

# Comparison of Spiritual-positive Psychological Characteristics in Individuals with and without Migraine

Zahra Atari<sup>1,\*</sup>

<sup>1</sup> M.A Graduated in Department of General Psychology, Faculty of Humanities, Payam Noor University of Garmsar, Garmsar, Iran

\* **Corresponding author:** Zahra Atari, Department of General Psychology, Faculty of Humanities, Payam Noor University of Garmsar, Garmsar, Iran. Email: z.atarii@gmail.com

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## Abstract

**Background:** Migraine is a common disabling type of a headache, which has a relationship with temporary changes in the diameter of blood vessels.

**Objectives:** The present study aimed to compare positive psychological characteristics in individuals with and without a migraine. **Methods:** The method of the present research was causal-comparative (ex-post facto), using parallel samples. The statistical population of this research consisted of all the individuals with a migraine in Tehran who had visited Tehran's city health center (2016), out of whom 60 individuals were selected based on entrance-exit criteria and semi-structured interviews, using a convenience sampling method; and 60 individuals without a migraine were put together with them. The spiritual intelligence questionnaires, life meaning, meta-personal self-construct and life satisfaction questionnaires were used in order to collect data. In addition, the items related to demographic data were completed.

**Results:** The results of data analysis, using SPSS20 software, showed that spiritual intelligence, life meaning, meta-personal self-construct, and life satisfaction significantly exist in those with lower migraine ( $P < 0.05$ ).

**Conclusion:** Migraine affects other mechanisms of those with a migraine through the intermediary role of stress, leading to a decrease in the levels of components studied in the present research.

**Keywords:** Life-meaning, Migraine, Satisfaction, Self-construct, Spiritual intelligence

## 1. Background

Headache is a common disorder which disturbs the lives of patients with headaches, especially when a recurrent and repetitive trend occurs (1). Recent studies have shown that headaches lead to considerable constraints in daily lives, affecting emotional behaviors and communicational aspects (2), especially migraine which starts in youth which is a period in which a lot of activities and work happen. Migraine is a common disabling type of headache, which has a relationship with temporary changes in the diameter of blood vessels. Although pain is felt in a high level and equally in both sides of the head especially in the front and the back of the head, it might very rarely be felt in the body.

Frequency components have been identified, which somehow stimulate migraine, leading to the start of attacks (3). Multifaceted relationships between biological, psychological, and social factors play a role in causing this disease, which requires appropriate interventions (4).

Positivist psychology, as a novel approach in psychology, focuses on the understanding and defining of happiness and the mental feeling of wellbeing as well as the accurate prediction of factors affecting them (5). This approach, from a positivist perspective, deals with the enhancement of mental wellbeing and happiness, through solving problems.

In recent years, spirituality and religion, due to increasing research concepts, have been considered

as important components in psychological methods (6). Considering the many positive effects of religions and spirituality on physical-mental health, it seems necessary to pay more attention to the important role of these variables in the country's health-treatment system in order to use their positive effects in preventing and treating the disease. Personal business shows that many mental-emotional disorders and even personal disorders interact with spiritual and religious issues, and that without being sensitive to this interaction, recognition and treatment will not be successful. Therefore, we can consider spiritual strategies as certain supplementary types of tool besides other approaches, and we can use them with special accuracy and sensitivity (6). One of the components that plays a key role in mental health is "spiritual intelligence". Intelligence, especially spiritual intelligence, is a set of different skills and abilities which appear in different social and historical contexts with different forms. Spiritual intelligence is referred to as the understanding of the relationship between the origin of the universe and meaningfulness in life, i.e. it forms what is our ultimate goal for living (7). Spiritual intelligence is one of the factors which affects mental health. Spiritual intelligence, as a confrontational strategy for solving daily stressful problems, can play an important role in different situations. King (2008) referred to the relationship between spiritual intelligence, meta-personal self-construct, life meaning, and life satisfaction (8).

In the comprehensive literature of psychology,

"self" is a special construct, which is a process of self-construct. Self-construct is a process of communication which helps to achieve developments between self and others. This process was continued by Baumeister (1998) (9). Self-construct is pictured in the form of a system of thoughts, feelings, and actions, considering the person's communication with others and himself/herself (10).

