

The Effect of Alternative Therapies on Decreasing Psychosocial Factors in Women

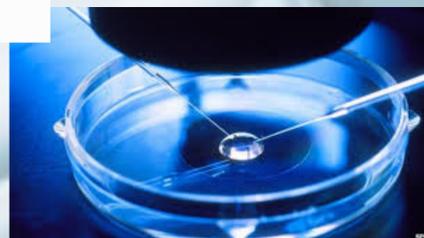
Undergoing In Vitro Fertilization

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Introduction

- In vitro fertilization (IVF) is often a couple's last resort in terms of overcoming infertility in order to achieve pregnancy.
- About 6% of married women in the US between the ages of 15-44 years experience infertility (Infertility, 2015)
- 7.4 million women of this age range having utilized infertility services (Infertility, 2015)
- As of 2013, 170,000 total IVF treatment cycles in the US (SART, 2013)
- Average cost of a single IVF cycle: about \$12,400 (Martin, et al. 2011)
- IVF can be financially burdensome even for those who do receive insurance coverage (Martin, et al. 2011)
- Women undergoing treatment frequently report feelings of anxiety, depression, and distress (Greil, et al. 2010)
- Infertility-specific stress and nonspecific anxiety for women undergoing IVF negatively associated with a positive pregnancy outcome (Gourounti, et al. 2011)
- Alternative mind-body and body-based therapies shown to be effective in reducing anxiety (Hart, 2006)
- Potentially beneficial effects of alternative therapies on relieving anxiety and distress in women
- Vital to evaluate the intervention's effectiveness for those undergoing IVF treatment
- This literature review aims to evaluate the effect of alternative therapies on decreasing psychosocial factors (i.e. distress, anxiety) in women undergoing IVF treatment.



Results

- CINAHL and PubMed searches: yielded 15 studies
- 12 studies met inclusion criteria:
 - Note: one study was a meta-analysis used to extrapolate background information, not included in the analysis
- More information regarding the studies in this review appear in Table 1
- Alternative therapies (i.e. yoga, acupuncture, mind-body therapy) appear to decrease the psychosocial distress of women undergoing IVF

Table 1: Quantitative and Qualitative Studies of the effect of alternative therapies on reducing psychosocial factors in women undergoing IVF

