Mindfulness-Based Program for Infertility: efficacy study

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Objective: To present and determine the impact of the Mindfulness-Based Program for Infertility (MBPI).
Design: Controlled clinical trial.
Setting: University research unit.
Patient(s): Fifty-five infertile women completed the MBPI, and 37 infertile women were assigned to a control group.
Intervention(s): The MBPI includes 10 weekly sessions, in a group format, with a duration of about 2 hours each (men attend three sessions).
Main Outcome Measure(s): Standardized measures of depression, state anxiety, entrapment, defeat, internal and external shame, experiential avoidance, mindfulness, self-compassion, and infertility self-efficacy were endorsed pre- and post-MBPI.
Result(s): The MBPI group and the control group were shown to be equivalent at baseline. By the end of the MBPI, women who attended the program revealed a significant decrease in depressive symptoms, internal and external shame, entrapment, and defeat. Inversely, they presented statistically significant improvement in mindfulness skills and self-efficacy to deal with infertility. Women in the control group did not present significant changes in any of the psychological measures, except for a decrease in self-judgment.
Conclusion(s): Increasing mindfulness and acceptance skills, as well as cognitive decentering from thoughts and feelings, seem to help women to experience negative inner states in new ways, decreasing their entanglement with them and thus their psychological distress. Data suggest that the MBPI is an effective psychological intervention for women experiencing infertility. (Fertil Steril® 2013;■:■–■. ©2013 by American Society for Reproductive Medicine.)
Key Words: Mindfulness, acceptance and commitment therapy, infertility, psychopathology

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Infertility presents many challenges to infertile couples. It has been described as a stressful condition not only from a medical perspective but also in terms of psychological burden, with couples stating that it corresponds to a very demanding life crisis (1–3). Emotional consequences tend to arise from the inability to conceive a child, affecting each partner's personal life and the couples' life. Studies focusing on the psychological consequences of infertility have produced mixed results (4–10). Most couples are able to adjust and cope with infertility, but others present problematic emotional responses such as depression and anxiety (11, 12).

Over the past few decades, psychological interventions have been developed to address the psychological consequences of infertility. According to Boivin (13), positive results from psychological interventions can occur in feelings of anxiety, tension, and worry, more than in depressive symptoms. This investigator states that interventions that emphasize education and skills training are more effective than those addressing emotional expression and support. Another study reviewing results from group interventions and individual/couple psychotherapy (14) found that both intervention formats tend to decrease anxiety and depression. In another meta-analysis, Hammerli, Znoj, and Barth (15) analyzed 21 controlled studies about the efficacy of psychological interventions in terms of mental health indicators and pregnancy rates. No significant effects were found regarding mental health, but significant effects were found in pregnancy rates in couples who were not using assisted reproductive technology. These investigators also suggest that women may benefit more from psychological interventions when compared with their male partners. Recently, the Integrative Body-Mind-Spirit intervention has

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proved successful at improving the psychosocial and spiritual well-being of women undergoing their first IVF treatment cycle (16). Domar and colleagues examined the impact of a group mind/body intervention on pregnancy rates in IVF patients and found that participation in such a program increased pregnancy rates for cycle 2, but mental health variables were not studied (17). Another study conducted by Korszycki and colleagues pointed out that interpersonal psychotherapy may be a promising treatment for depressed infertile women, but they argue that subsequent studies are needed to support these results (18).

Several mindfulness-based interventions have been applied and proved effective in numerous health problems such as chronic pain, cancer, anxiety disorders, depression, and so on (19), but to our knowledge a mindfulness-based program specifically addressing infertility has not been developed until now.

Considering that infertile patients may also benefit from such an approach, the Mindfulness-Based Program for Infertility (MBPI) was developed and studied. The MBPI is based on the Mindfulness-Based Program for Stress Reduction (20), the Mind/Body Program for Infertility (21), and basic principles of acceptance and commitment therapy (ACT) (22). It is a structured group intervention targeting infertile women that aims to cultivate mindfulness and acceptance, helping them to move in a chosen and valued life direction.

