

A study of Metacognitive Strategies, Spiritual Health and Life Satisfaction in College Students

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ABSTRACT

This study set to investigate the relation of metacognitive strategies with spiritual health and life satisfaction in university students. The participants consisted of 120 students who were selected using stratified random sampling. Spiritual Well-Being Scale (SWBS), Satisfaction with Life Scale (SWLS) and State Metacognition Inventory (SMI) were used to collect the data. Pearson correlation formula and multiple regression analysis were run to analyse the data. The results showed a significant relationship between metacognition and spiritual health as well as between metacognition and life satisfaction. The results of multiple regression analysis revealed that spiritual health could predict life satisfaction.

Keywords: Metacognition, Spiritual Health, Life Satisfaction

INTRODUCTION

As a science dealing with human behavior, psychology now attempts to optimize learning and education processes. Experts and researchers have always sought to understand cognitive processes and discover techniques to improve cognitive abilities [1]. Metacognition refers to the individual's understanding of their own cognitive system. It is a multifaceted concept that entails the knowledge, processes and strategies that evaluate cognition [2]. Stronger metacognitive strategies help promote learning and pave the way to success. Thus, they provide the individual with a sense of happiness, hope and self-confidence, hence the improvement of well-being [3]. Spiritual health is an important aspect of health in humans, which provide coherent relations among the inner resources. It is associated with such characteristics as stability in life and peace as well as a sense of closeness to oneself, God, society and environment. It determines the integrity of the individual and is an important dimension of a healthy life, which makes the life both goal-oriented and meaningful [4]. When spiritual health is at stake, people may experience mental disorders such as a sense of loneliness, depression and absurdity, hence the reduced life satisfaction [5]. Research has shown that life satisfaction is a predictor of health so that a sense of mental well-being and satisfaction is associated with high levels of mental health [6]. The higher the life satisfaction, the more positive the feelings an individual experiences. Life satisfaction denotes a positive outlook towards life despite failures, hardships, success and developing talents [7]. The health should primarily help people live a more comprehensive and coherent life, bear a deep understanding and prevent temperamental, emotional and behavioral disorders.

Life satisfaction and good health would help the educated people more effectively utilize educational facilities and improve their academic performance. Considering the importance of metacognitive strategies in learning, the present study aims to investigate the relation of metacognitive strategies with spiritual well-being and life satisfaction in university students.

MATERIALS AND METHODS

The population of the study consisted of all students at Islamic Azad University of Ahwaz in the 2010-2011 academic year. From among the population, a number of 120 students (both male and female) were selected as the participants using stratified random sampling. In this regard, a list of the current students was compiled by

referring the Office of Statistics and Information. Then using stratified sampling, the subjects were selected so that they participated in the study in a proportion consistent with their proportion in the population. The study adopted a correlational method. This method is generally used to study the variations in one or more variables due to the changes in other variables. It only illustrates the strength of correlation among variables [8].

The instruments used to collect the data include Spiritual Well-Being Scale (SWBS), the Satisfaction with Life Scale (SWLS) and State Metacognition Inventory (SMI).

Spiritual Well-Being Scale (SWBS)

Ellison and Paloutzian [9] developed the scale in 1982. It comprises 20 items such that 10 items measure existential well-being and 10 items address religious well-being [9]. Either subscale ranges in scores from 10-60. Higher scores indicate higher religious and existential well-beings. The sum total of scores over the two subscales denotes the spiritual health score that ranges from 20-120. The items are on a 6-point Likert scale ranging from strongly agrees to strongly disagree. In negative statements, the scoring is reversed. Based on the scores obtained, the individual's spiritual health is categorized as low (20-40), moderate (41-99) or high (100-120) well-being. The reliability of the religious and existential well-beings was shown to be 88.89 and 0.81, respectively [10]. In the present study, the reliability of scale was estimated to be 0.84 using Cronbach alpha formula and 0.83 using split-half method .

State Metacognition Inventory (SMI)

Coneil and Abedi developed SMI in 1996 and 1997. Navidi translated the scale into Farsi in 2004. SMI is an instrument that measures higher-order thought or metacognitive skills. It consists of 20 items with four subscales each of which comprising 5 items. The four subscales include planning, monitoring, cognitive strategies and awareness. Similar to Likert scale, SMI is on an ordinal scale ranging from 1-4. The scores range from 20 to 80. As every subscale comprises 5 items, the highest score on every subscale is 20 while the lowest score is 5. In the present study, the reliability of the questionnaire was calculated to be 0.86 using Cronbach alpha formula and 0.79 using split-half method .

Satisfaction with Life Scale (SWLS)

Ed Diener et al. [12] developed SWLS in 1985. It comprises 5 items. The questionnaire is on a 7-point Likert scale ranging from strongly agrees to strongly disagree. Suh et al. [13] calculated the reliability of the scale for a sample of 176 participants and reported a reliability coefficient of 0.82 using test-retest method and 0.87 using Cronbach's alpha formula. Schimmack et al. [14] reported the reliability of the scale to be 0.90, 0.80 and 0.79 for American, German and Japanese nationals, respectively. In the present study, the reliability of the scale was calculated to be 0.86 using Cronbach's alpha formula and 0.83 using split-half method.

RESULTS

Table 1 illustrates the descriptive statistics including mean, standard deviation, minimum and maximum scores. The mean and standard deviation of life satisfaction, metacognition and spiritual health were 23.29 ± 6.97 , 63.69 ± 7.29 and 96.60 ± 9.81 , respectively. Pearson correlation formula was run to examine the relationship between metacognitive strategies and spiritual health. As shown in Table 2, there is a significant positive correlation between metacognitive strategies and spiritual health ($r=0.32$, $P=0.001$). Thus, the first hypothesis is supported. In other words, as metacognitive abilities improve, spiritual health increases in the individuals.

