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Investigating the Differences between the Components of Meta-Emotions and Mindfulness in Depressed and Normal People

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Quantitative Study

Abstract

Background: Depression is one of the most serious threats to today's society and of course, one of the most common psychological disorders. This research aims to investigate the differences between the components of meta-emotions and mindfulness in people with depression and normal people.

Methods: The current research was a causal-comparative study. The selection of samples of the clinical group was done in the field and in cooperation with one of the centers providing psychiatric services located in Shiraz, Iran, and from among those who were referred to this clinic. The research sample size was 100 people who formed two equal clinical and comparison groups. The clinical group, which included 50 patients with major depressive disorder (MDD), was selected purposefully and with the diagnosis of a psychiatrist according to sufficient criteria in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). The comparison group, which was matched with the clinical group in the three variables of sex, age, and marital status, was selected by convenience sampling method from among the residents of Shiraz. The data were obtained using the Meta-Emotion Scale (MES) and the Five Facets Mindfulness Questionnaire (FFMQ). Statistical analysis of research data was done using SPSS software and multivariate analysis of variance (MANOVA).

Results: There was a significant difference between the average scores of meta-emotion and components of mindfulness between depressed and normal groups ($P < 0.001$). The results showed that the mean of meta-emotion in people with depression (89.74) was higher than in normal people (85.16) and in the case of mindfulness components, the mean of people with depression (114.34) was lower than that of normal people (131.44).

Conclusion: The results showed that there was a significant difference between the depressed and normal groups in terms of the experience of ecstasy and the level of the trait of mindfulness.

Keywords: Emotion; Mindfulness; Depression

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Introduction

Depression is one of the most serious threats to today's society and of course, one of the most common psychological disorders (Fakhoury, 2021). With a prevalence of up to 21.4% worldwide, depression has become a challenge for public health in all countries due to the limitations it creates for the individual, the family, and at a higher level for society (Kessler et al., 2007). Major depressive disorder (MDD) is a long-term and stable disorder that results in serious functional and social impairment (Otte et al., 2016). At the individual level, this disorder affects both the psychological and physical aspects of the person. Depression is a collection of different mental states that appear in a spectrum from mild boredom to avoidance of daily activities. On the other hand, it affects the person's functions such as eating and sleeping and the person's health (Hopko, Lejuez, LePage, Hopko, & McNeil, 2003). However, the negative consequences of depression are not limited to the mind and affect physical health as well, so that longitudinal studies show that depression increases the risk of cardiovascular diseases (CVDs) by about 80% (Hidese, Saito, Asano, & Kunugi, 2018).

On the other hand, depression is considered a recurring condition for most of the people who experience it, in such a way that more than 75% of people suffering from depression experience more than one episode of depression (Charis & Panayiotou, 2021). Although the elimination of the symptoms of the disorder is our main goal in treatment, maintaining health status is one of the current challenges in the field of mental health. Theoretical and clinical studies confirm the high percentage of recurrence in major depression (Fakhoury, 2018). Despite the high prevalence and destructive effects of this disorder, we are still facing a large therapeutic gap in this field (Friedman & Anderson, 2014), in such a way that critical research after reviewing more than one hundred clinical trials conducted on depression has estimated the percentage of reduction in the symptoms of the disorder to be around 50% (Khan, Faucett, Lichtenberg, Kirsch, & Brown, 2012). Existing treatments for depression at best reduce the disease burden in this disorder by only 30% (Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015). Finally, a possible conclusion from our realities and problems in dealing with mental disorders is that we still need pathological research to better understand the nature and factors involved in these disorders, to improve existing interventions (Lynch, Gray, Hempel, Titley, Chen, & O'Mahen, 2013).

In the meantime, one of the constructs that explain the complexity of human emotional experience and is still unclear and unknown to us is excitement (Norman & Furnes, 2016). In this regard, there is a need to investigate the nature of ecstasy and its impact on human life (Mansell, Barnes, Grant, & De Sousa, 2020). One of the areas that meta-emotion, as an emotional component, can be related to is depression. So far, three studies have investigated the relationship between depression and euphoria. Mitmansgruber et al. (2009) investigated in a student sample and reported that the severity of depression symptoms had a positive correlation with the experience of negative meta-emotions. In another study, it was reported that the severity of depression was related to extra shame and extra guilt as sub-categories of extra emotion (Leahy, 2002). Besides, in the latest research, it was found that the severity of depression was related to the possibility of meta-emotional experiences, especially negative meta-emotional experiences (Haradhvala, 2016).