The MBPI is intended to develop willingness/acceptance through a process of contacting the present moment and being in touch with the unfolding experience in an open and nonjudgmental way. This can be reached by mindfulness practice, bringing awareness to internal and external experiences as they occur in the moment (23). Another important skill learned during the MBPI is cognitive defusion or cognitive decentering. Recognizing that our mind tends to create stories about our lives, it is important to help people to become aware of their story as a story instead of a set of "truths" (24). In other words, it involves distancing from the mind and noticing the story it is telling rather than getting absorbed in it (25).

Furthermore, attitudes of kindness, curiosity, and willingness to be present with the unfolding experience are promoted, as well as the ability to recognize our own experiences as part of the larger human experience.

One of the main goals of MBPI is to promote psychological flexibility/acceptance. This is intended to be achieved through mindfulness practice but also through the use of metaphors such as "the mind as a radio always on" and "the coach and passengers" (22) and through emphasizing the importance of values clarification and committed action. These metaphors are derived from ACT and support the embracing of a new attitude towards private events, promoting their observation, decentering, and nonreacting. The exercise "the pain in my head" (26) is also intended to promote acceptance, willingness, and openness to painful thoughts without trying to suppress, modify, or control them.

The aim of the current study is to present data on the efficacy of the MBPI in a sample of infertile women pursuing medical treatment for their infertility.

MATERIALS AND METHODS

Participants

Participants were women who answered a recruitment announcement posted at the Portuguese Fertility Association (patients association) website. The Executive Committee of this association evaluated and approved the study. Inclusion criteria were age (18 years or older) and an infertility medical diagnosis. Participants were all married or living with a partner in a heterosexual relationship (Portuguese legal requirements for access to infertility consultations).

A total of 102 women answered the post. Sixty-one took part in the MBPI group, and 41 integrated the control group. One woman in the MBPI group (1.6%) gave up her participation before the admission interview for professional reasons. After completing the interview, five women (8.3%) dropped out from the study (two for professional reasons, one for marital reasons, one for family reasons, and one for unknown reasons). In the control group there was a dropout rate of 12.2% for unknown reasons. Thus, the MBPI was applied in five groups (two in Lisbon, two in O'Porto, and one in Coimbra), for a total of 55 participants. The control group was composed of 37 women. These women answered the recruitment announcement but lived in places where the MBPI sessions were not scheduled. Women in both groups presented a primary infertility diagnosis.

Instruments

Before and after the MBPI (10-week interval), the following set of self-report measures was completed by all the subjects:

Beck Depression Inventory (BDI; 27–29)—BDI is a well-known self-report measure for the assessment of depressive symptoms. In this study we found a Cronbach alpha of .85 in the MBPI group and of .91 in the control group.

State Anxiety Inventory form Y (STAI-Y1; 30, 31)—In this study, we used the state anxiety subscale that captures the way subjects are feeling in the moment they are answering. The Cronbach alpha found for STAI-Y1 was .93 in the MBPI group and .95 in the control group.

Others As Shamer (OAS; 32, 33)—This 18-item scale measures external shame (global judgments of how people think others view them). A Cronbach alpha of .93 was found in both the MBPI group and the control group.

Experience of Shame Scale (ESS; 33, 34)—The ESS is a 27-item questionnaire assessing feelings of shame around three key domains of self: character, behavior, and body. In this study, a Cronbach alpha of .96 was found in the MBPI group and of .95 in the control group.

Entrapment Scale (EE; 35, 36)—The EE assesses external entrapment (perception of things in the outside world that induce escape motivation) and internal entrapment (escape motivation triggered by internal thoughts and feelings). In the current study, both subscales presented a Cronbach alpha of .92 in both groups.

Defeat Scale (DS; 35, 37)—This is a 16-item measure of the sense of failed struggle and losing rank. In the MBPI group, a Cronbach alpha of .92 was found, and in the control group it was .96.