

In the name of God

**THE EFFECTIVENESS OF PSYCHOLOGICAL INTERVENTIONS
ON
SEXUAL FUNCTION OF INFERTILE WOMEN:
A SYSTEMATIC REVIEW AND META-ANALYSIS**

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BACKGROUND

- ❑ Sexual function is a complex biopsychosocial phenomenon which is one of the issues strongly affected by infertility
- ❑ Sexual dysfunction prevalence:
 - 43-90% of infertile women
 - 64% of infertile Iranian women
- ❑ In general, sexual dysfunction is more common in women rather than men



BACKGROUND

- ❑ **Female sexual dysfunction** is defined as a lack of libido, impaired arousal, inability to attain orgasm, pain accompanied with sexual activity, or a combination of mentioned problems.



BACKGROUND

- ❑ Infertile couples complain of a poor sexual function and marital satisfaction.
- ❑ Infertility can cause considerable psychological distress
- ❑ Such psychological conditions may lead to sexual disorders
- ❑ Thus, psychological interventions could be promising methods for infertile women's sexual dysfunction.



BACKGROUND

- ❑ Managing **sexual disorders** through **psychological interventions** in infertile women **need more efficient and comprehensive review studies to affirm their use in evidence-based medicine.**
- ❑ Systematic reviews and meta-analyses help to incorporate the common knowledge and hence to simplify the translation of research findings into practice



- ❑ To the best of our knowledge, no systematic review and meta-analysis has investigated the effect of psychological interventions on sexual function among infertile women. Therefore, it was aimed to **critically appraise and synthesize** the best available evidence on the effectiveness of **psychological interventions on sexual function of infertile women.**

Methods



INFORMATION SOURCES AND SEARCH STRATEGY

- ❑ A comprehensive search: Medline, Scopus, Cochrane Central Register of Controlled Trials, Web of Science, and PsycINFO.
- ❑ All references related to the search terms in MeSH including counseling, sexual counseling, psychological intervention, sexual disorder, sexual dysfunction, sexual behavior, sexual activity, sexual function, psychosexual dysfunction, sexual arousal, vaginismus, orgasm were searched.
- ❑ Search period: from conception to Jun 2022



INCLUSION AND EXCLUSION CRITERIA

The Cochrane PICO:

- ❑ **Population:** infertile women with primary or secondary infertility. Other population groups such as men, or fertile women, women with polycystic ovary syndrome (PCOS), and pregnant women were excluded.
- ❑ **Interventions:** all psychological interventions that were conducted to improve sexual function or to convert sexual dysfunctions.
- ❑ **Comparison group:** routine care, with no additional intervention.
- ❑ **Outcome:** sexual function (Female Sexual Function Index (FSFI))



QUALITY ASSESSMENT

A Critical Appraisal Tool (CAT) titled Jadad:

- ❑ Random assignment (2 items), double blinding (2 items), and the flow of patients (1 item).
- The overall scale: 5 items (0 to 5)
- A study could be judged to have poor quality with an awarded score of two or less, and high quality with a score of 3 or more



ANALYTIC TESTS

- ❑ Meta-analyses were carried out using **R software** version 4.2.0
- ❑ Random-effect model was used to pool the effect size.
- ❑ The **effect size** was reported with the standardized mean difference (**SMD**).
- ❑ Assessment of **Heterogeneity**: The **I²** statistic
- ❑ Sensitivity analysis: **Influence analysis**



