



Effect of Spiritual Intelligence on Leadership Effectiveness and Food-hygiene Practices

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Abstract

This study suggests an effort through a Holistic View of spiritual intelligence to address low-quality food problem at public institutions in East Malaysia. It explored the causal relationship of this value to Food Performance, Leadership Effectiveness, and Food-Hygiene Practice through 210 food handlers. The Partial Least Square Structural Equation Modeling (PLS-SEM) was used to test the relationship. Holistic View was found to have a positively significant relationship with the performance but, not Leadership Effectiveness. Holistic View among food handlers was found unaffected by Food hygiene practices.

Keywords: Spiritual intelligence; leadership effectiveness; food-hygiene practices; foodservice performance

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1.0 Introduction

A food service institution in the hospitality industry refers to a catering business that provides meals to places like skilled nursing facilities, senior housing, hospitals and intermediate care facilities. It is a meals business that must keep up with today's healthy lifestyle demands for food to be tasty, healthy and safe and most importantly cooked by a committed team of food handlers who are reliable in preparing healthy meals in a healthy working environment.

1.1 Problems in Foodservice Institutions

Food service institutions in Malaysia often have to deal with a diverse workforce that is highly mobile and lacking in work commitment. Foreigners further inflate this diversity as the industry is easily accessible to unskilled workers on a temporary employment pass and who usually work for a low flat wage. High employee turnover is, therefore, a great challenge. Poor sources of raw material, lack of food preparation standards and inadequate infrastructure also pose a problem although not as critical as incompetent food handlers who either have very little or no knowledge of food hygiene practices. They directly contribute to poor quality food in these establishments. This study, therefore, suggests developing food handlers' Holistic View of Spiritual Intelligence to address low-quality food problem at these foodservice establishments.

2.0 Literature Review

2.1 Spiritual Intelligence

Spiritual intelligence (or spiritual quotient) (SQ) is discussed with emotional intelligence (or emotional quotient) (EQ) and successful performance. EQ's abilities and skills controlling personality are extended to SQ, a subset of social intelligence (Mazni, Toh, Mohamed Azam, & Siti Khadijah, 2014). SQ comprises intangible inner attributes that enable one to care, tolerate and adapt (Marques, 2005). It also leads to a clear and stable sense of self-identity that allows one to discern the meaning of work events and circumstances. Employees will become more focused and calm at work, develop a selfless and altruistic attitude towards interpersonal relationships and easily facilitate changes and barriers (George, 2006). SQ is the foundation for healthy workplace relationships that leads to the carrying out of tasks beyond a job's boundary (Kumar & Bhasin, 2014). SQ is defined as the soul's intelligence, with which we heal ourselves and make ourselves whole (Zohar and Marshall, 2001).

2.2 A Holistic View

In some cultures, people find meaning and purpose in life through faith and devotion to one true God. Faith, spiritual strength, positive thinking, and appreciation of religion are all incarnated in SQ. It is a spiritual and Holistic View of an individual's identity - perception, cognition, plans, values, goals, motives, biological factors, conduct, and others (Magnusson & Torestad, 1993). Besides, a person who expects rewards only from God always performs and strives for the best without thinking of other interests like recognition and monetary

values (Magnusson and Forestad, 1993).

Spirituality and religion often confuse people, but active religion presents absolute realities in life (Gupta, Kumar, & Singh, 2014). Religion is narrower and relates to behaviors, tends to be rigid and sometimes without any clear link to ethics (Fry, 2003). Religion too has been referred to continuously in solving problems (Kadkhoda & Jahani, 2012; Lewis, Ritchie, & Bates, 2011; McAdamis, 2011; Rostami & Gol, 2014; Vayalilkarottu, 2012).

2.3 Hypotheses Testing

2.3.1 Food-hygiene Practice and Holistic View

Hygiene practice is linked to Holistic View in Mortell, Balkhy, Tannous, and Jong (2013) where hand hygiene compliance among physicians improved only with evidence. A therapeutic practice for late-life anxiety demonstrates substantial improvement in worry symptoms among older adults with beliefs rooted in religion (Barrera, Zeno, Bush, Barber, & Stanley, 2012). Elements of food hygiene practices that complement religious faith have a positive relationship with Holistic View and should be incorporated into safe and healthy food practices (Mazni, Toh, Mohd Faiz Foong, & Norazmir, 2013).

H1: Food-Hygiene Practice has an impact on Holistic View

2.3.2 Leadership Effectiveness and Holistic View

Intelligence is important in managing capabilities but not so with Australian educational institutions (Grunes, Gudmundsson, & Irmer, 2014). Ronay and Carney (2013) also found testosterone negatively related to empathic accuracy and perceived leadership ability. However, 87 researchers found a link in the spiritual leadership of management practitioners (Dent, Higgins, & Wharff, 2005). This study does not investigate the spiritual value of leaders but instead examines leadership effectiveness from the perception of subordinates.