One of the other constructs that have received a lot of attention in recent years is mindfulness, which is rooted in Eastern concepts (Buddhist meditation exercises)

(Kabat-Zin, 2003). In recent years, mindfulness has been combined with various treatments and has been widely used to treat various disorders, including depression, and prevent relapse (Gu, Karl, Baer, Strauss, Barnhofer, & Crane, 2020). But the use and reputation of mindfulness as an intervention has grown much faster than its precise conceptualization, in a way that many therapists and few researchers have addressed (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). On the other hand, in these few studies, most of the total score of mindfulness has been examined, and few studies have studied the components of mindfulness, especially at the clinical level (Petrocchi & Ottaviani, 2016). As a result, our incomplete understanding of change mechanisms (Robins, Keng, Ekblad, & Brantley, 2012) and cultural contexts (Gu et al., 2020) related to mindfulness highlights the importance of further research in this field. Considering all the problems and research gaps mentioned, the present study wants to examine the question of whether the experience of meta-emotions and the components of the conscious mind is different in patients with major depression and normal people.

Methods

The current research is of a fundamental type and the research method is of a comparative causal type (post-event). The selection of samples for the clinical group was done in the field and with the cooperation of one of the centers providing psychiatric services located in Shiraz, Iran, and from among the people who were referred to this clinic. The samples required for the normal group were also selected after the examination of a clinical psychologist according to the criterion of being equal in terms of gender, age, and marital status with the members of the clinical group from among the residents of Shiraz (people who have lived in Shiraz for at least the last 5 years) that were selected by convenience sampling method. The statistical population of this research consisted of those who referred to psychology and psychiatry clinics in Shiraz City. The research sample size was 100 people who formed two equal clinical and comparison groups. The clinical group, which included 50 patients with MDD, was selected purposefully and with the diagnosis of a psychiatrist according to sufficient criteria in Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). The comparison group, which was matched with the clinical group in the three variables of sex, age, and marital status, was selected from among the residents of Shiraz.

Inclusion criteria include the minimal ability to read and write, having the main diagnosis of major depression for the clinical group, and having a minimal reality check to implement the questionnaire. Exclusion criteria included comorbidity with schizophrenia spectrum disorders, the presence of acute physical problems leading to depression, the presence of any history of serious brain damage, receiving and taking antidepressants, and going through the psychotherapy process for the individual.

Research tools

Meta-Emotion Scale (MES): This measure, which has 28 items and 6 subscales, was designed by Mitmansgruber et al. (2009) to evaluate overexcitement. This questionnaire measures the two dimensions of positive and negative over-excitement, where positive over-excitement includes two subscales of over-compassion (7 items) and over-interest (5 items), and negative over-excitement includes the subscales of anger (4 items), over-shame (5 items), thought to

overcontrol (5 items), and over inhibition (2 items). Question 20 in this questionnaire is scored in a reverse way and subjects answer the questions in the form of a 5-point Likert scale from 1 (completely false) to 5 (completely true). The range of scores is between 28-140. Lower scores in negative overexcitement dimension scales and higher scores in positive overexcitement scales are considered appropriate. The creators of this scale have reported the reliability coefficient of this measure using Cronbach's alpha coefficient as 0.91 and 0.85 for positive meta-emotion and negative meta-emotion, respectively. This questionnaire has a significant correlation with positive and negative affect, Beck Depression Inventory (BDI), neo-personality, and metacognition questionnaires. In Behboodi Moghadam et al.'s research (2015), the reliability of the questionnaire was reported to be 0.73 for positive overexcitement and 0.79 for negative overexcitement through Cronbach's alpha.

Five Facets mindfulness Questionnaire (FFMQ): This questionnaire, which has 39 items, was created by Baer et al. (2006). This questionnaire has been developed through factor analysis and combining the items of Freiburg Mindfulness Inventory (FMI), Mindful Attention Awareness Scale (MAAS), and Kentucky Inventory of Mindfulness Skills (KIMS). This scale has a five-point Likert scale, where the subjects have to agree or disagree with each of the statements from 1 (never or very rarely) to 5 (often or always). The range of scores on this scale is between 39 and 195, with higher scores indicating greater mindfulness. This questionnaire has five components of observation (8 items), acting with awareness (8 items), being non-judgmental to inner experience (8 items), describing (8 items), and being non-reactive (7 items). According to Cronbach's alpha coefficient, the reliability of this questionnaire was between 0.75 (non-reactivity) and 0.91 (description). Moreover, the correlation between the factors was moderate and in the significant range of 0.15 to 0.34. The pre-test and post-test correlation of this questionnaire in the study of Hashemi et al. (2018) in Iranian society was between 0.57 (non-judgmental) and 0.84 (observation).