Kelly's self-construct approach (1995) to personality is not only one of the recent theories, but it is also one of the original theories (11). Kelly declared that we will not be able to find many familiar expressions and concepts that are usually found in the theories of personality. Kelly's (1995) theory is called "personal interpretation theory". His basic criterion in this theory is that individuals must be assessed based on their characteristics; and because attributions of personality are not consistent with this criterion, he devised a test for discovering individuals' personal interpretations, which is called "Test of the Set of Role Interpretations" (11). Recently, cognition has a strong internal connection with all forms of life. In fact, meta-personal self-construct is generally dependent on belief systems, which are owned by cultural-religious groups such as Buddhism and Hinduism (12).

As mentioned earlier, the members of religious-cultural groups such as Buddhism are likely to refer to meta-personal self-construct based on their belief systems. However, self-construct does not generally follow religious beliefs, because it is dependent upon a belief that is connected to everything and is not part of religious belief systems. Apart from that, an individual might possess a meta-personal self-construct, without belonging to a religious group (13). One of the constructs that has been developed in recent years, and has received attention as a well-being index, is "meaning of life". The meaning of life is a set of beliefs which is composed of an understanding of the world, purposefulness, efforts to communicate with the environment and others,

and even a supernatural force (14).

An important index of mental health is the level of life satisfaction. Zaki (2006) believed that life satisfaction is an important case which must be the focus of attention, because those with migraine usually experience lower life quality, especially when there is intense migraine. Life satisfaction refers to individuals' attitudes, general evaluation of totality of lives, like family lives and educational experiences (15).

The present study aimed to compare the levels of spiritual intelligence, positivist psychology components such as meta-personal self-construct, life meaning, and life satisfaction of people with and without migraine in order to make clear the effect of the incidence of migraine on behavior and mental action in patients with migraine, compared to those without this disease; because it seems that having

migraine, considering the frequency of headaches in different time periods, affects the levels of spiritual intelligence, meta-personal self-construct, meaning of life, and life satisfaction.

## 2. Objectives

The present study aimed to compare positive psychological characteristics in individuals with and without a migraine.

## 3. Methods

This study was of a surveying type with an ex-post facto (causal) method (causal-comparative). The statistical population of the present study consisted of all men and women who had visited Tehran's city health center (2016). For the inclusion criteria, 60 individuals with migraine were selected based on entrance-exit criteria and semi-structured interviews, using a convenience sampling method. Thus, statistical sample included 60 individuals with migraine, and 60 individuals without migraine. So the exclusion criteria for the sample size was regarding to those persons did have migraine.

In order to collect data, King's spiritual intelligence questionnaire (SISRI), meta-personal self-construct questionnaire (Stroink and Decicco), Steger's meaning of life questionnaire (MLQ) and Diner's life satisfaction (SWLS) were used. Face and content validity of scales was approved by psychology experts.

In addition, SPSS-20 software was used in order to analyze data.

### Instruments

**1. King's (2008) spiritual intelligence questionnaire** King's spiritual intelligence questionnaire (SISRI) was used in order to examine the level of spiritual intelligence. King's spiritual intelligence questionnaire (SISRI) was devised by king in 2008. This questionnaire has 24 items with some subscales including critical existential thinking, personal meaning production, transcendental awareness, and development of consciousness. The higher the score of a person from this questionnaire is, the higher their spiritual intelligence will be. Scoring was done based on a 5-point Likert scale (from "completely correct" to "completely incorrect"). In a study done by Raghیب, Ahmedi and Siadat (2010), the reliability of this scale was estimated to be 0.88, using Cronbach's alpha coefficient. Face and content validity of the scale was approved by psychology experts (16). In order to calculate convergent validity, Ghobari and Bonab's spiritual intelligence questionnaires were used concurrently; and the correlation coefficients of the two questionnaires were estimated to be 0.66 (16).

### 2. Stroink and Decicco's (2007) meta-personal self-construct questionnaire

The meta-personal self-construct questionnaire

was used in order to measure meta-personal self-construct. This questionnaire has ten items, and it was devised by Stroink and Decicco in 2007 (13). In a study conducted by Haratian, Janbozorgi, Agah-Haris and Sari-Motlagh (2017), the construct validity of this questionnaire was examined as 0.80. In addition, Cronbach's alpha coefficient was obtained for a total score of 0.79 (17).

