Age as Moderated Influence on the Link of Spiritual and Emotional Intelligence with Mental Health in High School Students

Jafar Shabani*, Siti Aishah Hassan, Aminah Ahmad, Maznah Baba

Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
jshabani@yahoo.com

Abstract: This study examined whether, spiritual intelligence (SI) and emotional intelligence (EI) can be considered as predictor for mental health. The present investigation was also to test the moderating effects of age on the relationship of SI and EI with mental health among high school students. The participants in the study were 247 High school students (124 male and 123 female) in the age range of 14-17 years old, at the Gorgan City, north of Iran. Three valid and reliable instruments were used to assess SI, EI and mental health. Descriptive statistics, multiple and moderated regression analysis were used to analyses the data. The result demonstrated that mental health can be influences by SI and EI. In addition, the moderated effect of age on the relationship of SI and EI with mental health was not found.

Keywords: Psychology, education, high school students, spiritual and emotional intelligence, mental health

1. Introduction

Mental health is vital to the overall health and well-being of adolescents (World Health Organization [WHO], 2004). The WHO conceptualized mental health separate from mental ill-health and defined the concept as: a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her own community. (WHO, 2007, p. 1) Previous studies are clear on the influence of better mental health versus mental ill-health for the individual and society. Individually, mental health affects our expressive, cognitive, perceptive, relational, and coping abilities, undergirding our general health and wellbeing and capacity to integrate into and become productive members of society (Dwivedi & Harper, 2004). Better mental health outcomes in adolescents are characterized by greater adaptation in family, school, and society environment, improved quality of life, and reduced symptoms of psychological disorders (Hoagwood et al., 1996; USDHHS, 1999). Positive mental health is also link to better physical health, increased pro-social behaviors, and participation in less adverse behaviors in adolescence (Resnick, 2000). On a societal level, mental health is perceived as a positive source contributing to asset development individually, socially, and economically (WHO, 2004). Conversely, poor mental health and wellbeing (i.e. depression, low self-esteem) during the adolescent years can lead to adolescent health risk behaviors, school failure, physical ill-health, suicide, involvement in juvenile and criminal justice systems, negative life choices, and mental disorders in adulthood (Lewinsohn et al., 1993; Canals, et al., 2002; Trzesniewski et al., 2006; Hjemdal et al., 2007).

There is some evidence that spiritual and emotional intelligence development and spiritual and emotional experiences are helpful for health. At the same time, there is a significant relationship between awareness of spiritual and emotional experiences and health (Hay & Morisy, 1990; Ioannis & Ioannis, 2005). As whole, it seems spiritual and emotional functions including SI, EI and its components can be used as an instrument in relates with individual mental health.

Many authors claimed and reported that there existed a significant relationship between EI and mental health (Goleman, 1995; Salovey & Mayer, 1990; Ioannis and Ioannis, 2005), and SI and mental health (Emmonce 2000; Nobel, 2000). Also, spiritual including SI can be used as a possible instrument to increase individual’s mental health (West, 2004). Therefore, the aim of this study was to investigate the link of SI and EI with mental health. In addition, the current study aims at providing more evidence regarding the relationship of SI and EI with mental health condition. In particular, this study examines whether SI and EI affects on mental health functioning.

Emotional intelligence (EI) was originally recognized as having its roots in the concept of social
intelligence (Thorndike, 1920; Salovey & Mayer, 1990; Goleman, 1995). Later, researches provided evidence that the two concepts actually represent interrelated components of the same construct (Salovey & Mayer, 1990; Bar-On et al., 2003; Lane & McRae, 2004). Consequently, this broad construct was accurately referred to as "emotional-social intelligence" (Bar-On, 2006). Based on historical reference, traits such as the capacity to navigate through and to adapt to one’s own environment and the possession of social and emotional "skills" are important not only to basic survival, but have implications in the areas of relationships, work, school, and emotional and mental health (Goleman, 1995; Salovey & Mayer, 1990).