This research was carried out with the coordination and cooperation of psychiatrists and clinical psychologists working in the psychology and psychiatry clinics of Shiraz City in the summer of 2021. The patients (subjects of the clinical group) were referred to the researcher by a psychiatrist after the initial assessment and diagnosis session and before receiving the treatment (presenting the diagnosis to the patient himself) to complete the research process. After establishing the initial relationship, checking the satisfaction of participating in the research, and checking the inclusion and exclusion criteria, the process of creating motivation to answer the research questionnaires took place. Finally, the questionnaire was made available to the subject in the standard response environment. The subjects of the comparison group were also selected by convenience sampling after being evaluated by a clinical psychologist and checking their age, sex, and marital status to compare with the clinical group, and after checking the consent of the participants in the research and preliminary explanations, and after checking the consent of the participants in the research and preliminary explanations, the questionnaire was given to them, in such a way that both groups of participants in the research, after answering the demographic information section, first answered the excitement questionnaire and then the questionnaire of the components of mindfulness.

The statistical analysis of research data has been done using SPSS software

(version 22, IBM Corporation, Armonk, NY, USA) and in two parts, descriptive and inferential. Descriptive analysis of the data included the demographic characteristics of the subjects, central statistical indicators, and the dispersion of the research variables. In inferential analysis of research variables, multivariate analysis of variance (MANOVA) was used.

Results

The age range of the participants was between 16 and 55 years, and the average age was 33.26 years. In this research, women covered 67% of the total population and men covered 33% of the total population and the lowest frequency. 48% of the participants were single and the rest were married. People with a bachelor's degree were the most frequent ones with 35 percent, and those with a doctorate degree or higher were the least frequent ones among the participants with 2 percent. Mean and standard deviation (SD) related to the variables and their subscales are as follows: 87.45 ± 10.16 for meta-emotion and 122.89 ± 20.73 for components of mindfulness.

Considering that all the values are within ±2, it can be concluded that the assumption of normality is valid. Levene's test for evaluating the assumption of the equality of variances of meta-emotion scores and mindfulness components was not significant (significance level was greater than 0.05). Therefore, the assumption of the equality of variances was valid for the variables of this hypothesis**.**

Based on the findings from table 1, the mean scores of overexcitement and mindfulness components between depressed and normal groups had a significant difference ($P < 0.001$). Therefore, it can be concluded that there was a significant difference between the two depressed and normal groups at least in one of the variables of meta-emotion and components of mindfulness (dependent variables) [meta-emotion: sum of squares (SS) = 526.58, degree of freedom (df) = 1, mean squares (MS) = 526.58, F = 5.31, eta square = 0.051, P = 0.020; components of mindfulness: SS = 7309.02, df = 1, MS = 7309.02, F = 19.03, eta square = 0.16, P = 0.001]. According to findings, there was a significant difference between the meta-emotion and the components of mindfulness in the depressed and normal groups ($P < 0.050$); therefore, it can be said that the main hypothesis regarding the difference between the depressed and normal groups in these two variables was confirmed.

The results of table 2 showed that the mean of meta-emotion in people with depression (89.74) was higher than that of normal people (85.16), but in the case of the components of mindfulness, the mean of people with depression (114.34) was lower than that of normal people (131.44).

Table 1. Results of significance test of multivariate analysis of variance (MANOVA) of meta-emotion and components of mindfulness Basic and demographic information of women with breast cancer

Test	Value	F	df hypothesis	df error	P-value	Eta square
Pillai's trace	0.17	10.59	2	97	0.001	0.17
Wilks' lambda	0.82	10.59	2	97	0.001	0.17
Hotelling's effect	0.21	10.59	2	97	0.001	0.17
Roy's largest root	0.21	10.59	2	97	0.001	0.17

df: Degree of freedom

Table 2. The mean and standard deviation (SD) of the Meta-Emotion Scale (MES) and the components of mindfulness according to the depressed and normal groups

Variables	Group	Mean ± SD
Meta-emotion	Depressed	89.74 ± 9.81
	Normal	85.16 ± 10.08
Components of mindfulness	Depressed	114.34 ± 21.77
	Normal	131.44 ± 17.13

SD: Standard deviation

Discussion

This research aims to investigate the differences between the components of meta-emotions and mindfulness in people with depression and normal people. The results showed that there was a significant difference between the depressed and normal groups in terms of the experience of meta-emotion and the level of mindfulness traits. According to the searches conducted by the researcher, no scientific research comparing people with depression and normal people in terms of excitement was found, but it is in line with the current research by Haradhvala (2016) and Mansell et al. (2020).

