

**INFERTILITY AND MINDFULNESS-BASED INTERVENTIONS:
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ABSTRACT

Infertility is a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse. Millions of people affected by infertility around the world. It affects their family and society. Mindfulness is a human ability and a type of meditation in which one focus on being intensely aware of what one sensing and feeling in the moment, without interpretation or judgment. Mindfulness-based interventions (MBIs) are therapeutic interventions that incorporate a mindfulness approach. Aim of the study is to do a systematic analysis on mindfulness-based interventions on infertility. Objective of the study is there any influence on mindful based intervention on infertility. Hypothesis was there is an influence on mindful based intervention on infertility. The study conclude that Studies shows that Mindfulness interventions may reduce symptoms and improve quality of life across a broad range of stress-related conditions in infertile people. However, relatively little is currently known about how mindfulness interventions affect health behaviours.

Keywords:

Mindfulness, Infertility, MBCT, DBT, ACT.

INTRODUCTION

Isaac prayed to the Lord on behalf of his wife, because she was childless. The Lord answered his prayer, and his wife Rebekah became pregnant.

Genesis 25:21 NIV

From the time immemorial, infertility is an issue. Etiology of infertility fluctuates from one area to another and with one populace then onto the next and even with one region then onto the next. According to World Health Organization (WHO), Infertility and subfertility affect a significant proportion of human beings. Infertility is a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse (WHO, 2019). Millions of people affected by infertility around the world. It affects their family and society. Problems in the ejection of semen, absence or low levels of sperm, or abnormal shape (morphology) and movement (motility) of the sperm are the cause of infertility in men. In the case of female, infertility may be caused by a range of abnormalities of the ovaries, uterus, fallopian tubes, and the endocrine system, among others (WHO, 2018). Type of infertility are Primary infertility: one never been pregnant and can't conceive after one year (or six months if 35 or older) of regular, unprotected sexual intercourse. Secondary infertility: one can't get pregnant again after having at least one successful pregnancy. Unexplained: Fertility means in clinical testing has not found a reason that a person unable to get pregnant (Cleveland Clinic medical professional, 2023). Infertility is a worldwide issue which affects 8-12 percent couples i.e., 50-80 million during their reproductive lives (WHO, 1991). They also reported that almost one in every six people of reproductive age around the world experience infertility in their lifetime. Because of the impact of antagonistic factors, for example, natural contamination, work tension, and makes progress with in living propensities, the number of infertility patients increments every year (Fu et al., 2015)

Infertility can have harming social and mental outcomes from avoidance and separation, divorce to social stigma that leads to isolation and psychological distress (Slade, O'Neill, Simpson, A & Lashen, 2007). Infertile women face social, communal and self-stigma which negatively affect their psychosocial wellbeing and caused low self-esteem. Infertile individuals express defensive response mechanisms and social support to manage the range of their uncomfortableness. Infertile women perceive a higher sense of stigma compared to men (Taebi, Kariman, Montazeri & Alavi Majd, 2021). Male infertility profound impacts are normal, however expert and gathering backing can assist you with exploring barrenness treatment. Frequently, men feel awkward communicating despondency and bitterness, so their outward responses might emerge as verbal outrage, an all the more socially OK method of articulation. As outrage changes to other less agreeable feelings, for example, despondency, men might additionally withdraw and quell any profound reactions (Texas fertility centre, 2023). Infertility can cause psychological distress, emotional stress and financial difficulties for both male and female (Boivin, Bunting, Collins & Nygren, 2007). For couples, the shared feelings related to not having a child include frustration and a sense of loss regarding the mother-father roles that society values. For a woman, being childless connects to infertility (a functional disorder), loss of control (my body defying my desires), psychological emptiness (unrealized maternal instinct), feeling alienated from the female community, feeling devoid of worth, loneliness (absence of emotional support from a child), lack of social security (no one to care for them in their later years), unfulfilled social role (mother, expecting woman, postpartum phase, mother-in-law), and decreased self-esteem (Kirca and Pasinoglu, 2013). For a man, being childless relates to the inability to impregnate a woman (diminished male function), psychological emptiness (unrealized paternal instinct), loneliness (in later years), failure to carry on the family line, unfulfilled social role (father, father-in-law), and reduced social security (Karlidere et al., 2007).

