

Relationship between Personality Traits and Spiritual Intelligence in Male Students of Shahid Chamran University at Ahvaz

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The aim of this research is to expand the evidence relating to spiritual intelligence by determining whether the big five personality traits can predict it. A further goal is to find the direction of this prediction. Two hundred seventy male graduate students of Shahid Chamran University at Ahvaz were selected using the simple random sampling. We employed NEO personality questionnaire to assess the personality traits and King spiritual intelligence scale (SISRI 24) to measure the spiritual intelligence. Results showed that the three personality traits of extraversion, agreeableness and conscientiousness have statistically significant correlations with spiritual intelligence. Curvilinear regression analysis also revealed a significant quadratic curvilinear relation between neurosis and spiritual intelligence. According to research findings, we conclude that the students with extraversion, agreeableness and conscientiousness features are more likely to have higher spiritual intelligence while people with higher openness necessarily do not have higher spiritual intelligence. The quadratic curve regression analysis results confirm that people with lower neurosis scores (non-concerned) have the highest scores of spiritual intelligence and people with higher neurosis score (very concerned) have the moderate scores of spiritual intelligence while people with moderate neurosis scores (those with some concern) have the least scores of spiritual intelligence.

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Nearly for half a century, psychologists have studied the relation between personality traits and mental-abstract functions (Baron, 1985; Wechsler, 1950). Some studies have examined mainly the relation between the big personality traits such as extraversion, neurosis or attributive styles and intelligence. For example, a series of recent studies have been conducted to examine the relation between extraversion and verbal or space intelligence (Robinson, 1985, 1986). Although research efforts in this area continue, the successful results concerning the relation between the big personality traits and the abstract intelligence do not suffice. More relevant and productive research in this area has confirmed the relation between cognitive functions and some specific personality variables such as curiosity, self-confidence, motivation, etc (Harter, 1974; Zigler & Hodapp, 1986), although these relations are moderate. A series of other research studies have examined the relation between ideas, actions and moral obligations associated with the latter kinds of personality characteristics. For example, Sibal and Hill (2001) showed that the spiritual beliefs have correlation with positive psychological characteristics such as physical health, marital satisfaction, stability, positive interpersonal performance and improved quality of life. Edwards (2003) reminded the distinction between the use of spiritual intelligence or human resources to resolve non-moral and spiritual conflicts. Generally, we cannot simply consider the spiritual intelligence as equal to the integrating individual intelligence capabilities to resolve moral conflicts. Conversely, we must consider the spiritual intelligence as a combination of personality characteristics, neurological processes, especial cognitive capacities, interests and spiritual qualities of the individual (Edwards, 2003). Spiritual intelligence helps people develop their capabilities beyond the limited boundaries of their personality. This intelligence helps human beings to understand the deeper meaning of life and with impressive

efforts try to solve important life issues including good and evil, life and death as the deepest sources of human problems (Edwards, 2003). Often, man encounters these issues (life and death, good and evil) to try to resolve them logically or otherwise (Zohar & Marshall, 2000). Therefore, spiritual intelligence is successful in resolving the conflicts by following the question why.

The most recently published work on spiritual intelligence has been done by King (2007), a psychology graduate student at Trent University, Ontario, Canada (Amram, 2009). In his opinion, spiritual intelligence is currently defined as a set of adaptive mental capacities which contribute to the awareness, integration, and adaptive application of the nonmaterial and transcendent aspects of one's existence, leading to such outcomes as deep existential reflection, enhancement of meaning, recognition of a transcendent self, and mastery of spiritual states (King, 2010). He proposed four essential abilities for the spiritual intelligence:

1. Critical existential thinking-the ability to contemplate existential and metaphysical issues and non existential issues that relate to one's existence.
2. Personal meaning production-deriving meaning and purpose from life experiences and creating and mastering a life purpose.
3. Transcendent awareness-the ability to identify the transpersonal and the transpersonal self in the material and nonmaterial world in relation to self and others.
4. Conscious state expansion-the ability and capacity to enter higher states of conscientiousness at one's own discretion.

These four abilities, according to Amram (2009), have a universal and biological origin.