The results of the present study and similar studies on the relationship between meta-emotion and depression can be explained in several ways. One of the things that we can raise in explaining the relationship between meta-emotion and depression is that people who have an overexcited perspective based on accepting their feelings can find more emotionally pleasurable conditions for themselves. Not only are they ready to accept their positive emotions, but they also are not too worried about facing their negative emotions. It seems that they consider emotional experiences as an opportunity for better understanding and communication with themselves and others. Therefore, in general, one of the explanations for the difference between the depressed and the normal group is the effect of extra emotions on the acceptance of one's own emotions (Haradhvala, 2016).

Another explanation that can be put forward, in this case, is the philosophical belief which Aristotle says that people are happy when they have the emotions they want to have. Aristotle believed that happiness was not having pleasant emotions and not having unpleasant emotions, but happiness was having desired emotions. Hanley and Garland (2017) provided empirical support for this idea of Aristotle in their research. They suggest that the discrepancy between the emotions a person wants and the emotions he has a positive relationship with depression and a negative relationship with well-being. This idea of Aristotle and the above-mentioned research is also compatible with the literature of meta-emotions, and it may be considered as an explanation for the findings of the present research. Mindfulness is a special way of being, a way of understanding and describing internal and external events that require understanding personal feelings. He believes that this style can enrich life and give it meaning and that mindfulness plays this role by harmonizing one's here-and-now experiences, as well as increasing one's insight into the role of one's mind and thoughts in daily concerns (Segal, 2010). In addition to being a way of being, mindfulness includes a set of behavioral, cognitive, and metacognitive mechanisms that all work to focus on the attention process; the focus on the attention process in turn plays a protective role against the downward spiral of negative mood-negative thought. Mindfulness increases the possibility of creating and expressing pleasant thoughts and emotions and causes the development of a new perspective on life (Segal et al., 2002).

The difference in subscales of emotion can be explained through the emphasis that Neff (2003) and Gilbert et al (2006) have placed on self-compassion and self-kindness concerning well-being and mental health. In addition, it can be stated that positive emotions are generally aligned with self-acceptance and acceptance of one's emotions, and on the other hand, negative emotions are aligned with negative treatment, non-acceptance, and rejection of the emotional world of the individual. For example, getting angry about one's anxiety affects one's experience of one's anxiety, and this is different from experiencing compassion or compassion about anxiety (Mitmansgruber et al., 2009).

The current research, like any other research, has faced limitations. Stating these limitations helps other researchers to adopt measures and conditions that help them maintain the internal and external validity of their research project. The limitations of the present study are: due to the outbreak of the coronavirus disease 2019 (COVID-19) epidemic and the need to respect the collective health of the society, the normal group was assessed through an online questionnaire, while the depressed group was assessed through a paper-pencil questionnaire, which the difference may create a flaw in the research conclusions. The statistical population of the present study includes people with depression and normal people of Shiraz City. Therefore, caution should be taken in generalizing the results of the study to other cities and cultures. The non-use of random sampling methods due to the lack of complete access to the statistical population was another limitation of the present study. This research is only about MDD; caution should be taken in extending and generalizing the results to other disorders until more studies are done.

It is suggested that considering the increasing need of communities to improve mental health services and also considering the significant difference between meta-emotion and its subscales between two depressed and normal groups, this finding should be considered and used in different treatment protocols. It is suggested that excitement as a variable affecting mental health should be considered in health policies, especially educational policies for the future generation, so that people learn how to communicate with their emotions and how to accept them. Considering the significance of the subscales of action combined with awareness, being non-judgmental to the inner experience, and describing these three subscales more than the two scales of observation and non-reactivity. Maybe even these subscales can be given therapeutic attention apart from interventions based on mindfulness.

Conclusion

The results showed that there was a significant difference between the depressed and normal groups in terms of the experience of happiness and the level of the trait of mindfulness.

Conflict of Interests

Authors have no conflict of interests.

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