Infertility treatment area is under vast development. There are three main types of fertility treatment are there, they are medicines, surgical procedures and assisted conception – including intrauterine insemination (IUI) and in vitro fertilisation (IVF) (National Health Service, 2023).

Mindfulness is a human ability and a type of meditation in which one focus on being intensely aware of what one sensing and feeling in the moment, without interpretation or judgment. Practicing mindfulness includes breathing techniques, guided imagery, and various practices to calm the body and mind and assist in alleviating stress. The goal of mindfulness is to wake up to the inner workings of our mental, emotional, and physical processes (Mayo clinic, 2023). Mindfulness developed from old eastern and Buddhist way of thinking and goes back close to 2500 years (Kabat Zinn, 2003). The definition of mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment.” (Kabat Zinn, 2003). The idea of care has been enlivened by a lot of people, and Jon Kabat-Zinn and his partners at the College of Massachusetts have been compelling in laying out it in the western world (Bernstein, Vago & Barnhofer, 2019). The three key elements of mindfulness can be derived are (Shrey, 2021), “observing” (just noticing, watching, open monitoring - beginner’s mind) (Shapiro & Carlson, 2017), “labelling” (simply mentally noting, naming and describing what you are experiencing without phrasing it in a positive or negative way) (Iani, Lauriola, Chiesa & Cafaro, 2019), and “non-judgement” (non-reactance and ultimate acceptance) (Iani, Lauriola, Chiesa & Cafaro, 2019).

Mindfulness-based interventions (MBIs) are therapeutic interventions that incorporate a mindfulness approach. There are many different kinds of therapies that are considered mindfulness-based interventions. Some examples include: Mindfulness-based cognitive therapy (MBCT), Mindfulness-based stress reduction (MBSR), Dialectal behaviour therapy (DBT), Self-compassion therapy, Yoga and Meditation (Sharpe, 2022). Mindfulness-based approaches can successfully alleviate the troubling symptoms linked to various mental health issues. Mindfulness-based approaches can successfully alleviate the troubling symptoms linked to various mental health issues. Anxiety and anxiety-related disorders, depression and depressive conditions, bipolar and various mood disorders, unhappiness or overall dissatisfaction with life, substance use disorders and addiction, and physical or other persistent pain. It helps an individual to become aware of their patterns of intrusive and negative thoughts (Sharpe, 2022). Studies show that mindful interventions are effective in managing infertility issues (Galhardo, Cunha & Pinto-Gouveia, 2013).

AIM

To do a systematic analysis on mindfulness-based interventions on infertility.

OBJECTIVE

Is there any influence on mindful based intervention on infertility.

HYPOTHESIS

There is an influence on mindful based intervention on infertility.

METHOD

Follow systematic analysis. Data identified using Google Scholar, MEDLINE, Embase, PsycINFO, CINAHL, Applied Social Sciences Index and Sociological Abstracts Eligible studies will include original, empirical, peer-reviewed qualitative evidence, published in English. Studies about infertility and mindful based interventions analysis. Data will be analyzed using the 'best fit' framework synthesis approach, drawing the topic.

DISCUSSION

Infertility is characterized as the inability to conceive after one year (or more) of unprotected sexual intercourse (Centre for Disease Control and Prevention, 2023). Mindfulness meditative practices were initially introduced to manage chronic pain, leading to the development of a program known as mindfulness-based stress reduction (MBSR). Later, Segal and colleagues broadened the application of mindfulness meditation by creating a treatment program aimed at preventing depression relapse, which integrated cognitive-behavioral therapy with mindfulness techniques, and was referred to as mindfulness-based cognitive therapy (MBCT) (Segal and Teasdale, 2018). Following the establishment of MBSR and MBCT, various other mindfulness-based interventions (MBIs) emerged, such as Dialectical Behavior Therapy (DBT) and Acceptance and Commitment Therapy (ACT), both of which are currently applied in therapeutic settings. Other mindful approaches include self-compassion therapy, yoga, and meditation (Sharpe, 2022).

