



# A Partial Least Squares Path Model of Principals' Performance in School Health Services Based on Spiritual Intelligence in Tabriz Female High Schools

Samereh Moghaddam Hosseini,<sup>1</sup> and Behnam Talebi<sup>1\*</sup>

<sup>1</sup>Department of Educational Administration, Tabriz Branch, Islamic Azad University, Tabriz, Iran

\*Corresponding author: Behnam Talebi, Pasdaran St, 5157944533, Tabriz, Iran. Tel/Fax: +98-4133302693, E-mail: btalebi1972@gmail.com

Received 2018 February 20; Revised 2018 June 17; Accepted 2018 June 19.

## Abstract

**Background:** School principals have a crucial role on effectiveness of schools and their performance, especially in school health services programs. The purpose of this study was to predict principals' performance in school health services based on Spiritual intelligence (SI) in high schools of Tabriz (Iran).

**Methods:** The population of this correlational research consisted of all high school principals of Tabriz (520) at the first to fifth educational districts in 2016. According to Krejcie and Morgan's table, and first, stratified random sampling method was used by equally considering the districts of education, and in the second step, random sampling method was used in terms of schools; 225 principals, including 45 principals of each district were selected. Data collection was done by the Spiritual intelligence self-report inventory (SISRI-24, 2009) ( $\alpha = 0.71$ ) and a researcher-made questionnaire ( $\alpha = 0.88$ ).

**Results:** The results of correlation test showed that there was a correlation amongst critical existential thinking ( $r = 0.59, P < 0.001$ ), personal meaning production ( $r = 0.16, P = 0.013$ ), transcendental awareness ( $r = 0.26, P < 0.001$ ), conscious state expansion ( $r = 0.45, P < 0.001$ ) and spiritual intelligence ( $r = 0.39, P < 0.001$ ) with school principals' performance in school health services. The results of partial least squares regression showed that critical existential thinking ( $0.62, P < 0.001$ ), transcendental awareness ( $0.4, P < 0.001$ ), conscious state expansion ( $0.45, P < 0.001$ ), and spiritual intelligence ( $0.51, P = 0.003$ ) influenced school principals' performance in school health services. Personal meaning production did not influence school principals' performance in school health services ( $P = 0.11$ ).

**Conclusions:** Strengthening the spiritual intelligence of school principals could lead to improvement of managerial performance and continuous improvement of education.

**Keywords:** Principals' Performance, Spiritual Intelligence, School Health Services, High School

## 1. Background

Education that is provided at high schools has a strategic value because high schools are places meant to prepare students for entry in the real world. "Schools are key settings for health promotion" (1). Shrestha et al. stated that "School health is effective in helping students achieve health literacy, enhance their health-related behaviors, and thereby improve their health status" (2). Improving the health of students starts with commitment to the health needs of children and their families (3) and school principals are the main provider of these services (4).

School leadership/principalship "is increasingly recognized internationally as a vital factor with regards to improving school effectiveness, teaching quality, and student achievement" (5). The principal is in a unique position to

influence the implementation of guiding principles. The principal, as the school leader, should attend to quality standards and seek improvements when needed and effective principals are essential for school performance and school improvement (6).

The "performance appraisal system is an evaluating system, for performance of an employee with respect to their job requirements" (7). "School management practice and the strategies of the schools' principals can create differences across schools" (8).

Leaders need to demonstrate rational, emotional, and spiritual intelligence (SI), or their leadership intelligence (9). This theory has grown from experiences in training of more than 4000 managers in how to conduct performance appraisals (10). A leader should possess all three in-

telligences (11).

King and DeCicco (2009) conducted empirical studies to investigate the factor structure of SI and identified four core components: (a) critical existential thinking (CET), which refers to thinking about the essence of reality, the world, and other existential and non-existential concerns in relation to oneself; (b) personal meaning production (PMP), which refers to finding personal meaning in all experiences and mastering the purpose of one's life (12), and necessary component of SI (13); (c) transcendental awareness (TA), which refers to identifying the means of achieving transcendence from oneself and the physical world; and (d) conscious state expansion (CSE), which refers to the ability to control how and when to enter higher states of consciousness (12). The findings of King and DeCicco also supported the notion that CET is a kind of spiritual ability, that SI consists of a set (14). Moreover, an effective leader serves subordinates by expanding their ability to recognize difficulties of work and to stimulate the open vision for the organization (15).