Although there are very few studies about the relation between intelligence and personality traits (the big five dimensions) researchers suggest that some personality traits such as neurosis, conscientiousness and agreeableness are effective on moral orientation and the use of human mental-spiritual capabilities. Thus, the aim of this research is to expand the evidence relating to the spiritual intelligence and to determine whether the

big five personality traits can predict the spiritual intelligence, and their magnitude and direction of the relations.

Method

Statistical Population, Sample and Research Method

The research design is correlational. The study statistical population included all the male students at the master level of Shahid Chamran University at Ahvaz in 2010-2011 (N=800). We conducted a pilot study to determine the sample size due to the big volume of the population. After estimating the population variance and using the estimation formula to determine the sample size, 270 subjects were selected using the simple random procedure. Data were analyzed using Pearson correlation; enter regression, stepwise regression and curvilinear regression analysis.

Tools

Neo personality questionnaire: NEO-FFI Personality Questionnaire was designed by Costa and McCrae (1985) and it includes 60 items. The five personality traits, that is, neurosis (N), extraversion (E), openness to experience (O) agreeableness (A) and conscientiousness (C), are assessed each by 12 items. For the first time, Kiamehr (2002), in Iran, used this questionnaire to assess the human science students of Tehran University. The reliability of this questionnaire has been determined in different studies in Ahvaz with satisfactory results (Amanolahifard, 2006; Hosseini Lorgany, 2007). Table 1 presents some of these results.

Table 1
Reliability Coefficients of NEO-FFI Scale in Two Studies in Ahvaz

Scholar	Method	Neurosis	Extraversion	Openness	Agreeableness	Conscientiousness
Amanollahi fard	Cronbach's α	.76	.65	.59	.48	.85
	Retest	.87	.84	.59	.80	.83
Lorgani	Cronbach's α	.90	.64	.52	.53	.82

Various Iranian and foreign researchers have reviewed and evaluated the reliability of the short form of NEO questionnaire. The results of various studies in different countries support the reliability of the five-factor structure of the short form (Costa & McCrae, 1995). Kiamehr (2003) by correlating the short and the long forms for Humanities Sciences students in Tehran acquired the coefficients of 0.75 (neurosis), 0.91 (extraversion), 0.71 (openness), 0.78 (agreeableness) and 0.75 (Conscientiousness).

The spiritual intelligence questionnaire. We used King's (2008) spiritual scale (SISRI-24) to measure spiritual intelligence in the present study. This questionnaire consists of four subscales of conscious state, personal meaning, critical thinking and transcendent goals that were validated in 2008-2009 by Sadat Raghieb, Hakiminia, Siadat and Ahmadi on students of Isfahan University. They used the first order structure of the confirmatory factor analysis to calculate the validity of this scale. Findings confirmed the four-factor structure of King's spiritual intelligence scales (SISRI-24). They used Ghobari Bonab's (2006) spiritual experience questionnaire simultaneously to estimate the convergent validity, and the correlation coefficient of these two questionnaires was 0.66 ($p < 0.01$). The reliability of this scale has been estimated by using Cronbach's α coefficient to be 0.88 ($p < 0.05$).

Results

We used Pearson correlation analysis in order to test the relationship between the personality traits and the spiritual intelligence. The normality of the variable distributions was checked using the Kolmogorov-Smirnov procedure. Values of Z test in this procedure (for all of the variables) were not significant. The result of Durbin-Watson test (1.923) also showed that all predictor variables (NEO factors) were independent of each other. Summary data concerning the hypotheses (and lateral results) are presented in Table 2.

Table 2
The Significant Levels and the Correlation Coefficients between the Personality Characteristics and the Total Score of Spiritual Intelligence

variables	Neurosis	Extraversion	Openness	Agreeableness	Conscientiousness
Critical existential thinking	r=-.035 P=.568	r=.174** P=.004	r=.101 P=.099	r=.215** P=.0001	r=.262** P=.0001
Personal meaning	r=-.179** P=.003	r=.116 P=.58	r=-.009 P=.568	r=.192** P=.002	r=.375** P=.0001
Transcendent awareness	r=-.091 P=.140	r=.099 P=.108	r=.114 P=.064	r=.262** P=.0001	r=.253** P=.0001
Conscious state	r=-.050 P=.415	r=.024 P=.701	r=.063 P=.310	r=.123** P=.045	r=.303** P=.0001
Spiritual Intelligence	r=-.061 P=.161	r=.124* P=.022	r=.082 P=.092	r=.235** P=.001	r=.375** P=.001

p<0.05*

p<0.01**

Based on the results of Table 1, we conclude that correlations between three of the personality traits and spiritual intelligence (total score) are statistically significant.

