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## The Impact of Spiritual Intelligence on Work Performance: Case studies in Government Hospitals of East Coast of Malaysia

Anita Abdul Rani\*, Imaduddin Abidin\* and Mohd Rashid Ab Hamid\*\*

*Centre of Modern Language and Human Science, Universiti Malaysia Pahang, Malaysia\**

*Faculty of Industrial Sciences and Technology, Universiti Malaysia Pahang, Malaysia\*\**

[anitarazali@gmail.com](mailto:anitarazali@gmail.com)\*

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### Abstract

*This study examined the causal relationship of spiritual intelligence on work performance among the staff nurses at three states of Malaysia i.e. Pahang, Terengganu and Kelantan. Questionnaires were developed and distributed to staff at the selected Government Hospitals which involved 506 female respondents in the age of 20-45 years old. The data collected was analysed using confirmatory factor analytic (CFA) approach and full-fledged structural equation modeling (SEM) in order to test the hypothesized model of the impact of Spiritual Intelligence on Work Performance. In addition, invariance analysis was also conducted on the demographic moderator such as age and tenure. The revised hypothesized SEM model yielded a  $p$ -value = 0.000, normed chi-square=3.999, CFI=0.972, TLI=0.963, GFI=0.939 and RMSEA=0.077. From the result, it can be found that work performance is influenced by Spiritual Intelligence. Also, the moderating factor of age and tenure is not significant that the model is applicable to all hospitals involved. This finding may pave the way forward for empowering spiritual intelligence in nursing school and training to enhance nurse's work performance.*

Keywords: *spiritual intelligence, nurses, work performance*

### 1. Introduction

For many years and still ongoing, researchers have been studying factors influencing worker performance. Work performance is important to the overall company or organization in order to achieve company's goal, develop products, provide services and attain competitive advantage. It is also functioned to speed up and maintain the accuracy while working toward a goal (Wichen at.al, 2000). Previous studies are clear on the varieties of influence on work performance. Work performance can be affected by person skills and abilities, hard work, positive circumstances and relative ease of the task at hand (Rosenthal, 1995); quality of work and quantity of it (Farh et.al, 1991), task contextual performance (Borman & Motowilda, 1997), adaptive performance (Hesketh & Neal, 1999), declarative knowledge, procedural knowledge and skills, and motivation (Campbell, McHenry & Wise, 1990).

Religiosity and spiritual are found to be helpful in influencing attitude (Weber, 1958) and shaping human experience, meaning and behavior (Kripner & Welch, 1992; Zohar & Marshall, 2004). Research shown there is a relationship between both; people with higher level of spirituality have healthier, happier and more productive lives at work (Tischler, 2002). Others examined the significant relationship between spiritual intelligence and mental health (Emmons, 2000; Nobel, 2000; West, 2004; Shabani, 2011), personality, rehabilitation, cognitive process social phenomena and physical health (Hill & Pargament, 2003; Piedmont, 2001; Taylor, Amenta & Highfield, 1995), motivation (Tee, Anantharaman, Yoon, 2011), leadership (Howard, 2002; Amram, 2009) and work performance (Alexander, 1993). Specifically in nursing, spiritual intelligence helps nurse's well being and happiness (Yang, 2006 ; Yang, 2007; Faribos, Fatemeh and Hamidreze, 2010).

### *1.1 Spiritual Intelligence*

Every people have their inborn spiritual capacities (Wolman, 2001) that give meaning and purpose to life. Understanding from Gardner's definition of intelligence that is the capacity to solve problems or to fashion products that are valued in one or more cultural setting, Emmons (2000) recommended that spirituality as an element of intelligence because it predicts functioning and adaptation and offers capabilities that enable people to solve problems and attain goals.

At the same time these recommendations followed by Zohar and Marshall (2000) who defined Spiritual Intelligence as intelligence which people address and solve problems of meaning and value, place their actions and live their life meaningfully. Spiritual Intelligence were then reviewed by many researchers (Emmons, 1999; Sisk & Torrance, 2001; Wolman, 2001; Zohar and Marshall, 2002; Nasel, 2004; Khavari, 2000; MacHovec, 2002; Rogers, 2003; Yang, 2006; Mark, 2004; King, 2007 and Howard et al, 2009).

Spiritual intelligence is important to assist a person in finding the deepest and most inner resource from which the capacity to care, the power to tolerate and adapt is obtained (George, 2006). In workplace, spiritual intelligence helps worker in the context of relationships and align personal values with a clear sense of purpose that demonstrate a high level of integrity in work (Tee et al. 2011).