### 3. *Steger's (2006) life meaning questionnaire*

Steger's life meaning questionnaire (MLQ) was used in order to measure the meaning of life. Steger's meaning in life questionnaire (MLQ) was introduced by Steger, Freezer, Ovasyshi, and Callier in 2006 in order to evaluate the existence of meaning and efforts to find it; and its reliability, validity, and factor structure was examined in different studies, using different samples. These scholars initially provided

44 items to make this tool, and then, using an exploratory factor analysis, they reached two factors:

1) the existence of meaning and 2) searching for love in life, with a total of 17 items. After that, in a confirmatory analysis, by removing 7 items, they obtained a proper two-factor structure with ten items. Life meaning scale includes two subscales which evaluate the meaning of life and the search for meaning.

The reliability of test and retest in this scale in Iran, with an interval of two weeks, was calculated to be 0.84 for the subscale of meaning existence; and 0.74 for meaning search subscale (18). Cronbach's alpha coefficient for the subscale of meaning search was estimated to be 0.78. Therefore, it seems that the scale has favorable internal consistency (18).

### 4. *Diner's (1985) life satisfaction questionnaire*

In order to evaluate life satisfaction, a life satisfaction questionnaire (SWLS) was used, which was devised by Diner, Imons, Larsen, and Griffin in 1985. Diner was a velocity in the field of life satisfaction, who introduced many relevant theories. This questionnaire had 5 items, each of which was scored based on a 7-point Likert scale. Considering the ease of implementing this questionnaire and proper psychometric features, using it is greatly used in studies related to life satisfaction. The reliability of a tool is the consistency degree of that tool in measuring all measurable things; i.e. to what extent do measurement tools in the same conditions yield the same results. Diner, Emmons, Larsen and Griffin (1985) measured the validity and reliability of life satisfaction for a group of university students (19). They reported the correlation coefficient of retesting scores to be 0.82 after two months of implementation, and reported Cronbach's alpha coefficient to be 0.87. Another study was reported Cronbach's alpha coefficient for a group of adults in nations such as America, Germany, Japan, Mexico, and China to be 0.90, 0.82, 0.79, 0.76, and 0.61,

respectively (20). In Iran, Mozaffari (2003) evaluated the validity of the Iranian form of life satisfaction, using negative-positive emotion test, and reported a positive significant correlation between these two scales. In the present study, in order to determine the validity and reliability of life satisfaction scale, this scale was concurrently implemented with Oxford's happiness scale, whose validity coefficient concurrent with Oxford's happiness scale was calculated to be

0.66 and  $P > 0.001$ , and its reliability coefficient was calculated using Cronbach's alpha to be 0.80, which shows that the validity and reliability of this scale are acceptable (21).

## 4. Results

The present study was done for physical-psychological signs of stress and life satisfaction in 120 individuals with migraine and without migraine (with an average age of 33 years and 6 months, and a standard deviation of an age of 9).

Based on the findings, in sum, 120 respondents with an average age of 33 years and 6 months participated in the present study, and the age of respondents ranges from 18 to 57.

In terms of marital status, 45 percent of respondents were single, and the other 55 percent were married. In terms of the level of education, 15.8 percent of individuals had their diploma; 57.5 percent of them had their BA degrees; and 26.7 percent of them had their MA and higher degrees.

In order to analyze research data, and to compare two groups in the indexes being studied in this study, first, the results of Kolmogorov-Smirnov test were examined in order to examine the normality of data distribution in the indexes being studied. Then, a Leven test was used in order to examine the homogeneity of the variance of scores in the two groups; and considering the fact that hypotheses did not hold, a Man-Whitney non-parametric test was used for the significance of the difference between the scores of the two groups with and without migraine.

As it can be seen in Table 1, results show that the difference between the scores of spiritual intelligence and its dimensions, psychological self-construct, meaning search and meaning existence, and life satisfaction in the two groups are different ( $P < 0.05$ ); As it can be seen from the results incorporated in Table 1, a significant difference is seen between the two groups with and without migraine for the four scales of spiritual intelligence and total score ( $P > 0.05$ ); this means that the mean of the scores of critical existential thinking, personal meaning production, transcendental awareness and consciousness development of respondents without migraine is greater than that of the group with migraine, which shows that this hypothesis is approved. In addition, the scores of meta-personal construct and life