The popularity of the concept for the past decades has led researchers to examine its potency in various areas of human functioning. Among the areas with the strongest connections to EI is developmental, educational, clinical and counselling, industrial and organizational psychology. Hence, characteristic or ability EI were related to life success (Bar-On, 2001; Goleman, 1995), life satisfaction and well-being (Martinez-Pons, 1997; Palmer et al, 2002), physical and mental health (Ioannis and Ioannis, 2005), interpersonal relationships (Fitness, 2001; Flury & Ickes, 2001), academic achievement (Van der Zee et al., 2002; Parker et al., 2004), and more.

Today, there has been an increasing interest in how emotional reactions and experiences affect on mental health. For example, it has been claimed that negative emotional states are associated with unhealthy patterns of physiological functioning, whereas positive emotional states are associated with healthier patterns of respond in both cardiovascular activity and immune system (BoothKewley & Friedman, 1987; Herbert & Choen, 1993).

According to Salovey (2001) although suppressing negative feelings is neither a healthy strategy, he suggested that emotions’ manifestation has a positive impact on physical health when people are confident about their abilities to regulate them. Moreover, Taylor (2001) argued that if you are emotionally intelligent then you can cope better with life’s challenges and control your emotions more effectively, both of which contribute to good physical and mental health. Furthermore, Dulewicz, et al., (2003), examined the role emotional self-management such as stress, distress, morale and poor quality of working life play in everyday life. They demonstrated that EI was strongly correlated with both, physical and psychological health.

Also, considering Gardner’s theory, existential intelligence can be define as an ability to find and realize meaning in life (Halama & Strizence, 2004). Based on this definition, Halama & Strizenece (2004) suggested that the ability to find and realize meaning in life is an important element of SI. Since, SI involves a set of abilities that draw on spiritual resources, it can be concluded that existential and SI is non-identical but mutually related and overlapping construct (Halama & Strizenece 2004). Drawing on Gardner’s definition of intelligence, Emmons (2000b) argued that spirituality can be viewed as a form of intelligence because it predicts functioning and adaptation and offers capabilities that enable people to solve problems and attain goals. Earlier, Emmons (1999) defined spirituality as the search for, and the experience of elements of sacred meaning, higher consciousness, and transcendence, SI entails the abilities that draw on such spiritual themes to predict functioning and adaptation and to produce valuable products or outcomes. Zohar & Marshall (2000) stress the utility of SI in solving problems of meaning, value, and those of an existential nature, concurring with Vaughan (2002) and Wolman (2001). Looking at spirituality through the lens of intelligence, Emmons (1999) writes, “SI is a framework for identifying and organizing skills and abilities needed for the adaptive use of spirituality” (p. 163). Hence, SI can be differentiated from spirituality in general, spiritual experience, (e.g. a unitary state), or spiritual belief, (e.g. a belief in God), (Amram, 2007). However, the theory and research of the spirituality and SI were well reviewed by many authors and researchers (Emmons, 1999; MacHovec, 2002; Mark, 2004; Schuller, 2005; Sisk & Torrance 2001; Wolman, 2001; Zohar & Marshall, 2000; Nasel, 2004; Amram, 2009).

2. Method

2.1. Sample

Two hundred and forty seven Iranian high school students in Gorgan city, north of Iran (124 females and 123 males) were recruited as respondents in this study. Their ages ranged from 14 – 18 years. They were selected by using cluster sampling technique, and their participation was voluntary and anonymously.

2.2. Measures

All participants responded to the three instruments that have been translated to Persian language:

2.2.1. The Integrated Spiritual Intelligence Scale (ISIS, Amram & Dryer, 2008)

Amram & Dryer’s Integrated Spiritual Intelligence Scale (ISIS) was reviewed and chosen for measure of SI due to its comprehensive nature and strong psychometric properties (Amram & Dryer,
2008). ISIS is an 83-item long form, and a 45-item short form, self-report and observer-rated instrument containing 22 subscales assessing separate capabilities that are grouped into five main domain scales of spiritual intelligence. Responses are answered a six-point scale ranging from “never or almost never” to “always or almost always”. For this study the simple Likert method (1–2–3–4–5–6) was chosen. The measure yields an overall SI scores (range 0–270). The scale has a Cronbach alpha of 0.76.

