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### Original Article

# The effectiveness of cognitive treatment, based on the presence of mind on the psychological well-being and mental health among elderly individuals

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## Abstract

**Introduction:** The high prevalence of anxiety and depression in old age and reduction of psychological well-being in this period of life is very significant. The purpose of the present study was examining the effectiveness of cognitive treatment, based on the presence of mind on the psychological well-being and mental health among elderly individuals.

**Materials and Methods:** The statistical community of this clinical research with pre-test and post-test plan and the control group concluded all the elderly individuals of Babul city. Number of 20 cases (10: experimental group and 10: control group) were selected randomly. For collecting information, Ryff's Psychological Well-being Questionnaire and Goldberg Mental Health Questionnaire (GHQ) were used. To analyze the data, two descriptive statistics and the inference statistics (the covariance) were used.

**Results:** The results showed that after applying the cognitive treatment based on the presence of mind, the psychological well-being was meaningfully increased. Also all components including: positive emotions, negative emotions, stress-depression, neurosis, determination and happiness have been increased significantly. The mental health of elderly cases has been increased in experimental group ( $P < 0.05$ ).

**Conclusion:** The results of the study revealed that cognitive treatment, based on the presence of mind is effective on the psychological well-being, mental health and mental health components among elderly individuals.

**Keywords:** Cognitive treatment, Mind, Mental health, Psychological well-being

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## Introduction

Humans always go through the process of aging in the presence of suitable living conditions as a natural process of life. Old age is a stage of development that appears with a significant decrease in sensory and motor activities and memory. According to the World Health

Organization's definition of old age, people over the age of 60 can be considered part of the elderly community. The phenomenon of old age has created many challenges, including economic, social and health, which need comprehensive investigation. Almost 60 years ago, the World Health Organization defined health as a state of

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complete physical, mental and social well-being and not simply not being sick (1). There have been many criticisms of not having a mental patient as a criterion for mental health, and multiple criteria for mental health have been presented instead (2).

Health is a multi-dimensional concept that includes the feeling of happiness and well-being in addition to not being sick and disabled. Most psychiatrists, psychologists and mental health researchers ignore the positive aspects of health. Although the efforts that have been made to overcome the traditional patterns of health have provided the necessary grounds for considering health as a state of well-being (not merely the absence of disease), it is not enough. Of course, the new models of health also mainly emphasize negative characteristics, and in them, health measurement tools are often associated with physical problems (mobility, pain, fatigue, and sleep disorders), psychological problems (depression, anxiety, and worry), and social problems (inability to play a social role, marital problems). In the last decade, 6 models of psychological well-being or positive mental health were presented. Based on this model, psychological well-being consists of 6 factors. Self-acceptance (having a positive attitude towards oneself), positive relationship with others (establishing warm and intimate relationships with others and the ability to empathize), autonomy (a sense of independence and the ability to stand up against social pressures), purposeful life (having a purpose in life and giving meaning to it), personal growth (feeling of continuous growth) and control over the environment (a person's ability to manage the environment). This model has been widely noticed in the world. This model was presented based on the study of mental health texts and it was stated that the components of the model are positive mental health standards and these dimensions help to measure the level of well-being and positive functioning of a person (3).

Other researches have also investigated the psychological well-being of the elderly, for example, in a research entitled the effectiveness of spiritual intelligence on the quality of life and psychological well-being of the elderly, the results showed that spiritual intelligence training

had a positive effect on the quality of life and psychological well-being of the elderly. 4).

Mental health has 13 symptoms, of which 2 symptoms are related to emotional well-being, 5 symptoms are related to social well-being, and 6 symptoms are related to psychological well-being. Psychological well-being means the ability to find all one's talents and has the following components: 1- Autonomy (a sense of competence and ability in managing one's environment, etc.), 2- Personal growth (having continuous growth, etc.), 3- Relationships positive with others (having warm relationships, etc.), 4- purposefulness in life (having a goal in life), 5- self-acceptance (having a positive attitude towards oneself, etc.), 6- mastering the environment (ability to choose and creating a suitable environment, etc.) Also, mental health is one of the important topics that is effective in the growth of family and society. The World Health Organization defines mental health as a state of well-being in which a person knows his abilities and uses them effectively and productively and is useful for his community. In general, mental health is the creation of mental health by preventing mental illnesses, controlling the effective factors of its occurrence, early diagnosis, prevention of factors caused by the return of mental illnesses and creating a healthy environment in establishing proper human relationships (5).

