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Aim and Scope

One of the elements of modern time is reliance on scientific thinking. With respect to thought provoking philosophical nature of the present time, Modern psychology has proposed theories in the field of psychological processes based on empirical studies. Hence Journal of Modern Psychology has been launched to provide a space for scholars to publish thoughts and scientific studies in personality, abnormal and social psychology.



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Book Review: Jean-Claude Maleval's *Psychoanalytical Conversations* say a lot about psychoses



Jean-Luc Vannier

Psychoanalyst and Professor, Cote d'Azur University, French

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Abstract

Published by Érès with the support of the Centre national du livre, the simple review of the introduction to this collection would already be satisfying. Not that the “revised and expanded” texts proposed by Jean-Claude Maleval are of limited interest. Quite the contrary. However, the dozen or so pages that open these *Psychoanalytical Conversations with Ordinary and Extraordinary Psychotics* contain assertions and other clinical innovations capable of shaking the doctrinal tree. Certainly, there is no surprise in this author's constant and incisive criticism of the “dead end of the descriptive strategy” adopted by successive DSMs and reduced to “entities independent of human history and cultural variations”. Moreover, this in an environment characterized by a “spectacular” increase in requests for psychoanalysis by subjects with a psychotic structure. The clinician briefly explains the reasons: the introduction of the diagnosis of ordinary psychosis, the sharpening of its identification and a better knowledge of the conduct of the treatment. A trend reinforced *a contrario* by the negative effects of a “deterioration of the conditions in which patients receive in psychiatric institutions”.

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The introductory paragraphs dedicated by Jean-Claude Maleval to the “symptomatological variety of psychosis” are more innovative: if he quotes Jacques-Alain Miller on “the gradation within the great chapter of psychosis”, the emeritus professor of clinical psychology at the University of Rennes 2 still distances himself cautiously from him by affirming that “there is no specific clinic of generalized foreclosure” [forclusion généralisée]. He preferred a “clinic of restricted foreclosure” [clinique de la forclusion restreinte] in a place where the “elementary phenomena, common to ordinary and extraordinary psychoses, constitute the clinical expression of the psychotic structure”. A distinction which is not without consequence since it enables a transition towards conceptions elaborated during his long experience in psychopathology: in the first place, not only is the clinic of stabilizing “substitution” [suppléance], sometimes by means of fantasies or perverse behaviors, or even by acting out - in the image of unmotivated murders - but also with regard to the function of writing which becomes “a deposit and a ciphering of the jouissance of the Other” [jouissance de l’Autre]. “Substitution” [suppléance], as the “compensation¹ of the deficiency of the fundamental fantasy”, are concepts used by the author who seems to follow in the footsteps of Helene Deutsch who is admittedly, even still hesitant at her time, of the “functioning as if” described by her in

the avoidance of the triggering of the psychosis. However, is this “Substitution” an *ad hoc* function, a more general defense mechanism, or even a pathognomonic sign of a new entity - the pre-psychosis - capable, as some authors affirm, of “definitively preventing the occurrence of a trigger²”?

Secondly, the author raises the problem of the differential diagnosis between, on the one hand, Asperger’s syndrome – “valorized in the XXIst century” and, on the other hand, borderline case and ordinary psychosis, which was the subject of one of his other works³; in this regard, he suggested a rethinking of the Freudian triad “Neurosis, psychosis and perversion”. In addition to this, he specifies in his fascinating study on Glenn Gould the reason why one should replace this third component with “autism as all studies on the prevalence show an exponential curve”. Additional audacity: his thought aiming at substituting the term of “substitute structure” [structure suppléante] to that of “psychotic structure” to better consider the “modes of specific jouissance” [jouissance spécifique] to these denominations. By making autism an entity in its own right⁴, Jean-Claude Maleval completely empties of its content schizophrenia, which Eugen Bleuler had made in the heart of his discovery : He thus completes its nosographic dismembering, an undertaking initiated in 1981 with his work in Payot Edition and dedicated to Jacques Lacan *Folies hystériques et psychoses dissociatives*, then, in a much more

¹ According to Christian Hoffmann, “compensation” involves, more than substitution [suppléance], “if only etymologically, decompensation”, in Eléonore Galiana-Mingot, *Quelques préalables théorico-cliniques à la conceptualisation lacanienne des suppléances, Du « comme si » d’Hélène Deutsch à la « prépsychose » de Moritz Katan*, Recherches en psychanalyse, Cairn, 2010/1 n°9, p. 149.

² Ibid.

³ *Repères pour la psychose ordinaire*, Navarin Editeur, 2019.

⁴ Jean-Claude Maleval has devoted two important works to this topic: *L’autiste et sa voix*, Coll. « Champ freudien », Seuil, 2009 and *La différence autistique*, préface de Jacques-Alain Miller, Coll. « Arguments Analytiques », Presses Universitaires de Vincennes, 2021.

committed manner, in a work that is both thorough and astonishingly didactic, for example by separating “psychotic delusion and neurotic delirium”, a book entitled *Logique du délire*⁵. So many innovations made it authoritative; at the end of this abundant introduction, to recall and confirm the fact that “psychoanalysis is in an exceptional position in the field of knowledge in relation to the discourse of science”, he even proposed to add to the latter “ethics committees”. Science must be on its toes.

In detail, some unpublished texts such as *On the desert clinic*, the one on Glenn Gould’s *Asperger’s syndrome or ordinary psychosis?* and the one, particularly edifying in that it makes a case for the numerous related contradictions on “the borderline catch-all diagnosis”, shoulders with older contributions: Some of them, published in the past in *exclusively* Lacanian journals, remain more difficult to decipher because of a metalanguage that is less accessible to those *uninitiated* in Lacan’s formulas. However, it must be recognized - and we readily agree with this observation - that Jean-Claude Maleval is an *enlightened translator* in explaining the latter with the presentation of clinical cases backed up by an academic thought that is resolutely oriented towards teaching. That is, with a rare efficiency for the audience or the reader.

Among the articles that have caught our attention is the one entitled *Unmotivated murder and the function of acting out for the psychotic subject* : From Esquirol’s “homicidal monomania” to Lacan’s “process of alienation in the image of the

other” through Guiraud’s and Cailleux’s “murder as an effort to liberate the pathologically transposed illness in the outside world”, the author’s historical and clinical erudition, enriched by his own experience, *elucidating* in a very convincing way the stages, mechanisms and other obscure chains in these homicides, the reasons for which are supposedly inexplicable. Additionally, other professions directly linked to these rapidly increasing phenomena would be well advised to learn from these texts.

In the same vein, we have carefully compared the original version of his study *Necrophilia, psychosis and perversion* published in 1997⁶ with the one in this collection. The author replaces each occurrence of the meaning “murderer by lust” [assassin par lubricité] by “murderer by pure enjoyment” [assassin par pure jouissance], an inflection - apparently minimalist in form but more in conformity with Lacanian doxa - introduced by a few lines of Jacques-Alain Miller distinguishing between “crimes of utility” [crime d’utilité] and “crimes of enjoyment” [crime de jouissance], the latter “delivering to the actant a satisfaction which is so singular that it cannot be shared”.

On the other hand, we will question his text *Un sinthome masochiste hors normes*, initially published in *La Cause freudienne* under the title *Suppléance perverse chez un sujet psychotique*. Its content is based on a clinical vignette - if one considers two sessions with a subject, followed ten years later by a report, could have this meaning - written by Michel de M’Uzan in 1972⁷. Jean-Claude Maleval detects in this case the

⁵ *Logique du délire*, Nouvelle édition revue et augmentée, Coll. « Clinique Psychanalytique et Psychopathologie », Presses Universitaires de Rennes, 2011.

⁶ Th. Alberne (sous la direction de), *Criminologie et psychiatrie*, Ellipses, 1997, pp. 207-227.

⁷ « Un cas de masochisme pervers, Esquisse d’une théorie », in *De l’art à la mort*, Tel Gallimard, n°84, 1977, pp. 125-150.

setting up of a “perverse sinthome to be able to remedy the failure of the Borromean knot rings” or, more simply said, “to put the ego back together”: the tattoos as well as the scars of the sado-masochistic practices make “hold together body and imaginary”. Nevertheless, two questions arise: If Lacanian doctrine holds perversion to be a series of trans-structural conducts, in what way it would be possible to see it as a specific and successful replacement for the foreclosure of the Nom-du-Père [forclusion du Nom-du-Père]? The author then seems to take into consideration the absence of limits in the search for enjoyment of the subject and this, contrary to the numerous cases of sado-masochism where a preliminary agreement between the actors takes the place to define mutual limits not to be exceeded. However, Mr. M's very “lucid” refusal of an “amputation of the penis for fear of medico-legal complications”, in addition to the undoubtedly phallic significance of this *retreat*, does it not remind us of the partial existence, in any psychotic, of a “psychic attitude that takes reality into account⁸”? In this perspective, can we still evoke the central hypothesis of a “substitution” [suppléance]?

Whether or not one is close to, convinced of, or simply interested in Lacan's thought in the orientation proposed by Jacques-Alain Miller, it is undeniable that Jean-Claude Maleval's *Psychoanalytical Conversations*, apart from a few very Lacanian pages, clarifies with acuity and instructs our knowledge of psychoses with sharp intelligence. In other words, the book is a must for any self-respecting clinician.

Nice, May 2023

Jean-Luc Vannier

Laplanche et Pontalis, *Vocabulaire de la ^ psychanalyse*, Coll. « Quadrige », PUF, 2014, p. 70.



Research Paper: The effectiveness of Mindfulness Group Training on Psychological Well-being, Alexithymia, and Marital Burnout



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Abstract

The aim of the present study was to determine the effectiveness of mindfulness group training on psychological well-being, alexithymia, and marital burnout. The current research was a quasi-experimental with a pre-test-post-test design and a control group. The population of the present study included married women in the city of Rodsar in 2023. From this population, 30 people were selected by purposive sampling and were randomly divided into two experimental and control groups. The experimental group received eight two-hour sessions of mindfulness group training, and the control group did not receive any training. Psychological well-being scale (PWB), couple burnout measure (CBM), and Toronto alexithymia scale (TAS) were used to collect research data. Covariance analysis was also used to analyze the data. The research findings showed that mindfulness group training was effective in increasing psychological well-being and reducing marital burnout and alexithymia in married women ($p < 0.01$). Therefore, it was concluded that the results of the present study could be useful for families to improve psychological well-being, marital exhaustion, and emotional alexithymia.