2.2.2. Emotional Intelligence Inventory, Youth Version (EQ-i YV, Bar-On & Parker, 2000)

Utilized to measure emotional intelligence, the Bar-On Emotional Quotient Inventory: Youth Version (EQ-i: YV) was developed by Reuven Bar-On, Ph.D. and Jami D.A. Parker, Ph.D., and published by Multi-Health Systems, Inc. (2000). The EQ-i: YV was developed to measure emotional intelligence in adolescent populations, based on the theoretical basis of the Bar-On model of social and emotional intelligence. This 60-item inventory is a self-report instrument designed to measure emotional intelligence in young people age 7 to 18 years. The instrument measures a cross-section of abilities and competencies that constitute the core features of emotional intelligence. Responses are invited on a four-point scale ranging from “very seldom true of me” to “very often true of me”. For this study the simple Likert method (1–2–3–4) was chosen. The measure yields an overall EI scores (range 0–240). The scale has a Cronbach alpha of 0.74.

2.2.3. General Health Questionnaire (GHQ 28, Goldberg, 1972; Goldberg & Williams, 1998)

In 1972, Goldberg developed a simple questionnaire, the General Health Questionnaire (GHQ), which is the most widely used instrument for detecting non-psychotic psychiatric “Cases”. The GHQ is a self-administered screening questionnaire used to diagnose psychiatric disorders both in primary care and in the community. The main benefits of GHQ are that it is easy to administer, brief, and objective. Several versions of GHQ are available: there is a 60-item version, and shorter versions (comprising 30, 28 and 12 items). The 28-item version (GHQ-28) developed by Goldberg and Hillier (1979) is constructed on a different basis when compared with the other versions. Responses are responded on a four-point scale ranging from “less than usual”, to “much more than usual”. Of the four possible ways of scoring this instrument (Goldberg & Williams, 1998), for this study the simple Likert method (0–1–2–3) was chosen. The measure yields an overall health scores (range 0–84) and is composed of four subscales described as somatic symptoms, anxiety and insomnia, social dysfunction and depression. High scores indicate high levels of psychological strain. The measure was found to have an acceptable level of internal consistency reliability (alpha = 0.92). High score on this scale indicate poor general health.

3. Results

To attain the main objectives of the present study, the collected data were subjected to a number of statistic analyses by using statistical package for social sciences (SPSS 17.0). Besides, descriptive statistics, multiple and moderated regression analyses was also used in this study.

3.1. Descriptive statistics; Table 1 indicates the mean and standard deviations of all the observed variables. Descriptive statistics is worked out to know the pattern of score distribution. A perusal of table 1 reveals that the mean score on SI is 3.93 with the SD of .36, EI is 2.90 with the SD of .29, and on total mental health the mean score was .91 with the SD of .43. (See table 1)

3.2. Multiple Regression Analysis (MRA); MRA was conducted to assess the strength of relationship between dependent variable and independent variables. MRA provides an opportunity with little ambiguity to assess the importance of each of the predictors to the overall relationship. The results of regression analysis for the dependent variable (mental health) are presented in table 2. It is clear from the results that the regression analysis indicated both the variables (SI and EI) as a significant predictor of mental health. This table shows that R = .640, R^2 = .409, and {F (2,244) = 48.50 p < .05}. This R^2 value means that 40.9% of the variance in mental health increase is explained by SI and EI. Based on the values reported in the table, the beta coefficient for spiritual intelligence was - .293, and for emotional intelligence was - .413. This means that emotional intelligence is the strongest predictor followed by spiritual intelligence to explain the criterion variable (mental health).

3.3. Moderated Multiple Regression (MMR); (MMR) was employed in examining the effects of moderator variable (Age) on the relationships between the independent variable (SI and EI) and dependent variable (mental health). MMR involves two steps. First, it is needed to form two regression equations, one includes the first- order only and a second model include the first-order effects as well as a product term including the moderator variable. In this research, the product term is age. The following
are the two equations formed that derived from the regression procedure by entering independent variables and product term block by block in order to create two models.