AUTHOR(S)/YEAR	COUNTRY	DESIGN	INTERVENTION	SAMPLE	FOCUS	RESULTS
Balk et al. (2010) Complementary Therapies in Clinical Practice, 16(3), 154-157	United States	Observational, prospective, cohort study	Acupuncture	Intervention Group N=20 Control Group N=37	Stress: PSS Pregnancy rates	Acupuncture group: lower stress scores pre- and post-embryo transfer compared to control group; pregnancy rate of 64.7%, compared to control group of 42.5%.
Skiadas et al. (2011) Fertility and Sterility, 96(6), 1467-1472	United States	RCT	Emotional support	Intervention Group N=66 Control Group N=65	Stress: PSS	No difference in final PSS scores. Intervention group more likely to report study as helpful and recommend emotional support during an IVF cycle.
Isupova (2011) International Journal of Qualitative Studies on Health and Well-Being, 6(3)	Russia	Quasi-ethnographic research: enetography	Internet community support	50 Women	Women's IVF experiences: Hermeneutic text analysis and ethnography of communication	Internet forums: serve as a source of psychological support; provide relief and consolation to the community members; encourage women to continue treatment towards a successful result, increasing individual well being.
Isoyama et al. (2012) Acupuncture in Medicine, 30(2), 85-88	Brazil	RCT	Acupuncture	Intervention Group N=22 Control Group N=21	Anxiety: HAS	HAS score lower in test group than control group after 4-week intervention. Similar demographics and pregnancy outcomes.
Chan et al. (2012) Psychology & Psychotherapy: Theory, Research & Practice, 85(4), 356-373	China	RCT	Integrative Body-Mind-Spirit Intervention (I-BMS)	Intervention Group N=141 Control Group N=110	Anxiety: C-STAI Importance of Childbearing and Marital Satisfaction: C-KMS Holistic health: BMSWBI Socioeconomic characteristics	I-BMS Intervention: reduced levels of anxiety and disorientation; decreased perceived importance of childbearing; increased levels of tranquility and marital satisfaction. Comparable clinical outcomes between groups
Kim et al. (2013) Asian Nursing Research, 8(1), 49-56	South Korea	Nonequivalent control group nonsynchronized design	Mind-Body Therapeutic Program (MBTP)	Intervention Group N=26 Control Group N=24	Uncertainty: Uncertainty Scale for Infertile Women Anxiety: STAI, VAS-A Exogenous variables: social support, marital relationship, infertility stress	MBTP: reduced uncertainty and anxiety in pre/post measurements more than control. No difference in implantation rate between groups.
Qu et al. (2014) Scientific Reports, 4, 5028	China	RCT	Auricular Acupressure (AA)	AA Group N=101 Sham-AA Group N=102 Control Group N=02	Anxiety: Spielberger's State Trait Anxiety Inventory, Amsterdam Preoperative Anxiety and Information Scale Clinical pregnancy rate Implantation rate Live birth rate NPY and TGF-alpha levels	AA: reduced anxiety levels associated with IVF, improved outcomes of IVF via increasing NPY levels in follicular fluids.
Ockhuijsen et al. (2014) Human Reproduction (Oxford, England), 29(7), 1459-1470	Netherlands	RCT	Positive reappraisal coping intervention (PRCI)	PRCI-Monitoring Group N=127 Monitoring-Control Group N=126 Routine Care Control Group N=124	Demographic, medical, gynecological characteristics: BIF Anxiety and Depression: HADS Positive/Negative Emotions: DRK Perception of Intervention: IEF Treatment Outcome: medical chart review	Women reported more anxiety during waiting period than before treatment. PRCI did not significantly reduce anxiety, depression, or daily negative emotions during waiting period. PRCI patients reported more positive emotions during the waiting period than the monitoring-control group. No difference in clinical outcome between groups.
Ockhuijsen et al. (2014) Human Reproduction (Oxford, England), 29(12), 2712-2718	Netherlands	RCT	Positive reappraisal coping intervention (PRCI)	PRCI-Comparison Group N=110 (Additional group to the 377 women above)	Anxiety and depression: HADS Clinical Pregnancy: medical chart review	PRCI-comparison group had lower anxiety at Time 2 and 3 but not lower depression levels. PRCI-comparison group had higher clinical pregnancy rate but no differences in clinical pregnancies with fetal heartbeat.
Valoriani et al. (2014) European Journal of Obstetrics & Gynecology and Reproductive Biology, 176, 158-162	Italy	Cohort study	Hatha-yoga	Intervention Group N=45 Control Group N=75	Anxiety: STAI-Y1 Depression: EDS Distress: GHQ-12	HY group: higher anxiety and depression levels initially; significant reduction in anxiety, depression, and distress following treatment.
Domar, Gross, Rooney, and Boivin (2015) Fertility and Sterility, 104(2), 451.e7	United States	RCT	(CCRI)	Intervention Group N=89 Control Group N=77	Demographic, medical, and infertility characteristics Impact of fertility issues in life/treatment domain: FertiQol Anxiety: STAI Depression: BDI Coping: Revised WCCL	CCRI: reduced global anxiety compared to the control group; group reported positive evaluations for the intervention, engaged in more positive reappraisal coping, had an improved Fertility Quality of Life

References

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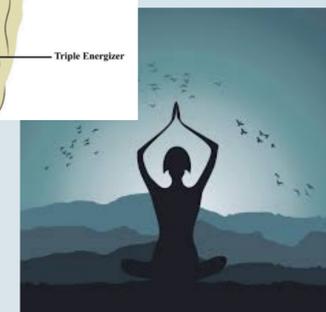
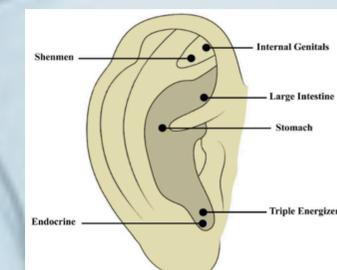
Methods

Inclusion criteria

- Papers limited to publication in the last six years
- Participants had to be women
- Must be undergoing IVF and some form of alternative intervention
- Study had to measure the effect of the alternative therapy on decreasing psychosocial measures

Search Strategy

- Literature search of two databases: CINAHL and PubMed
- Searches contained articles between the years of 2010 and 2016.
- Used keywords: IVF AND mind body therapy, IVF AND acupuncture, IVF AND yoga
- Performed a hand-search
- Reviewed abstracts to determine if paper met inclusion criteria



Discussion

- Women often measure high on anxiety, stress, uncertainty, and depression scales prior to IVF treatment.
- This review revealed the positive impact that alternative therapies have on mental health for women undergoing IVF.
- Although there were mixed results regarding whether alternative therapies led to more successful pregnancy rates, these interventions are important for a woman's psychosocial health.
- Providing women with the option to use alternative therapies during the IVF process could be a positive way of implementing psychosocial reducers into treatment plans.
- Results of this review inform both women's healthcare providers as well as women undergoing IVF treatment on the positive effects of alternative therapies during the difficult process.