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1. Introduction

Human are social beings; one of their basic needs is interaction and communication with others. Among the many and varied problems of the family, the problems of spouses and marital relations have serious outcomes (Nesset et al., 2021). Marriage is one of the most important phenomena in the social system, which is of great importance as it is the most fundamental institution for education and the health of the society. The need to strengthen family life, its stability and durability, the type of attitude and interaction of couples with each other, and the study of couples' relationships help to clarify the structural frameworks in which couples' relationships are formed (Pines & Nunes, 2003).

Among the constructs studied in positive psychology is psychological well-being, which has attracted the attention of many researchers as one of the main components of public health during the past two decades (Hafenbrack & Vohs, 2018). In the last decade, Ryff et al. (1995) presented the theory of psychological well-being. According to Ryff et al.'s model, psychological well-being consists of six factors: self-acceptance (having a positive attitude towards oneself), positive relationships with others, autonomy (feeling of independence and the ability to stand up against social pressures), purposeful life (having a sense of purpose in life and giving it), personal growth (a sense of continuous growth), and environmental mastery (a person's ability to manage the environment) (Seligman, 2011). Psychological well-being is a type of satisfaction with the quality of life, which includes a positive state of physical, psychological, and social well-being (Ryff et al., 1995).

Moreover, psychological well-being is one of the most important components of emotional stability in couples. Psychological well-being is an objective feeling of satisfaction and pleasure experienced by men and women with regard to all aspects of the marital relationship. Psychological well-being has several emotional and cognitive components. People with a high sense of well-being have positive emotions. However, people with a low sense of well-being evaluate the incidents and events in their lives as unfavorable and experience more negative emotions such as anxiety, depression, and anger (Ahmadi Shurke Tucanlou & Asghari Ebrahimabad, 2018).

Another variable that can be effective in couples' relationships is alexithymia. Alexithymia is a special disorder in emotional processing that mostly refers to a decrease in the ability to identify and recognize emotions. People suffering from alexithymia magnify normal physical arousal, misinterpret physical signs of emotional arousal, show emotional helplessness through physical complaints, and in therapeutic measures, seek to treat physical symptoms (Edward & Wupperman, 2017). Alexithymia refers to problems in the fields of experience, verbalization, and regulation of emotions. Difficulty in identifying emotions and differentiating between bodily sensory perceptions related to emotional arousal of emotions, difficulty in describing emotions, limited imaging process, and outward-oriented cognitive style are the most important features of alexithymia. The characteristics that reflect the cognitive and emotional defects in these people (Taylor, 2000). In the sense that people with this construct are unable to establish an interpersonal relationship due to the major problems they have in identifying, expressing, and regulating their emotions. Interpersonal

relationships are not effective and efficient, and this factor explains a part of the variance in marital problems, including marital burnout (Larson & Holman, 1994). In fact, people with alexithymia show patterns of interpersonal interactions that include distancing and withdrawal. In particular, alexithymia is associated with coldness and distance in interpersonal relationships and inhibition of social feeling in social interactions; this shows the effect of alexithymia on interpersonal and social problems (Kafetsios & Hess, 2019). Marital burnout is also an important variable for women in families that should be taken into consideration. Marital burnout is a painful state of physical, emotional, and mental exhaustion that affects those who expect romantic love and marriage to give meaning to their lives (Pines & Nunes, 2003). Burnout means a physical, emotional, and mental breakdown that comes from the disproportion between expectations and reality. Exhaustion occurs due to failure in love and is a response to existential issues, the accumulation of psychological pressures that weaken love, the gradual increase in fatigue and monotony along with small annoyances contribute to burnout. The onset of burnout is rarely sudden, usually gradual, and rarely results from an unfortunate event or even a few unpleasant shocks (Qasemi & Behroozi, 2015). The accumulation of frustrations and tensions in daily life causes erosion and finally leads to burnout. In a disillusioned marriage, while experiencing a feeling of separation from their spouse and a decrease in mutual interests and connections, one or both couples have significant concerns about the growing relationship and progress towards separation and divorce (Sharifi et al., 2011).

Mindfulness is effective in reducing marital conflicts. Mindfulness is described as a feeling which is free of individual evaluation and is

without judgement. Mindfulness meditation training and its applications are focused on daily life and it is useful for dealing with stress, illness, and pain. Mindfulness-based stress reduction is a behavioral intervention that is based on attention and self-focus. Exercises are done by focusing on thoughts, feelings, and perception. These skills are achieved through focusing on breathing in all life related activities. It helps people through changing people's perception of stressful events and increasing their ability to control life (Moeenizadeh et al., 2021).

Interventions based on mindfulness are considered one of the cognitive-behavioral treatments of the third generation, or the third wave. When emotional signals cannot be perceived and evaluated in the process of cognitive processing, the person is emotionally and cognitively disturbed, and he or she experiences helplessness. This disability disrupts the organization of emotions and cognitions in an individual and affects the relationship of the couples, after which, marital exhaustion occurs (Motahari et al., 2014). The most important part of mindfulness exercises is to have awareness, which means commitment on the presence of mind, so that a person can have a non-judgmental performance and be aware of the situation at any time without effort and in a non-reactive manner (Hafenbrack et al., 2020).

Many studies were done in relation to mindfulness, which show the beneficial effects of mindfulness in the treatment of all kinds of problems. Hofmann et al. (2011) reviewed thirty-nine studies and found that mindfulness-based therapy significantly improved anxiety. Goyal et al. (2014) investigated the usefulness of mindfulness meditation for stress reduction. Their review included 47 trials with more than 3,000 participants; they found that meditation

programs were effective on positive mood, attention, substance use, eating habits, sleeping, or weight, but there was no evidence that meditation programs were better than any active treatment. (Hofmann et al., 2011)

They found out about the violence of the spouse (Basharpoor & Jani, 2020). They realized the effectiveness of mindfulness-based stress reduction training on women's marital burnout (Naghbi et al., 2020). Kalhor et al. (2020) addressed the effectiveness of mindfulness-based cognitive therapy on dysfunctional attitudes and marital exhaustion in women with marital conflicts, and Ghamari et al. (2021) found the effectiveness of mindfulness training on students' anxiety and psychological well-being. Carpenter et al. (2019) showed the effects of mindfulness on distress and stress tolerance. They revealed that the effects of mindfulness training were greater on resilience compared to relaxation training. Mindfulness-based therapy improves emotion regulation problems in people who commit violence against their spouses.

The importance of paying attention to the psychological well-being, marital burnout, and alexithymia of married women and finding solutions to improve them is that it helps the decision-makers to pay attention to all the dimensions of these variables. That is to say, based on the dimensions of this problem, the authorities can play the role of providing suitable platforms and infrastructures for improving the situation. Having a healthy society depends on having healthy families, and this requires the satisfaction that spouses experience in their marriage relationship (Nesset et al., 2021). According to what has been said, this research seeks to answer the following question: does group mindfulness training have an effect on the psychological well-being, marital burnout, and alexithymia of married women in Rudсар, in 2023?

2. Method

2.1. Population, participants and data collection procedure

The research method was quasi-experimental employing a pre-test-post-test design and a control group. In order to draw a sample of people, questionnaires of psychological well-being, marital burnout, and emotional Alexithymia were administered to a number of women in the population, and among them, 40 people who met the cut-off point were selected by purposive sampling divided into two groups, experimental and control. The experimental group underwent eight two-hour sessions of mindfulness training in two months, and the control group did not receive any training. Finally, during the intervention period, five people from each group left the research, and the number of samples reached 30. The criteria for entering the research were informed consent and desire to participate in the research, activity, participation in the mindfulness course (including the experimental group), and being married. The criteria for exiting the research were unwillingness to continue, lack of regular participation and practice in the course (including the experimental group), and incomplete as well as distorted questionnaires. Research questionnaires were administered to 70 married women in the pre-test phase. While filling out the questionnaire, every type of question was answered by the researcher. Then 40 people who had higher marital burnout, alexithymia, and lower psychological well-being with the estimated cut-off points were selected and randomly divided into two groups of 20 people: an experimental and a control group, 20 people in each. They were assured that the results would remain confidential. The experimental group consisted of people who were invited to participate in the mindfulness

training workshop. During the course, five people from the experimental, and five from the control group left the experiment. The training was done on-line. The participants were trained for two months, i.e., eight weeks, and the questions of the people were answered in the telegram group during the course, and their feedback from the tasks in the group was checked. After eight sessions with the experimental group participating in the training course, the questionnaires were administered among the members of both groups again.

2.2. Instruments

Psychological well-being Scale (PWB): The psychological well-being scale (short form) was designed by Ryff and Keyes (1995) and revised in 2002. The short form of this questionnaire is derived from the original form with 120 questions. This version contains six factors, which are: independence, control over the environment, personal growth, the factor of positive communication with others, purposefulness in life, and self-acceptance. Each subscale contains seven questions. The questions are expressed on a Likert scale. A high score in this test indicates high psychological well-being, and a low score indicates low psychological well-being (Ryff & Keyes, 1995). They reported the correlation of this questionnaire with the 84-question scale as 0.70 to 0.89. In the research, internal consistency using Cronbach's alpha for the components of self-acceptance, mastery of the environment, positive relationships with others, having a goal in personal life, personal growth, and independence were equal to 0.81, 0.81, and 0.82 respectively. They got 0.67, 0.75, and 0.79 (Ryff & Keyes, 1995).

The Couple Burnout Measure (CBM): The questionnaire was designed and compiled by

Pines (1996) in order to measure marital burnout (Pines & Nunes, 2003). This questionnaire has 21 questions and includes 3 main components of physical fatigue, emotional fatigue, and mental fatigue, and based on a seven-point Likert scale, it measures marital exhaustion with questions such as (having nothing and nothing to forgive). All of which are answered on a 7-point Likert scale (1=never to 7=always). This spectrum shows the degree of marital exhaustion of the person. The subscale of physical exhaustion has 6 questions, the subscale of mental exhaustion has 7 questions and the emotional exhaustion subscale has 8 questions. The reliability coefficient of this test using the test-retest method was 0.89 for a period of one month, 0.76 for a period of two months and 0.66 for a period of four months. Internal consistency was measured for most of the participants with constant alpha coefficient, which was between 0.91 and 0.93 (Pines, 1996). In Sadati et al. (2015) research they calculated the correlation of this test with the ENRICH Marital Satisfaction Scale, the correlation coefficient between these two questionnaires was -0.40, which was significant at the $p < 0.001$ level.

