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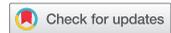
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# The Effectiveness of Mindful Hypnotherapy on Depression, Self-Compassion, and Psychological Inflexibility in Females with Major Depressive Disorder: A Single-Blind, Randomized Clinical Trial

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## ABSTRACT

The effectiveness of the novel intervention *mindful hypnotherapy* on depression, self-compassion, and psychological inflexibility in females with major depressive disorder was examined in a randomized, clinical trial. Thirty-four participants were randomly allocated into mindful hypnotherapy and waitlist control groups. The intervention group was treated in 8 face-to-face, 60-minute weekly therapy sessions along with mindful hypnosis audio tapes to be used daily. The results of analysis of covariance indicated that there were significant differences between the mindful hypnotherapy and waitlist control groups after intervention and at 2-month follow-up ( $p < .001$ ). The between-subject test of repeated measures ANOVAs also indicated a clinically significant difference between groups across time (baseline, postintervention, and 2-month follow-up) in depression,  $F = 53.86$ ,  $p < .001$ , effect size = .65, and in self-compassion,  $F = 33.18$ ,  $p < .001$ , effect size = .53, as well as psychological inflexibility,  $F = 26.84$ ,  $p < .001$ , effect size = .48. In conclusion, this study indicates that mindful hypnotherapy is an effective intervention for treating depression as well as reducing psychological inflexibility and improving self-compassion for patients with major depressive disorder.

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## Introduction

Major depressive disorder (MDD) is the most prevalent chronic mental disorder; approximately 300 million people (4.4% of the world's population) suffer from it (World Health Organization, 2017). Despite advancements in treatments over the past 50 years, this number, globally and particularly in lower-income countries, is going up (Murphy et al., 2017; World Health Organization, 2017). The consequences of MDD in terms of lost health are enormous. For example, the World Health Organization (WHO) ranked depression as the single largest contributor to worldwide disability (7.5% of all years lived with disability in 2015), which makes it the leading cause of disability worldwide (World Health Organization, 2017). Moreover, because of suicide, depression ranks among the top 20

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causes of death on a global scale (World Health Organization, 2017). Additionally, an almost universal observation is the twofold greater prevalence of major depressive disorder in women than in men (Rubio et al., 2011; Vandeleur et al., 2017). Women with depression are more likely to experience higher symptom severity, an earlier age of onset, more years since the onset of depression, and a longer index episode (Eid et al., 2019; Marcus et al., 2008).

One of the protective factors against the development and maintenance of depressive episodes is self-compassion (Ehret et al., 2015). Neff (2003) defines self-compassion as consisting of three central (bipolar) components: (a) self-judgment, in which an individual has a harsh self-criticism and judgment, as opposed to self-kindness, which is the ability to treat oneself with care and understanding; (b) isolation, which involves feeling alone when failing and being imperfect, as opposed to common humanity, which refers to the recognition that imperfection and failures are normal and shared aspects of human beings; and (c) overidentification, which is over-identifying with thoughts and emotions, in contrast to becoming mindful and accepting experiences. The results of studies show that patients with MDD have a low level of self-compassion. In contrast, high levels of self-compassion can prevent or reduce the onset of depression (Krieger et al., 2013; Luo et al., 2019; MacBeth & Gumley, 2012; Van Dam et al., 2011).

Another potential mechanism underlying the development and maintenance of depression is psychological inflexibility (Hayes et al., 1999; Paulus et al., 2016). Psychological inflexibility is the rigid dominance of psychological reactions over personal values and contingencies in guiding action (Bond et al., 2011). Treatment-resistant and chronic forms of MDD are challenging to treat because of associations with rigidity in cognitive, emotional, and behavioral frameworks (Yasinski, 2016). Therefore, psychological inflexibility plays an important role in depression and its reduction could be an important therapeutic task of MDD treatment.

Although randomized controlled trials indicate that many therapeutic approaches, such as cognitive behavior therapy (CBT) and interpersonal psychotherapy (IPT), as well as antidepressant medications are effective for treating MDD, a significant number of patients do not respond to either CBT, IPT, or medications (Alladin, 2010). Moreover, about 50% to 90% of patients stay profoundly vulnerable to relapse, even after a reduction in symptoms (Kessing et al., 2004). Therefore, researchers and therapists must develop more effective and short-term treatments for MDD.