The study of Sharmila et al. (2017) with title "effectiveness of the use of SI in women academic leadership practice" concluded that SI is related to the creation of targeted, meaningful and balanced work place as well as the integrity of the staff (16). The findings of Zaharis et al.'s (2017) study revealed clear consistency between spirituality and the practice of exemplary leadership (17). Sultan et al.'s (2017) research results showed that SI "was significantly related to leadership effectiveness and personality traits of extroversion and openness to experience" (15). Sukhwinder and Sukhdev (2017) studied the relationship between spiritual quotient and individual competencies, including interpersonal skills, decision making, adaptability, knowledge, accountability, leadership skills, and communication. Results showed that there was a significant relationship between spiritual quotient and the seven components of individual competency (18). Tung's (2018) findings suggested that there are strong, positive, and significant relationships between workplace spirituality, workplace climate, compensation, and perceived job performance (19). Hence, to investigate group members, leaders must remain engaged with their basic characteristics and convey them to members through insight and personal behaviors to develop a sense of spiritual survival through membership (15).

School health services, as a symbol of the implementation of health policies in the educational system, are of great importance for the following reasons: Attention to human capital as a guarantee of community development (20), health education (2), mental health and well-being of individuals (21), the role of school health behavior in school outcomes (22), importance of student engagement

and safety (23), changing expectations and perceptions of the school (24), education and health development (25), and there are many challenges for providing school-based health services to school children for a variety of reasons. In Iran, about 16% of the total population are students and paying attention to their health issues and the provision of appropriate health services is a difficult position. Various projects, including health promotion schools, were designed and implemented, yet were not successful. A review of the research showed that there was little research on the role of managers, and in particular the dimensions of intelligence, on the performance of schools in health services and a research vacuum in this area still exists. Therefore, this research investigated whether SI of managers is effective on their performance in school health services.

## 2. Methods

The population of this correlational research, consisted of all high school principals of Tabriz (520), at the first to fifth educational districts, during year 2016. According to Krejcie and Morgan's table, at first, stratified random sampling method was used by equally considering the districts of the education, and in the second step, using random sampling method in terms of school, 225 principals, including 45 principals of each district and one principal of each school were selected. Principal participation criteria in this research was to have at least two years of management experience in their current position. Data collection was done by using two questionnaires.

1- Spiritual intelligence self-report inventory (SISRI-24, 2009): King (2008) developed the SISRI-24 for the measurement of SI in Western countries (26). King and DeCicco (2009) extensively reviewed previous SI models, conducted empirical studies, and developed the SISRI-24, which they reported to have good internal reliability and external validity. The SISRI is a 24-item self-report scale that consists of four subscales: CET, PMP, TA, and CSE (12). Antunes et al. calculated internal reliability of the full scale as estimated by Cronbach's alpha of 0.92, and the four subscales Cronbach's alpha ranged from 0.78 to 0.91, which indicates that the SISRI-24 had good reliability (27). Sharif Nia et al. (2015) investigated the internal consistency of this questionnaire estimated with Cronbach's alpha of 0.872 (28). Chan and Siu (2016) reported statistics of the SISRI-24. The Cronbach's coefficient alpha was 0.87 for the full scale, 0.65 for the CET subscale, 0.72 for the PMP subscale, 0.72 for the TA subscale, and 0.82 for the CSE subscale (14). Furthermore, in this research, after conducting a pilot implementation, its pilot was 28 people with a Cronbach's alpha of 0.71 for SI and 0.72, .71, 0.74, and 0.73 for CET, PMP, TA, and CSE, respectively. In order to assess the validity of this

questionnaire, content validity by 12 experts was used and CVR of 0.83 and CVI of 0.81 was calculated.

2- Principal's performance in school health services questionnaire: In this research, the principal's performance in school health services data was obtained from a researcher-made questionnaire. This questionnaire is a 14-item self-report scale. In addition, after conducting the pilot implementation in this study, its pilot was 28 people with a Cronbach's alpha of 0.88. In order to assess the validity of this questionnaire, content validity and face validity assessment was used. In the next step, construct validity was used via factor analysis (principal components method). In the achieved factor matrix, all items of the questionnaire had a correlation higher than 0.5 and four factors explained 67.68% of the variance. In the achieved factor matrix, all items of the questionnaire had a correlation higher than 0.5. Both questionnaires were based on a four-degree Likert scale (one - not at all true of me, two - not very true of me, three - very true of me, four - completely true of me) and the range of degrees was from one to four in each item. Accordingly, in scoring the questionnaire, the first option was scored with a score of one; the second option with a score of two; option three with a score of three; and option four with a score of four.