Toronto Alexithymia Scale (TAS-20): The initial form of the Toronto Alexithymia Scale was 26 questions that was created in 1985 by Taylor et al. (1985). In 1994, the Toronto Alexithymia Scale was revised by Bagby et al. (1994) and turned into a 20-question form. Bagby et al. (1994) found that in their validation study, the 20-question form of the Toronto Alexithymia Scale (TAS-20) had three structural factors that were consistent with the construct of alexithymia. The three subscales are Difficulty Identifying Feelings (including 7 items), difficulty in describing emotions (including 5 items), and Externally Oriented Thinking (including 8 items) on a 5-point Likert scale. 1 (strongly disagree) to 5 (strongly agree). A full

score is also calculated from the total of the three subscale scores for general alexithymia. Alexithymia refers to the score that the subject receives from the response to this scale. and varies from 20 to 100. A higher score means more alexithymia. In the Persian version of TAS- 20, Cronbach's alpha coefficient for total Alexithymia and three subscales of difficulty in recognizing emotions, difficulty in describing emotions, and objective thinking are 0.85, 0.82, 0.75, and 0.72 respectively (Besharat, 2007). This indicates that the internal consistency of the scale is good. The reliability of the TAS-20 was confirmed in a sample of 67 people on two occasions with a time interval of 4 weeks, from $r = 0.80$ to $r = 0.87$ for total alexithymia and different subscales (Besharat, 2013).

3. Results

Examining the demographic characteristics of the participants demonstrated that the minimum age was 24 and the maximum was 56, the minimum duration of marriage was 1

year and the maximum was 31 years, the minimum number of children was 0 and the maximum was 3; 66.67% of the participants had a master's degree, and the majority were housewives. Regarding the spouse's education, 46.7% had a bachelor's degree, and regarding the spouse's occupation, 3% were self-employed. To check the normality of the distribution of the main research variables, the Kolmogorov-Smirnov test was used, and the p-value of the Kolmogorov-Smirnov test in the scores of all variables was greater than 0.05, so it was concluded that the distribution of all variables was normal. Levine's test was used to check the assumption of homogeneity of variances. Considering that in all research variables, the significant number was greater than 0.05, it can be concluded that the variance of the research variables in the groups was equal and homogeneous.

In Table 2, the mean and standard deviation of the research variables are shown separately for the experimental and control groups in the pre-test and post-test.

Table 1

Structure of mindfulness training sessions (Kabat-zinn, 2015)

sessions	Discerption of sessions
	The meeting before starting the treatment:
1	In this meeting we were introduced and established a relationship with the patients. It begins with the group getting to know each other and emphasizing confidentiality and privacy. After introducing the treatment and familiarizing them with the process and structure of the intervention, the need to do the homework was also emphasized, and their questions and doubts regarding the treatment were answered, and the people became mentally ready to start the course.
	The first session:
2	<ul style="list-style-type: none"> • Reading and reflecting on <i>Meditation and Practicing Consciousness</i> • Practicing the presence of mind in relation to breathing during the day • Having bites accompanied by the presence of mind • Official practice of the presence of mind and physical examination, 6 days a week, 45 minutes each time
	The second session:
3	<ul style="list-style-type: none"> • Practicing formal mental presence every day for 45 minutes

- Practicing mindfulness meditation (yoga).
- Practicing the presence of mind in breathing during the day
- Increasing the level of awareness during daily activities such as eating, bathing, brushing teeth, washing dishes, and reading

The third session:

- 4
- Practicing the formal presence of mind which requires 45 minutes of physical examination every day.
 - Practicing mediating while sitting
 - Continuation of daily activities with intentional awareness, such as eating, bathing, brushing teeth, washing dishes, and reading

The fourth session:

- 5
- 45 minutes of yoga every day
 - Feedback
 - STOP technique
 - Continuation of daily activities with intentional awareness such as eating, bathing, brushing teeth, washing dishes, reading

The fifth session:

- 6
- Practicing the formal presence of mind every day for 45 minutes, alternating between sitting meditation, physical examination, and Yoga.
 - The article on the effects of meditation on the grey cortex of the brain
 - Kindness prayer
 - Continuation of daily activities with intentional awareness, such as eating, bathing, brushing teeth, washing dishes, reading, and especially during interactions with others, which can reveal a lot about ourselves,

The sixth session:

- 7
- Acceptance, facing unpleasant thoughts, emphasizing the transience of experiences, feelings, and thoughts and their unreality, body scan

The seventh session:

- 8
- A review of learned techniques, selective exercise, and posing the question: How can I take care of myself in the best way?

The eighth session:

- 9
- Summing up, reviewing learned techniques, giving feedback, and emphasizing the use of what has been learned

After the end of the intervention, the collected data was analyzed. In order to analyze the research data, statistical methods were employed at two levels: descriptive and inferential. In this research, descriptive

statistics (mean, standard deviation, skewness, and kurtosis) and inferential statistics (correlation test and statistical test of covariance analysis), and SPSS 23 were used to analyze the data.

Table 2

Mean and standard deviation of the research variables according to the experimental and control groups in the pre-test and post-test phases

Research articles	Group	Test	mean	The standard deviation
Psychological well-being	the experimental	pre-exam	325.67	17.88
	group	pre-exam	341.53	15.90
	Control	pre-exam	333.37	21.73
	Group	pre-exam	333.02	21.04
Marital Burnout	the experimental	pre-exam	85.54	17.55
	group	pre-exam	77.07	15.51
	Control	pre-exam	69.18	18.19
	group	pre-exam	69.08	18.46
Alexithymia	the experimental	pre-exam	57.77	13.33
	group	pre-exam	50.80	12.07
	Control	pre-exam	65.19	15.23
	group	pre-exam	65.15	15.29

As can be seen in Table 2, psychological well-being increased after the intervention in

the experimental group, and marital burnout and alexithymia decreased.

Table 3

Results of covariance analysis in two control and experimental groups of psychological well-being

Source of changes	F	Sig	η^2
Groups – tests	40.74	0.000	0.60

According to Table 3, there was a significant difference between the two experimental and control groups in the pre-test and post-test means ($p=0.000$). Therefore, it

can be concluded that group training in mindfulness was effective for psychological well-being.

Table 4

Results of covariance analysis in two control and experimental groups of the marital burnout test

Source of changes	F	Sig	η^2
Groups – tests	14.10	0.001	0.34

Between the two groups (experimental and control), there was a significant difference between the pre-test and post-test means

($p=0.001$) (Table 4). Consequently, it can be inferred that mindfulness group training was effective in reducing marital burnout

Table 5

Results of covariance analysis in the two control and experimental groups of the alexithymia

Source of changes	F	Sig	
Groups – tests	57.54	0.00	0.34

According to the results of Table 5, there was a significant difference in the pre-test and post-test means between the two groups ($p=0.000$). Hence it can be concluded that mindfulness group training was effective for alexithymia.

4. Discussion

The results of the covariance analysis showed that mindfulness group training was effective for the psychological well-being of married women in the city of Rudsar. The results of Ghamari and Hosseini's (2017) study indicated the effectiveness of mindfulness training on the anxiety and psychological well-being of students and showed that mindfulness training reduces anxiety and increases psychological well-being. Karbalai et al. (2021) presented that emotion regulation, cognitive flexibility, and mindfulness were related to psychological well-being. In explaining this result, it can be said that mindfulness gives people the opportunity to perceive thoughts and events as they avoid passing judgement on these thoughts and events critically. Therefore, mindfulness helps to free people from the pressure of automatic thoughts and unhealthy behaviors and increases self-regulation. In explaining the relationship between mindfulness and psychological well-being, the theory of self-determination refers to the role of attention, which forms the core of the concept of mindfulness, in emotional self-regulation. By promoting attention to one's thoughts and feelings, mindfulness increases emotional self-regulation and will lead to social well-being. Considering that mindfulness involves a state of detachment

from thoughts, it is possible that people who naturally have higher mindfulness are less affected by thoughts and emotions that are characteristic of low well-being. Some studies highlighted that mindfulness had a direct effect on positive psychological well-being and physical outcomes (Karbalai et al., 2021).

The results of the covariance test illustrated that mindfulness group training was effective in reducing marital burnout among married women in the city of Rudsar. The results of this research are consistent with some other findings (Rabiei et al., 2020), which showed that mindfulness-based stress reduction training can significantly reduce marital burnout and its components (physical fatigue, mental fatigue, and emotional fatigue). This study revealed that the stress reduction program based on mindfulness is a suitable intervention method to reduce the level of marital exhaustion in women. In explaining these findings, it can be said that couples with low marital burnout actually have more perceptual harmony compared to unsatisfied couples, and one of these perceptual harmony factors is mindfulness. Mindfulness means the degree to which a couple enthusiastically re-evaluates his or her perception of his or her spouse in a specific situation, which can increase flexibility in various situations, and the ability to be aware of inner senses can help neutralize and reduce emotions. It is very effective during the fight with the wife or husband since the person can identify the feeling of arousal faster.

Furthermore, the results of the covariance test showed that mindfulness group training was effective in treating alexithymia in

married women in the city of Rudsar. It can be said that mindfulness group training can play an important role in reducing alexithymia, and mindfulness group training can be used in family interventions to reduce alexithymia. In the process of practicing mindfulness and keeping the states of mindfulness in a way that the person pays constant attention to neutral stimuli such as breathing, depressive patterns that increase the use of ineffective coping behaviors are stopped in this regard, at the present moment. Additionally, mindfulness exercises may identify the initial signs of stress, subsequently specify and clarify the initial evaluations of the stressors of rumination and psychological arousal, and give people the opportunity to cope with these internal events with better methods. In explaining the results, it can be added that the purpose of mindfulness is to increase awareness from moment to moment. By increasing cognitive coping processes such as positive reappraisal and strengthening emotion regulation skills such as distress tolerance, mindfulness may protect a person against dysfunctional mood, which is one of the factors affecting the quality of life. Since one of the goals of therapies based on mindfulness is the acceptance of emotions without judgment, this type of acceptance facilitates a healthy encounter with emotions and the person finds the possibility to face his emotions without getting entangled in them, without avoiding them, and without judgment. With non-judgmental acceptance, instead of getting caught in the habitual patterns of dealing with emotions, which is actually the same as entanglement or avoidance, a person can gain access to appropriate emotion regulation strategies, and the uncompromising methods of emotion regulation are reduced in a person. Increasing mindfulness reduces avoidance or over-engagement with uncomfortable thoughts and emotions and

therefore keeps emotions in balance. If conscious attention is directed to emotional regulation, the improvements in emotional regulation may be due to an overall increase in positive emotional experiences and a decrease in negative emotional experiences. On the other hand, mindfulness increases people's ability to regulate emotions by reducing negative emotions. Acceptance leads to turning the person's attention to the less uncomfortable aspects of stimuli that provoke negative emotions and therefore reducing negative emotions (Kabat-zinn, 2015). Berking and Wupperman (2012) found that emotions can be regulated by avoidance or over-involvement. Avoidance of current experiences can include selective information bias, cognitive distortions, emotional instability, attention deviation, or non-engagement. Excessive involvement also includes rumination and chronic worry. As the mindfulness approach is based on the premise that behavior, feelings, thoughts, and emotions have a mutual effect on each other, controlling one of these cases with the help of meditation exercises and also increasing awareness about the fact that thoughts are only thoughts and not reality, it becomes possible to keep feelings and emotions under control.