Table 3 shows that for model 1, $R = .640$, $R^2 = .409$, adjusted $R^2 = .404$ and $\{F (2,244) = 48.50 \ p < .05\}$. This $R^2$ means that 40.9% of the variance in mental health increase is explained by SI and EI. Model 1 does not include the product term and, thus, ignores a possible moderating effect of age. To find out whether the potential moderating effect of age on the SI and EI with mental health relationship, we need to interpret the model 2 in table 3.

Model 2 shows results after the product term has entered the equation. As shown in table 3, the addition of the product term resulted in an $R^2$ change of .000, $F$ change $(1,243) = .132$, Sig. $F$ change = .717 at the $p < .05$. This result do not supported the presence of a moderating effect. In other words, the moderating effect of age explains .0% of variance in mental health above and beyond the variance explained by spiritual intelligence and emotional intelligence. The results suggest that the age is not important moderating factors on relationship between SI, EI and mental health.

4. Discussion

The results in this study found emotional intelligence was significantly and negatively correlated with mental health scores. This finding is in line with (Bar-On, 2002; Palmer et al, 2002; Ioannis and Ioannis, 2005). Also between spiritual intelligence and mental health scores the finding of this study provides evidence to the claims of the previous researchers (Hay and Morisy, 1990; Emmonce 2000; Nobel, 2000; Zohar and Marshall (2000); West, 2004). The results of the Multiple Regression Analyses (MRA) revealed the overall scores of the emotional and spiritual intelligence are statistically significant predictors of mental health in the study. Emotional Intelligence was found to be the strongest predictor followed by spiritual intelligence for mental health scores. So, the findings of this study supported a positive effect of spiritual and emotional intelligence on students’ mental health scores. The overall regression model was successful in explaining approximately 40.9% of the proportion variance explained in mental health scores. Finally, the findings of the results failed to provide evidence for the hypothesis that age has moderating effect on the relationship between two independent variables (spiritual and emotional intelligence) and dependent variable (mental health).

Table 1: Descriptive Statistics of the Independent and Dependent Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual Intelligence (SI)</td>
<td>247</td>
<td>3.02</td>
<td>4.87</td>
<td>3.9340</td>
<td>.35637</td>
</tr>
<tr>
<td>Emotional Intelligence (EI)</td>
<td>247</td>
<td>2.15</td>
<td>3.67</td>
<td>2.9028</td>
<td>.29031</td>
</tr>
<tr>
<td>Total Mental Health</td>
<td>247</td>
<td>.04</td>
<td>2.04</td>
<td>.9110</td>
<td>.42770</td>
</tr>
</tbody>
</table>

Table 2: Multiple Regression Analysis of Total Mental Health

<table>
<thead>
<tr>
<th>Variables</th>
<th>Summary of Regression</th>
<th>Un-std Coefficient B</th>
<th>Un-std Coefficient Std. Error</th>
<th>Std. Coefficient Beta</th>
<th>t</th>
<th>Sig. Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td>4.063</td>
<td>.248</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiritual intelligence</td>
<td>- .352</td>
<td>.076</td>
<td>-.293</td>
<td>-4.638</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Emotional intelligence</td>
<td>- .609</td>
<td>.093</td>
<td>-.413</td>
<td>-6.533</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Multiple R</td>
<td>.640</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>.409</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>.404</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-Statistics</td>
<td>84.504</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Predictors: SI & EI. Dependent Variable: Total Mental Health. * p < .05.
Amram, collect the necessary data for the study. We appreciate the contribution of high schools students in providing information about students in their schools. We also appreciate the contribution of high schools students for giving us community counsellors, teachers, school counsellors, and parents, all of whom are concerned with spiritual-emotional development and mental health of the school students, especially those of Iranian population. 

Acknowledgment
We thank the administration officers at all schools of this research sample for giving us information about students in their schools. We also appreciate the contribution of high schools students by participating in this research, thus allowing us to collect the necessary data for the study.

REFERENCES


Journal of American Science                                                                                                                 2010;6(11)
http://www.americanscience.org