Amram and Dryer (2007) have identified five construct of Spiritual Intelligence; they are Consciousness, Transcendence, Grace, Meaning and Truth. A consciousness trait is the ability to raise consciousness, to tap intuition and to synthesize multiple viewpoints in ways that will enhance daily functioning and well-being. Transcendence is a trait of the ability to align with the sacred and transcend the egoistic self with the sense of relatedness and holism in ways that enhances functioning. Grace is a trait that reflects the love for life drawing on the inspiration beauty and joy inherent in each present moment to enhance the functioning and well being. While Meaning is a trait of the ability to experience meaning, link activities and experiences to values and construct interpretations in ways that that enhance functioning and wellbeing in the face of pain and suffering. Truth is a trait of the ability to be present, to love peacefully and surrender to truth, manifesting open receptivity, presence, humility and trust in ways that enhance daily functioning and well-being.

## *1.2 Nurse's Work Performance*

Nursing career is a profession that focused on people's health and its environment confront on a daily basis with multiple occupational stressors (Harrison, et. al, 2002). In stressful situation the innate source which can help them is spirituality because it gives meaning and purpose to life (Faribors, 2010). Nurses attitude towards their work give a big impact on their behavior at work and quality of patient care. Nurses who integrate profession and spirituality can make them a good nurse (Baldachino, 2008; Faribos, 2010). This can be happened when a nurse have a holistic human life aspect such as biological, mental, social and also spiritual aspect (Chung, Wong & Chang, 2006). The effect of nurse's spirituality and nurses who used spiritual intelligence enables to approach and solve their problems with spiritual attitude-approach that can achieve self actualization and wellbeing (Faribos, 2010).

As a whole, it can be proposed that Spiritual Intelligence can be used as a factor of influence in work performance. Spiritual Intelligence in this study refers to human capability in controlling their mind and action according their beliefs to the supreme power that is also a practice of behavioral control in keeping human in balance and remaining their pure heart. These current studies are aims to provide more evidence regarding the relationship of Spiritual Intelligence with work performance. In particular, this study examines nurse's age and tenure as a moderator between Spiritual Intelligence and human work performance.

## **2. Method**

This study is descriptive and inferential in which was conducted with a total number of 506 nurses of four government hospitals in East Coast of Malaysia. It will discuss the sampling technique, instrumentation and the data screening procedure before proceeding to the confirmatory factor analysis (CFA) technique in testing the hypothesized model and invariance analysis.

### *2.1 Sampling*

Sample size was taken based on Morgan (1979) table. Nurses ranged from below 20 to above 50 years old. Most participants were female (n=554, 97.7%) and were married (n=462, 81.5%) and majority of nurses had Diploma's degree (n=550, 97%). Their experiences range from 2 to more than 15 years.

Table 1: Distribution of Demographic Characteristics

		<u>Frequency</u>	<u>Percentage</u>
Gender	Male	9	1.6
	Female	554	97.7
Age	< 30	184	32.5
	30 – 35	174	30.7
	35 – 40	99	17.5
	40 – 45	50	8.8
	45 – 50	22	3.9
	>50	23	4.1
Marital	Single	86	15.2
	Married	462	81.5
	Widow	7	1.2
Ethnic	Malay	535	94.4
	Chinese	6	1.1
	Indian	3	.5
	Bumiputra	1	.2
Level of Academic	Diploma	550	97
	Degree	11	1.9
Tenure	< 2 years	26	4.6
	2 – 5 years	97	17.1
	5 – 7 years	96	16.9
	7 – 10 years	124	21.9
	10 – 15 years	126	22.2
	> 15 years	78	13.8

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## 2.2 Measure

All respondents answered to the two instruments prepared with two languages, English and Malay. The instruments also have been adapted to Malaysian English by the experts.

### *2.3 Demographic*

This part includes the variables such as age, education, marital status and tenure to collect the demographic profile of the respondents.

### *2.4 The Integrated Spiritual Intelligence -ISIS (Amram & Dryer, 2008)*

Amram & Dryer's Integrated Spiritual Intelligence Scale was chosen in measuring nurse's level of Spiritual Intelligence due to its comprehensive nature and strong psychometric properties (Amram & Dryer, 2008). Researcher used 45 items short version with 5 domain scales of Spiritual Intelligence. Originally the scale had 83 items contain 22 subscales. The instruments have been adapted into Malaysian context of English by language experts. Respondents answered with a six-point likert scale ranging from 'never or almost never-very frequently-somewhat infrequently-somewhat frequently-very frequently-always or almost always.'

### *2.5 Schwirian Six Dimension Scale (Schwirian, 1979)*

Nurse's work performance was measured with Schwirian Six-D Scale. This scale is 52 items long, self report and content 6 main domain scale of work performance. The answers are from 4-point of likert scale from 'seldom-occasionally-frequently-consistently.'