The limitations of the research can be attributed to the non-cooperation of a number of participants in answering all the questions of the questionnaire, the impossibility of generalizing the results of the research to other societies, the focus of the research on women, the selected methods, and the intensity and duration of this program.

5. Conclusion

According to the results, it was suggested that psychological intervention based on mindfulness should be taught in a comprehensive treatment package and that this

training should be done in the media and collectively. It is essential that the education planners, especially in the field of family and the authorities responsible for the public health of society, have basic information in the field of mindfulness group training and regularly update their information. It is also suggested that counselors and couple therapists use the therapeutic components of mindfulness approaches to reduce couples' marital problems.

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Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: Comparison of Differentiation of Self, Couple Burnout, and Emotional Intimacy in Divorce-seeking and Normal Couples



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Abstract

Divorce is an undeniable fact of personal and social life and it happens when the life together is unbearable for the couple. The present study was conducted with the aim of comparing differentiation of self, couple burnout and emotional intimacy in divorce-seeking and normal couples. This research is of comparative causal type. The statistical population of the research included all couples applying for divorce who referred to four counseling centers (Ehya, Khanevade, Negahe No and Hamrah) in Rasht and non-applicant couples living in Rasht in spring and summer of 2022. The investigated sample includes 150 people (75 from divorce-seeking couples and 75 from non-seeking couples) who were selected by convenience sampling method, and were evaluated using the differentiation of self-inventory (DSI), couple burnout measurement (CBM) and personal assessment of intimacy in relationships (PAIR). The data were analyzed using multivariate analysis of variance and independent t-test. The results showed that there is a significant difference between the two groups of divorce applicants and non-divorce applicants in all aspects of differentiation of self, couple burnout and emotional intimacy ($P < 0.01$). Also, the results of the independent t-test showed that there is a significant difference in the total score of differentiation of self, couple burnout and emotional intimacy between the two groups ($P < 0.01$) and the mean of differentiation of self and emotional intimacy in the group of couples who did not file for divorce and the mean couple burnout was higher in applicant couples. The results of this research showed that the low level of couple burnout as well as having more differentiation of self and intimacy between couples can provide health and stability in their lives.

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1. Introduction

Divorce can seriously affect one's health, well-being, and life choices. It can raise the risk of death, reduce the quality of life, and trigger emotional problems such as depression, anxiety, grief, loneliness, and guilt (Auersperg et al., 2019). It can also change the life course and decisions of individuals (Konstam et al., 2016). Various economic, social, environmental and genetic factors and personal characteristics such as self-esteem, communication skills and marital intimacy influence the satisfaction and divorce of couples (Mokhles et al., 2021). Researchers think that they can predict the likelihood of a couple's marriage ending in divorce or deadlock by analyzing their communication patterns. If couples can deal with conflicts positively and effectively, having a lot of conflict does not necessarily damage their relationship. The link between conflict and marital satisfaction has a long research history (Pirmardvand Chegini & Karami, 2022). Recently, the scientific community has shifted its focus from the factors that cause divorce to the factors that lead to satisfied marriages. They can create a positive image that can help create and promote satisfied marriages in society by focusing on satisfied couples (Kheyrollahi et al., 2019).

One of the variables that relates to the level of marital satisfaction is self-differentiation (Bakhshizadeh et al., 2019). Self-differentiation, according to Bowen, is an idea that reflects the individual's ability to achieve intimacy in marital life. Self-differentiation involves the individual's ability to maintain contact with people while

keeping their "self-perception". In other words, self-differentiation means the ability to balance independence and interdependence in relationships (Peleg & Zoabi, 2014). Differentiated individuals can enjoy intimacy in close relationships without fearing losing their identity, while keeping their autonomy and calmness when faced with their spouse's anxiety (Hill, 2008).

Another factor that has been found in couples who have difficulties is burnout (Zeng et al., 2020). Burnout in couples is a slow process where love and intimacy gradually diminish and cause overall exhaustion (Kupcewicz & Józwick, 2020). Burnout means the negative change of love and commitment in marriage, a process where love cools down and the wish to end the marriage and the relationship with the hurtful partner takes over the former love. Burnout involves the involuntary termination of emotional and romantic relationships. All marriages reach a point where love cools down and loses its depth. When a marriage faces problems, both partners suffer and often they are not aware of what went wrong (Clinton & Trent, 2009). Besides aspects such as intimacy and burnout that greatly influence the level of marital satisfaction in couples.

In addition, many researchers have reported that the human need for communication and closeness with others is natural and universal, and relationships that have intimacy are a major source of joy, sense of purpose and satisfaction in life. Considering that intimacy is a fundamental and higher need of humans, therefore, enhancing intimacy between partners is the

first step to create a desirable marriage (Bagarozzi, 2013). The meaning of intimacy in the available literature is not very clear. The word intimacy is often used to indicate the general feeling of partners from being close to each other (Yoo et al., 2013). Psychologists have defined intimacy as closeness, similarity and personal or emotional relationships with another person, which requires deep knowledge and understanding of the person and the expression of thoughts and feelings that show their resemblance with each other (Labrecque & Whisman, 2019).

The family center, which is the source of security, peace and intimacy for men and women, has been affected by negative processes in recent years and this endangers the social health because the family problems disturb the family system and if the problems get worse, the family will fall apart. The breakdown of the family not only harms the psychological-emotional well-being of the family members and the society, but also causes many social damages (Gravningen et al., 2017). Therefore, by comparing the divorce seekers and those who have not harmed their joint life, one can find out the factors that cause this problem and use this knowledge to increase the awareness of families and make the counseling process easier for divorce seekers, in order to avoid divorce. In addition, by finding out the influencing factors, one can use them in planning suitable treatment programs to fix the damaged relationships, especially for the couples who are in danger. The outcomes of such studies can be useful for the organizations that deal with social damages,

such as the Welfare Organization, family courts and counseling and psychotherapy centers, or any institution that tries to help couples and families. Therefore, this research tries to answer this question: Is there a difference between self-differentiation, marital alienation and emotional intimacy in divorce seekers and normal couples?

2. Method

This research uses a causal-comparative study, which also has the names of a cross-sectional and post-hoc research method. The predictor variable is not under the direct control of the researcher in this method because it has happened in different situations and the researcher only assesses its kind and degree of influence on the criterion variable at the current time. Two groups of divorce seekers and non-seekers who resided in Rasht city in the first half of 1401 and attended the counseling centers of Rasht city to deal with their marital issues make up the research population. The research sample includes 150 individuals (75 individuals from divorce seekers and 75 individuals from normal couples). The convenience sampling method chose the divorce seekers group from the individuals who were in the counseling centers of Rasht city and the purposive sampling method chose the normal couples group in proportion to the circumstances of the seekers group from among the couples who lived in Rasht city. The entry criterion for normal couples was that they had do not have intense marital disputes, no desertion and readiness to participate in the research.

2.1. Instrument

The Differentiation of Self-Inventory (DSI): Skowron and Friedlander developed this questionnaire in 1998 with 43 items. It was updated in 2003 and consisted of 46 items and 4 factors (Emotional Reactivity, I-Position, emotional cut off and fusion with others) and is applied to assess the level of differentiation of individuals. It mainly concentrates on important relationships in life and current interactions with their original family (Skowron & Smith, 2003). Skowron and Friedlander (1998) reported the Cronbach's alpha coefficient of this questionnaire as 0.88. The reliability coefficient of the entire test was also 0.92 in the research (Skowron & Smith, 2003). Yoonesi (2006) normalized this test on a normal sample in Iran and its validity was obtained by retest and Cronbach's alpha for the entire scale 0.85, emotional reaction 0.77, I position 0.60, emotional cutoff 0.65 and fusion with others 0.70.

Couple Burnout Measurement (CBM): Pines (1993) developed this scale with 21 items on a Likert spectrum. Kaiser (1993) constructed the items of this scale using the Love Scale of Rubin (1973, cited by Kayser, 1993) and the questionnaire "Personal Assessment of Intimacy in Relationship (PAIR)" by Schaefer and Olson (1981, cited by Kayser, 1993) as well as his own clinical experiences. This scale has 11 items that measure positive emotions (care, attachment, love, ...) and 10 items that measure emotions that show dissatisfaction (McCarthy, 2006). The scores of the scale had a high positive correlation with the scores of other alienation scales and a negative correlation with the scales that

measure marital intimacy and closeness in the sample of Pines (1993), and Cronbach's alpha was 0.97. Sadati et al. (2021) also obtained the reliability of the scale by Cronbach's alpha method as 0.79 in a research with a sample of 300 teachers in Iran.

The Personal Assessment of Intimacy in Relationships (PAIR): This questionnaire was created by Shofer and Olson (1981) and assesses intimacy in six aspects of emotional, social, sexual, rational, recreational and customary. With this questionnaire, individuals explain their communicative intimacy based on what they are presently feeling in their relationship (perceived intimacy) and also what they hope for from the relationship (expected intimacy). This questionnaire is a 36-item self-report instrument that uses a 5-point Likert scale for grading the items. The lowest and highest scores of a person in the entire scale are 36 and 180, respectively; and in each of the subscales, they are 6 and 30. In this questionnaire, a higher score shows more intimacy. Shofer & Olson (1981) measured the reliability of the subscales of the questionnaire by Cronbach's alpha method between 0.70 and 0.77, which was 0.75 for the emotional intimacy subscale, 0.77 for the sexual intimacy subscale, 0.70 for the rational intimacy subscale, 0.70 for the recreational intimacy subscale and 0.71 for the social intimacy subscale. Shirali Nia (2012) also computed the reliability of intimacy using the Cronbach's alpha method, which was 0.62 for the emotional intimacy subscale, 0.70 for the sexual intimacy subscale, 0.64 for the rational intimacy

subscale, 0.70 for the recreational intimacy subscale and 0.60 for the social intimacy subscale, which indicated the acceptable reliability of the questionnaire.