In a clinical study involving 60 infertile women, the 30 participants in the experimental group received mindfulness-based cognitive infertility stress therapy (MBCIST) over eight group sessions, lasting 120 minutes each week. The control group did not receive any intervention. The outcomes indicated that MBCIST enhances the psychological well-being of infertile women, which encompasses improvements in self-acceptance, relationships with others, autonomy, mastery of the environment, life purpose, and personal growth. The results suggest that MBCIST is an effective approach to enhancing psychological well-being in women undergoing infertility treatments (Fard, Kalantarkousheh, and Faramarzi, 2018).

The aim of another study was to present and assess the effects of the Mindfulness-Based Program for Infertility (MBPI). Fifty-five infertile women participated in the MBPI, which consisted of 10 weekly group sessions, each lasting around 2 hours. Upon completion of the MBPI, participants showed a significant reduction in depressive symptoms, feelings of internal and external shame, entrapment, and defeat. Conversely, they exhibited statistically significant improvements in mindfulness skills and self-efficacy regarding coping with infertility. Enhancing mindfulness and acceptance skills, along with cognitive decentring from cognitive and emotional experiences, appears to assist women in processing negative internal states differently, thereby reducing their emotional entanglement and subsequent psychological distress. Evidence indicates that the MBPI serves as an effective psychological intervention for women experiencing infertility (Galhardo, Cunha, and Pinto-Gouveia, 2013).

In one study, it is suggested that incorporating mindfulness into everyday life has been recognized to calm our emotional minds and enabled individuals to view situations "as they are" without assigning expectations, judgments, cynicism, or fears to them. This review reveals the therapeutic effects of mindfulness meditation in relation to infertility distress. It aims to consolidate the evidence regarding the effectiveness of mindfulness-based psychological interventions in enhancing emotional well-being and biological results in infertility (Patel, Sharma, and Kumar, 2020).

A study investigates the impacts of mindfulness-based interventions on physical and psychological effects in women experiencing infertility. Studies were considered if participants were women diagnosed with infertility, were over 18 years old, and the design was a randomized controlled trial of a mindfulness-based intervention program. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were adhered to. A total of ten articles were eventually included in the current meta-analysis. The meta-analysis results demonstrated substantial, significant effects of mindfulness-based interventions that can

effectively alleviate depression, anxiety, quality of life, general health vitality, and social functioning in women facing infertility (Wang, Liu, and Lei, 2023).

A study conducted by Shargh, Bakhshani, Mohebbi, Mahmudian, Ahovan, Mokhtari, and Gangali (2016) revealed that mindfulness-based cognitive therapy (MBCT) treatment in infertile women significantly contributed to enhancing marital satisfaction and mental health. Appropriate training for infertile individuals through counseling services can enhance their mental health and marital satisfaction, significantly aiding in alleviating issues for infertile couples.

A short-term mindfulness-based stress reduction (MBSR) program appears to be potentially beneficial in enhancing the quality of life for women dealing with infertility (Hosseini, Mousavi, Hekmat, Haghhighzadeh, Fard, and Jafari, 2020).

Mindfulness-Based Cognitive Group Therapy (MBCT) represents a form of psychotherapy that employs cognitive, behavioral, and metacognitive strategies aimed at reducing stress and irrational thoughts in participants. This study aims to assess the effectiveness of MBCT in alleviating perceived infertility-related stress and irrational parenthood thoughts among infertile women undergoing In-Vitro Fertilization (IVF) treatment. The study concluded that MBCT training positively influences the reduction of perceived infertility-related stress and irrational parenthood thoughts in women undergoing IVF treatment (Maliheh, Bahram Ali, Nemati, and Hamid, 2012).