### *2.6 Data Screening and Analysis*

To achieve the main objective of the present study, the collected data (600) were subjected to a number of statistical analyses by using statistical package for social sciences (SPSS 17.00). During the process of data screening for outliers, 95 dataset are deleted due to mahalanobis distance values leaving a final 505 dataset to be analysed. Several statistical validity tests and analysis are then conducted such as reliability and validity tests using confirmatory factor analysis (CFA) for construct validity and discriminant validity for multicollinearity treatment, composite reliability and average extracted, testing to the fit for the hypothesized CFA model and the revised model.

### *2.7 Validity and reliability of the questionnaire*

The Spiritual Intelligence questionnaire was answered by 505 nurses and its validity and reliability was checked with Cronbach's alpha coefficient. The reliability for each construct were; consciousness=0.776, Transcendence=0.861, Meaning=0.564, Truth=0.502 and Grace=0.656. All values yielded alpha coefficient exceeded the values of 0.50 suggested by Nunnally (1978). Therefore the questionnaire was accepted and admissible. In order to validate the instrument this study also considered construct validation using analysis of moment structures software (AMOS 18) with maximum likelihood (ML) to analyse data. This approach is called as confirmatory analysis which is more advance as the hypothesized are based on the underpinning theory (Hair et al., 2010) as discussed in the next section.

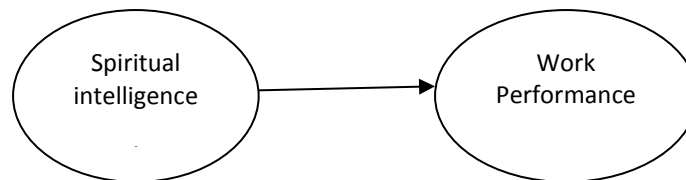
## 2.8 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis was applied to determine the construct validity of the survey items. It simply means how well is the construct explained the variables under the construct (Hair et al., 2010). The factor loading or the regression weight and the squared multiple correlations (SMC) of the items are significantly correlated to the specified construct would also contribute to the construct validity comprehension.

## 2.9 The hypothesized model and modeling strategy

In order to confirm the construct validity in this study, Confirmatory Factor Analysis (CFA) discussed in were used to test the model of measurement in figure 1. The criteria to assess the fit of the measurement model is based on a number of descriptive fit indices, which included 1) the chi-square statistic, that determined if the non-zero in the residual matrix could have occurred simply due to chance; 2) the minimum value of the discrepancy between the observed data and the hypothesized model were divided by degrees of freedom (CMIN/df); 3) the comparative fit index (CFI); 4) the Tucker-Lewis index (TLI); and 5) the root mean square of approximation (RMSEA). Insignificant p-value of chi-square statistics will indicate the goodness-of-fit model (Hair et.al., 2006), Byrne (2001) suggested to rely on other indices of fit, primarily CFI and RMSEA. In the context of the current study, the CFA results reported were tested using only 567 participants after dealing with the missing data.

Figure 1 : CFA SIWP Hypothesized Model



The results of the CFA for Spiritual Intelligence\_ Work Performance, as shown in Figure 1, demonstrated a good fit between the data (N=567) and the measurement model has  $p < .05$  and  $df = 42$ . The fit indicators are  $CFI = 0.972$ ,  $TLI = 0.963$  and  $RMSEA = 0.77$  exceeded the threshold. This indicated a good fit of the hypothesized model.

Table 2 : Variance estimate (VE) for each variable in the model

obs var	std loading	R <sup>2</sup>	error var e <sub>j</sub>	CR	VE
<b>SPIRITUAL INTELLIGENCE</b>					
Truth	0.554	0.307	0.693	0.874	0.587
Grace	0.805	0.648	0.352		
Meaning	0.732	0.536	0.464		
Transcendence	0.876	0.767	0.233		
Consciousness	0.822	0.676	0.324		
Total	3.789	2.934	2.066		
<b>WORK PERFORMANCE</b>					
Leadership	0.887	0.787	0.213	0.951	0.766
Critical Care	0.878	0.771	0.229		
Teaching Collaboration	0.899	0.808	0.192		
Planning Evaluation	0.844	0.712	0.288		
InterperCommunication	0.911	0.830	0.170		
Profess Development	0.828	0.686	0.314		
Total	5.247	4.594	1.406		

The table 2 shows the factor loading values are above 0.7 as recommended by Hair et al. (2006) except for 'truth' = 0.554, all of the items are significant statistically. There are also no offending estimation for example a negative value. Next, Table 3 displays the average variance extracted (AVE), correlation and correlation square matrix among exogenous variables

Table 3 : Average Variance Estimate (AVE), correlation and latent correlation

Note: Correlation in significant at 0.01 level (2-tailed) values in brackets indicate correlation squared.

