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The Relationship among Emotional Intelligence, Social Support, Job Involvement, and Turnover Intention – A Study of Nurses in Taiwan

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Abstract

This study examines the relationship between nursing staff's emotional intelligence, social support, job involvement, and turnover intention of nursing staff. The MANOVA Multivariate Analysis of Variance (MANOVA) and Structural Equation Modeling (SEM) were used to examine the aforesaid constructs. The results of the study show that while emotional intelligence has a positive impact on social support and job involvement, social support also has a positive impact on job involvement. Meanwhile, both social support and job involvement have a negative impact on turnover intention. Therefore, the underlying reasons for turnover behavior can be traced back to emotional intelligence, whereas social support and job involvement can be two tiers of mediators. These results can provide hospitals with human resource management strategies and serve as a reference for organizational management.

Keywords: Emotional Intelligence, Social Support, Job involvement, Turnover intention, Nurses

1. Introduction

Labor shortage could also be due to the regulations, which are generally the results obtained after hot debates and political wrestling between employers and employees. However, the employees are often the weaker ones. Therefore, in the past, the statutory ordinances still tended to favor employers and led to long term shortage problems in such industries. Taking the nursing industry as an example, every hospital in the entire country has labor shortage problems, and the shortage of nurses is around 9,000 persons in Taiwan. The problem of insufficient nursing staff lies in the low employment rate and high turnover rate. At present, there are more than 100,000 nurses in Taiwan. Most of them cannot take leave even when they are sick. There has been often some news about the death caused by working overtime or long-term fatigue. Even in some cases, the nurses have to work carrying an intravenous injection with them. The Ministry of Health and Welfare (2018), released the ideal ratio of patient and nurse in Taiwan is 7 to 1, but in fact, in the hospital, one nurse needs to take care of a dozen patients. The problem of the nursing shortage is bit by bit eroding the medical system in Taiwan.

This study, therefore, aims to explore the factors that affect the turnover intention of nursing staff. Wu et al. (2009) documented that the turnover rate of nursing staff in Taiwan is very high, and the turnover rate of nursing staff

within 3 months of employment is 50-60% and that within one year is 20-32%. The National Federation of Nurses Association of the Republic of China (2018) pointed out that from December 2013 to February 2018, 89.76% of the hospitals in Taiwan had difficulty in nursing recruitment and the average vacancy rate was 5.57%. Therefore, some of the hospitals had to reduce the number of beds or wards to cope with the situation. Chang et al. (2010), pointed out that the main reasons for the departure of nursing staff come from the characteristics of the nursing work itself. To improve the nursing manpower problem, the nursing staff's ability should be considered, and appropriate nursing work be arranged accordingly. In addition to improving the job environment and reducing the potential factors that cause turnover intention, the government or hospitals can learn from the United States to promote "Magnet hospitals," and attract excellent caregivers willing to engage in nursing work (Pinkerton, 2008; Westendorf, 2007; Wolf et al., 2008). Hospitals or the authority may follow the practice of Australia, California in the U.S.A. and Japan to reduce the ratio of caregivers to patients (Goo et al., 2007; Kao, 2011; Lu, 2009). Hospitals should also promote nursing care retention strategies, to improve the nursing practice environment (Lu et al., 2008) and conduct career planning so that caregivers within a certain age can switch to units that do not need to have night shifts or long work shifts (Huang & Kuo, 2009) to reduce the turnover rate.

At present, the relevant research on nursing staff turnover at home and abroad is mostly focused on job stress and job burnout (Cai Huina et al., 2014; Huang Baoyuan, 2009; Wu et al., 2012; Zeytinoglu et al., 2006) and working pressure (Zangaro & Soeken, 2007; Yu et al., 2008; Chang et al., 2008). However, in addition to working values and work stress, there are emotional intelligence, social support, job involvement, and turnover intention. The study hopes to explore the issues of the nursing staff's emotional intelligence, social support, job involvement, and turnover intention in different aspects, and to fill the gap of previous work regarding nursing staff. Meanwhile, the differences among different hospital care workers are also discussed in this paper. We hope that the findings of this study will enable the Department of Health and medical institutions to gain a better understanding of the manpower loss of caregivers as a reference for future operations.

