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The Mindfulness Based Program for Infertility (MBPI)

A seven-year follow-up study

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Disclosure

Ana Galhardo

I have not received and will not receive any commercial support related to this presentation or the work presented in this presentation.



Mindfulness Based Program for Infertility

(MBPI; Galhardo, Cunha, & Pinto-Gouveia 2013)

Developed based on:

- Mindfulness Based Programs for stress, chronic pain, anxiety disorders, depression
(e.g. Kabat-Zinn, 1990; Kabat-Zinn, et. al, 1992; Williams et al., 2007)
- Basic principles of Acceptance and Commitment Therapy (ACT; Hayes et al., 1999)
- Mind Body Program for Infertility
(Domar et al., 1990)
- Clinical experience on the application of mindfulness and acceptance skills

MBPI





Psychosocial intervention in a group format (15 women)



10 weekly sessions 2 hours each (men attend 3 sessions)



Admission: Semistructured clinical interview and self-report instruments



MBPI - Skills trained

- ▣ Mindfulness
- ▣ Acceptance/Psychological flexibility
- ▣ Values clarification
- ▣ Interpersonal communication
- ▣ Self-compassion and compassion
- ▣ Psychosocial education on:
 - Lifestyle and fertility (exercise, nutrition, caffeine, alcohol, nicotine and herbal remedies, etc.)
 - Stress, anxiety and depression

MBPI- Sessions



Half-hour of sharing (optional)



Formal mindfulness practice, followed by sharing



Informal mindfulness practice



The “three minutes breathing space” ends each session



Metaphors and experiential exercises are included in most of the sessions:

- ❑ An experiential exercise of listening to others
- ❑ Introduction of values clarification (valued life directions) through the imagery exercise "10 years of marriage"
- ❑ Integration of a greater number of positive aspects in day-to-day experience

MBPI – Efficacy Study

ORIGINAL ARTICLES: MENTAL HEALTH, SEXUALITY, AND ETHICS

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;100: 1059–67. ©2013 by American Society for Reproductive Medicine.)

Key Words: Mindfulness, acceptance and commitment therapy, infertility, psychopathology

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MBPI – Efficacy Study

Women in the MBPI group significantly ($n = 55$):

Decreased:

- Depressive symptoms
- Anxiety symptoms
- External and internal shame
- External and internal entrapment
- Defeat
- Experiential avoidance
- Self-judgment

Increased:

- Self-efficacy to deal with infertility
- Mindfulness skills

Women in the control group significantly ($n = 37$):

Decreased:

- Self-judgment

No significant differences were found in any other variables



MBPI Follow-up Study Aims

Examining whether there are long-term effects of the MBPI encompassing four moments:

- ❑ Pre-MBPI (T1)
- ❑ Post-MBPI (T2)
- ❑ Six-months follow-up (T3)
- ❑ Seven-year follow-up (T4)



MBPI Follow-up Study Participants

40 women who had participated in the MBPI groups
(attrition rate 73%)

	MBPI ($N = 40$)	
	<i>M</i>	<i>SD</i>
Age	41.68	3.79
Years of Education	16.15	2.33

Mean duration of infertility at baseline – 3.45 years ($SD = 2.78$)



MBPI Follow-up Study Instruments

- **Beck Depression Inventory**

(BDI; Beck et al., 1961; Portuguese version by Vaz-Serra, & Pio-Abreu, 1973a, 1973b)

- **State Anxiety Inventory form Y**

(STAI-Y1; Spielberg, 1983, Portuguese version by Daniel, 1996)

- **Acceptance and Action Questionnaire II**

(AAQ II; Bond et al., 2011, Portuguese version by Pinto-Gouveia et al., 2012)

- **Frieburg Mindfulness Inventory**


(FMI; Walach et al., 2006; Portuguese version by Pinto-Gouveia & Gregório, 2011)



MBPI Follow-up Study Procedure

- Participants in the control group showed a dropout rate of 50% at six-month assessment and were not included at seven-year follow up.
- Participants in the MBPI groups were contacted by email and invited to take part in the follow-up study
- The set of self-report measures was available in an online platform and the link was provided to participants who agreed to participate
- All subjects gave their written informed consent


MBPI Follow-up Study Results



		MBPI Group (N = 40)				
Measures	Time	M	SD	F	p	η^2p
AAQ-II	T1	24.33	9.75	10.75	<.001	.22
	T2	19.33	7.50			
	T3	18.13	6.72			
	T4	17.85	7.64			
FMI	T1	33.17	4.96	7.17	<.001	.24
	T2	38.63	6.00			
	T3	38.00	6.12			
	T4	38.46	6.71			

Repeated measures ANOVAs

MBPI Follow-up Study Results



		MBPI Group (N = 40)				
Measures	Time	M	SD	F	p	η^2p
BDI	T1	10,75	7,27	11.68	<.001	.23
	T2	5,93	4,18			
	T3	4,45	4,63			
	T4	7,35	7,26			
STAI-Y1	T1	47,53	13,28	7.31	<.,001	.16
	T2	43,08	9,20			
	T3	40,00	10,82			
	T4	39,08	11,39			

Repeated measures ANOVAs



MBPI Follow-up Study Results

- Mean comparisons showed that benefits achieved after the MBPI completion were maintained for the seven-year follow-up period
- **Experiential avoidance** – mean scores increasingly lower over time
- **Mindfulness skills** – mean scores increasingly higher over time
- **Depressive symptoms** - significant decrease from T1 to T2 and from T1 to T3, but not to T4
- **Anxiety symptoms** - significant decrease from T1 to T3 and from T1 to T4



MBPI Follow-up Study Discussion

- The current study highlights sustained benefits of MBPI 7 years after the intervention on mindfulness skills and experiential avoidance
- Moreover therapeutic gains were also maintained in terms of depression and anxiety symptoms, contributing to emotional well-being
- These findings are in line with the ones found for mindfulness interventions targeting other health problems such as endometriosis (Hansen, Kesmodel, Kold, & Forman, 2017), diabetes (van Son, Nyklíček, Pop, Blonk, Erdtsieck, & Pouter, 2014) and irritable bowel syndrome (Zomorodi, S., Rasoulzadeh, Azadfallah, Ebrahimidaryani, & Arbabi, 2015)



MBPI Follow-up Study Discussion

- Further research is needed to replicate or even expand these findings through a randomized controlled trial
- Overall, follow-up results show that the MBPI can produce durable effects in emotion regulation processes, as well as in psychopathological symptoms
- These findings have important clinical implications, considering that, to our knowledge this is the longest follow-up study addressing a mindfulness based intervention for people dealing with fertility problems and the demands of medical treatment



In summary

- MBPI is the first program that focuses specifically on mindfulness and acceptance skills designed for people with infertility
- MBPI showed to be an effective psychological intervention for women experiencing infertility and therapeutic gains seem to persist over a long period of time, contributing to these women psychological adjustment

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