Mindfulness and hypnotherapy are both powerful interventions, particularly in the field of depression. Research evidence indicates that mindfulness is effective for treating depression (Ramel et al., 2004; Strauss et al., 2014). Furthermore, experimental studies (Dobbin et al., 2009) and meta-analyses (Milling et al., 2019; Shih et al., 2009) show that hypnotherapy is very effective in alleviating the symptoms of depression. Clinical hypnosis can be used as a single intervention or integrated with other psychotherapies (Yapko, 2018). The results of studies in support of clinical hypnosis indicate that hypnotherapy can be used as a therapeutic supplement and a powerful tool to increase the performance of other psychotherapies (Ramondo et al., 2021). For example, the meta-analysis evidence (Ramondo et al., 2021) shows that cognitive behavior therapy (CBT) combined with clinical hypnosis is a more effective form of psychotherapy than CBT alone.

The integration of mindfulness and hypnosis has critical clinical implications for improved intervention efficiency and effectiveness. Mindful hypnotherapy (MH), the

integration of mindfulness and hypnosis, attempts to produce a deeper level of change in patients. Both mindfulness and hypnosis use suggestions for guided imagery and alterations in attention for an enriched mind-body connection (Elkins & Olendzki, 2018; Slonena & Elkins, 2021). A unique characteristic of mindfulness is the encouragement of a nonjudgmental, accepting, and flexible relationship with one's experiences, including emotions, thoughts, and behaviors. Therefore, in mindful hypnotherapy, hypnotic suggestions are applied to enhance the delivery of mindfulness principles, including nonjudgmental awareness with acceptance of experiences, self-compassion, and value living (Elkins & Olendzki, 2018; Olendzki et al., 2020).

Due to the high prevalence of depression and increasing numbers in the general population, alongside problems in various aspects of the patient's life and society, new and effective interventions in this field are critical. Additionally, the results of previous studies on the MH intervention show that it is feasible, effective, and has good retention, including significant reductions in stress and negative mood as well as significant increases in mindfulness (Olendzki et al., 2020; Slonena & Elkins, 2021). An example of enhanced intervention efficiency and effectiveness is that audio-based brief mindful hypnosis can significantly decrease stress reactivity and increase mindfulness skills in just 7 days compared to an active control condition (Slonena & Elkins, 2021). Despite these studies, to date, no trials have been conducted in patients with major depressive disorder. Therefore, this study evaluated the effectiveness of mindful hypnotherapy in depression, self-compassion, and psychological inflexibility in females with major depressive disorder.

## **Method**

### ***Trial Design***

This study is a single-blind, randomized controlled design that was conducted in 2022 in the Talegani Hospital in Tehran city, Iran. Research Committee of Shahid Beheshti University of Medical Sciences (ethical code No: IR.SBMU.RETECH.REC.1400.880) and the Iranian Registry of Clinical Trials (IRCT code No: IRCT20211210053342N1) approved this study. There were no significant changes between the start of the trial and the registration confirmation. The researcher, who was not aware of the study objective, generated the random number sequence using the random number generator function in SPSS. Then, the assistant researcher opened the envelope that was kept sealed, opaque, and numbered in sequence and then assigned the participants to the groups. Furthermore, throughout the randomized controlled trial procedure, the data analyst who collected follow-up data did not know the objective of the study. Moreover, to reduce clinician bias, the participants' scores were not shared with the therapist until the conclusion of the study.

### ***Participants***

The participants in this study were female adults with major depressive disorder, Iranian, and speaking the Persian language. They were selected with purposive sampling methods among the patients who were referred to the psychology clinic, Taleghani Hospital, Tehran, Iran.

### ***Inclusion Criteria***

Participant inclusion criteria were: a score above 28 on the Beck Depression Inventory-II (BDI-II), indicating severe levels of depression; diagnosis of major depressive disorder, according to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5); age range of a minimum of 18 years and a maximum of 50 years; having given informed consent to participate in the study and signed a written consent form; education levels of at least a diploma from a high school/secondary school; if receiving psychiatric medication, the dosage and type of medication should be stable in the last 3 months before the start of the study and remain stable during the study period; availability for 8 weekly sessions.

### ***Exclusion Criteria***

Participant exclusion criteria were: unwillingness to continue treatment; serious suicidal thoughts, and any plan(s) to attempt suicide; receiving psychological interventions in the last 6 months; participation in another psychological intervention at the same time as the study; recent substance abuse; diagnostic indicators or a history of borderline personality disorder, bipolar disorder, psychosis, or schizophrenia due to contraindication with hypnosis.

### ***Sample Size***

The sample size was calculated using G-Power software using analysis of covariance and considering effect size = .50 (Olendzki et al., 2020),  $\alpha = .05$ , power = .80, and considering the two-groups of intervention and control of 34 people.