2. Literature Review

2.1 Emotional Intelligence

Goleman (1996) divided emotional intelligence into five categories: First is understanding one's emotion. The second is managing emotion properly. The third is motivating oneself. The fourth is recognizing emotions in others, while the last is managing relationships. Knowing one's emotion is the basis of emotional intelligence. Proper management of emotions must be based on the basis of self-awareness, understanding how to self-comfort and dispensing of anxiety and darkness. Motivating oneself is a kind of emotional control that enables people to do things more efficiently. Bar-on (2000) suggested that emotional intelligence is the knowledge and social ability that allows a person to have effective emotional responses in different conditions. The theoretical model consisted of five dimensions: interpersonal components, individual internal components, adaptive components, general mood components, and stress management components. These components were made up of five subcomponents: (1) interpersonal components: empathy, social responsibility, interpersonal relationships, (2) individual internal components: self-awareness, self-confidence, self-respect, self-realization, independence, (3) adaptive components: real test, problem solving, agility, (4) general mood components: happiness, optimism, (5) pressure management components: pressure to withstand, impulse control

2.2 Social Support

Cohen et al. (2000) documented that "social support" in the broad sense refers to any social relationship that may contribute to the course of personal health and happiness. Sarason et al. (1983) argued that the measurement of social support includes two factors; one is the number of people one can rely on, the other is the degree of satisfaction. Individuals' satisfaction with others' social support may be influenced by factors such as whether the individual was able to control environmental sensations and recent experiences. Therefore, social support is a subjective feeling, only when the recipient feels supported and satisfied, can it be considered social support.

2.3 Job Involvement

Lodahl and Kejner (1965) integrated multiple concepts of job involvement into two concepts. The first concept was that work performance affects the extent of one's self-esteem. Then, job involvement comes from the level of

individual self-esteem, which depends on the quality of one's performances. The second concept was the recognition of one's work. Since an individual's work value mainly comes from the early socialization process, lasting in one's self-concept, it's not easy to change, and not easily affected by the organizational environment (Brown, 1996). Robinowitz and Hall (1977) indicated that there was a positive correlation between job involvement and age. This might result from the older a person is, the more mature he or she becomes, and the higher need of economic stability.

Turnover Intention

3. Methodology

3.1 Sample

A pretest of the questionnaire was performed to ensure content validity and reliability within the target context. Thirty pretest questionnaires were distributed to the participants in the training program of the Taiwan Nurses Association. In addition, five experts in the organizational behavior areas and five RNs were invited to assess wording clarity, question-item sequence adequacy, and task relevance. Several minor modifications of the wording and the question-item sequence were made based on the comments collected from these experts.

In this study, the online questionnaires were collected from 390 hospital nurses. The valid questionnaires numbered 370, and thus, the valid percentage was 94.87%. The contents of the questionnaire included the questions of emotional intelligence scale, social support scale, job involvement scale, turnover tendency scale, and nurses basic information; This questionnaire used the Likert five-point scale, which is given by the caregivers and assigned 1 to 5 points based on their opinions from "strongly disagree" to "strongly agree". The majority of the respondents were female (94.1 %), were under 35 years old (84.9%), had an educational level of college or higher (95.7%), and had worked less than 5 years(63.8%), had an average personal income per month of less than NT\$ 50,000 (93.0 %).

3.2 Measurement of the Constructs

The questionnaire contained four parts. The first part was the Emotional Intelligence Questionnaire, the questionnaire developed by Sun(2004), which was according to Goleman's (1996) Emotional Intelligence Theory, included five aspects of understanding their emotions, managing emotions, self-motivation, screening others' emotions and managing interpersonal relationships. The Cronbach's alpha of the questionnaire was 0.870, which has demonstrated its reliability and validity (Sun, 2004).

The second part of the questionnaire measured the respondents' degree of social support. The Social Support Questionnaire is based on the Sarason's (1983) Social Support Definition to develop the Social Network Model Scale, which includes three facets: personal, work, and family. The overall Cronbach's α reaches 0.890 (Sarason, 1983), showing that this scale has good reliability.

The third part of the questionnaire measured the respondents' general attitude toward job involvement. The Job Involvement Scale refers to the questionnaire by Xu et al. (1999) compiled based on the "Job Involvement Model Scale" developed by Robinowitz and Hall (1977), which includes two facets: the importance of job involvement and the importance of job identification. The facet, the overall Cronbach's α reached 0.780 (Xu et al., 1999), showing that the scale has good reliability.

