.3)	20.3 (2.5)	20.6 (2)	24.4 (2.7)	Yes
Hezbiyan (2016)	Iran	Low	Individual	Educational Intervention	Pregnant or parturient women	NR	NR	30	30	28.5 (22.4)	40.0 (14.2)	34.2 (19.4)	67.4 (7.3)	Yes
Hosseini (2016)	Iran	Moderate	Group	Educational Intervention	Patients	48.5	48.1	24	24	20.8 (7.7)	19.7 (6.7)	25.1 (9.5)	36.6 (4.0)	Yes
Jones (2011)	Australia	Low	Individual	Cognitive Therapy	Patients	33.3	34.9	17	11	21.9 (6.5)	19.7 (5.7)	18.6 (8.2)	27.3 (3.9)	Yes
Khakbazan (2016)	Iran	High	Individual	Educational Intervention	Women with no specific condition	35.6	34.7	45	43	22.1 (0.6)	21.1 (0.6)	NR	NR	Yes
Masheb (2009)	USA	High	Individual	Cognitive Therapy	Women with no specific condition	43	43.0	25	25	18.4 (1.7)	15.9 (1.7)	19.5 (1.7)	21.9 (1.7)	No
Moradi (2016)	Iran	Low	Group	Others	Patients	45.7	44.7	56	57	23.1 (2.8)	21.8 (3.7)	22.4 (3.0)	26.5 (3.5)	Yes
Nejati (2017)	Iran	High	Individual	Educational Intervention	Pregnant or parturient women	27.1	26.3	40	40	20.3 (3.6)	19.9 (2.7)	20.7 (3.9)	25.2 (1.8)	Yes
Nho (2013)	Korea	Moderate	Individual	Educational Intervention	Patients	44.0	44.3	22	21	10.7 (7.9)	11.7 (7.9)	9.2 (8.9)	23.1 (6.9)	Yes
Rostamkhani (2012)	Iran	Moderate	Individual	Educational Intervention	Women with no specific condition	23.1	23.7	40	40	24.4 (4.6)	25.3 (4.8)	23.7 (4.4)	29.4 (4.2)	Yes
Rostamkhani (2016)	Iran	Moderate	Individual	Educational Intervention	Pregnant or parturient women	24.9	25.1	30	30	25.1 (4)	24.7 (4.3)	23.7 (5)	28.1 (4.5)	Yes
Soltani (2015)	Iran	Low	Individual & group	Cognitive Therapy	Women with no specific condition	33.1	34.0	15	15	36.0 (4.4)	37.9 (4.7)	39.3 (6.7)	65.2 (6.5)	No
Torkzahrani (2016)	Iran	High	Individual	Educational Intervention	Pregnant or parturient women	23.4	24.9	45	45	20.5 (3.7)	19.3 (4.6)	22.4 (3.8)	27.9 (3.7)	Yes
Tutuncu (2012)	Turkey	Low	Individual	Educational Intervention	Patients	52.0	48.4	35	35	23.2 (5.5)	25.1 (6.3)	NR	NR	Yes
Ziaee (2013)	Iran	Low	Group	Cognitive Therapy	Women with no specific condition	21.6	21.5	14	14	23.2 (2.4)	22.2 (4.0)	22.4 (1.5)	29.4 (1.7)	Yes

Fourteen studies declared the sexual functions including desire, arousal, lubrication, orgasm, satisfaction, and pain immediately or one month after intervention, which were included in the meta-analysis. Two studies did not report FSFI domains (Table 1). The funnel plot showed an asymmetric pattern. So according to this test, the existence of publication bias is unlikely (Figure 2).

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