As shown in Table 2, there is a significant positive correlation between metacognitive strategies and life satisfaction ($r=0.22$, $P=0.01$). Thus, the second hypothesis is supported. In other words, as metacognitive abilities improve, life satisfaction increases in the individuals.

Table 1. Descriptive statistics of life satisfaction, metacognitive strategies and spiritual health

Variables	Mean	SD	Minimum score	Maximum score
SPIRITUAL health	96.6028	9.81890	64.00	114.00
Metacognitive strategies	63.6967	7.29309	46.81	79.10
Satisfaction With Life	23.2988	6.97356	0.00	35.00

Table 2. Correlation coefficient between metacognitive strategies and spiritual health

Criterion variable	Predictive variable	R	P	N
Metacognitive strategies	SPIRITUAL health	0.32	0.001	120

Table 3. Correlation coefficient between metacognitive strategies and life satisfaction

Criterion variable	Predictive variable	R	P	N
Metacognitive strategies	Satisfaction With Life	0.22	0.01	120

As shown in Table 4, the linear correlation of life satisfaction with metacognitive strategies and spiritual health is supported using F-test ($F=30.35$, $DF=1$ & 118 , $P=0.001$).

Table 4. Linear correlation between criterion and predictive variables

Index	SS	df	MS	F	α
Regression value	1184.06	1	1184.06		
Remainder	4602.31	118	39.00	30.35	0.001

As illustrated in Table 5, the multiple correlation coefficient of the linear combination of life satisfaction with spiritual health and metacognitive strategies is computed to be 0.46. The β coefficient of spiritual health on life satisfaction is shown to be 0.42 ($P=0.001$). However, the β coefficient of metacognitive strategies on life satisfaction is not statistically significant. In other words, spiritual health may predict life satisfaction while metacognitive strategies may not significantly predict life satisfaction. Considering the present findings, Hypothesis 0 (H_0) is rejected while the research hypothesis – proposing a multiple relation among metacognitive strategies, spiritual health and life satisfaction- is supported. Table 5 displays the β coefficients of each subscale of different variables in terms of their influence on life satisfaction.

Table 5. Multiple correlation coefficients between criterion and predictive variables

Criterion variable	Predictive variable	MR	RS	F for P	Regression coefficients (B)		
					1	2	3
Satisfaction With Life	SPIRITUAL health	0.46	0.21	15.73	0.30	0.09	B
				0.0001	4.88	1.05	T
	Metacognitive strategies	0.296	0.088	5.619 0.005	0.0001	0.29	P

DISCUSSION

The present study investigated the correlation of metacognitive strategies with spiritual health and life satisfaction in university students. The present findings supported the first hypothesis so that metacognitive strategies was found to have a significant positive correlation with spiritual health ($r=0.32$, $P=0.001$). This is consistent with the findings of Bassu [6] and Amini [1].

As early as human became a rational being, he started using cognitive processes to understand his environment. Generally speaking, cognition refers to understanding and includes higher mental processes such as creativity, problem-solving and comprehension. Metacognition refers to the knowledge of cognitive processes. In other words, metacognition involves strategies and processes that evaluate, monitor and control the cognition. Utilization of metacognitive strategies improves the performance control. This interaction helps reduce stress and anxiety so that it empowers the individual to overcome cognitive barriers and solve problems. It also contributes to improved self-concept, self-confidence and realistic knowledge of one's abilities and weaknesses, hence the improvement of well-being. Health or well-being is a broad concept involving various dimensions. In most models, spiritual well-being is addressed, which refers to the close relationship among internal resources such as life stability, closeness to God, oneself and society. Various studies have addressed the role of metacognitive strategies in mental disorders [1]. Research has shown that metacognitive strategies may help people adapt to the needs and threats of life while they also contribute to well-being [6].

The present findings supported the second hypothesis so that a significant positive correlation was found between metacognitive strategies and life satisfaction ($r=0.22$, $P=0.01$). This is consistent with the findings of Shariati [12]. Metacognitive strategies regulate cognitive processes and contribute to learning. They facilitate learning. Understanding the learning processes and information utilization set the stage for the learning to occur; thus, they help the individual hold a positive feeling towards life. In other words, people may experience life satisfaction that is a stable and general feeling that reflects the attitudes people hold about the world they live in. Thus, by evaluating the quality of life, people achieve life satisfaction. Metacognitive strategies help identify the suitable strategy to do a certain task and to assess one's performance so that people may achieve their goals and enjoy life satisfaction. The present findings also revealed the multiple relations of metacognitive strategies with spiritual health and life satisfaction.

In the contemporary world, people may not attain their goals without accurate utilization of their knowledge. Metacognitive strategies facilitate this process. Better planning and attempts bring about a more comprehensive and happier life. Since well-being empowers the individual to use their skills and satisfy their needs, it contributes to life satisfaction. Research has proved the strong correlation between life satisfaction and mental health. A healthy human may enjoy physical, mental, social and spiritual well-being. Spiritual health addresses social and personal anxiety as well as adaptability. Life satisfaction is the result of successful adaptation

to different situations [13]. With increased life satisfaction, positive feelings nurture in the individual. The present findings showed that spiritual health could predict life satisfaction while metacognitive strategies could not do so.

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