The research question for the current study was: Is principal's performance in school health services predictable based on their SI in high schools? In order to analyze the data, using the regression test, the amount of coefficient of determination and correlation was estimated at the significance level of 0.05. Ethical considerations, secrecy, and confidentiality of principals' information were considered in this research.

### 3. Results

Based on the descriptive data obtained from the study, 108 principals of private schools (48%) and 117 principals of public schools (52%) were studied. Among the studied principals, seven (3.11%) were 25 to 30 years old; 34 (15.11%) were 30 to 40 years old; 118 (52.45%) were 40 to 50 years old, and 66 (29.33%) were up to 50 years old. In addition, four (1.77%) had less than 10 years of work experience; 73 (32.45%) had 10 to 20 years of work experience; 127 (56.45%) had 20 to 25 years of work experience, and 21 (9.33%) had higher than 25 years of work experience. All of the studied principals were females. The results of Smart PLS SEM showed:

There was a correlation amongst CET ( $r = 0.59$ ,  $P < 0.001$ ), personal meaning production ( $r = 0.16$ ,  $P = 0.013$ ), transcendental awareness ( $r = 0.26$ ,  $P < 0.001$ ), conscious state expansion ( $r = 0.45$ ,  $P < 0.001$ ), and spiritual intelligence ( $r = 0.39$ ,  $P < 0.001$ ) with school principals' performance in school health services.

**Table 1.** Mean and Standard Deviation of Performance and SI

Variable	Min	Max	Mean $\pm$ SD
<b>Performance</b>	31.00	56.00	44.98 $\pm$ 7.46
<b>CET</b>	18.00	28.00	25.37 $\pm$ 2.33
<b>PMP</b>	14.00	20.00	18.5289 $\pm$ 1.61
<b>TA</b>	20.00	28.00	25.79 $\pm$ 2.11
<b>CSE</b>	12.00	20.00	18.3 $\pm$ 1.62
<b>SI</b>	74.00	117.00	95.71 $\pm$ 9.2

Abbreviations: CET, Critical Existential Thinking; CSE, Conscious State Expansion; PMP, Personal Meaning Production; SI, Spiritual Intelligence; TA, Transcendental Awareness.

Based on path coefficient and P value ( $P < 0.01$ ): CET (0.62,  $P < 0.001$ ), transcendental awareness (0.4,  $P < 0.001$ ), conscious state expansion (0.45,  $P < 0.001$ ) and spiritual intelligence (0.51,  $P = 0.003$ ) could predict school principals' performance in school health services.

Based on path coefficient and P value: PMP ( $P = 0.11$ ) could not predict school principals' performance in school health services.

Based on the descriptive data obtained from the study, 225 high school principals were studied. Based on the data in Table 1, the mean performance of school principals was  $44.98 \pm 7.46$  and their performance was above medium. The mean IS was  $95.71 \pm 9.2$  and was higher than medium. In addition, the status of principals in the components of SI was higher than medium.

According to Table 1 and the results of correlation test with SPSS software, SI and all its components had a positive and significant correlation with the performance of the principals of the schools studied. The highest correlation was between performance variables and CET (0.59) and the lowest correlation was between performance variable and PMP (0.16).

Based on the results of the PLS regression test, the path coefficients according to the T value and the P value were significant in the CET, TA, CSE, SI, and not significant in the PMP. The CET, TA, CSE and SI could predict the performance of school principals and the PMP could not predict school health services.

Based on Figure 1, the CET had the highest effect, the TA had the least effect on performance, and the effect of PMP on performance of principals was not significant.

Based on Figure 2, the CET, TA, CSE and SI directly affected performance, and the R square was 0.657. The adjusted R square was 0.649. Therefore, 65% of school principals' performance changes were predictable based on their SI.