2.2. Procedure

We obtained permission from the welfare and visited four counseling centers (revival, family, new look and companion) in Rasht city. We examined the list of couples who had registered for divorce through the judicial decision system and had been referred to these counseling centers. Then we selected 150 people (75 couples applying for divorce by the method of sampling available and 75 couples of the group of ordinary people by the method of purposive sampling and among the couples living in Rasht city). We explained the method of filling out the questionnaires for the sample and asked them to answer the research questionnaires. We entered the research data into the statistical software for analysis. We used descriptive statistical methods of mean and standard deviation and frequency and percentage to examine the descriptive and demographic information of the subjects. We used inferential statistical methods (multivariate analysis of variance and independent t-test) to test the research hypotheses. We performed all data analysis using SPSS software version 20.

3. Results

The results revealed that the people who applied for divorce had an average age of

Table 1

37.24 years with a standard deviation of 4.34, while the people who did not apply for divorce had an average age of 40.57 years with a standard deviation of 4.84. The results also revealed that the people who applied for divorce had been married for an average of 8.86 years with a standard deviation of 2.55, whereas the people who did not apply for divorce had been married for an average of 9.82 years with a standard deviation of 1.72. The gender analysis in both groups indicated that women made up 53.3% of the people who applied for divorce and 50.7% of the people who did not apply for divorce, while men made up the rest. The education level analysis indicated that 36% of the people who applied for divorce and did not apply for divorce had a bachelor's degree, 29.3% of the people who applied for divorce and 40% of the people who did not apply for divorce had an associate degree, and the rest had a diploma. The employment status showed that 54.7% of the people who applied for divorce and 49.3% of the people who did not apply for divorce were employed and the rest were unemployed. The results showed the number of children for each group. The people who applied for divorce had different numbers of children than the people who did not apply for divorce. 16% of the people who applied for divorce had no children. 28% of the people who did not apply for divorce had no children. 62.7% of the people who applied for divorce had one child. 45.3% of the people who did not apply for divorce had one child. The rest of the participants in both groups had two children.

Mean and standard deviation of total score and dimensions of self-differentiation, alienation and emotional intimacy by two groups

Component	Group	Mean	Standard Deviation
Emotional Reactivity	<i>Divorce Applicant</i>	25.09	1.67
	Non-Applicant	32.42	3.21
My Position	Divorce Applicant	25.18	2.50
	Non-Applicant	37.08	5.69
Emotional Fusion	Divorce Applicant	32.70	2.64
	Non-Applicant	42.81	4.51
Fusion	Divorce Applicant	39.70	3.06
	Non-Applicant	49.28	4.95
Differentiation	Divorce Applicant	122.69	4.57
	Non-Applicant	161.60	15.83
Marital Burnout	Divorce Applicant	59.13	5.13
	Non-Applicant	34.14	9.84
Emotional intimacy	Divorce Applicant	18.80	3.57
	Non-Applicant	30.47	4.90

The researcher used an independent t-test to compare the two groups of divorce applicants and non-applicants on their total

score of self-differentiation, marital burnout and emotional intimacy. [Table 2](#) shows the results of this analysis.

Table 2

Comparison of marital burnout and emotional intimacy total scores in the two groups using independent t-test

Component		T	df	Sig
Differentiation	<i>Assuming equal variances</i>	-20.44	148	0.001
	Assuming unequal variances		86.26	0.001
Marital Burnout	Assuming equal variances	19.49	148	0.001
	Assuming unequal variances		111.47	0.001
Emotional Intimacy	Assuming equal variances	-16.60	147	0.001
	Assuming unequal variances		133.4	0.001

The researcher compared the total score of self-differentiation between the two groups using an independent t-test. The test results showed a significant difference and the mean comparison indicated that the non-applicants group had a higher mean of this variable. The researcher also compared the total score of

marital burnout between the two groups using an independent t-test. The test results showed a significant difference and the mean comparison indicated that the applicants group had more burnout than the non-applicants group.

The researcher also compared the total score of emotional intimacy between the two groups using an independent t-test. The test results showed a significant difference and the mean comparison indicated that the applicants group had less emotional intimacy than the non-applicants group. The researcher then used a multivariate analysis of variance to compare the dimensions of self-differentiation in the two groups of applicants and non-applicants. The researcher examined the assumptions of this test first. The Box's M test results showed that the homogeneity of covariance assumption was not met ($P = 0.001$, $M_{Box} = 123.858$, $F = 12.025$, $df = 10$). The Levene's

test results showed that the homogeneity of variance assumption was not met for any of the dimensions of self-differentiation ($P > 0.05$). However, since the sample size of the two groups was equal, there was no limitation for performing the analysis of variance test. The Wilks' Lambda test results showed that there was a significant difference between the dimensions under study in the two groups of applicants and non-applicants ($P = 0.001$, $F = 111.85$, Wilks' Lambda = 0.245). **Table 3** shows the results of the multivariate analysis of variance for comparing the dimensions of self-differentiation in the two groups under study.

Table 3

Comparison of the dimensions under study using multivariate analysis of variance in the two groups

Component	SS	df	MS	F	Sig	η^2
Reactivity	2016.66	1	2016.66	306.21	0.001	0.674
My situation	5304.42	1	5304.42	274.40	0.001	0.650
Emotional rift	3830.42	1	3830.42	279.40	0.001	0.654
Hybridity (mixture)	3436.82	1	3436.82	202.43	0.001	0.578

According to the multivariate analysis of variance, divorce applicants and non-applicants differed significantly in all aspects of differentiation.

4. Discussion

This study compared how divorce applicants and normal couples differ in self-differentiation, marital alienation and emotional intimacy. The two groups showed significant differences in all aspects of differentiation, which agreed with previous studies (Peleg & Zoabi, 2014; Hill, 2008). Bowen (1978) argued that low differentiation leads to individual, family and system

problems. This supports the idea that high differentiation allows people to enjoy emotional intimacy in relationships without giving up their true selves (Peleg, 2008). Couples with low differentiation have less emotional maturity and capacity for intimacy and unity when they marry and they give up their growth and self-leadership for their relationship stability. They become anxious and dysfunctional when they face stress. They also react more emotionally to their spouses' negative events and behaviors and they are mixed up with each other when they want to get closer (Sadati et al., 2013). Moreover, the study found a significant

difference in marital alienation between the two groups, which matched the findings of previous studies. (Kupcewicz & Jóźwik, 2020; Clinton & Trent, 2009).

The results showed a significant difference in marital burnout between the applicants and non-applicants for divorce. This was in line with previous studies (Kupcewicz & Jóźwik, 2020; Clinton & Trent, 2009). The results can be explained by the four-stage cycle of divorce, which consists of decision-making, planning, separation, and adaptation to divorce (Clinton & Trent, 2009). All these stages can indicate marital burnout, which is the loss of emotional attachment to the spouse. It involves lack of attention, emotional indifference, and increased loneliness and dissatisfaction. The main feeling in this stage is frustration, which comes from the negative and harmful behaviors of the wife and husband. The couples find it hard to ignore the mistakes of the spouse, which was easy in the first stage. They also become distant from each other and consider divorce, separation, or finding a better partner, which raises the chance of marital burnout (Peleg, 2008). Frustration is different from hopelessness and burnout, anger and frustration, which are more prominent in this stage. They are caused by the negative and harmful behaviors of the wife and husband. Unlike the previous stage, anger and frustration decrease somewhat and emotional coldness increases a lot. The couples do not engage in conciliatory behaviors that could offend the spouse (Hill, 2008). The psychological pressures that weaken love, the gradual increase of fatigue and monotony, and the

accumulation of small pains facilitate the separation of the couples.

The results also showed a significant difference in emotional intimacy between the applicants and non-applicants for divorce. This was consistent with previous studies (Bagarozzi, 2013; Yoo et al., 2013; Whisman & Labrecque, 2019). The results can be explained by the importance of emotional intimacy for adult relationships, as most social psychologists suggest. Emotional intimacy is the connection point between couples and strengthens their relationship. If it is damaged, their marital life will also be at risk of damage and separation. In some marital relationships, the unwritten system and rules of the couples may limit the expression of emotions. As a result, the couples cannot express some of their emotions with passion and enthusiasm (Bagarozzi, 2013). Therefore, the problems that arise in expressing and expressing emotional intimacy increase the distance between the couples and the probability of separation and divorce. Moreover, the results of various studies have shown that intimacy between couples is one of the basic components in the stability and strength of a marital life. Any factor that weakens it is a destructive factor in marital satisfaction and compatibility, and can increase the likelihood of reduced marital satisfaction and divorce.

5. Conclusion

We can state that couples can protect their lives by having a high level of self-differentiation and emotional intimacy. If either spouse lacks differentiation or emotional intimacy, they may become

dissatisfied and separated. Undifferentiated individuals (less differentiated) have more conflicts that are emotional in marital issues because they are emotionally involved in them. They also have less power to deal with problems logically, so they get into marital conflicts. On the other hand, highly differentiated people can enjoy emotional intimacy in relationships without sacrificing their true selves. This reduces marital dissatisfaction and increases intimacy. Therefore, when couples have lower differentiation in marital relationships, they fuse more, which creates and exacerbates marital conflicts. The results of this study showed that divorce applicants had lower differentiation and emotional intimacy and more marital dissatisfaction. Therefore, couple therapists and family counselors should pay special attention to these three influential variables in their couple therapy sessions.

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Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: The Relationship between Resilience and Depression in Patients with Cardiovascular Disease



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Abstract

Long-term chronic diseases such as AIDS, cancer and heart diseases always create crises in people's lives by changing the way patients look at themselves. Coronary arteries of the heart, which cause hardening and narrowing of the arteries of the heart, are the most common type of heart disease. This descriptive correlational study investigated the relationship between depression and resilience in cardiovascular patients. The study population included all cardiovascular patients in East Gilan in 2018. Purposive sampling was used to select 150 patients who completed the Connor-Davidson Resilience Scale (CD-RIS) and Zong Depression Self-Rating Scale (SDS) questionnaires. Data were analyzed using correlation. The results showed that there is a significant negative correlation between depression and resilience in cardiovascular patients ($P < 0.01$). This study emphasized the importance of improving resilience to reduce depression in this population. It can also be concluded that resilience plays a mediating and modulating role in heart disease and its low levels are considered as a risk factor for depression and heart disease.