The elderly are among the vulnerable sections of the society who bear more medical and health expenses compared to other groups of the society. Many psychological disorders occur during old age. Fear of death, feeling alone, failure, fatigue, stress, suicidal thoughts, changes in sleep patterns are considered to be symptoms of mental health disorder in the elderly. Mood disorders and anxiety are among the most common disorders of the elderly (6).

Mental disorders of the elderly are caused by the complex interaction of organic, psychological and social factors. According to the statistics of the National Institute of Mental Health, the most common disorders of the elderly are depression and cognitive impairment, and phobia, calcium, and the risk of suicide increase with age, so that about 20% of suicides are committed by people over 65 years old. Many mental disorders of the elderly can be prevented. If such conditions are

not diagnosed on time and treated properly, it may turn into an irreversible condition that requires hospitalization.

The purpose of mental health is not only to explain the causes of behavior disorders, but its purpose is to create factors that complement a healthy and normal life, as well as to treat minor behavior disorders in order to prevent the occurrence of severe mental illnesses, and the overall goal of the mental health organization is follow-up. (7). Considering the high prevalence of anxiety and depression in old age and the decrease in psychological well-being in this period of life, the aim of this research is to investigate the effect of cognitive therapy based on the presence of mind on improving the psychological well-being and mental health of the elderly.

### Materials and Methods

The statistical population of this research was made up of all the elderly people of Babol city. A sample of 10 people was selected as the experimental group and 10 people as the control group by a simple random method. The subjects of the experimental and control groups were almost the same in terms of gender and age. To collect information, two psychological well-being questionnaires of Riff and Goldberg's mental health questionnaire (GHQ) were used. Two methods of descriptive statistics and inferential statistics (covariance) were used to analyze data.

#### Research instruments

A) *Ryff's Psychological Well-being Questionnaire*: This scale was created by Ryff in (1989) and has 6 factors of autonomy, control over the environment, personal growth, positive relationship with others, purposefulness in life and self-acceptance. This test is answered on a 6-point continuum from "completely disagree" to "completely agree" (one to six). Out of all the questions, 44 questions are scored directly and 40 questions are scored inversely (8).

B) *Goldberg Mental Health Questionnaire (GHQ)*: The General Health Questionnaire is a test with a multiple nature and self-administered, which is designed to investigate discrete non-psychotic disorders. This questionnaire is used for teenagers and adults of any age in order to

discover the disability in normal functions. The general health questionnaire was first prepared by Goldberg (1972). The main questionnaire has 60 questions, but shortened forms of 30 questions, 28 questions and 12 questions have been used in different studies. According to researchers, the different forms of this questionnaire have high validity and reliability. In this research, the 28-question form of the general health questionnaire was used. This form was designed by Goldberg and Hiller (1979), through the implementation of factor analysis method on its long form. The questions of this questionnaire examine the mental state of the person in the last month and include symptoms such as abnormal thoughts and feelings and aspects of visible behavior that emphasize the here and now situation. This questionnaire consists of four subtests, each of which has 7 questions. All the items of the general health questionnaire have 4 options and the scoring method is Likert, the scoring of each of the 4 grade questions of the test is (0, 1, 2, 3) and as a result, the total score of a person is from 0 It will be variable up to 84 (9).

#### Intervention

The treatment program was implemented according to Kabat-Zinn et al.'s protocol (10), which has been studied in various researches, and the results indicate the effectiveness of this treatment method on depression, anxiety, stress, and psychological adjustment (11): The first session: Setting the general policy, taking into account the privacy and personal life of people, inviting people to introduce themselves to each other, practicing physical examination, homework, discussing and determining the weekly meetings for the distribution of tapes and pamphlets. The second session: includes training of the relaxed body for 14 groups of muscles, including forearms, arms, back muscles of the legs, thighs, abdomen, chest, shoulders, neck, lips, eyes and forehead.