H2: Perceived Leadership Effectiveness has an impact on Holistic View

2.3.3 Holistic View and Food Performance

A foodservice manager assesses company's performance by gauging how its food measures to others in the same industry. This study, however, looks at how religious and spiritual intelligence affect food performance. In investigating the financial performance of Turkish organizations, Ayranci (2011) found the Holistic View of top managers to have the strongest effect. Similarly, SQ positively impacted the service quality of a Counseling Center in Tehran (Rostami & Gol, 2014). Eliasi and Dwyer (2002), on the other hand, linked dietary food intake and practices to an observance of traditions and religious guidelines, especially for Judaism and Islam. This study expects the religious value to be connected to performance.

H3: Holistic View has an impact on Food Performance

3.0 Methodology

The questionnaire adopted the 6-point Likert scale to elicit a more specific respondent reaction (Croasmun & Ostrom, 2011). Holistic View is a component in the Integrated Spiritual Intelligence Scale (ISIS) and contains items adapted from Ayranci (2011). They refer to a connection with nature, ability to see problems as a whole, and recognition that everything is integrated. Items for Food-Hygiene Practices were taken from Bolton, Meally, Blair, McDowell, and Cowan (2008) and cross-checked against the Self-Examination Programme (SELF) developed by the Malaysian Ministry of Health. Question items for Leadership Effectiveness were adapted from Yukl (2008) and Food Performance from Kleynhans (2003). Judgmental sampling was chosen to generalize the results. The Partial Least Square Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0 tested the model and hypotheses.

4.0 Results and Discussions

Table 1: Profile of Respondents

Construct	Item	Loadings	AVE ^a	CR ^b
Food-Hygiene Practices	Cutting board	0.599	0.538	0.872
	Dented	0.858		
	Gloves	0.780		
	Headcover	0.860		
	Work when sick	0.696		
	Towel	0.547		
Leadership Effectiveness	Contribution	0.744	0.609	0.860
	Decision	0.911		
	Problem solver	0.630		
	Reflection	0.810		
Holistic View	Closeness	0.700	0.639	0.875
	Religious	0.889		
	Religious activities	0.867		
	Religious book	0.723		
Leadership Effectiveness	Contribution	0.744	0.609	0.860
	Decision	0.911		
	Problem solver	0.630		
	Reflection	0.810		
Holistic View	Closeness	0.700	0.639	0.875
	Religious	0.889		
	Religious activities	0.867		
	Religious book	0.723		
Food Performance	Food presentation	0.822	0.550	0.859
	Food temperature	0.699		
	Menu	0.686		
	Quality	0.668		
	Tasty	0.820		

Note: Sink, Watch, and Needs were deleted due to low loadings

^a Average variance extracted (AVE) = (summation of the square of the factor loadings)/(summation of the square of the factor loadings) + (summation of the error variances)

^b Composite reliability (CR) = (square of the summation of the factor loadings)/(square of the summation of the factor loadings) + (square of the summation of the error variances)

The validity and reliability of the measures follow the structural model for the testing of a hypothesized relationship. In which it is consistent with the views of Joseph F. Hair, Hult, Ringle, and Sarstedt (2014), T. Ramayah, Lee, and Boey (2011), and T. Ramayah, Yeap, and Ignatius (2013). The bootstrapping method of 500 resamples tested the significance of the path coefficients and the loadings (Gholami, Sulaiman, Ramayah, & Molla, 2013).

Table 1 shows respondents from East Malaysia (54% female); with 80% below 40 years old. The majority were permanent or contract workers and engaged in more than 8 hours of work daily. More than 80% worked for less than five years, most had attended food handling courses and had typhoid immunization.

4.1 Measurement Model

Table 2: Results of measurement model

Construct	Item	Loadings	AVE ^a	CR ²
Food-Hygiene Practices	Cutting board	0.599	0.538	0.872
	Dented	0.858		
	Gloves	0.780		
	Headcover	0.860		
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Note: Sink, Watch, and Needs were deleted due to low loadings
^a Average variance extracted (AVE) = (summation of the square of the factor loadings)/(summation of the square of the factor loadings) + (summation of the error variances)

Convergent validity is usually ascertained by loadings, average variance and composite reliability (Gholami et al. 2013). Loadings were all higher than 0.5; composite reliability higher than 0.7 and AVE greater than 0.5 (Table 2). The discriminant validity of the measures was inspected. Correlation between constructs and the square root of the average variance of each construct was observed and compared as suggested by Gholami et al., 2013. The square root of AVE is higher than correlational values (Table 3) indicating adequate discriminant validity (Fornell & Larcker, 1981). Hence, the model evaluation criteria were met and its reliability and validity measures supported.

Table 3: Discriminant validity

Discriminant validity of constructs	Food Service Performance	Food-Hygiene Practices	Holistic-View	Perceived Leadership Effectiveness
Food Service Performance	0.742			
Food-Hygiene Practice	0.094	0.733		
Holistic View	0.247	0.149	0.799	
Perceived Leadership Effectiveness	0.526	0.132	0.275	0.780

Note: Diagonal elements are the square root of the average variance extracted (AVE) between the constructs and their measures. Off-diagonal elements are correlations between constructs. For discriminant validity, diagonal elements should be larger than off-diagonal elements in the same row and column.