### ***Study Procedures***

Thirty-four females who met the inclusion criteria were selected by the purposive sampling method. The reason for choosing a female sample was that most of the people with MDD who were referred for psychotherapy at the time of sampling were women, and the number of men was small. Furthermore, in the initial interview, 4 men who met the other selection criteria were not willing to participate in 8 weekly sessions. Therefore, to reduce the dropout rate from the study, they were not selected.

Participants were given information about the purpose of the study and their right to withdraw from the study. All participants gave informed consent to participate in the study and signed the written consent form. They were assured of the confidentiality of all personal information. Because their right to withdraw from the study, to decrease its dropout rate a complete explanation was given regarding treatment conditions, the number of sessions, and random allocation to either the treatment or control groups. Furthermore, they were thoroughly questioned about having sufficient time to attend the intervention sessions and the possibility of their presence during the weekly sessions. Then, participants were randomly assigned to either the MH intervention or the waitlist control group (WLC). The intervention group consisted of eight 60-minute weekly sessions of mindful hypnotherapy. Participants in the WLC group did not receive any intervention but were given the opportunity to complete the intervention after participating in the study. The Beck Depression Inventory (BDI-II), Self-Compassion Scale-Short Form (SCS-SF), and Acceptance and Commitment Questionnaire-II (AAQ-II) were conducted at baseline, postintervention, and 2-month follow-up.

## Measures

### **The Beck Depression Inventory (BDI-II)**

The BDI-II is a 21-item self-report questionnaire used to assess the severity of depression during the previous 2 weeks, the depressive symptoms experienced by psychiatric patients as well as the general population, and the degree of depression. Its scores range from 0 to 63 with each item score ranging from 0 to 3, based on four options for the absence of a specific symptom to the maximum degree of the presence of that symptom. Scores ranging from 0 to 13 are considered minimal depression, 14 to 19 is mild depression, 20 to 28 is moderate depression, and 29 to 63 is severe depression (Beck et al., 1996). Cronbach's alpha was reported to be about .92 (Osman et al., 2008).

### **Self-Compassion Scale-Short Form (SCS-SF)**

The SCS-SF is a 12-item self-report questionnaire that assesses three main components of self-compassion and their opposites: self-kindness/self-judgment, common humanity/isolation, and mindfulness/overidentification. Items are rated on a 5-point Likert scale from 1 (*almost never*) to 5 (*almost always*). Total scores range from 12 to 60, and higher scores indicate greater self-compassion (Raes et al., 2011). The internal consistency reliability of the SCS-SF was reported to be between .86 and .87 (Raes et al., 2011). In another study, Cronbach's alpha values for the total were reported as .91, and .83, .87, .91, .88, .92, and .77 for the subscales, respectively (Khanjani et al., 2016).

### **Acceptance and Commitment Questionnaire-II (AAQ-II)**

The AAQ-II is a 7-item measure that was used to evaluate psychological inflexibility and experiential avoidance. Items are rated on a 7-point Likert scale from 1 (*not at all true*) to 7 (*completely true*). Items are reversed for scoring purposes. Higher total scores mean more flexibility, whereas lower total scores mean less flexibility. The results of the study by Bond et al. (2011) indicate the satisfactory structure, reliability, and validity of AAQ-II. Internal consistency was .84, and the 3- and 12-month test-retest reliability scores were .81 and .79, respectively (Bond et al., 2011). In another study, Cronbach's alpha was reported to be about .93 (Tyndall et al., 2019).

## Intervention

The patients in the intervention group were treated for eight 60-minute weekly individual sessions based on the mindful hypnotherapy protocol (Elkins & Olendzki, 2018; Olendzki et al., 2020). The permission to use the protocol and transcripts for MDD patients were given by Dr. Gary Elkins via e-mail in April 2021. The therapist is a clinical psychologist with 4 years of experience in hypnotherapy and mindfulness-based interventions. The intervention was delivered in person and in the Persian language. The intervention in every session included a didactic teaching component and hypnotic induction based on the sessions. In therapy sessions, treatment and suggestions were individualized to match the participant's specific problems, needs, and goals, but home-practice audio was prerecorded. The scripts were based on *Mindful Hypnotherapy: The Basics for Clinical Practice Manual* (Elkins & Olendzki, 2018).

The content of each session is as follows: (a) present-moment awareness, (b) nonjudgmental awareness of bodily sensation, (c) nonjudgmental awareness of thoughts and feelings, (d) self-hypnosis, (e) compassion for self and others, (f) awareness of personal values and meaning in life, (g) integrated mindfulness, and (h) termination/transition to long-term practice. At the end of each session, participants received daily practice audio recordings of their home exercises based on the content presented that week.