The third session: training for 6 groups of muscles, including hands and arms, legs and thighs, stomach and chest, forehead and lips, and home homework. The fourth session: Getting to know how to be mindful of breathing, teaching the technique of inhaling and exhaling with calmness and without thinking about anything else, and teaching the technique of watching

breathing and the homework of breathing mindfulness before sleep. The fifth session: teaching the technique of paying attention to the movement of the body while breathing, focusing on the body parts and their movements, and searching for physical sensations and eating mindfulness homework. Sixth session: training to pay attention to the mind, positive and negative thoughts, whether the thoughts are pleasant or unpleasant, allowing negative and positive thoughts to enter the mind and easily remove them from the mind without judgment and paying deep attention to them. Seventh session: 40 minutes of sitting meditation, revision of homework, practice of observing the connection between activity and mood. Eighth session: Revision of previous material and summary.

## Results

In the descriptive analysis of the data, the statistical indices related to each of the research variables were calculated. In the inferential statistics section, multivariate covariance analysis and one-variable covariance analysis tests have been used. Then, the collected data were analyzed by using statistical and decision-making techniques that are compatible with the research method and type of variables.

Before performing the analysis of covariance, the assumptions of the analysis of covariance were examined first, and Levene's test showed that for the well-being variable and its items, the presupposition of the same variance of the groups is established, and therefore, the results of the analysis of covariance can be used.

**Table 1.** The results of the multivariate analysis of variance test

Test	Effect size	F	DF1	DF2	P	Square of share
Lambda Wilkes	1	664.74	8	1	0.030	1
Pillai effect	0.001	664.74	7	1	0.030	1

According to Table 1, the difference in psychological well-being components between

the two experimental and control groups is significant ( $P= 0.030$  and  $1F=7, 74.664$ ).

**Table 2.** The results of the interaction test between the groups

Variable	Sum of squares	df	Square	F	P
Mental well-being	2965.477	1	2965.477	34.707	0.001
Positive emotions	491.643	1	491.643	17.255	0.004
Negative emotions	1810.738	1	1810.738	47.476	0.000
Group Stress/ Depression	252.683	1	252.683	200.187	0.000
Neurosis	606.746	1	606.746	19.682	0.003
Determination	72.463	1	72.463	5.751	0.048
Vitality	108.522	1	108.522	19.832	0.003
Mental well-being	266.981	1	38.140		
Positive emotions	199.455	1	28.494		
Negative emotions	8.836	1	1.262		
Error Stress/Depression	215.797	1	30.828		
Neurosis	88.208	1	12.601		
Determination	38.305	1	5.472		

According to Table 2, the following results are obtained: The difference in psychological well-being in the two groups ( $P= 0.001$ ;  $df=1$ ;  $F=34.707$ ), positive emotions ( $P= 0.004$ ;  $df=1$ ;

$F=17.255$ ), negative emotions ( $P= 0.001$ ;  $df=1$ ;  $F=47.476$ ), stress/depression ( $P= 0.004$ ;  $1 df$ ;  $F=200.187$ ), neurosis ( $P= 0.003$ ;  $1 df$ ;  $F=19.682$ ), difference of will ( $P= 0.048$ ;  $1 df$ ;  $F=19.832$ ) and

The difference in vitality ( $P= 0.003$ ;  $df=1$ ;  $F=19.832$ ) is significant. Therefore, it can be said that cognitive therapy based on the presence of mind is effective on the psychological well-being of the elderly. Before performing the covariance analysis, the assumptions of the covariance

analysis were first examined and the Lone test showed that for the variable of mental health, the assumption of the same variance of the groups is established, and therefore, the results of the covariance analysis can be used.