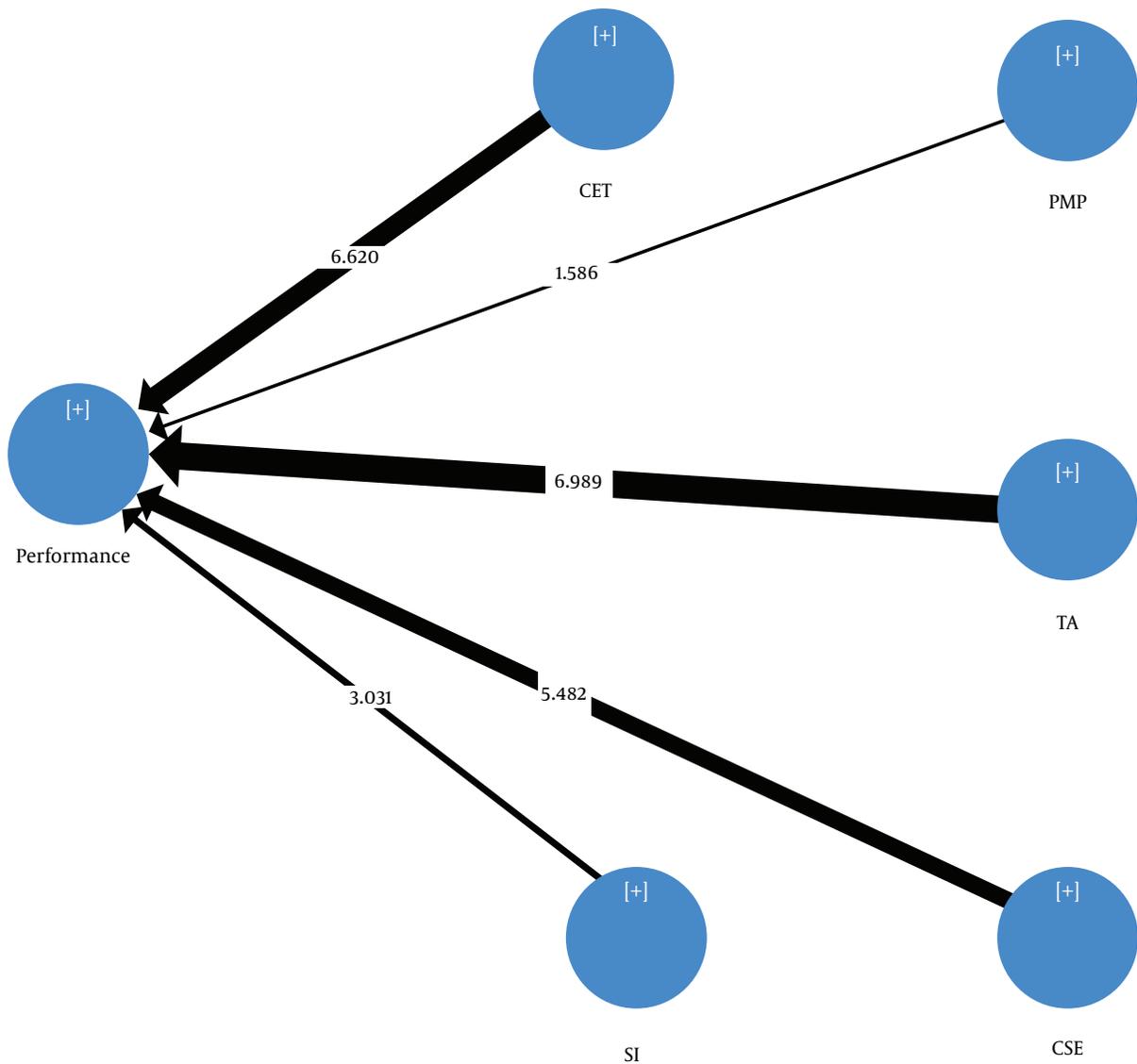


Figure 1. T values of latent variables

#### 4. Discussion

Based on the results of the PLS regression test, the path coefficients according to the T value and the P value were significant in the CET, TA, CSE, SI, and not significant in the PMP. The CET, TA, CSE, and SI could predict the performance of school principals and the PMP could not predict school health services.

The results of this research are consistent with Tung (2018) (19), Sharmila et al. (2017) (16), Zaharis et al. (2017) (17), Sultan et al. (2017) (15), Sukhwinder and Sukhdev (2017) (18), and Amram (2007) (29).