### **Statistical Analysis**

Data were analyzed with SPSS V24.0. The chi-square test was used to compare the demographic characteristics between the study groups. The independent samples *t* test was used to identify baseline differences between the intervention and control groups in clinical characteristics. Moreover, the Levene test of equality of variances was used to examine the normality of clinical variables. Furthermore, the analysis of covariance (ANCOVA) was performed to determine the difference between the means of mindful hypnotherapy and waitlist control groups, with controlling preintervention scores for measures of depression, self-compassion, and psychological inflexibility. Finally, the repeated measures ANOVA was used to compare the difference between the means of the intervention and waitlist control groups across time (baseline, postintervention, and 2-month follow-up). In all tests, a *p* value less than .05 was considered significant.

### **Results**

In the posttest and follow-up evaluation phases, 31 participants (16 in the intervention group and 15 in the waitlist control group) completed the evaluation and their data were included in the final analysis. The intervention and control groups were approximately equal in demographic characteristics. The result of the chi-square test shows that there were no statistically significant differences between the study groups in demographic characteristics ( $p > .05$ ). The participants were Iranian females speaking the Persian language, between the ages of 19 and 46 (mean age = 32.06), and were predominantly single ( $n = 19, 61.3\%$ ). Furthermore, the education level was a diploma ( $n = 7, 22.6\%$ ), associate degree ( $n = 3, 9.7\%$ ), bachelor's degree ( $n = 13, 41.9\%$ ), master's degree ( $n = 6, 19.4\%$ ) and Ph.D. degree ( $n = 2, 6.5\%$ ). Moreover, most of the participants were employed ( $n = 17, 54.8\%$ ) and other were housewife ( $n = 8, 25.8\%$ ), student ( $n = 4, 12.9\%$ ), and unemployed ( $n = 2, 6.5\%$ ).

The independent *t* test (see, [Table 1](#)) also shows that there was no statistically significant difference between groups at baseline in clinical characteristics ( $p > .05$ ). Additionally, the results of the Levene test of equality of variances (see, [Table 1](#)) also revealed that all variables including depression, self-compassion, and psychological inflexibility in both intervention and control groups were normally distributed ( $p > .05$ ). [Table 2](#) shows the participants' mean scores and standard deviation in dependent variables at baseline, postintervention, and 2-month follow-up.

The results of the ANCOVA (see, [Table 3](#)) indicate a significant reduction in depression in the intervention group compared with the control group in postintervention and 2-month follow-up ( $p < .001$ ). Moreover, the repeated measure ANOVAs (see, [Table 4](#)) also revealed that the intervention group resulted in significant changes in depression over

**Table 1.** Levene Test of Equality of Variances and Independent *T* Test for Equality of Means

Dependent variables	Independent t-test		Levene's Test of Equality of Variances	
	Baseline significance	Post-intervention significance	Follow-up significance	
Depression	.776	.294	.099	
Self-compassion total score	.484	.111	.205	
Self-kindness	.451	.775	.549	
Common-humanity	.134	.452	.424	
Mindfulness	.653	.797	.535	
Self-judgment	.936	.175	.171	
Isolation	.666	.111	.104	
Overidentified	.789	.066	.559	
Psychological inflexibility	.513	.099	.104	

**Table 2.** Mean and Standard Deviations of Scores on Baseline, Postintervention, and Follow-Up Measures

Dependent variables	group	Baseline		Post-intervention		Follow-up	
		Mean	SD	Mean	SD	Mean	SD
Depression	MH	36.75	6.51	10.13	11.74	8.44	7.99
	WLC	37.47	7.34	34.13	7.77	34.00	6.83
Self-compassion total score	MH	29.63	5.48	44.88	9.48	44.56	9.96
	WLC	27.8	8.62	26.40	6.73	24.73	6.55
Self-kindness	MH	5.00	1.75	7.94	1.56	7.81	1.60
	WLC	4.53	1.64	4.47	1.76	4.47	1.88
Common humanity	MH	5.06	1.56	6.94	2.11	7.13	1.78
	WLC	4.07	2.01	4.87	1.8	4.80	1.37
Mindfulness	MH	5.19	1.9	7.63	1.78	7.94	1.87
	WLC	4.87	2.03	4.60	1.68	4.13	1.68
Self-judgment	MH	7.13	1.66	4.63	2.21	4.56	2.55
	WLC	7.07	2.28	8.20	1.47	7.93	1.98
Isolation	MH	7.19	1.83	4.13	1.62	5.44	2.09
	WLC	7.47	1.72	7.40	1.18	8.27	1.53
Overidentification	MH	7.31	1.92	4.88	2.30	4.25	1.91
	WLC	7.13	1.76	7.93	1.71	8.40	1.76
Psychological inflexibility	MH	32.31	8.36	19.06	10.49	16.06	8.40
	WLC	34.27	8.07	35.53	8.00	36.00	6.25

Abbreviations: MH = Mindful Hypnotherapy; WLC = Waitlist Control Group; SD = Standard Deviation

time (baseline, postintervention, and follow-up). Additionally, the between-subjects test indicated a significant difference between groups across time with the main effect,  $F = 53.86$ ,  $p < .001$ , and effect size = .65.