Construct	1	2
Spiritual Intelligence	0.587	
Performance Work	0.442 (0.195)	0.766

According to the above table, each AVE value is found to be more than the correlation square except for the correlation square of spiritual intelligence and work performance which is slightly higher than the AVE value. This concludes that the discriminant validity is supported or in other words multicollinearity is not present (Byrne, 2001).

### 2.10 Invariance Analysis

Invariance analysis was examined across demographic moderators; hospital's location, nurse's tenure and nurse's age. Invariance analysis was suggested by Cheung and Rensvold (2002). In testing the invariant factor, the value of coefficients for each data group was verified. The variable can be considered as moderator if the Chi-Square value between constrained model and unconstrained model differs by more than 3.84 (Kline, 2011). Table 25 shows the results of each group selected.

Table 4 : Results of the Multiple Group Modeling

		Chi-square	df	Critical Value	Chi-square Change	Moderation Result	Hypothesis Result
Hospital's Location	Unconstrained Model	320.156	160	16.27	1.999	Not Significant	Not Supported
	Constrained Model	322.155	163				
Nurse's Tenure	Unconstrained Model	299.089	160	16.27	4.089	Significant	Supported
	Constrained Model	303.178	163				
Nurse's Age	Unconstrained Model	318.603	160	16.27	2.14	Not Significant	Not Supported
	Constrained Model	320.743	163				

Statistically significant at .005

Based on the analysis, hospital's location has no significant relationship since the Chi-square difference between the constrained and unconstrained model is 1.999. Therefore location of the hospital is not the moderating factor between spiritual intelligent and work performance. This model can be used for every hospital. While for the nurse's tenure is not significant since the Chi-square difference between the constrained and unconstrained model is 4.089. Therefore nurse's tenure is moderating factor between spiritual intelligent and work performance. This model cannot be used for every hospital. The nurse's age's variable is not significant since the Chi-square difference between the constrained and unconstrained model is 2.14. Therefore nurse's age is not the moderating factor between spiritual intelligent and work performance. This model can be used for every hospital. As a result the model admissible and can be used and appropriate to be used across hospitals under study and age group with exclude of tenure.



### 3. Discussion and Analysis

There are positive correlation found between spiritual intelligence and work performance. The results show that nurses with higher spiritual intelligence perform more in their work. In previous literature, Spiritual intelligence were related with health, leadership, now with this study confirming that Spiritual intelligence influence work performance. There was a positive relationship between Spiritual intelligence and work performance. In other meaning, when nurses apply Spiritual intelligence in work, their performance increase. The fit structural model of SIWP, which is from the development of Spiritual intelligence study and Work Performance study. The significant value from the Spiritual intelligence construct to work performance construct suggested that the Spiritual intelligence should be applied by the nurses and should be implement in the planning policies and training in government hospitals.

Therefore this paper to the literature is that it has managed to further extend and strengthen the theoretical discourse on the Spiritual intelligence in particular by empirically illustrating the extent of its relationship with work performance. In other words, this study shows the essence and the strength of Spiritual intelligence in able to increase nurse's work performance. This paper attempts to identify Spiritual intelligence as a contributor or predictors to work performance and it also try to define structural relationships amongst the constructs. As expected, this study empirically proved that spiritual intelligence play important roles in nurse's work performance. Unexpectedly, it contributes 44% to the work performance.

The empirical data showed that the contribution of Spiritual intelligence to nurse's work performance is significant. This mean that nurse's who has spiritual intelligence will perform in her work. This indicates that spiritual intelligence is important in helping workers in enhancing their career performance. Nurse's who use their Spiritual intelligence able to motivate, enable, empower, and provide a hope as they feel connected to 'God' or a higher consciousness (Fowler, 1997). Nurse's who are happy are nurses who have and apply their Spiritual intelligence as they will work satisfied and can give a meaning to it. Therefore nurses will carry out the act of caring and innovative care pertaining to nursing practice, health care, wellness, healing and human potential (Yang and Mao, 2007).

Therefore, nurses whom use spiritual intelligent can solve their stressful and attitude problem to be a high-quality employee and apply a good nursing technique. Nurses who develop their own spirituality can reflect it in their nursing practice, through trusting, empathetic relationships and it helps to provide assurances of spiritual nursing care (Elkins and Cavendish, 2004).

#### *3.1 Models of Spiritual intelligence based on Demographic Factors*

Previous studies have linked nurse's Spiritual intelligence with their nurse's demographic and academic background. Some of the study showed that there were relationship between Spiritual intelligence and gender, age and marital status. However, this study has shown that some demographic factors selected such as age, tenure and type of hospital have no influence in the relationship between Spiritual intelligence and work performance. This study finds the degree of contribution for the practicality of SIWP model that can be used across all nurses and

hospitals in the East Coast of Malaysia. As for the moderating effects, theoretically and empirically, there were no significant moderator in the relationship between Spiritual intelligence and work performance.

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