**Table 1.** Man-Whitney test for the difference of average rank in spiritual intelligence scales

Spiritual intelligence	Group	Average rank	Z	Man-Whitney	P
Critical existential thinking	Without migraine	83.57	-7.279	416	0.0001
	With migraine	37.43			
Producing personal meaning	Without migraine	85.3	-7.861	312	0.0001
	With migraine	35.7			
Transcendental awareness	Without migraine	87.85	-8.631	159	0.0001
	With migraine	33.15			
Developing consciousness	Without migraine	86.96	-8.365	212	0.0001
	With migraine	34.04			
Spiritual intelligence (total)	Without migraine	87.25	-8.427	195	0.0001
	With migraine	33.75			
Metacognitive self-construct	Without migraine	87.35	-8.57	189	0.0001
	With migraine	33.65			
Meaning search	Without migraine	41.36	-6.57	651.5	0.0001
	With migraine	79.64			
Meaning existence	Without migraine	81.52	-6.96	539	0.0001
	With migraine	39.48			
Life satisfaction	Without migraine	87.63	-8.92	173	0.0001
	With migraine	33.38			

satisfaction and the dimensions of life meaning are different in the two groups ( $P < 0.05$ ); hence, the scores of the group of individuals without migraine are greater than those of the group of individuals with migraine.

## 5. Discussion

The present study aimed to compare spiritual-positivist psychological characteristics in individuals with and without migraine. As results showed, the mean of the scores of critical existential thinking, personal meaning production, transcendental awareness, and consciousness development of respondents without migraine was greater than that of the group of individuals with migraine. In order to express this hypothesis, we can refer to the finding of a study done by the Iranian study that represented the spiritual intelligence on job satisfaction of nurses and their mental health (22). We can refer to the fact that migraine affects spiritual intelligence through the intermediary role of stress, which decreases its efficiency in a way that individuals with high migraine, compared to those without migraine, have lower levels of spiritual intelligence. It can be seen that meta-personal self-construct scores are different in the two groups; hence, the scores of meta-personal self-construct in the group of individuals without migraine are greater than those of the group of individuals with migraine. Considering the fact that self-construct is taken as a set of thoughts, feelings, and action in connection to the person's communication with themselves and others (13), it is defined as a concept of personal identity which develops beyond the person in order to surround broader dimensions of humanity, life, soul or universe (10). Descriptive personal shows of individuals who neither refer to personal traits (considering independent self) nor to social relationships and groups (considering the independent self), but to a nature beyond the person and to others as a

worldwide focus (for example, I am connected to the whole of humanity and I am part of a natural discipline), result from meta-personal self-construct. Recently, a third self-construct called meta-personal self-construct has been observed, which includes self-perception, and has a deep internal connection to all forms of life (13). This self-construct is significantly different from dependent self, which is only related to coordination in maintained communications with other special people. It can be said that forming a meta-personal self-construct and enhancing it require removing work limits; in addition, considering the biological-mental-social theory of migraine based on the fact that there are high levels of stress in individuals with migraine, leading them to motor and psychological constraints. We can expect that in people with migraine, compared to those without migraine, reaching a meta-personal self-construct is less likely.

Results showed that the mean of the scores of searching for meaning in life in respondents with migraine and the mean of the scores of meaning existence in life of respondents without migraine is greater than that of the group of individuals with migraine. In order to express this finding, it can be said that individuals without migraine or chronic diseases, thanks to not having signs of chronic disorders such as migraine, can focus more on finding meaning in life, as well as wellbeing. If individuals with migraine are not able to find any meaning in their lives due to performance limits, they will experience absurdity and lose hope in their lives, and their lives will be filled with fatigue and boredom. Therefore, they, compared to those without migraine, experience lower levels of meaning search and meaning of life (2).

Results showed that the scores of life satisfaction in the group of individuals without migraine were greater than those of the group of individuals with migraine. Since the first hypothesis showed that spiritual intelligence in individuals with migraine is



lower than that of individuals without migraine, it seems that these individuals, due to chronicle malfunctions and disabilities, do not get to focus on spiritual beliefs, leading to increasing inner stresses and disappointment when facing crises, which makes them unable to stand deprivations and hardships, resulting in a decrease in life satisfaction.

## Limitation and suggestion of the study

From the constraints of the present study, we can refer to the following limitation: limited use of questionnaires as collection of information for this study. The statistical population of this study, in terms of characteristics, was of a type that researcher could not use random sampling for, which was a kind of constraint for the implementation of this study. It is recommended that a similar study be conducted aiming to compare the mentioned components. It is also recommended that future studies focus on similar research on different cities.

## 6. Conclusion

Migraine affects other mechanisms of those with a migraine through the intermediary role of stress, leading to a decrease in the levels of components studied in the present research.

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## Conflicts of interest

None

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