Spiritual intelligence is a tool to assess meaning, inspiration, insight, and value about the things we think or decisions we make in our life. It helps us understand, which actions or which paths are more meaningful than the other (30). In fact, SI is our soul intelligence or our own real intelligence, which we use to answer fundamental questions of our own and put those answers in new frameworks. Zohar and Marshall (31), by confirming the existence of SI, considered it as an intellectual talent that humans use in solving their spiritual and valuable questions and puts their life in a vast and rich state of meaning. Growth and strengthening of SI can be the basis of a better and more coherent

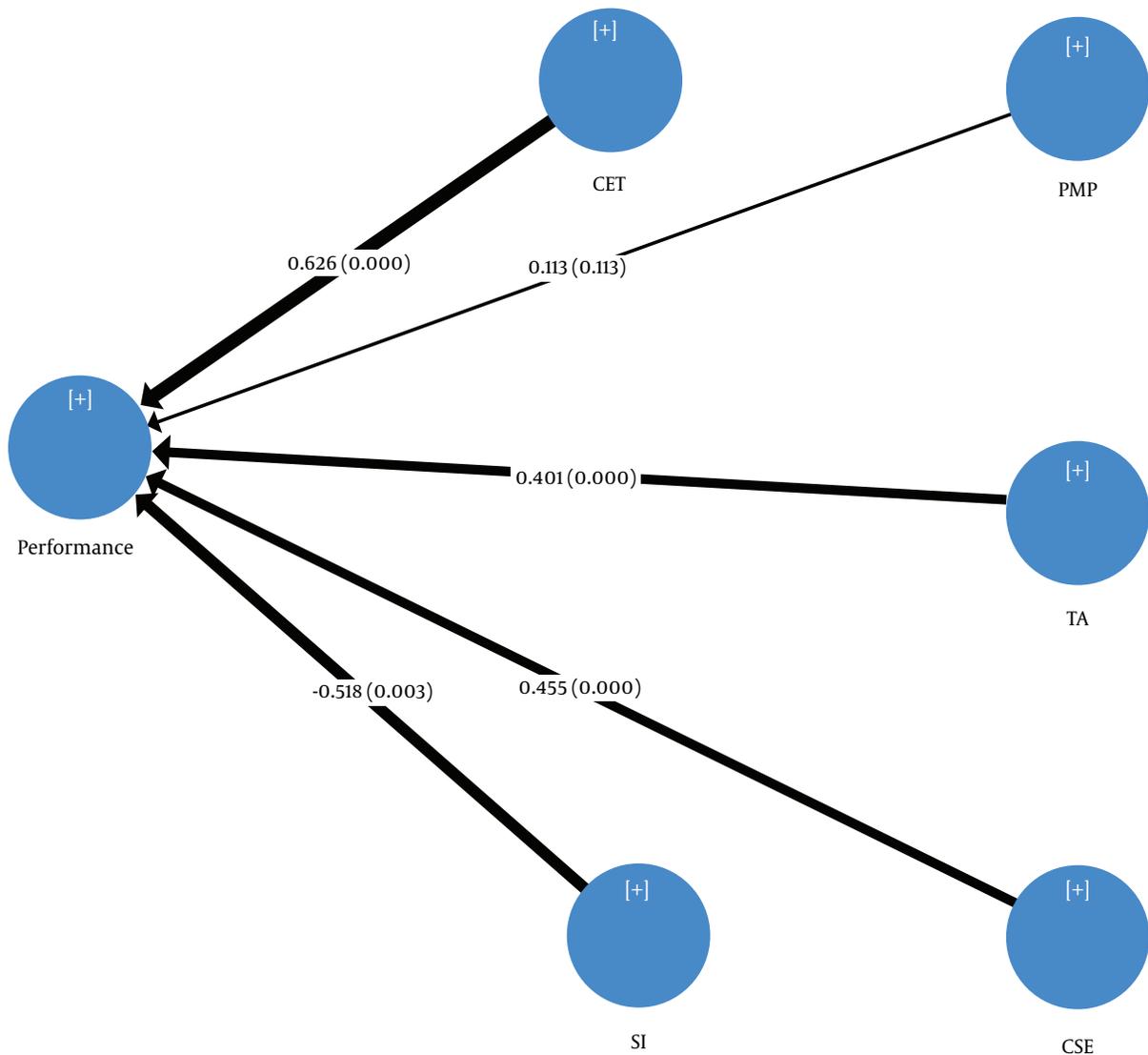


Figure 2. Path coefficient of latent variables and P values

working life for all organizational stakeholders; a life that is free from any kind of pressure, fear, and anxiety. In addition, the growth of SI is a way of life to be more uplifting, more motivated, and accepting serious responsibilities in the field of work and production. Regarding the effect of spirituality and spiritual practices in individuals and creating peace of mind, one can enhance spiritual experience by creating an appropriate atmosphere and promoting organizational spirituality, which in turn increases the quality of work life and, consequently, improves the quality of work done by individuals.

