

# The Effectiveness of Non-pharmacological Alternatives for Managing Stress, Anxiety and Depression in Women ongoing Infertility Treatment

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## Background

Infertility affects 13% of reproductive age women in the United States per year. Women undergoing infertility have increased risk for poor psychological health. Stress, anxiety and depression are psychological factors affecting women's physical, social, and infertility success. Targeted interventions have shown success in women undergoing infertility treatment, yet they are not always recommended by providers due to lack of knowledge.



[https://3.bp.blogspot.com/-Oe8RzQ-Rp\\_YUGJ6eHeGz2I/AAAAAAWVA/MhnZk2\\_3Edc/w1200-h630-p-k-no-nu/digestive%2Bdisorders.jpg](https://3.bp.blogspot.com/-Oe8RzQ-Rp_YUGJ6eHeGz2I/AAAAAAWVA/MhnZk2_3Edc/w1200-h630-p-k-no-nu/digestive%2Bdisorders.jpg)

## Purpose

This systematic review will describe the available interventions to improve psychological health for women undergoing infertility treatment. We will conclude with recommendations for healthcare providers serving this population.

## Method

Four constructs were included in the search

- 1) Stress or anxiety or depression
- 2) Assisted reproductive technologies or artificial insemination
- 3) Yoga, Counseling, Social networking, social support, or psychotherapy groups,
- 4) Support groups, meditation, body mind intervention, expressive writing, acupuncture, or music therapy.

**Total 17 articles used in systematic review**

### CINAHL

Four constructs above using "and"  
109

Filter English and last 5 years  
39

Eliminate duplicates and exclusions  
3

### PubMed

Four constructs above using "and"  
667

Filter English and last 5 years  
667

Eliminate duplicates and exclusions  
14

## Results

Interventions	Number of participants in study	Screening tool used	Timing of intervention	Results
Acupuncture	1. 424 exp. grp; 424 control grp 2. 19 laser acupuncture and 32 acupuncture	1. STAI MOS 26- short form 2. POMS STAI	1. 3 sessions: days 6-8 of stim, 1 hr prior to ET and following ET; 2. 10 or 20 minutes twice weekly x 3 months prior to start of treatment	Significant decrease in anxiety.
Counseling	1. 34 couples exp. grp and 34 couples in control grp	1. FertiQol FPI ENRICH	1. One to five 1 hour sessions depending on couple needs at start of treatment	Improvement in quality of life. Decreased stress levels.
E-therapy	1. 61 exp. grp and 59 control grp.	1. HADS	1. One module completion in 5 weeks	Reduction of depression and anxiety but not significant.
Expressive Writing	1. 153 exp. grp; 142 in control grp 2. 46 exp. grp and 45 control grp. 3. 78 gratitude grp, 78 mindfulness grp and 78 control	1. COMPI BDI-II STAI 2. SAS-20 SCL-90-R 3. PHQ-9 GAD -7 PSQI FPI MAAS GQ-6	1. 3 EWI at start of treatment, 5 weeks later prior to pregnancy test and 16 weeks post intervention 2. One EWI at start, 2 in the middle and 1 at the end of treatment (10-14 day period) 3. Beginning of treatment, prior to ET and 3 days prior to pregnancy test ( 4 weekly 1 hour sessions)	Reduction of anxiety symptoms but not significant. Significant decrease in depressive symptoms.
Mind/Body/Spirit	1. 62 MBP grp and 37 control grp 2. 110 MBP grp and 213 in control grp 3. 45 exp. grp and 45 control	1. ISSL 2. FertiQol 3. BDI	1. 2 hour sessions weekly for 8 weeks 2. 4 months prior to start of treatment 3. 90 minute biweekly sessions x 4 weeks prior to start of treatment	Improvement in Quality of life. Significant decrease in stress and depression.
Music Therapy	1. 70 music grp, 70 headphone grp and 69 control grp 2. 89 music grp and 97 control grp	1. VAS-P STAI BDI GHQ 2. STAI	1. Prior to egg retrieval and upon completion 2. 28 minutes prior to ET and post ET	Stress levels decreased but not significant. Improvement on pain management.
Social Network	1. 90 participants	1. PSS	1. Survey questionnaire based over the previous 6 months	Improvement in stress levels but not significant.
Social Support	1. 45 exp. grp and 41 control grp 2. 201 women and 201 men	1. Cortisol testing before and after completion of study 2. COMPI	1. 3-5 hour discussion session post video 2. Study was at start of treatment	Significant decrease in stress levels.
Yoga	1. 49 participants 2. 64 yoga grp and 64 control grp	1. FertiQol DAS STAI BDI 2. COMPI	1. 2hr weekly session x 6 weeks prior to IVF treatment 2. 1 hour twice weekly x 6 weeks starting just prior to start of treatment	Significant decrease in stress levels.

## Implications for Research and Practice

Utilizing targeted interventions described are potential ways to help decrease stress, anxiety, and depressive symptoms in women seeking infertility treatment. Healthcare providers can provide education to patients about these interventions that are evidence based in order to help improve the psychological well-being of these women and improve quality of life.