Results of the analysis of covariance (see, Table 3) also indicate that the total scores of self-compassion in addition to positive subscales including self-kindness, common humanity, and mindfulness, were significantly improved in the MH group compared with the WLC group in postintervention and follow-up ( $p < .001$ ). Additionally, negative subscales including self-judgment, isolation, and overidentification were significantly decreased in the intervention group compared with the WLC group in postintervention and follow-up ( $p < .001$ ). Moreover, a within-subjects test of the repeated measure ANOVAs (see, Table 4) revealed that the intervention group resulted in significant changes in total self-compassion over time. Furthermore, the between-subject test indicates a significant difference between groups across time with the main effect,  $F = 33.18$ ,  $p < .001$ , and effect size = .53.

Finally, psychological inflexibility was significantly decreased in the MH group compared with the WLC group in postintervention and 2-month follow-up ( $p < .001$ ), which

**Table 3.** ANCOVA for Study Variables

Dependent variables	Source	ANCOVA			
		F	Significance	partial $\eta^2$	Observed power
Depression	Post intervention	46.62	.000 ***	.625	1.00
	Follow-up	89.32	.000 ***	.761	1.00
	Multivariate tests	43.68	.000 ***	.764	1.00
Self-compassion total score	Post intervention	37.97	.000 ***	.576	1.00
	Follow-up	40.31	.000 ***	.590	1.00
	Multivariate tests	20.78	.000 ***	.606	1.00
Self-kindness	Post intervention	31.84	.000 ***	.532	1.00
	Follow-up	26.43	.000 ***	.486	.99
	Multivariate tests	17.82	.000 ***	.569	1.00
Common humanity	Post-intervention	6.07	.02 *	.178	.66
	Follow-up	14.34	.001 ***	.339	.95
	Multivariate tests	7.033	.003 **	.343	.89
Mindfulness	Post- intervention	23.36	.000 ***	.455	.99
	Follow-up	35.41	.000 ***	.558	1.00
	Multivariate tests	19.38	.000 ***	.590	1.00
Self-judgment	Post- intervention	26.65	.000 ***	.488	.99
	Follow-up	16.35	.000 ***	.369	.97
	Multivariate tests	13.63	.000 ***	.502	.99
Isolation	Post- intervention	43.47	.000 ***	.608	1.00
	Follow-up	19.68	.000 ***	.413	0.99
	Multivariate tests	21.10	.000 ***	.610	1.00
Overidentification	Post- intervention	19.26	.000 ***	.408	.98
	Follow-up	42.05	.000 ***	.600	1.00
	Multivariate tests	20.28	.000 ***	.600	1.00
Psychological inflexibility	Post- intervention	23.95	.000 ***	.461	.99
	Follow-up	55.23	.000 ***	.664	1.00
	Multivariate tests	28.51	.000 ***	.679	1.00

Covariate includes preintervention scores.

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\* $p < .001$ .

means that participants in the MH group gained more psychological flexibility. Moreover, a within-subjects test of the repeated measure ANOVAs (see, Table 4) indicated that the MH group resulted in significant changes in psychological inflexibility over time. Furthermore, the between-subjects test indicates a significant difference between groups across time with the main effect,  $F = 26.84$ ,  $p < .001$ , and effect size = .48.

## Discussion

This study examined the efficacy of mindful hypnotherapy, a novel intervention that incorporates elements of both mindfulness and hypnosis for treating depression alongside improving self-compassion and psychological inflexibility in patients with major depressive disorder. The results showed statistically significant changes in outcome variables in the intervention group after treatment and 2-month follow-up compared with the control group. These findings were similar to the results of previous studies on mindful hypnotherapy. The results of the study by Olendzki et al. (2020) showed that MH clinically significant improved mindfulness, psychological flexibility, and depression in college students. Additionally, the results of the study by Slonena and Elkins (2021), a brief (3 sessions) mindful hypnosis intervention compared to an active control group show that MH is an effective intervention for increasing mindfulness and reducing stress reactivity.