#### 4.1. Conclusion

Spiritual intelligence lets a person realize these abilities and try hard to reach them. It is the infrastructure of individual beliefs and has a role in how these beliefs and values play a part in actions that an individual performs. In other words, SI regarding its link with meaning, value and imagination, can allow for change. A person with high SI has flexibility, self-consciousness, capacity to face challenges and difficulties and going beyond that, capacity for inspiration and intuition, holistic attitude towards the universe, searching for answers to fundamental questions of life and criticizing the traditions and cus-

**Table 2.** Correlations Coefficient Between Variables<sup>a</sup>

Variables	Performance	CET	PMP	TA	CSE	SI
<b>Performance</b>						
Correlation	1					
Sig						
<b>CET</b>						
Correlation	0.597	1				
Sig	< 0.001					
<b>PMP</b>						
Correlation	0.165	0.239	1			
Sig	0.013	< 0.001				
<b>TA</b>						
Correlation	0.260	0.346	0.549	1		
Sig	< 0.001	< 0.001	< 0.001			
<b>CSE</b>						
Correlation	0.454	0.622	0.297	0.232	1	
Sig	< 0.001	< 0.001	< 0.001	< 0.001		
<b>SI</b>						
Correlation	0.398	0.649	0.646	0.734	0.611	1
Sig	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	

Abbreviations: CET, Critical Existential Thinking; CSE, Conscious State Expansion; PMP, Personal Meaning Production; SI, Spiritual Intelligence; TA, Transcendental Awareness.

<sup>a</sup>P value: (P < 0.01).

**Table 3.** Results of Partial Least Squares Regression in Performance Prediction

Report	Variable				
	CET	PMP	TA	CSE	SI
<b>Path Coefficient</b>	0.62	0.11	0.4	0.45	-0.51
<b>Total Effect</b>	0.62	0.11	0.4	0.45	-0.51
<b>T</b>	6.62	1.58	6.98	5.48	3.03
<b>P value</b>	< 0.001	0.11	< 0.001	< 0.001	0.003
<b>R square</b>	0.657				
<b>R square adjusted</b>	0.649				

Abbreviations: CET, Critical Existential Thinking; CSE, Conscious State Expansion; PMP, Personal Meaning Production; SI, Spiritual Intelligence; TA, Transcendental Awareness.

toms. Furthermore, SI is at the basis of emergence of spiritual capital in the sense that a person with low SI cannot achieve the ability of spiritual capital, and organizations, whose leaders and employees have no SI, will never have intellectual capital in their organization. In addition, SI, which means deeper awareness of itself as an immaterial being, is, in fact, a source of non-objective talent that has not been discovered before; when one's consciousness increases and is used, it creates a sense of security in it and thus the order of his performance improves in the work

environment. According to these findings, it can be concluded that in order to increase job performance, implementation of SI tests at the time of entering the organization is essential.

The results of this research are consistent with researches of Tung (2018), in confirming the relationship between workplace spirituality and job performance; Sharmila et al. (2017) in confirming the relationship between SI and academic leadership activities; Zaharis et al. (2017), in confirming the relationship between spiritual-

ity and the practice of exemplary leadership; Sultan et al. (2017) in confirming the relationship between SI and leadership effectiveness; and Sukhwinder and Sukhdev (2017) in confirming the relationship between spiritual quotient and individual competencies showing that SI is one of the key factors determining the performance of school principals in the performance of school health services and the improvement of students' health. This conclusion emphasizes the importance of high school administrators and upstream documents regarding the appointment of managers with the dimensions of intelligence, especially SI in schools.

Based on the findings of this research, strengthening SI of school principals in order to improve their performance and continuous improvement of educational activities is suggested.

## Acknowledgments

The authors thank Tabriz branch of Islamic Azad University and Tabriz educational districts and Tabriz high schools' principals for their cooperation in this research.