**Table 3.** Results of one-way analysis of covariance test

	Sum of squares	Freedom degree	Mean of squares	F	P
Group	2091.953	1	2091.953	257.432	0.000
Error	105.641	13	8.126		
Total	16554.000	16			

According to Table 3, the reported P is equal to 0.0001, which is smaller than 0.05, in other words, cognitive therapy based on mindfulness is effective on the mental health of the elderly. Here too, Lune's test showed that for all the research

variables, the presupposition of the same variance of the groups is established, and therefore, the results of the covariance analysis can be used to test the research hypotheses.

**Table 4.** The results of the multivariate analysis of variance test

Test	Effect size	F	DF1	DF2	P	Square of share
Lambda Wilkes	0.015	97.140	4	6	0.000	0.985
Pillai effect	0.985	97.140	4	6	0.000	0.985

**Table 5.** Results of interaction test between groups

Source	Variable	Sum of squares	df	Mean of square	F	P
Group	Depression	163.683	1	163.683	78.862	0.000
	Physical sign	120.618	1	120.618	61.488	0.000
	Social performance	19.233	1	19.233	17.530	0.002
	Anxiety of sleep	215.116	1	215.116	238.108	0.000
Error	Depression	18.751	9	2.083		
	Physical sign	17.655	9	1.962		
	Social performance	9.874	9	1.097		
	Anxiety of sleep	8.131	9	0.903		

According to Table 4, the difference in mental health components between the two groups is significant ( $P= 0.0001$ ;  $F=6$  and  $97.140$ ). According to table 5, the following results are obtained:

The difference in depression component ( $P= 0.001$ ;  $df=1$ ;  $F=78.562$ ), physical symptom ( $P=$

$0.001$ ;  $df=1$ ;  $F=61.488$ ), social functioning ( $P= 0.002$ ;  $df=1$ ;  $F=17.530$ ) and anxiety sleep ( $P= 0.001$ ;  $df=1$ ;  $F=238.108$ ) is significant in two groups. Therefore, it can be concluded that cognitive therapy based on the presence of mind is also effective on the mental health components of the elderly.

## Discussion

The results of the multivariate analysis of covariance test showed that after the cognitive therapy based on the presence of mind, the psychological well-being of the elderly in the experimental group and in the post-test stage was significantly higher than the pre-test, and these changes did not exist in the control group. Is. Also, in all the components of this variable, including positive emotions, negative emotions, stress-depression, neurosis, will and vitality, there were significant pre-test and post-test differences and there were changes only in the experimental group.

The results and findings of this hypothesis were consistent and similar to the research of Goldfrine and Hiring, which investigated the effect of mindfulness-based cognitive therapy on depression (12). Also, the one-way analysis of covariance test showed that after cognitive therapy based on the presence of mind, the mental health of the elderly in the experimental group and in the post-test stage was significantly higher than the pre-test. In the next 40 years, the world's population over 65 will double, 52% of which will live in Asian countries and 40% in developed countries (13). Iran, as one of the developing countries, is not exempt from this rule; So that the aging process in the country indicates the growth of the elderly population (14).

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According to the 2013 census, more than 6 million (8.2 percent) of Iran's population are 60 years old and older. According to international estimates, Iran's elderly population will grow faster than other regions of the world from 1419, and by 1424, it will surpass the average growth of the world's elderly population and 5 years later, it will surpass that of Asia as well (15). The research conducted in Iran in the field of geriatrics is very limited and based on that, aging is examined in a narrow concept of physical health and is confined in a limited medical framework (16). Despite the growth of the elderly population and changes in the population pyramid of the country, the needs of the elderly in all its dimensions have not yet been focused on as a vulnerable group of society (17). Therefore, considering the growth of the elderly population in the country, it is suggested that psychological research in this field should be more targeted and more numerous.

## Conclusion

The results of this research showed that after cognitive therapy based on the presence of mind, the psychological well-being of the elderly increased in all components, including positive emotions, negative emotions, stress-depression, neurosis, will and vitality, as well as the mental health of the elderly. The intervention has also shown a significant increase.

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