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1. Introduction

Coronary arteries of the heart, which cause the narrowing and hardening of the heart's arteries, is the most common and deadly chronic disease. In Iran, this condition accounts for 46 percent of deaths and has a prevalence of 181.4 per 100,000 people (Comín-Colet et al., 2016). This condition has been called the epidemic of the century and has become widespread in Iran. It is estimated that 40 to 50 percent of men and 25 to 35 percent of women among the healthy 40-year-old population will eventually develop coronary heart disease (Hashemi et al., 2022).

Experts suggest that some psychological disorders may predispose or aggravate cardiac and vascular patients to this condition. Extensive research has been conducted on the factors that facilitate or hinder the health improvement of cardiac and vascular patients. The findings indicate that high motivation, appropriate living environment and high resilience are conducive to the health of cardiac and vascular patients, while stress, depression, anxiety and low motivation are detrimental to their health (Oshio et al., 2003).

Resilience is a crucial concept for the mental health of cardiac and vascular patients. It refers to the ability to cope with or adapt to challenging situations (DoustdarTousi & Golshani, 2014). Resilience entails the individuals' capacity to maintain their health and withstand and endure in difficult and risky situations, which not only enables them to overcome the hardships, but also strengthens them (Sanderson & Brewer, 2017). Resilience characterizes those who face risk but do not succumb to disorders. Resilience is the person's ability to bounce back from stressful situations and a vital resource that assists the person to manage and cope with various

stressors (Connor & Davidson, 2003). Li and Hasson (2020) demonstrated the vital role of resilience in safeguarding the mental health of the person from the detrimental consequences of any stressful and harmful situation.

Stroke patients have exhibited the lowest level of resilience, which has heightened the vulnerability of this group of patients (DoustdarTousi & Golshani, 2014). Resilience as an internal source of resistance mitigates the negative effects of stress and averts early heart attack (Samani et. al., 2007).

Depression is another factor that affects the mental health of cardiac patients. It is one of the most common mental disorders and impacts about a quarter of the patients who visit health centers worldwide. The main signs of depression are low mood or sadness and lack of interest or pleasure in daily activities (American Psychiatric Association, 2013). Depression impairs the cognitive and memory functions of the patients, and makes them face difficulties with decision-making, self-esteem, and hopelessness (Nardini & Papazacharias, 2019). By changing the natural mechanisms of the body such as hormonal levels and platelet activity, depression indirectly increases the risk of developing or worsening coronary heart diseases by 1.5 to 2 times (Rezai et. al., 2018).

Studies have shown that severe injuries and negative psychological states have a significant impact on both the short-term and long-term outcomes and raise the risk of chronic diseases such as cardiovascular disorders (Merkt. al., 2017). Therefore, it is vital to preserve the physical and mental health of people with cardiovascular disease. The aim of the present study was to explore the relationship between depression and resilience in this population.

2. Method

This research was a descriptive-correlational study. The target population of this research included all cardiac and vascular patients hospitalized in the hospitals of eastern Gilan (Langarud, Rudsar, Lahijan) in 2019. Initially, from each city, two hospitals (private and public) were chosen by convenience sampling and after visiting those hospitals, 150 patients with cardiovascular disease were selected by purposive sampling. The inclusion criteria for the research were having cardiovascular disease, not having serious psychological problems and willingness to cooperate in the research. Resilience and depression questionnaires were administered to them and then the data were analyzed using SPSS software and correlation method.

2.1. Instruments

Conner-Davidson Resilience Scale (CD-RIS): This scale, developed by Connor and Davidson in 2003, assesses psychological resilience. It has 25 items that are rated on a 5-point Likert scale by the participant. According to the Connor and Davidson resilience questionnaire, people who score more than 50 on this test are resilient and people who score less than 50 are not resilient. The score range of the questionnaire is 25 to 125. Bigdeli et al. (2013) reported a high internal consistency of this scale as 0.9 based on Cronbach's alpha. Compel-Sills and Stein

(2007) standardized the initial resilience scale by selecting 10 items from the original 25 items on a sample of 511 people. The construct validity of the scale was supported by confirmatory factor analysis for both questions with factor loadings from 44 to 93 percent, which indicates the satisfactory and acceptable construct validity for this scale.

Zung Self-Rating Depression Scale (SDS): This scale, based on Zung's theory in 1976, aims to diagnose and understand depression of oneself or others. It is a self-report tool that has 20 items. Participants should rate all items on a 4-point scale as 1- rarely 2- sometimes 3- usually 4- often, but scoring in some items (20-18-17-16-14-12-11-6-5-2) is reversed. In Zung's depression, people who score between 59-50 on the test have mild depression, 69-60 moderate, 79-70 severe and above 80 deep. The validity of the questionnaire was 0.89 and its reliability was 0.81 (Zung, 1976).

3. Results

This research involved 150 people with cardiovascular disease, consisting of 80 men (53.33%) and 70 women (46.67%). The average age of the participants was 50.43 years, with a minimum of 20 years and a maximum of 79 years. The age range was 59 years. Table 1 shows the mean and standard deviation of the research variables.

Table 1

Mean and standard deviation of resilience and depression variables

Variable	Mean	Standard Deviation
Resilience	38.1	9.9
Depression	63.23	11.38

To investigate the relationship between resilience and depression in cardiac and

vascular patients, Pearson correlation test was applied and the results are shown in Table 2.

Table 2

Correlation matrix of resilience with depression

	Correlation	Resilience
	Correlation	-0.435
Depression	Error	0.00
	Number	150

The test error was lower than the standard level of 0.05, indicating that the test was significant and there was a relationship between depression and psychological resilience. The correlation level indicated that resilience decreased as depression scores increased among the people.

4. Discussion

The present research aimed to examine the association between resilience and depression among individuals with cardiovascular disease. The results indicated a negative correlation between resilience and depression. These findings are in line with previous studies by Hashemi et al. (2022), DoustdarTousi and Golshani (2014) and Denneson et al. (2017).

These studies suggest that resilience is a form of protection against life challenges that enhances positive emotions and successful coping with adverse experiences. Therefore, individuals with chronic conditions such as heart disease may benefit from resilience, as it may improve their psychological well-being and their coping and adaptation to their illness. Moreover, the present research found that patients with heart failure undergo significant physical, emotional, familial and social changes, and that resilience and psychological well-being may enable them to interact optimally with the stimuli that affect them and avoid depression, anxiety and conflict. Resilience and psychological well-being may

also facilitate their psychological adjustment to their own problems (Harper et al., 2016).

Resilient patients are resourceful and flexible and can adjust to environmental changes and recover quickly from stressful situations. On the other hand, individuals with low resilience may be more vulnerable to their disease conditions and may have a slower recovery from stress (Hashemi et al., 2022). DoustdarTousi and Golshani (2014) also reported a significant relationship between resilience as a personality trait and heart disease, as well as a significant difference between healthy individuals and patients with cardiovascular disease in terms of resilience level. They explained that resilient individuals tend to view negative events more adaptively and realistically and often perceive problems as temporary. Conversely, individuals with low resilience may have less ability to cope with stressful conditions and may experience more anxiety. Anxiety may also be related to depression, which may affect patients with cardiovascular disease, as cognitive biases may lead to a negative worldview and influence the information processing of individuals and cause depression. Additionally, patients with cardiovascular disease and low resilience may attempt to show a positive attitude toward stressors, but may ignore their own abilities and values and become depressed (Momeni & Alikhani, 2013).

The present research had some limitations, such as the restricted sample size to one city and the non-cooperation of some patients. Future research should have more time and resources to collect comprehensive and extensive data and to conduct the study in a broader geographical area to obtain a more valid and reliable result. All relevant organizations, institutions and individuals should support the research goals of the study.

5. Conclusion

The results of this research indicate that resilience is an important predictor of depression among individuals with cardiovascular disease.

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Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: The Effectiveness of Training Metacognitive Strategies on Reducing Rumination and Worry



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Abstract

Rumination and worry are among the cognitive conflicts in many people. This research was conducted with the aim of the effectiveness of training metacognitive strategies on reducing rumination and worry. This research is a semi-experimental type with a pre-test-post-test design and a control group. 32 students of Shahid Beheshti University were selected based on the cut of point in the Ruminative Responses Scale (RRS) and the Penn State Worry Questionnaire (PSWQ) by purposive sampling method and were assigned in two experimental (n = 16) and control (n = 16) groups. Metacognitive strategies were taught to the experimental group for 8 sessions, but the control group did not receive any training during this period. Data analysis was done using covariance analysis and SPSS-26 software. The findings showed that metacognitive therapy was able to significantly reduce rumination and worry in the experimental group compared to the control group ($P < 0.001$). Based on this finding, it can be concluded that training metacognitive strategies can be used effectively to reduce rumination and worry.

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1. Introduction

Today, all people are deeply involved in their thoughts and are anxious and worried about past experiences and future events (Tran, 2023). Worry is one of the universal phenomena that include all people and its definition can be a bit complicated. Worry occurs when your mind is occupied with negative and unreliable thoughts (Forster et al., 2015). Treatment of worry is necessary if it becomes severe and uncontrollable, otherwise it can be completely normal and an important phenomenon in life (Vîslă et al., 2022). Not all types of worries are bad, but some of them are useful and necessary. Worry has been one of the useful tools for human survival, because during human evolution, those who were worried and looked for food and shelter survived. Effective worry causes people to face life problems and look for a solution to solve problems. Another type of worry is troublesome worry, which does not produce a correct and precise solution like effective worry (Borkovec et al., 1991; Dippel et al., 2023). Treating troublesome worry is essential because it does not give you the opportunity to solve your problem with the right solution and causes severe stress and anxiety (Gori et al., 2023). This type of worry focuses on events that are very unlikely or impossible to happen (Borkovec et al., 1991; Dippel et al., 2023).

One of the concepts related to worry is rumination (Hoyer, 2009). Rumination is defined in psychology as a compulsive focus of a person's attention on the symptoms and causes of a distress and paying attention to its causes and results, instead of focusing on its

solutions (Watkins & Roberts, 2020). Rumination and worry are related to anxiety and other negative emotional states. Rumination has been widely researched as a factor of cognitive vulnerability and as a background for depression (Hoyer, 2009; Wong et al., 2023). The difference between rumination and worry is that worry is focused on the future and is usually activated as a coping strategy in response to disturbing thoughts. When negative beliefs are activated, a person experiences worry, but rumination focuses on bad feelings from past experiences.