## Footnotes

**Authors' Contribution:** In this research, both authors participated in various research stages.

**Conflict of Interest:** None declared.

## References

- Pommier J, Guevel MR, Jourdan D. Evaluation of health promotion in schools: a realistic evaluation approach using mixed methods. *BMC Public Health*. 2010;**10**:43. doi: [10.1186/1471-2458-10-43](https://doi.org/10.1186/1471-2458-10-43). [PubMed: [20109202](https://pubmed.ncbi.nlm.nih.gov/20109202/)]. [PubMed Central: [PMC2824736](https://pubmed.ncbi.nlm.nih.gov/PMC2824736/)].
- Shrestha RM, Miyaguchi M, Shibanuma A, Khanal A, Yasuoka J, Jimba M. A School Health Project Can Uplift the Health Status of School Children in Nepal. *PLoS One*. 2016;**11**(11). e0166001. doi: [10.1371/journal.pone.0166001](https://doi.org/10.1371/journal.pone.0166001). [PubMed: [2781290](https://pubmed.ncbi.nlm.nih.gov/2781290/)]. [PubMed Central: [PMC5094771](https://pubmed.ncbi.nlm.nih.gov/PMC5094771/)].
- Cruden G, Kelleher K, Kellam S, Brown CH. Increasing the Delivery of Preventive Health Services in Public Education. *Am J Prev Med*. 2016;**51**(4 Suppl 2):S158-67. doi: [10.1016/j.amepre.2016.07.002](https://doi.org/10.1016/j.amepre.2016.07.002). [PubMed: [27542653](https://pubmed.ncbi.nlm.nih.gov/27542653/)]. [PubMed Central: [PMC5505174](https://pubmed.ncbi.nlm.nih.gov/PMC5505174/)].
- Leroy ZC, Wallin R, Lee S. The Role of School Health Services in Addressing the Needs of Students With Chronic Health Conditions. *J Sch Nurs*. 2017;**33**(1):64-72. doi: [10.1177/1059840516678909](https://doi.org/10.1177/1059840516678909). [PubMed: [27872391](https://pubmed.ncbi.nlm.nih.gov/27872391/)]. [PubMed Central: [PMC5654627](https://pubmed.ncbi.nlm.nih.gov/PMC5654627/)].
- Liu S, Xu X, Grant L, Strong J, Fang Z. Professional standards and performance evaluation for principals in China. *Educ Manag Adm Leadersh*. 2016;**45**(2):238-59. doi: [10.1177/1741143215587304](https://doi.org/10.1177/1741143215587304).
- Grissom JA, Mitani H, Blissett RSL. Principal licensure exams and future job performance: Evidence from the school leaders licensure assessment. *Educ Eval Policy Anal*. 2017;**39**(2):248-80. doi: [10.3102/0162373716680293](https://doi.org/10.3102/0162373716680293).
- Khan HMA, Chandio JH, Farooqi MTK. Comparison of performance appraisal system in public and private schools. *Pak J Comm Soc Sci*. 2014;**8**(1):288-94.
- Masci C, De Witte K, Agasisti T. The influence of school size, principal characteristics and school management practices on educational performance: An efficiency analysis of Italian students attending middle schools. *Socioecon Plann Sci*. 2018;**61**:52-69. doi: [10.1016/j.seps.2016.09.009](https://doi.org/10.1016/j.seps.2016.09.009).
- Gage T, Smith C. Leadership intelligence: Unlocking the potential for school leadership effectiveness. *South Afr J Educ*. 2016;**36**:1-19.
- Ronthy M. *Leader intelligence: How you can develop your leader intelligence with the help of your soul, heart and mind*. Stockholm, Sweden: Amfora Future Dialogue AB; 2014.
- Daderman AM, Ronthy M, Ekegren M, Mardberg BE. "Managing with my heart, brain and soul": The development of the leadership intelligence questionnaire. *J Coop Edu Internships*. 2013;**47**(1):61-77.
- King DB, DeCicco TL. A viable model and self-report measure of spiritual intelligence. *Int J Transpersonal Stud*. 2009;**28**(1):68-85. doi: [10.24972/ijts.2009.28.1.68](https://doi.org/10.24972/ijts.2009.28.1.68).
- King DB. Personal meaning production as a component of spiritual intelligence. *Int J Exist Psychol Psychother*. 2010;**3**(1).
- Chan AWY, Siu AFY. Application of the spiritual intelligence self-report inventory (SISRI-24) among Hong Kong University students. *Int J Transpersonal Stud*. 2016;**35**(1):1-12. doi: [10.24972/ijts.2016.35.1.1](https://doi.org/10.24972/ijts.2016.35.1.1).