The fourth part of the questionnaire measured the respondents 'turnover intention, including their religious affiliation (Buddhism, Taoism, Christianity, Catholicism, or other). The turnover intention scale is based on the "Departure Disposition Scale" developed by Richard et al. (2001), which includes two facets: separation ideas and separation plans. The overall Cronbach's α reaches 0.90 (Richard et al., 2001) showed that this scale has good reliability.

3.3 Hypothesis and Research Framework

Douglas et al. (1996) pointed out that emotional, social support is that when a person is unhappy, his colleagues or supervisors can listen to his complaints and provide encouragement and comfort to relieve or convert his

personal feelings. Robbins (2006) pointed out that the difference between the average senior supervisor and the excellent executer is up to 90% due to emotional intelligence factors. In addition, emotional intelligence will affect employees, social support, and working efficiency, so companies should focus on emotional intelligence. High emotional intelligence can easily convert negative emotions into positive ones and thus result in better job performance (Lam & Kirby, 2002; Sy et al. 2006; Othman et al., 2008; Singh, 2008). Goleman (1996) suggested that when the person's emotional intelligence is high, one will feel content and get along with others, and could feel the emotional changes of self, full of positive attitude and empathy. He also emphasized that anxiety and the achievement of learning will be affected by emotional intelligence. Argyle (1987) suggested that emotions could be controlled when individuals have a benign interaction with society, so emotional intelligence and social support have a mutually influential relationship. According to the above literature, this study proposes the following hypothesis:

Hypothesis 1: Emotional intelligence has a positive impact on social support.

From the theory of emotional intelligence in the literature, the higher the emotional intelligence, the easier it is to convert the negative emotional behavior into a positive emotional process with less negative feelings, and thus, the employee could have a better work performance (Mayer & Salovey, 1997). Salovey and Mayer (1990) can also be used to prove that when an individual's emotional intelligence is high, one can prioritize and deal with tasks properly. Therefore, according to the above literature, this study proposes the following hypothesis:

Hypothesis 2: Emotional intelligence has a positive impact on job involvement.

Lord (1996) suggested that when employees receive social support at work, they will act and give full consideration to the benefit of the organization as an exchange. As for the work attitude, there will be a higher trust and organizational commitment. Likewise, when the employees feel that they are the important ones in the organizations, they will have a strong sense of organizational recognition. Therefore, the higher the social support, the higher the extent of staff engagement. Aoki et al. (2002) documented that in terms of professionals such as public school teachers, social support would improve their recognition of their schools and job involvement. Zheng Yanli (2007) suggested that in the case of the information industry, there is a positive correlation between job involvement and family support. The higher the self-evaluation and family support, the higher the job involvement is. According to the above literature, this study proposes the following hypothesis:

Hypothesis 3: Social support has a positive impact on job involvement.

Steinhardt et al. (2003) and McGrath et al. (2003) argued that if the employees do not have sufficient support in the workplace, they will be susceptible to greater work pressure. Ray and Miller (1991); Thomas and Ganster (1995) and Iverson et al. (1998) argued that social support is an important resilience mechanism that can significantly reduce the negative impact of stressors. It had the ability to protect individuals against life stress events (Ootim, 2001). Dollard et al. (2000) suggested that social support played an important variable in relation to stress in a psychosocial work environment. According to the above literature, this study proposes the following hypothesis:

Hypothesis 4: Social support has a negative impact on turnover intention.

Rabinowitz and Hall (1977) argued that if the employee's job involvement is higher, the turnover tendency is lower. Hom and Griffeth (1995) analyzed the first three major predictors of turnover intention, job satisfaction, organizational commitment, and job involvement, all of which were relevant to turnover intention. According to the above literature, this study proposes the following hypothesis:

Hypothesis 5: Job involvement has a negative impact on turnover intention.