To calculate the combined effects of the personality traits in predicting the spiritual intelligence, enter method of multiple regression analysis was used. Table 3 presents the results of the regression analysis.

Table 3
Regression Analysis Results of Personality Traits and the Total Score of Spiritual Intelligence Using the Simultaneous Enter Method

Dependent	Predictors	MR	RS	FP	B	b	t	p
Spiritual Intelligence	Neurosis				-.326	-.179	-2.64	.009
	Extraversion				.018	.007	.122	.903
	Openness	.422	.178	11.26 (.001)	.425	-.013	-.18	.867
	Agreeableness				-.027	.184	2.76	.006
	Conscientiousness				.902	.335	5.304	.001

Results of Table 3 indicate that the relations between personality traits and spiritual intelligence differ from weak to moderate.

Stepwise regression analysis results of the relation between spiritual intelligence and personality traits are shown in Table 4.

Table 4
Regression Analysis Results of Personality Traits and the Total Score of Spiritual Intelligence Using the Stepwise Method

Dependent	Predictors	MR	RS	FP	b	t	p
Spiritual Intelligence	Conscientiousness	.370	.137	41.92	.37	6.47	.001
	Conscientiousness	.390	.152	23.57	.39	6.78	.001
	Neurosis				-.12	-2.15	.032
	Conscientiousness				.33	5.54	.001
	Neurosis	.422	.178	18.89	-.18	-3.04	.003
	Agreeableness				.18	2.87	.004

Finally, Table 5 shows the curvilinear regression analysis result of the quadratic relationship between neurosis and spiritual intelligence (SI). Curvilinear regression analysis can be applied to detect if not-so-linear relationship exist between X and Y.

Table 5

The Curvilinear Relationship between Neurosis and SI

Independent variable	Equation	R²	F	P
Neurosis	Linear	0.004	0.981	0.323
	Quadratic	0.023	3.037	0.050
	Cubic	0.021	2.287	0.061

As it is shown in Table 5, linear trend between neurosis and SI with $F=0.981$, $p=0.323$ is not significant, but quadratic trend with $F=3.037$, $p=0.050$ is significant. It means that there is a curvilinear correlation between neurosis and SI.

Discussion

Investigating the existing theories about intelligence and mental capabilities assures that the existence of spiritual intelligence occurs after the growth of other mental abilities such as physical, cognitive and emotional intelligences (Wigglesworth, 2004). It is theoretically essential to explain why and how spiritual intelligence develops after the maturation of other human cognitive abilities. Perhaps the first background variables of spiritual intelligence that come to mind is the personality traits. What characteristics and personality traits are underlying the spiritual intelligence growth in humans?

The purpose of this study was to study the relation between personality traits with the spiritual intelligence to provide an answer to the above question. First of all, it should be mentioned that because of the spiritual intelligence issue being exquisite, no comprehensive review about its antecedents and consequences has been done.

In general, results of this study indicate that the relation between personality traits and spiritual intelligence differs from weak to moderate and is insignificant. The most obvious relation is between conscientiousness and spiritual intelligence. The correlation between these two variables is statistically significant. In other words, whenever people's conscientiousness score is higher, their spiritual intelligence score would be higher. This probably explains easily how conscientiousness is associated with the spiritual intelligence. According to the positive relation between conscientiousness, spirituality and religious tendencies (Saroglou, 2002; Saroglou, 2010), one can understand that the central core of conscientiousness is a combination of bound over the values and avoidance of emotional and functional profligacy. After conscientiousness, agreeableness is the second personality trait that has a positive and significant relation with spiritual intelligence. Generally, conscientiousness and agreeableness are two personality traits that their positive association with religious beliefs and attitudes has been proved in numerous studies (Saroglou, 2010). Tendency of individuals' scores with high scores of agreeableness toward the religious centers (mosques, churches and ...) confirms this matter (Costa & Mc Crae, 1995). Although openness has a positive relation with spiritual intelligence, it is so small that it has no statistical significance. There are two possibilities for the lack of relation between openness and spiritual intelligence. Firstly, an essential rational relation may not exist between these two constructs.