Worry and rumination are common among the general population and among students. For example, Joubert et al. (2022) in a study on 207 adults showed that 38% of them are involved in worry and rumination on a daily basis. Bakshi and Ansari (2007) in their research on 400 students of Tehran University of Medical Sciences showed that 4.8% of them had severe worry and 34.3% had moderate worry.

Among the strategies that have grown in recent years in order to reduce cognitive conflicts in the field of psychotherapy is paying attention to metacognitive strategies. Metacognition refers to the factors that are responsible for monitoring and controlling cognition (Fiedler et al., 2019). Therefore, metacognitive strategies are measures to monitor cognitive strategies and control and guide them (Scorțan, 2023). In this mechanism, a person tries to control the situation by controlling his thoughts, and through this, he provides appropriate performance and solutions (Farazandeh et al., 2023). Several researches have shown the

effectiveness of metacognitive strategies in various areas, including rumination (Ansari et al., 2021; Normann & Morina, 2018; Solgi & Hosseini, 2021) and worry (Ansari et al., 2021; Normann & Morina, 2018; Hammersmark et al., 2023).

Considering that many of us worry many times during the day or ruminate on the events of our lives, and this behavior is widespread in all members of society, including students, the present study was conducted with the aim of investigating the effectiveness of metacognitive strategies training on reducing rumination and worry.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This research is a semi-experimental type with a pre-test-post-test design and a control group. The research population was the students of Shahid Beheshti University in the academic year 2022-2023. 32 students of were selected based on the cut of point in the Ruminative Responses Scale (RRS) and the Penn State Worry Questionnaire (PSWQ) by purposive sampling and were assigned in two experimental (n = 16) and control (n = 16) groups.

Consent to participate in the research, not suffering from other mental disorders, not participating in other psychotherapies and not taking psychiatric drugs were among the criteria for entering the research. Also, the participants could withdraw from the study whenever they wanted.

2.2. Instrument

Ruminative Responses Scale (RRS): The Ruminative Response Scale (RRS)-short form was developed by Nolen-Hoeksema & Morrow (1991) and is one of the most widely used measures of rumination, comprising 22 items and two components: reflection (items 1-11) and brooding (items 12-22). It is scored on a 4-point Likert scale from never (1) to always (4). A higher score indicates more rumination. A cut of point above 51 on this scale is considered severe rumination (Rosenbaum et al., 2017). Some studies have supported the reflection–brooding two-factor model and confirmed the satisfactory psychometric properties of this scale (Burwell & Shirk, 2007; Schoofs et al., 2010). Luminet (2004) reported the internal consistency of the scale as 0.88 to 0.92 and its test-retest reliability as 0.68. In Iran, Bagherinejad et al. (2010) confirmed the factor structure of the scale and reported its internal consistency to be 0.88.

Penn State Worry Questionnaire (PSWQ): The PSWQ was developed by Meyer et al. (1990) and is a 16-item self-report scale designed to measure the trait of worry in adults. In scoring the PSWQ, a value of 1, 2, 3, 4, and 5 is assigned to a response depending upon whether the item is worded positively or negatively. Possible range of scores is 16-80 with the algorithm of total scores: 16-39 low worry, 40-59 moderate worry, and 60-80 high worry. In this research, people whose level of worry was severe (high) were selected. PSWQ validity have been confirmed in various studies (Startup & Erickson, 2006; Zlomke, 2009). In Pestle et al. (2008), Cronbach's alpha was

reported as 0.91. In Iran, the results of the study by Moghadasin et al. (2019) showed the best fit for the single-factor model among 8-12-year-old children and 13-18-year-old adolescents. These results indicate the appropriate construct validity of this questionnaire in the Iranian population. Cronbach's alpha was equal to 0.85 for children and 0.86 for teenagers.

Metacognitive Strategies Training: The training of metacognitive strategies was based on the protocol of Miegel et al., (2020) and Ghorbani et al., (2022) and was conducted in eight sessions once a week and for 90 minutes in each session. Table 1 shows the sessions and the content of each session.

Table 1
Metacognitive strategies training sessions

Sessions	Content of each session
First session	Teaching cognitive strategies, expressing the purpose, summarizing, taking notes and telling the learned material to others
Second session	Defining the metacognitive strategy, finding out about one's cognitive skills and acting correctly in situations
Third session	Teaching planning strategies, predicting the necessary time and speed, selective attention, overestimation of threat, choosing appropriate strategies
Fourth session	Repetition and review of the stated content and solving problems in a group
Fifth session	Monitoring strategy, controlling the effectiveness of activities, meditation to search for reasons, exaggerated sense of responsibility and self-questioning to monitor understanding
Sixth session	Self-regulation strategy training, change, modification or adjustment of self-regulation
Seventh session	Repetition and review of the stated content and solving problems in a group
Eighth session	Answering questions, thanking and post-test

Data analysis was done using covariance analysis and SPSS-26 software

3. Results

The mean and standard deviation of the age of the students in the experimental group

were 23.15 and 4.28 and in the control group were 23.78 and 2.72. The mean of the research variables are presented in Table 2 for the two experimental and control groups separately.

Table 2
The mean of the research variables separately for the two experimental and control groups

		Rumination	Worry
Experimental group	Pre-test	54.21	66.12
	Post-test	31.79	34.58
Control group	Pre-test	55.08	66.83
	Post-test	56.47	65.27

As can be seen in Table 2, the mean of worry and rumination in the experimental group decreased in the post-test, but in the control group, rumination increased slightly and worry decreased slightly. The normality

of the data distribution was checked with the Kolmogorov-Smirnov test and the homogeneity of variances was checked with the Levene's test, which is presented in Table 3.

Table 3

Checking the normality of data distribution and homogeneity of variances

		F	P		
Kolmogorov-Smirnov test	Pre-test (rumination)	0.45	0.37		
	Post-test (rumination)	0.67	0.23		
	Pre-test (worry)	0.81	0.18		
	Post-test (worry)	0.72	0.21		
Levene's test		F	df ₁ /df ₂	p	
	Rumination	1.09	1/30	0.44	
	Worry	2.17	1/30	0.36	

The non-significance of the Kolmogorov-Smirnov test and Levene's test shows that the data distribution is normal and the condition

of homogeneity of variances is established. The results of covariance analysis are presented in Table 4.

Table 4

Results of covariance analysis of metacognitive strategies training on rumination and worry

variable	Source of changes	Sum of squares	Df	Mean squares	F	P
Rumination	Pre-test group	28590.11	1	28590.11	58.46	0.001
	error	15496.74	1	15496.74	29.74	0.001
	total	7432.45	30	642.28		
		51519.3	32			
Worry	Pre-test group	33460.75	1	33460.75	46.09	0.001
	error	18026.41	1	18026.41	23.10	0.001
	total	6012.33	30	471.36		
		57499.22	32			

According to Table 4, the training of metacognitive strategies has been able to significantly reduce rumination and worry in

the experimental group compared to the control group.

4. Discussion

The purpose of this research was to investigate the effectiveness of metacognitive strategies training on reducing rumination and worry. The findings of the research showed that the training of metacognitive strategies was able to significantly reduce rumination and worry in the experimental group compared to the control group.

This findings are consistent with researches of Ansari et al. (2021), Hammersmark et al. (2023), Normann & Morina (2018) and Solgi & Hosseini (2021).

In explaining these findings, it should be said that metacognitive strategies help people gain a better understanding of their dominant ways of thinking by creating awareness of cognitive processes. In this regard, it has been shown that metacognitive strategies of monitoring thoughts can help people suffer less cognitive fusion (Rabie et al., 2012). Worry and rumination are both related to negative thoughts that are constantly going through our minds, and after them we experience negative emotions (Lewis et al., 2019) and suffer mental distress (Xie et al., 2019). But in metacognitive model, instead of cognitive models -that attention is paid to the content of thoughts- is considered to the process and process of thoughts that flow in our head. For example, why should we believe that "worrying is a good thing" or that "if I constantly think about past negative experiences, I can learn from them". In the metacognitive model, it is assumed that we should be aware of the flow of our thoughts and in fact gain knowledge about our

cognitions. Hence, by learning metacognitive strategies and some negative thoughts, the students participating in this research were able to engage less with their negative thoughts and monitor their thinking process from above.

Although this research was accompanied by new findings that can be used in society to reduce the level of worry and rumination in different groups of people, it was also accompanied by limitations. The findings are limited to the research community of students of Shahid Beheshti University and caution should be exercised in generalizing their findings to other groups. The data collection method was also based on self-report questionnaires and were not used some other tools such as examining daily experiences, physiological indicators or observing people in natural situations. It is suggested that in the future, more research should be done in this field and among different groups of society. Conducting such researches can be beneficial in designing and implementing preventive and therapeutic programs in order to reduce worry and rumination in the society.

5. Conclusion

The findings of this research showed that teaching metacognitive strategies can be effective in reducing worry and rumination. Therefore, according to the increasing trend of worry and rumination among different groups of people, teaching these strategies can help reduce worry and rumination in society.

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Conflicts of Interest

The Author declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: The Relationship between Cognitive Emotion Regulation and Executive Functions



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Abstract

This research was conducted with the aim of investigating the relationship between cognitive emotion regulation and executive functions. The research method is descriptive-correlation type. 150 students of Islamic Azad University Science and Research Branch were selected by convenience sampling method and completed research tools including Cognitive Emotion Regulation Questionnaire (CERQ) and Barkley Deficits in Executive Functioning Scale (BDEFS). Data analysis was done with Pearson correlation coefficient and SPSS-22 software. The findings showed that there is a positive and significant relationship between the strategies of emotion regulation of acceptance, positive refocusing, planning, positive reappraisal, and putting into perspective with executive functions, but this relationship were inverse for self-blame, other-blame, catastrophizing and rumination ($P < 0.01$). According to the findings, it is concluded that constructive strategies of cognitive emotion regulation can be effective in strengthening executive functions, and incorrect strategies of cognitive emotion cause problems in executive functions.