A study was carried out in China to determine whether high levels of dispositional mindfulness correlated with enhanced specific aspects of fertility quality of life (FertiQoL) in women experiencing infertility, and whether acceptance, autonomy, and self-regulation mediated any relationship. It was a cross-sectional study. The findings indicated that mindfulness positively correlated with Core and Treatment FertiQoL. Higher levels of mindfulness were associated with greater autonomous and self-regulatory skills, as well as lower avoidance of experiences, which subsequently led to improved Treatment FertiQoL (Li, Luo, and Long, 2019).

In 2016, Galhardo, Cunha, and Pinto-Gouveia conducted a study titled "Acceptability and Feasibility of the Mindfulness Based Program for Infertility (PBMI)." The results demonstrated that the MBPI was feasible and well-received by participants. The mindfulness-based program (MBP) effectively reduced stress and depressive symptoms while promoting overall well-being among infertile women (Nery et al. , 2019).

In 2020, a study by Monteiro, Galhardo, Cunha, Couto, Fonseca, and Carvalho was conducted to explore the development of MindfulSpot. The purpose of the study was to create MindfulSpot, a prototype mobile application intended to provide an opportunity for practicing mindfulness in a comfortable and accessible manner. MindfulSpot was developed as a platform for cultivating mindfulness skills and it offers valuable information on specific aspects of the emotional effects of infertility. Besides being used independently, it can also serve as a supporting tool for the MBPI.

The issue of infertility impacts both physiological and psychosocial factors. As outlined in the study, "Effectiveness of sexual health counselling based on mindfulness approach on sexual satisfaction in women suffering from infertility: An RCT," sexual counseling has the potential to enhance both sexual and marital satisfaction. The research concluded that programs focused on mindfulness-based sexual health counseling may boost sexual satisfaction for women experiencing infertility within the intervention group. (Nejad, Bokaie, and Ardekani, 2023).

A study conducted by Hosseinpanahi, Mirghafourvand, Farshbaf-Khalili, Esmaeilpour, Rezaei, and Malakouti in 2020, titled "The effect of counseling based on acceptance and commitment therapy on mental health and quality of life among infertile couples: A randomized controlled trial," indicated that Acceptance and Commitment Therapy counseling can enhance the mental health and quality of life of infertile couples.

Individuals diagnosed with infertility, both women and men, face a variety of stressors related to infertility, such as alterations to their family and social networks, tension in their sexual relationships, and unexpected difficulties in their partnership. The study titled "Using Acceptance and Commitment Therapy to Treat Infertility Stress" by Eifert and Peterson in 2010 reveals that ACT could be beneficial for couples after unsuccessful IVF treatments. The benefits from this treatment were sustained one year after therapy, suggesting that an ACT approach to addressing infertility might lead to enduring changes.

In a study titled "Acceptance and Commitment Therapy (ACT) Adapted for Women with Infertility-related Distress," ninety women experiencing infertility in Canada and the United States will be recruited. They will receive seven weekly emails with 15-minute videos, each detailing a new technique based on Acceptance and Commitment Therapy that targets the psychological inflexibility and distress associated with infertility. The study will assess fertility-related quality of life and psychological flexibility prior to and after the program, as

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well as at a one-month follow-up. Additionally, feedback will be gathered on how to enhance the program. It aims to reduce infertility-related distress (University of Regina, 2023).

A study was designed to examine the impact of acceptance and commitment therapy (ACT) on the quality of life of women dealing with infertility during treatment. Overall, the findings suggest that ACT improves the quality of life for infertile women, indicating that this treatment could be useful in enhancing their quality of life given the high rates of infertility. The study was titled Effect of Acceptance and Commitment Therapy on the Quality of Life in Infertile Women During Treatment: A Randomized Control Trial (Attarha, 2019).

COCLUSION

Studies shows that Mindfulness interventions may reduce symptoms and improve quality of life across a broad range of stress-related conditions in infertile people. However, relatively little is currently known about how mindfulness interventions affect health behaviours.

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