Results



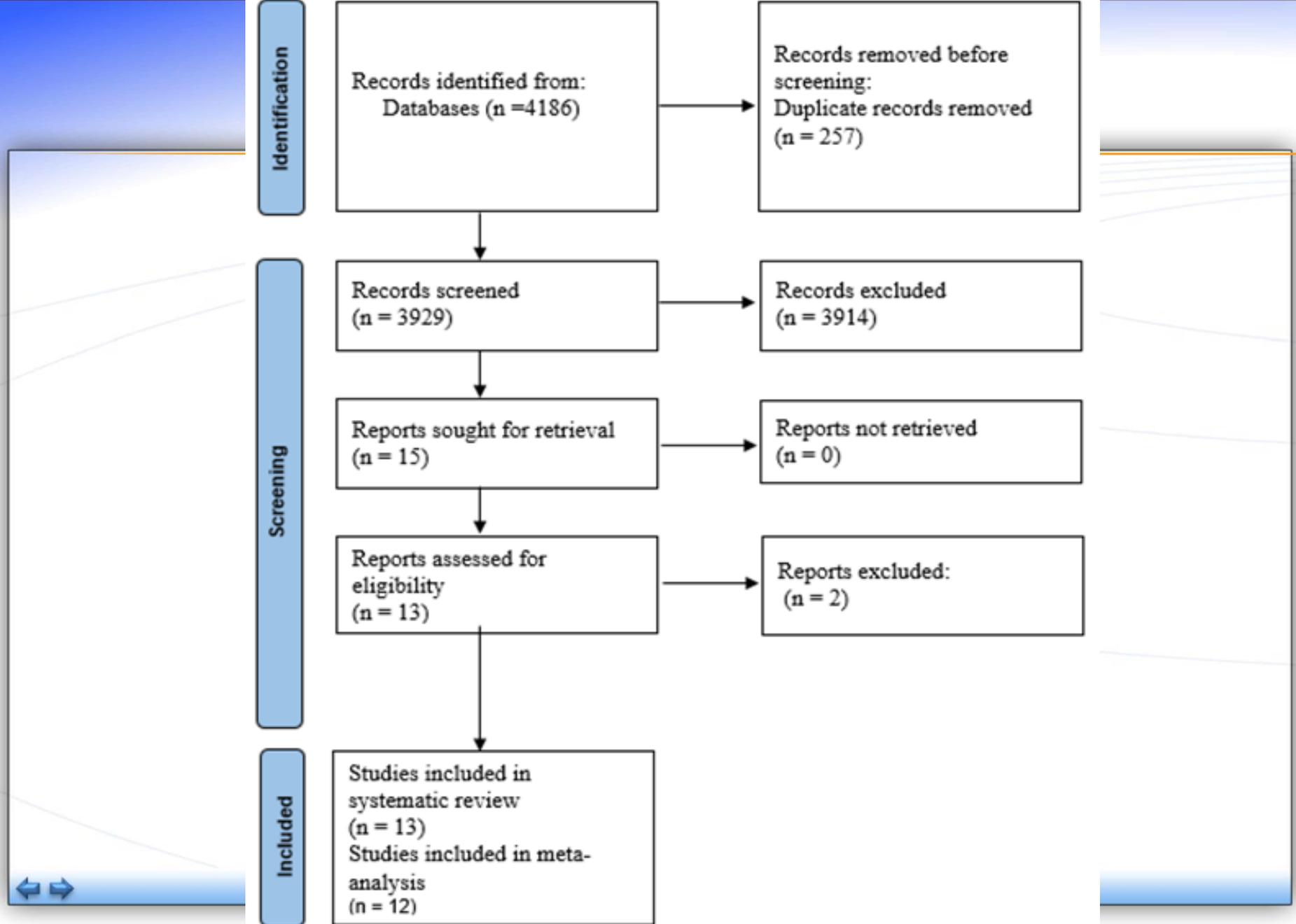


Figure 1- PRISMA Flow diagram of study selection

THE CHARACTERISTICS OF THE INCLUDED ARTICLES

- The participants:
 - 792 infertile women
 - 18- 45 years old
- Psychological interventions: 10 approaches
- The **type** of psychological interventions: in six studies as **individual**, in five studies as **couple** and in two studies as **group** interventions.
- The **frequency** of outcome measurement: 2- 3 times
 - In **all studies**, sexual function was measured at the **baseline**.
- The **duration of measuring outcome**: immediately after to 4 months following intervention.