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1. Introduction

Today, in various fields of psychology, we are witnessing the attention paid to executive functions and the defects that arise in them due to diseases or how to strengthen them. Executive functions refer to the abilities that people rely on to implement their plans and achieve their goals (Friedman & Robbins, 2022). So far, different researchers have listed different actions and capabilities as executive functions, but there is a general consensus that abilities such as organization, planning, problem solving and decision making, self-control, self-regulation, receiving feedback, working memory, and self-motivation are among executive functions (Diamond, 2013; Karbach & Kray, 2016). Several behavioral exercises have been introduced to strengthen executive functions (Diamond & Ling, 2016) and researchers have investigated the issue of which areas are the neuro-brain basis of executive functions and how some psychological disorders such as learning disorders, cognitive impairment, behavioral disorders such as ADHD with defects in executive functions are related. Today, it has been well shown that the frontal areas of the brain are one of the areas that play the main role in executive functions (Otero & Barker, 2013; Stuss, 2011) and that neural distortion in this area can be associated with executive function defects. Therefore, in many mental disorders in which weakness in executive functions is observed (such as OCD, ADHD, LD), abnormality can be seen in these brain areas, and drug therapies and psychotherapies lead to the improvement of the functioning of these areas.

One of the fields that are considered as executive functions is the field of emotion regulation (Sahin et al., 2023). Emotion regulation refers to the ability of people to regulate the intensity and duration of their emotions (Petrova & Gross, 2023). People with emotional dysregulation (for example, people with borderline personality disorder) experience emotions with more or less intensity and duration than normal people (Goldbach et al., 2023).

One of the ways that can be used to regulate emotions is to pay attention to thoughts and ways of thinking. These ways of emotional regulation based on thoughts are called cognitive emotion regulation. Some of these strategies of cognitive emotion regulation such as rumination, self-blame, other-blame and catastrophizing are destructive and negative, and others such as planning, acceptance and positive refocusing are positive strategies and are healthy (Garnefski et al., 2002).

University students are one of the groups in society that strengthening their executive functions can have beneficial effects in their future education and career. If students can use healthy cognitive strategies of emotion regulation to better manage their emotions, they can show better performance and achieve better results. Therefore, in order to achieve a more comprehensive understanding in this field, the present research has investigated the relationship between the cognitive regulation of emotion and executive functions among students.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

The research method is descriptive-correlation type. The research population was the students of Islamic Azad University Science and Research Branch in the 2021-2022 academic year. 150 students of Islamic Azad University Science and Research Branch were selected by convenience sampling method and completed research tools including Cognitive Emotion Regulation Questionnaire (CERQ) and Barkley Deficits in Executive Functioning Scale (BDEFS). The questionnaires were prepared online using the Porsline system and distributed to student groups through the WhatsApp application. Some of the questionnaires were not returned and some were incompletely filled, which were excluded from the analysis process. Data analysis was done with Pearson correlation coefficient and SPSS-22 software.

2.2. Instrument

Cognitive Emotion Regulation Questionnaire (CERQ): This questionnaire was created by [Garnefski & Kraaij \(2006\)](#). It has 18 items and is scored from never (1) to always (5), including 9 components of self-blame (items 1 and 6), acceptance (items 3 and 4), rumination (items 2 and 5), positive refocusing (items 1 and 7), planning (items 9 and 10), positive reappraisal (items 11 and 16), putting into perspective (items 13 and 14), catastrophizing (items 15 and 12) and other-blame (items 17 and 18). In the research of [Garnefski & Kraaij \(2006\)](#), the 9-factor

structure of the scale was confirmed and the internal consistency of the subscales was reported between 0.75 and 0.86. [Jafarpour et al. \(2016\)](#) applied this questionnaire in Iran. The data analysis using Cronbach's alpha method showed that the questions of this questionnaire have good internal stability ($\alpha=0.85$). A confirmatory factor showed that the questions of this questionnaire were loaded on 9 factors like the original version, and the fit indices indicated the fit of the measurement model with the theoretical model.

Barkley Deficits in Executive Functioning Scale (BDEFS): This scale has 89 items designed by [Barclay \(2011\)](#) which has five subscales including Self-Management to Time (e.g., “have trouble doing what I tell myself to do”; Cronbach's $\alpha = .96$), Self-Organization/Problem Solving (e.g., “have trouble doing things in their proper order or sequence”; $\alpha = .96$), Self-Restraint (e.g., “likely to do things without considering the consequences for doing them”; $\alpha = .93$), Self-Motivation (e.g., “I do not have the willpower or determination that others seem to have”; $\alpha = .93$), and Self-Regulation of Emotion (e.g., “overreact emotionally”; $\alpha = .93$). The scoring of the scale is such that the option never or rarely gets a score of 1 and the option most of the time gets a score of 4. High scores on any subscales can be a sign of impairment in that area of executive functioning in daily activities. Its 5-factor structure has been confirmed in the research of [Barkley \(2011\)](#). [Zarenezhad \(2018\)](#) investigated the validity and reliability of this scale in Iran. The results of the confirmatory factor analysis showed that all 89 items have

a suitable factor load and none of the questions were deleted and all five subscales were confirmed. The reliability of the subscales was also calculated by Cronbach's alpha method and their values and their rate was between 0.72 and 0.90

3. Results

123 students were female and 27 were male. The mean and standard deviation of the

students' age were 23.14 and 3.46. 81% of students (124 students) were in bachelor's degree and the rest were in master's degree. 89 people were in psychology, 23 in counseling, 18 in language translation, 8 in law, 7 in history, and 5 in Persian literature. The mean and standard deviation of the cognitive emotion regulation and executive functions are presented in [Table 1](#).

Table 1

The mean and standard deviation of cognitive emotion regulation and executive functions

	Variables	Mean	Standard deviation
Cognitive emotion regulation	Self-blame	13.79	2.13
	Acceptance	4.27	1.47
	Rumination	6.95	1.38
	Positive refocusing	2.81	0.81
	Planning	5.08	1.55
	Positive reappraisal	3.72	1.68
	Putting into perspective	2.96	0.92
	Catastrophizing	6.17	2.11
	Other-blame	7.10	2.32
Executive functions	Self-management to time	18.45	5.84
	Self-organization/problem solving	14.26	4.31
	Self-restraint	21.66	5.02
	Self-motivation	27.19	5.75
	Self-regulation of emotion	24.82	6.33

The Kolmogorov-Smirnov test was not significant to check the data distribution (cognitive emotion regulation: $F = 0.19$, $P = 0.81$; executive functions: $F = 0.23$, $P = 0.74$), which indicates that the data have a normal distribution. The correlation matrix of the relationship between cognitive emotion regulation and executive functions is presented in [Table 2](#).

Table 2

The correlation matrix of the relationship between cognitive emotion regulation and executive functions

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Self-blame	1												
Acceptance	0.42**	1											
Rumination	0.28**	-	1										
Positive refocusing	0.33**	0.33**	0.23**	1									
Planning	0.41**	0.30**	0.31**	0.38**	1								
Positive reappraisal	0.25**	0.21**	0.27**	0.42**	0.53**	1							
Putting into perspective	0.30**	0.28**	0.23**	0.33**	0.37**	0.44**	1						
Catastrophizing	0.44**	0.26**	0.38**	0.36**	0.34**	0.48**	0.48**	1					
Other-blame	0.47**	0.24**	0.31**	0.32**	0.31**	0.36**	0.50**	0.27**	1				
Self-management to time	0.23**	0.23**	0.43**	0.22**	0.21**	0.27**	0.41**	0.21**	0.22**	1			
Self-organization/problem solving	0.26**	0.25**	0.41**	0.35**	0.19**	0.20**	0.29**	0.24**	0.24**	0.53**	1		
Self-restraint	0.35**	0.24**	0.30**	0.28**	0.26**	0.26**	0.37**	0.33**	0.19**	0.51**	0.50**	1	
Self-motivation	0.20**	0.31**	0.44**	0.26**	0.35**	0.38**	0.28**	0.19**	0.21**	0.47**	0.48**	0.44**	1
Self-regulation of emotion	0.24**	0.46**	0.39**	0.33**	0.27**	0.25**	0.30**	0.34**	0.23**	0.55**	0.53**	0.51**	0.44**

As can be seen in [Table 2](#), there is a positive and significant relationship between the methods of emotion regulation of acceptance, positive refocusing, planning, positive reappraisal, and putting into perspective with executive functions, but this relationship were inverse for self-blame, other-blame, catastrophizing and rumination ($P < 0.01$).

4. Discussion

This research was conducted with the aim of investigating the relationship between cognitive emotion regulation and executive functions. The findings showed that healthy forms of cognitive emotion regulation such as acceptance, positive refocusing, planning, positive reappraisal, and putting into perspective had a positive relationship with

executive functions, but unhealthy forms of cognitive emotion regulation such as self-blame, other-blame, catastrophizing and rumination have a negative relationship with executive functions.

Although there was no research that examined the relationship between the cognitive emotion regulation and executive functions, but the previous researches are somewhat consistent with the findings obtained in this study ([Gyurak et al., 2012](#); [Mohammed et al., 2022](#); [Sperduti et al., 2017](#)). For example, [Gyurak et al. \(2012\)](#) showed in a research on neurodegenerative patients that better verbal fluency -as one of the executive functions- was related to better emotional regulation. [Mohammad et al. \(2022\)](#) also showed that a higher level of

executive functions is partially related to the effective use of emotion regulation strategies.

In the explanation of these findings, it can be said that healthy strategies in the cognitive regulation of emotions help so that a person, instead of being more involved and drowning in negative emotions, has a newer perspective on the situation that has occurred and can, with the help of these cognitive strategies, control his emotions. On the other hand, unhealthy cognitive strategies in emotion regulation, such as rumination or self-blaming or others-blaming, not only do not help to solve the problem, but also fuel the problems and make the situation more difficult than before. In this way, when people use healthy cognitive emotion regulation strategies, they will be able to perform better in executive functions such as memory, concentration, organization, emotion regulation, and self-management. On the other hand, unhealthy cognitive strategies in emotion regulation will weaken them by interfering in the process of executive functions.

This research also had some limitations. Sampling method was convenience and the study group was students. The tools used were self-report questionnaires and was discussed only the correlation between the variables. It is suggested that future studies investigate the role of cognitive emotion regulation strategies on functions in specific groups of patients. Also, teaching students healthy strategies to regulate emotions can help them to perform better in their academic, career and family fields.

5. Conclusion

The findings of the research showed that executive functions are related to cognitive emotion regulation strategies. Therefore, more attention should be paid to the role of cognitive regulation of emotion on emotional functions.

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Conflicts of Interest

No conflict of interest has been reported.

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