4.2 Structural Model

The structural model shows causal relationships among constructs in the model (Sang, Lee, & Lee, 2010). Figure 1 of Table 4 shows the results of the structural model from the PLS output. Perceived Leadership Effectiveness positively relates to Holistic View ($R^2 = 0.088$, $\beta = 0.260$, $p < 0.01$) and Holistic View to Food Performance ($R^2 = 0.061$, $\beta = 0.247$, $p < 0.01$). These findings support H2 and H3. However, Food-Hygiene Practice ($\beta = 0.114$, $p > 0.05$) is not a significant predictor of Holistic View. Thus, H1 is not supported. There is a 6.1% variance in Food Performance, so the most significant predictors are Leadership Effectiveness and Holistic View.

Q^2 via blindfolding measures predictive relevance. As predicting observables is more significant than estimating constructs, part of the data was omitted during parameter estimations and then estimated (Chin 2010). Omission distance can be from 5 to 10. $Q^2 > 0$ implies the model's predictive relevance whereas $Q^2 < 0$ a lack of predictive relevance

(Fornell & Cha, 1994). The cross-validated redundancy for two endogenous constructs, Holistic View, and Food Performance (see Figure 1) was calculated for predictive relevance (Chin, 2010). Table 5 shows Q² values at 0.027 and 0.044 respectively indicating the model's predictive relevance.

Table 4: Summary of results of hypotheses testing

Hypothesis	Relationship	Beta	Std Error	t-value	Decision
H1	Food-Hygiene Practices→Holistic View	0.114	0.158	0.723	Not Supported
H2	Perceived Leadership Effectiveness→Holistic View	0.260	0.065	3.992***	Supported
H3	Holistic View→Food Service Performance	0.247	0.065	3.783***	Supported

*Notes: ***p<0.01(2.33), **p<0.05(1.645), *p<0.1(1.28); (based on the one-tailed test)*

Table 5: Blindfolding result: cv-communality and cv-redundancy

Block	Cv – Communality H ²	Cv- Redundancy F ²
Food Performance	0.523	0.027
Holistic View	0.407	0.044

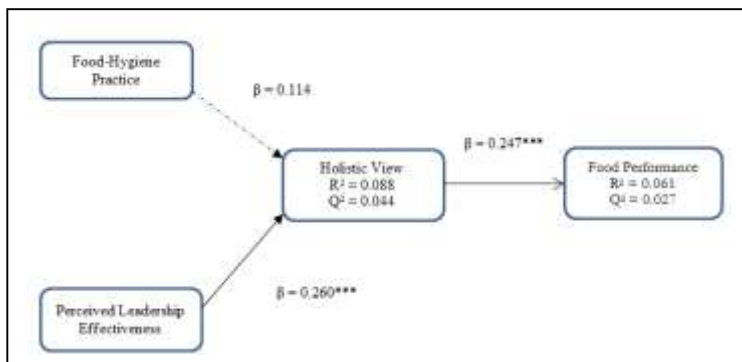


Figure 1: Hypothesis Testing Results

4.3 Implications of the Study

Holistic View in this study has a positively significant relationship with performance, but not with Perceived Leadership Effectiveness. This contradicts the findings of Grunes et al. (2014) as well as discussions relating to the relationship between SQ and leadership (Dent et al., 2005).

The implication is that efforts should focus on nurturing food handlers with high SQ values as they would selflessly work to ensure that food prepared is always of the highest quality no matter the odds they face in the workplace. Food purveyors who are the decision makers in the food service operation should also be involved in developing Holistic View values of front-line employees so that they can deal with the complexities of food service business. Also, immediate supervisors need to find the most efficient way of delegating work that would make food handlers competent, knowledgeable and useful at work.

4.4 Limitations of the Study

The study results are based on data collected from public food service operations and are not generalizable to other contexts. The data is perceived-based obtained via self-reporting at the individual level. It is the food handlers and not consumers who measure Leadership Effectiveness of their immediate supervisors and Food Performance.

5.0 Conclusion

Perceived Leadership Effectiveness of immediate superiors can develop holistic values of younger food handlers. Strong and convincing leaders can influence subordinates to work effectively. Also, food handlers with holistic values have a distinct work identity, are more aware of roles and responsibilities, and tend to improve food performance. Nevertheless, food handling activities did not bring about any holistic effect on food handlers who seemed preoccupied with daily food preparation.

Future research could examine why Food-Hygiene Practices do not affect Holistic View. One possibility is to test the relationship using formative measures on Food-Hygiene Practice items. Also, the effect of Food-Hygiene practices on other values like self-consciousness, high-consciousness and challenge could be studied instead. Finally, a study could be done on how values of Holistic View could help front-line employees deal with complex food service situations.

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