- Sultan S, Anwar Khan M, Kanwal F. Spiritual intelligence linking to leadership effectiveness: Interceding role of personality traits. *Int J Soc Sci*. 2017;**3**(2):599-613.
- Sharmila Devi R, Steven Eric K, Azimi H, Khairuddin I. Effectiveness of the use of spiritual intelligence in women academic leadership practice. *Int J Educ Manag*. 2017;**31**(2):160-78. doi: [10.1108/ijem-09-2015-0123](https://doi.org/10.1108/ijem-09-2015-0123).
- Zaharis M, Sims P, Safer L, Tagaris A, Hendricks A, Sekulich K. The impact of spirituality on school leadership. *Educ Leadersh Rev*. 2017;**18**(1):81-95.
- Sukhwinder K, Sukhdev S. Exploring relationship among spiritual quotient, personal competence and job satisfaction of employees: An empirical study. *J Manag Res*. 2017;**17**(1):187-200.
- Tung Thanh D. How spirituality, climate, and compensation affect job performance. *Soc Respons J*. 2018.
- Zare Jamalabadi M, Kajbaf MB, Mohiti Ardakani E. Accordance of schools health status with the regulations of school health in Yazd. *J Community Health Res*. 2014;**3**(3):177-84.
- Morton KL, Atkin AJ, Corder K, Suhrcke M, Turner D, van Sluijs EM. Engaging stakeholders and target groups in prioritising a public health intervention: the Creating Active School Environments (CASE) online Delphi study. *BMJ Open*. 2017;**7**(1). e013340. doi: [10.1136/bmjopen-2016-013340](https://doi.org/10.1136/bmjopen-2016-013340). [PubMed: [28087549](https://pubmed.ncbi.nlm.nih.gov/28087549/)]. [PubMed Central: [PMC5253605](https://pubmed.ncbi.nlm.nih.gov/PMC5253605/)].
- Kase C, Hoover S, Boyd G, West KD, Dubenitz J, Trivedi PA, et al. Educational Outcomes Associated With School Behavioral Health Interventions: A Review of the Literature. *J Sch Health*. 2017;**87**(7):554-62. doi: [10.1111/josh.12524](https://doi.org/10.1111/josh.12524). [PubMed: [28580676](https://pubmed.ncbi.nlm.nih.gov/28580676/)].
- Gase LN, Gomez LM, Kuo T, Glenn BA, Inkelas M, Ponce NA. Relationships Among Student, Staff, and Administrative Measures of School Climate and Student Health and Academic Outcomes. *J Sch Health*. 2017;**87**(5):319-28. doi: [10.1111/josh.12501](https://doi.org/10.1111/josh.12501). [PubMed: [28382671](https://pubmed.ncbi.nlm.nih.gov/28382671/)]. [PubMed Central: [PMC5876042](https://pubmed.ncbi.nlm.nih.gov/PMC5876042/)].
- Wolker Manta S, da Silva KS, Rech CR, da Costa B, Iha T, Silva Lopes A, et al. Changes in the perception of school climate among Brazilian high school students between 2001 and 2011. *Int J School Health*. 2017;**4**(2). doi: [10.5812/intjsh.13497](https://doi.org/10.5812/intjsh.13497).
- Khaleghinezhad SA, Shabani M, Hakimzadeh R, Nazari Shaker H, Amerian M. Prediction of high school students' life satisfaction and academic performance based on locus of control and self-esteem. *Int J School Health*. 2016;**3**(3). doi: [10.17795/intjsh-31924](https://doi.org/10.17795/intjsh-31924).
- King DB. *Rethinking claims of spiritual intelligence: A definition, model, and measure*. Peterborough, Ontario: Trent University; 2008.

27. Antunes RR, Silva AP, Oliveira J. Spiritual intelligence self-assessment inventory: Psychometric properties of the Portuguese version of SISRI-24. *J Relig Spiritual Aging*. 2017;**30**(1):12-24. doi: [10.1080/15528030.2017.1324350](https://doi.org/10.1080/15528030.2017.1324350).
28. Sharif Nia H, Haghdoost AA, Ebadi A, Soleimani MA, Abbaszadeh A. [Psychometric properties of the king spiritual intelligence questionnaire (KSIQ) in physical veterans of Iran-Iraq warfare]. *J Mil Med*. 2015;**17**(3):145-53. Persian.
29. Amram Y. The seven dimensions of spiritual intelligence: An ecumenical, grounded theory. *115th Annual Conference of the American Psychological Association*. San Francisco, CA. 2007.
30. Talebi B, Poorabdollah N, Alizadeh F. [The role of spiritual intelligence in students' academic achievement]. *Res Teach*. 2014;**1**(1):69-80. Persian.
31. Zohar D, Marshall I. *SQ- spiritual intelligence, the ultimate intelligence*. USA, New York, NY: Bloom Burg; 2000.