4. Data Analysis and Results

4.1 Reliability and Validity of Research Constructs

Data analysis was conducted using a two-stage methodology involving a measurement model and a structural model, as recommended by McDonald and Ho (2002). The first step in the data analysis was to assess the construct validity for the ten measurement elements by performing LISREL confirmatory factor analysis. The adequacy of

the measurement model was evaluated according to the criteria of reliability, convergent validity, and discriminant validity. Reliability assesses the extent to which varying approaches construct measurements and yield the same results (Campbell and Fiske 1959), and composite reliability (CR) is used to examine the reliability. As shown in Table 2, all of the CR values were greater than the common acceptance level of 0.60 (Bagozzi and Yi 1988). The convergent validity of the measurement scales was evaluated using two criteria suggested by Jořreskog and Sořrbom (1989): (a) all indicator factor loadings should be significant and exceed 0.45, and (b) the average variance extracted (AVE) by each construct should exceed 0.50. All factor loadings were higher than the 0.45 benchmark in this study. As shown in Table 2, most AVEs were greater than 0.5, except those for the social support and turnover intention scales, both of which had AVE values (0.45 and 0.43, respectively) slightly below the required minimum criterion of 0.5. Hatcher (1998) proposed that even if the AVE of one or two of the constructs is less than 0.5, the convergent validity can still be considered acceptable. Therefore, the convergent validity was deemed acceptable in the present study.

Discriminant validity assesses the extent to which a concept and its indicator differ from another concept and its indicators (Bagozzi and Phillips 1991). The discriminant validity of the measures was assessed using the guidelines suggested by Fornell and Larcker (1981); namely, the square root of the AVE for each construct should exceed the correlation between that and any other construct. Table 2 lists the correlation matrix, with the correlations among the constructs and the square root of the AVE on the diagonals. The diagonal values exceeded the inter-construct correlations; hence, the measures met the standard for discriminant validity.

Table 2 Correlations, CR, and AVE among variables

Construct	EI	SS	JI	TI
EI	0.76			
SS	0.43**	0.67		
JI	0.17**	0.21**	0.71	
TI	- 0.29**	- 0.23**	0.10	0.66
CR	0.83	0.61	0.73	0.60
AVE	0.58	0.45	0.51	0.43

Diagonal elements (in bold) are the square root of the average variance extracted (AVE)

Off-diagonal elements are the correlations among latent variables (* p<0.05. ** p<0.01, two-tailed)

CR composite reliability, AVE average variance extracted.

4.2 Model Testing Results

Four separate models were tested to examine the relationships among the three independent variables (emotional intelligence, social support, and job involvement) and the dependent variables (turnover intention). Structural equation modeling was used to test the hypothesized relationships in the research model. For models with a good fit, the Chi-square normalized by degrees of freedom (CMIN/df) should not exceed 3, and the non-normed fit index (NNFI), comparative fit index (CFI), and goodness-of-fit index (GFI) should exceed 0.9 (Bentler 1983, 1988; Browne and Cudeck 1993; Hayduk 1987). The root means square error of approximation (RMSEA) should be less than 0.08 (Jořreskog and Sořrbom 1993). For the structural models (see Table 3), χ^2/df was 2.622; the GFI was 0.969; the RMSEA was 0.066; NNFI was 0.929, and the CFI was 0.954. In summary, the overall results suggest that the research model provided an adequate fit to the data.

Table 3 Model fit index summary

Fitness type	Index	Estimates of this study	Recommended standard values	Whether it is standard
Absolute Fit Measurement	CMIN/DF	2.622	<3	Yes
	GFI	0.969	>0.9	Yes
	RMSEA	0.066	<0.08	Yes
Incremental Fit Measurement	NNFI	0.929	>0.9	Yes
	CFI	0.954	>0.9	Yes

GFI goodness-of-fit index, RMSEA root mean square error of approximation, NNFI non-normed fit index; CFI comparative fit index.

From the path coefficients of the revised theoretical structure model in Table 4, the path between emotional intelligence and social support was statistically significant with a positive coefficient ($b = 0.853$; $p < 0.001$). It means emotional intelligence exerts significantly direct influence on social support. Thus, H1 was supported. The path between emotional intelligence and job engagement was statistically significant, with a positive coefficient ($b = 0.946$; $p < 0.001$). It means that emotional intelligence has a significant direct effect on job engagement, that is, the higher emotional intelligence of nurses, the higher job engagement of nursing staff. Hence, H2 was supported. The path between social support and job engagement was statistically significant ($b = 0.496$; $p < 0.05$). It indicates that the higher social support of the nursing staff, the higher the possibility they tend to have high job engagement. Therefore, H3 was supported. From the theoretical structure model in Table 4, the path coefficients between social support and turnover were statistically significant with a negative coefficient ($b = -0.644$; $p < 0.001$). It means that the nursing staff's social support has a direct negative effect on turnover intention. Thus, H 4 was supported. The path coefficients between social support and turnover intention were statistically significant ($b = -0.235$; $p < 0.01$). It means the job involvement of nursing staff has a significantly negative impact on turnover intention. Therefore, H5 was supported.