THE CHARACTERISTICS OF THE INCLUDED ARTICLES

- ❑ Total score of sexual function in all studies was significantly increased in the intervention group compared to control group ($P < 0.05$).
- ❑ 9 studies reported domains of FSFI in the control and intervention groups. Among them, all domains of FSFI in 5 studies improved significantly in intervention group compared to control group.



TABLE 1- TOTAL SCORES OF INCLUDED STUDIES BASED ON JADAD SCALE

Study	Items			
	Randomization	Blinding	An account of all patients	Total score
<u>Jalilian et al. (2017)</u>	1	0	1	2
<u>Marvi et al. (2019)</u>	2	2	1	5
<u>Mohammadzadeh et al. (2020)</u>	2	0	1	3
<u>Hasanzadeh et al. (2019)</u>	1	0	1	2
<u>Fahami et al. (2015)</u>	2	0	1	3
<u>Pasha et al. (2020)</u>	2	0	1	3
<u>Sahraeian et al. (2019)</u>	2	0	1	3
<u>Hasanzadeh et al. (2018)</u>	1	0	1	2
<u>Shayan et al. (2022)</u>	1	0	1	2
<u>Karakas et al. (2019)</u>	0	0	1	1
<u>Momeni et al. (2018)</u>	2	0	1	3
<u>Alimanesh et al. (2021)</u>	2	0	1	3
<u>Ramadan et al. (2018)</u>	0	0	1	1

TABLE 2- INFLUENCE ANALYSIS OF THE INCLUDED STUDIES

	Random effect model based on SMD	95%CI	p-value	τ^2	95%CI	I^2	95%CI	p-value test of heterogeneity
Main analysis	1.74	0.64-2.83	0.005	2.71	1.28-8.23	93.9%	91.1-95.9	<0.0001
Influential cases removed	0.99	0.70-1.29	<0.0001	0.038	0.00-0.46	31.8%	0-69.7	0.17