Secondly, several studies have shown that unexpected and conflicting results about the relations between this personality factor and dependent variables like counterproductive behavior, delinquency etc (e.g., Hashemi Seykh Shabani, 2007; Lee, Ashton & Shin, 2005; Lee, Ashton & De Vries, 2005). In the present study, the relation between extraversion and spiritual intelligence is positive and statistically significant. Hopefulness and cheerfulness are two basic indexes of extraversion in the NEO test that keep the human mind dynamic and active to search for reality. Perhaps, the most complex point of the present study concerns the relation between

spiritual intelligence and neurosis. How can the insignificant relation (nearly zero) between neurosis and spiritual intelligence can be justified? The correlation between these two traits is statistically insignificant. The basic theory of this research was that spiritual intelligence helps psychological adaptation, but statistical results show otherwise.

Regression analysis results indicate that when the effects of conscientiousness are removed from the neurosis, the relation between neurosis and spiritual intelligence will be significantly negative. In other words, conscientiousness in the stepwise method is the first predictor variable of spiritual intelligence followed by neurosis and agreeableness that adds significant weight to the regression equation. An analysis of Table 4 shows that neurosis together with two other variables has a significant impact on spiritual intelligence. In other words, a certain level of neurosis is considered as the most motivational factor of spiritual intelligence. In order to study what level of neurosis score is necessary for spiritual intelligence growth, curvilinear regression analysis was used. The quadratic curve regression analysis results confirm that people with lower neurosis scores (non-concerned) have the highest scores of spiritual intelligence and people with higher neurosis score (very concerned) have the moderate scores of spiritual intelligence while people with moderate neurosis scores (those with some concern) have the least scores of spiritual intelligence. The findings of this research suggest that improvement in mental health requires the highest level of spiritual intelligence growth, because the moderate score in spiritual intelligence may create some conflict or cognitive dissonance in personality. That is, people with low and high spiritual intelligence may feel more integrity in their personality in life. Finally, people with higher conscientiousness and agreeableness scores and the lowest scores in concerns and anxiety have the greatest spiritual intelligence. The conscientiousness to the human and divine duty may have anxiety, but psychologists should take into consideration the role of deep spiritual intelligence (not moderate ones) in personal development and mental health.

Limitations

Despite the statistical significance and adequate effect size in the (linear or curve) relationships between personality traits and spiritual intelligence, it is important to note that this study used correlational methods and hence no clear cause-and-effect conclusions can be drawn from the results. Another limitation of this study is the fact that the ISIS measure used to assess spiritual intelligence is still relatively new with limited reliability and validity studies conducted (Amram & Dryer, 2008).

Furthermore, ISIS is originally designed as a self-report measure, which limits its validity as it is susceptible to manipulation based on perceived desirability (Lopez & Snyder, 2003; as cited by Amram, 2009).

Future Research

We controlled the effect of sex and educational level in our study and performed it on master male student. Researchers in the future would do well to replicate these findings with larger and more diverse demographic sample populations like male and female at different level of education, organizational employees, managers, leaders etc.

Future studies are needed to replicate these findings, for example, with samples outside of Ahvaz or outside of Iran.

In order to overcome the limitations of some of the brief self-report assessments, future research can use longer or different measures to assess SI or personality.

Researchers in the future may study the impact of spiritual intelligence factors on other life and work variables like job performance, life satisfaction and etc.

Finally, to overcome the limitations of a correlational statistical approach, future studies might consider using an experimental design in which a group of persons (treatment group) will receive training and coaching to enhance and develop their spiritual intelligence competencies, and over time, can be compared in their psychological variables to a control group of persons. A related set of research questions is how, and if,

spiritual intelligence competencies might be developed through such methods as training, coaching, and therapy, as well as contemplative and spiritual practices such as meditation.

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