The effectiveness of mindful hypnotherapy can be explained by mechanisms that underlie depression and the processes of this treatment. One of the protective factors against the

**Table 4.** Repeated Measures ANOVAs for Study Variables

Dependent variables	Test	Source	F	Significance	Partial $\eta^2$	Observed power
Depression	Within-subjects effects	Time	59.47	.000 ***	.672	1.00
		Time $\times$ group	36.17	.000 ***	.555	1.00
Self-compassion total score	Between-subjects effects	Group	53.86	.000 ***	.650	1.00
		Time	13.02	.000 ***	.310	.97
Self-kindness	Within-subjects effects	Time $\times$ group	23.33	.000 ***	.446	1.00
		Group	33.18	.000 ***	.534	1.00
Common humanity	Between-Subjects Effects	Time	10.65	.000 ***	.269	.97
		Time $\times$ group	11.68	.000 ***	.287	.98
Mindfulness	Within-subjects effects	Group	28.04	.000 ***	.492	.99
		Time	9.06	.000 ***	.238	.92
Self-judgment	Between-subjects effects	Time $\times$ group	1.80	.183	.059	.31
		Group	13.86	.000 ***	.323	.94
Isolation	Within-subjects effects	Time	5.40	.009 **	.157	.79
		Time $\times$ group	12.30	.000 ***	.298	.99
Over-identification	Between-subjects effects	Group	22.47	.000 ***	.437	.99
		Time	1.94	.160	.063	.35
Psychological inflexibility	Within-subjects effects	Time $\times$ group	10.00	.000 ***	.256	.96
		Group	19.23	.000 ***	.399	.98
Over-identification	Between-subjects effects	Time	13.52	.000 ***	.318	.99
		Time $\times$ group	13.72	.000 ***	.321	.99
Psychological inflexibility	Within-subjects effects	Group	18.49	.000 ***	.389	.98
		Time	3.72	.040 *	.114	.59
Psychological inflexibility	Between-subjects effects	Time $\times$ group	19.09	.000 ***	.397	.99
		Group	18.56	.000 ***	.390	.98
Psychological inflexibility	Within-subjects effects	Time	13.38	.000 ***	.316	.98
		Time $\times$ group	20.26	.000 ***	.411	.99
	Between-subjects effects	Group	26.84	.000 ***	.481	.99

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\* $p < .001$ .

development and maintenance of depressive episodes is self-compassion (Ehret et al., 2015). Symptoms of depression include a profound sense of unworthiness (Clarkin et al., 2019). Self-compassion, by contrast, involves fully accepting oneself rather than seeing oneself as a worthless person and recognizing that one's experience of imperfection is connected to the experience of imperfection shared by all humanity (Neff & Knox, 2016). Additionally, one of the risk factors for major depressive disorder is self-criticism (Ehret et al., 2015). In contrast, self-compassion involves self-kindness as the ability to treat oneself with care and understanding rather than with self-judgment (Neff, 2003). Other factors considered to be involved in the onset of depression are stressful life events and psychological stress (Uchida et al., 2011; Yang et al., 2015). Self-compassion increases the capacity to be open and highly adaptive under stressful situations (Luo et al., 2019). It is the ability to join one's feelings of suffering with a sense of loving kindness, connection, and concern (Neff, 2003). Therefore, by targeting and improving self-compassion, the capacity to be open and highly adaptive under stressful situations will be increased (Luo et al., 2019).

Another potential mechanism underlying the development, maintenance, and exacerbation of depression is psychological inflexibility (Hayes et al., 1999; Levin et al., 2014; Paulus et al., 2016). Research evidence shows that psychological inflexibility is associated with depression (A-tjak et al., 2015; Peltz et al., 2020). Clinical features of depression are struggling with unwanted thoughts and emotions at the expense of engaging in actions based on values (Levin et al., 2014). Furthermore, psychological inflexibility involves the rigid dominance of psychological reactions, including cognitive rigidity, fusion with negative beliefs, and avoiding unwanted internal experiences, such as physical sensations and

emotions over chosen values (Bond et al., 2011; Hayes et al., 1999; Paulus et al., 2016). Therefore, increases in certain aspects of psychological flexibility, such as present-moment awareness, defusing negative thoughts, and living based on values are associated with improvement in symptoms of depression (Forman et al., 2007; Pots et al., 2016). Similarly, a decrease in psychological inflexibility is associated with a significant improvement in symptoms of depression (Bohlmeijer et al., 2011; Fledderus et al., 2013; Forman et al., 2007; Niles et al., 2014; Peltz et al., 2020).