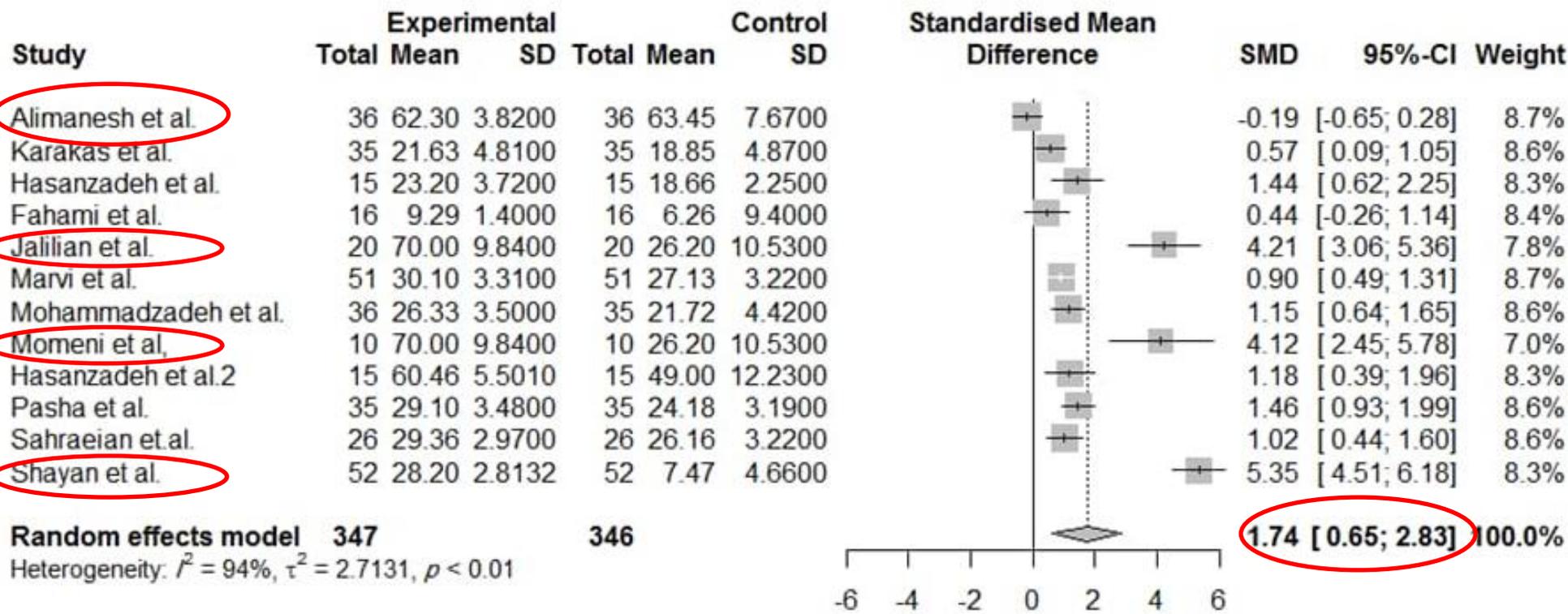


Figure 2. Forest plot for Standardized Mean Difference of sexual function for psychological intervention and control group

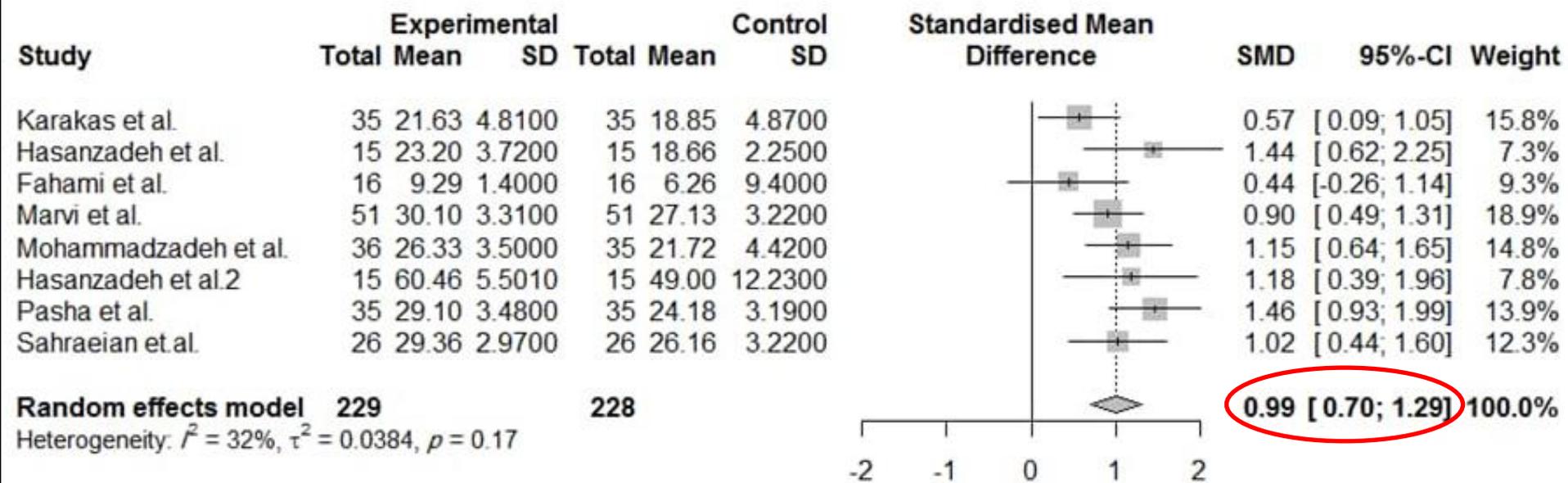


Figure 3- Forest plot for Standardized Mean Difference of sexual function for psychological intervention and control group, after removing influential cases.

CONCLUSION

- ❑ In sum, the results showed the **superiority of psychological interventions** compared to control group.
- ❑ The present findings showed that psychological interventions can support infertile women undergoing treatment to improve their sexual function, and as a consequence their marital relationships.
- ❑ The results of this systematic review and meta-analysis **provide a guide for policy makers and health care providers to design and implement programs to enhance the intended outcomes related to sexuality for infertile women.**



Thank you.