Table 4 Parameter estimation of the modified theoretical model

Relationship of construct	Standardized estimates	Results
Social support ← Emotional intelligence (H1)	0.853***	Supported
Job engagement ← Emotional intelligence (H2)	0.946***	Supported
Job engagement ← Social support (H3)	0.496*	Supported
Turnover intention ← Social support (H4)	-0.644***	Supported
Turnover intention ← Job engagement (H5)	-0.235**	Supported

$P < 0.05^*$, $P < 0.01^{**}$, $P < 0.001^{***}$

Conclusion

Since the problems of chronic fatigue or even "karoshi" (sudden death from overwork) are quite common in Taiwan, the government launched a revised labor law. The issue continues to raise a lot of debate and political wrestling between employers and employees, as well as between different political parties in Taiwan. Some of the problems present themselves in the form of labor shortage, especially in some service-intensive industries, such as in the nursing industry. The problem of insufficient nursing staff mainly comes from a high turnover rate. This study, therefore, aims to explore the emotional intelligence, social support, job involvement and turnover intention of nurses by literature and analyzes the differences of the nurses with different personal factors in the four constructs and the association between them. Finally, we put forward the academic and practical recommendations based on our research findings in the following issues.

First, the empirical evidence shows that emotional intelligence has a significant direct impact on social support and job involvement. This means that when the emotional intelligence of nurses is higher, the social support will increase, and then job involvement will also improve. According to the MANOVA analysis, nurses with different ages and different service years of care-related work have significant differences in emotional self-adjustment, interpersonal relationships, emotional management, and social support. The nurses with higher ages tend to have lower emotional intelligence, social support, and job involvement. Meanwhile, they also are inclined to have higher turnover intention. The fewer years of service in care-related work, the lower the average score of emotional intelligence. The results of this study are the same as those of Lin et al. (2009), who suggested that employees with higher social support will have better emotional intelligence, and employees with better emotional intelligence will be more likely to adapt well.

Second, this study finds that social support has a negative effect on job involvement and turnover intention. Namely, when the social support of the nursing staff is higher, the more willing the nursing staff will be to work

in the hospital, and thus, the turnover rate will be reduced. According to the MANOVA analysis, nurses with different ages and different service years of care-related work have significant differences in social support, as well as job involvement and turnover intention. In different age groups, nursing staff falling within 36-40 years of age, when compared to other age groups, social support is lower, and thus, job involvement is lower, and the turnover tendency is higher. As for different service years in care-related work, employees with less than 1 year (inclusive) of service year have higher social support, and their job involvement is also higher. Our study and Lord (1996) and Lin Zhichun (2009) have the same results. The higher the level of social support, the higher the job involvement.

Third, our evidence shows the job involvement of the nursing staff has a negative impact on turnover intention. According to the MANOVA analysis, nursing staff of different age groups, different service years and different years of care-related work have significant differences in job involvement and turnover tendency, which includes resignation plan and turnover intention. In different age groups, for the nursing staff of 36 years of age and above, the lower job involvement results in, the higher turnover tendency. The job involvement of nurses within 15-20 years of age is lower; the turnover tendency of 25-30 years of age is higher. The results of this study are the same as those of Dai et al. (2012). The higher the degree of job involvement, the more attention the employee will pay to his work. Dai et al. (2012) suggest that when recruiting employees, employers should pay attention to whether employees have the personality traits of job involvement.

Overall, the underlying reason of turnover behavior can be traced back to emotional intelligence, whereas social support and job involvement can be two tiers of mediators. Broadly speaking, the government regulations are also part of social support, which can lead to the job involvement of nursing staff. Then, the turnover intention will also be affected accordingly. These results can provide hospitals with human resource management strategies and serve as a reference for organizational management.

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