People with depression tend to be preoccupied with their symptoms (Papageorgiou & Wells, 2004), resulting in the narrowing of their range of internal and external experiences. Therefore, mindfulness and hypnosis provide a powerful vehicle for expanding awareness and creating new experiences based on values. The expansion of awareness in mindfulness and hypnosis is effective in bringing underlying emotions into awareness, which leads to increasing the capacity to experience different emotions without getting caught up with them (Alladin, 2010; Elkins & Olendzki, 2018). This not only disrupts the depressive cycle but can also help develop anti-depressive pathways (Alladin, 2010). Mindful hypnotherapy creates a deeper level of change in patients by integrating principles and techniques of hypnotherapy such as hypnotic induction and mindfulness, which include nonjudgmental awareness and acceptance of internal experiences such as difficult emotions and thoughts, self-compassion, resilience toward stressful situations, and living based on values (Elkins & Olendzki, 2018; Olendzki et al., 2020). Additionally, both mindfulness and hypnosis use suggestions for therapeutic goals. The difference between suggestions during mindfulness and hypnosis sessions is that in the mindfulness session suggestions are given and practiced at the highest level of consciousness, but in the hypnosis session hypnotic suggestions are given at deep, unconscious levels. In the mindful hypnotherapy, a hypnotic induction technique is used to achieve an altered state of consciousness or “trance” involving focused attention and reduced peripheral awareness. Within this deep state of consciousness, the individual is more receptive to new ideas (Elkins et al., 2015). This is a powerful tool for creating cognitive, perceptual, physical, and physiological changes (Alladin & Alibhai, 2007). Therefore, the principles of mindfulness can be deeply absorbed. In mindful hypnotherapy, mindfulness is learned through psychoeducation and practice in session, then absorbed deeply through hypnotic suggestions.

Several limitations of this investigation need to be mentioned. The main limitation was the gender of the study sample. The participants were all female, and this limited the interpretation of results to another gender. Other limitations included the lack of an active control condition, purposive sampling method, and a relatively small sample size. Future research should attempt to replicate and extend these results and tests of generalizability to another gender, comparing with other active treatment groups, and larger sample size. Additionally, future research is needed to examine the impact of mindful hypnotherapy delivery in a group format. Both mindfulness and hypnotherapy can be performed in a group context and could be very beneficial, enabling many individuals to be treated at the same time. Research is also needed to investigate the feasibility, efficacy, and effectiveness of MH for anxiety disorders such as panic disorder, eating disorders, chronic pain conditions, irritable bowel syndrome, and psychological issues in chronic conditions such as cancer and multiple sclerosis.

In conclusion, mindful hypnotherapy shows promise as an effective intervention for treating depression as well as improving self-compassion and psychological inflexibility in

people with major depressive disorder. This novel intervention shows potential as a unique and valuable contribution to major depression disorder interventions. Therefore, psychotherapists may wish to give serious consideration to mindfulness in combination with hypnosis as a treatment option in clients with depression.

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## Data Availability statement

Data available on request from the authors.

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## Die Wirksamkeit von Achtsamkeits-Hypnotherapie bei Depression, Selbstmitgefühl und psychisch bedingtem unflexiblen Verhalten bei Frauen mit schwerer depressiver Störung: eine einfach verblindete randomisierte klinische Studie

HASSAN KHAZRAEE, MARYAM BAKHTIARI, AMIR SAM KIANIMOGHADAM, UND ELAHEH GHORBANIKHAH

**Zusammenfassung:** Die Wirksamkeit der neuartigen Behandlungsform der Achtsamkeits-Hypnotherapie bei Depression, Selbstmitgefühl und psychisch bedingtem unflexiblen Verhalten mit schwerer depressiver Störung wurde in einer randomisierten klinischen Studie untersucht. 34 Teilnehmerinnen wurden nach Zufall einer Gruppe mit Achtsamkeits-Hypnotherapie und einer Warteliste Kontrollgruppe zugewiesen. Die Teilnehmerinnen der Behandlungsgruppe erhielten 8 wöchentliche, 60-minütige, persönliche Therapiesitzungen mit zusätzlichen Audio-CDs mit Achtsamkeitshypnose zum täglichen Üben. Die Ergebnisse der Kovarianzanalyse zeigten nach der Behandlung und im Follow-up nach 2 Monaten ( $p < .001$ ) signifikante Unterschiede zwischen der Gruppe mit Achtsamkeits-Hypnotherapie und der Warteliste Kontrollgruppe. Der Zwischen-Subjekt-Test wiederholter ANOVA Messungen zeigte ebenfalls über die Zeit hinweg einen klinisch signifikanten Unterschied bezüglich Depression zwischen den Gruppen (Baseline, nach Behandlung und Follow-up nach 2 Monaten), bezüglich Depression  $F = 53.86$ ,  $p < .001$ , Effektstärke = .65, für Selbstmitgefühl  $F = 26.84$ ,  $p < .001$ , Effektstärke = .48. Abschließend zeigt diese Studie, dass Achtsamkeits-Hypnotherapie eine effektive Behandlungsmethode für Depression ist als auch zur Behandlung psychisch bedingten unflexiblen Verhaltens sowie zur Verbesserung von Selbstmitgefühl von Patientinnen mit schwerer depressiver Störung.

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## L'efficacité de l'hypnothérapie de pleine conscience sur la dépression, l'auto-compassion et l'inflexibilité psychologique chez les femmes atteintes d'un trouble dépressif majeur : un essai clinique randomisé en simple aveugle

HASSAN KHAZRAEE, MARYAM BAKHTIARI, AMIR SAM KIANIMOGHADAM, ET ELAHEH GHORBANIKHAH

**Résumé:** L'efficacité de la nouvelle intervention d'hypnothérapie consciente sur la dépression, l'auto-compassion et l'inflexibilité psychologique chez les femmes atteintes d'un trouble dépressif majeur a été examinée dans un essai clinique randomisé. Trente-quatre participants ont été répartis au hasard dans des groupes témoins d'hypnothérapie de pleine conscience et de liste d'attente. Le groupe d'intervention a été traité en 8 séances de thérapie hebdomadaires en face à face de 60 minutes avec des bandes audio d'hypnose de pleine conscience à utiliser quotidiennement. Les résultats de l'analyse de covariance ont indiqué qu'il y avait des différences significatives entre les groupes de contrôle de l'hypnothérapie de pleine conscience et ceux de la liste d'attente après l'intervention et au suivi de 2 mois ( $p < 0,001$ ). Le test inter-sujet de mesures répétées ANOVA a également indiqué une différence cliniquement significative entre les groupes dans le temps (ligne de base, post-intervention et suivi de 2 mois) dans la dépression,  $F = 53,86$ ,  $p < 0,001$ , taille de l'effet = 0,65, et dans l'auto-compassion,  $F = 33,18$ ,  $p < 0,001$ , taille d'effet = 0,53, ainsi que l'inflexibilité psychologique,  $F = 26,84$ ,  $p < 0,001$ , taille d'effet = 0,48. En conclusion, cette étude indique que l'hypnothérapie de pleine conscience est une intervention efficace pour traiter la dépression ainsi que pour réduire l'inflexibilité psychologique et améliorer l'auto-compassion pour les patients souffrant de trouble dépressif majeur.

GÉRARD FITOUSSI, M.D.

*President-elect of the European Society of Hypnosis*

## La Eficacia de la Hipnoterapia Consciente Sobre la Depresión, la Autocompasión y la rigidez Psicológica en Mujeres con Trastorno Depresivo Mayor: Un Ensayo Clínico Aleatorizado Simple-Ciego

HASSAN KHAZRAEE, MARYAM BAKHTIARI, AMIR SAM KIANIMOGHADAM, Y ELAHEH GHORBANIKHAH

**Resumen:** La eficacia de la nueva intervención *hipnoterapia consciente* en la depresión, la autocompasión, y la inflexibilidad psicológica en mujeres con trastorno depresivo mayor se examinó en un ensayo clínico aleatorizado. Treinta y cuatro participantes fueron asignados aleatoriamente a grupos de hipnoterapia consciente y de control en lista de espera. El grupo de intervención recibió tratamiento en ocho sesiones de terapia semanales consecutivas de 60 minutos junto con cintas de audio de hipnosis consciente para usar diariamente. Los resultados del análisis de covarianza indicaron que hubo diferencias significativas entre grupos de hipnoterapia consciente y control en lista de espera después de la intervención y a los dos meses de seguimiento ( $p < .001$ ). La prueba entre sujetos de ANOVA de medidas repetidas también indicó una diferencia clínicamente significativa entre los grupos a lo largo del tiempo (línea de base, después de la intervención y seguimiento de 2 meses) en la depresión,  $F = 53.86$ ,  $p < .001$ , tamaño de efecto = .65, y en autocompasión,  $F = 33.18$ ,  $p < .001$ , tamaño de efecto = .53, así como rigidez psicológica,  $F = 26.84$ ,  $p < .001$ , tamaño de efecto = .48. En conclusión, este estudio indica que la hipnoterapia consciente es una intervención eficaz en tratar la depresión, además de reducir la rigidez psicológica y mejorar la autocompasión en pacientes con trastorno depresivo mayor.

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