Emotional Intelligence and Job Performance of Nurses in Tertiary Hospitals of Xishuangbanna City, the People's Republic of China*
ความฉลาดทางอารมณ์และการปฏิบัติงานของพยาบาลในโรงพยาบาลระดับตติยภูมิของเมืองสิบสองปันนา สาธารณรัฐประชาชนจีน*

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Abstract

Emotional intelligence is an important ability for improving job performance. This correlational study aimed to explore levels of emotional intelligence and job performance, as well as the relationships between the two, among nurses in tertiary hospitals in Xishuangbanna City, the People's Republic of China. The sample included 296 nurses working in two tertiary hospitals in Xishuangbanna City. Research instruments were the Wong and Law Emotional Intelligence Scale (WLEIS) (Wong & Law, 2002) and the Shortened Job Performance Scale (SJPS) (Greenslade, 2008) translated into Chinese by Lin (2012). The Cronbach's alpha coefficients were .94 and .92. The data were analyzed with descriptive statistics and Pearson's Product-Moment correlation.

The results of this study were as follows:

1. The mean score of overall emotional intelligence was at a moderate level ($\bar{X}$ =4.91, SD=0.84). In terms of each dimension of emotional intelligence, Self-Emotion Appraisal (SEA) was at a high level ($\bar{X}$ =5.61, SD=0.87), while Others' Emotion Appraisal (OEA), Regulation of Emotion in the self (ROE), and Use of Emotion to facilitate performance (UOE) were at moderate levels ($\bar{X}$ =4.55, SD=1.19; $\bar{X}$ =4.58, SD=1.20; $\bar{X}$ =4.90, SD=1.11).

2. The mean scores of task performance and contextual performance were at a moderate level ($\bar{X}$ =54.39, SD=10.57; $\bar{X}$ =67.54, SD=12.12).

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3. There were significant positive relationships between emotional intelligence and task performance (r = .456, p<0.01) as well as emotional intelligence and contextual performance (r =.432, p<0.01).

Nursing administrators could develop strategies to improve nurses' emotional intelligence skills, enhancing overall work performance.

Keywords: Emotional intelligence, Job performance, Nurse, Tertiary hospital

บทคัดย่อ

ความฉลาดทางอารมณ์เป็นความสามารถที่สำคัญในการที่จะเพิ่มความสามารถการปฏิบัติงานของพยาบาล การวิจัยเชิงพรรณนานี้มีวัตถุประสงค์เพื่อศึกษาระดับของความฉลาดทางอารมณ์และการปฏิบัติงาน และความสัมพันธ์ระหว่างความฉลาดทางอารมณ์และการปฏิบัติงานของพยาบาล ในโรงพยาบาลระดับตติยภูมิของเมืองสิบสองปันนา สาธารณรัฐประชาชนจีน กลุ่มตัวอย่างประกอบด้วย พยาบาลจำนวน 296 คนที่ปฏิบัติงานใน 2 โรงพยาบาลระดับตติภูมิของเมืองสิบสองปันนา สาธารณรัฐประชาชนจีน เครื่องมือการวิจัยได้แก่ 1) แบบวัดความฉลาดทางอารมณ์ (WLEIS) ของ หว่อง และ ลอ (Wong & Law, 2002) และ 2) แบบประเมินการปฏิบัติงานฉบับย่อ (SJPS) แปลเป็นภาษาจีนโดยลิน (Lin, 2012) ค่าสัมประสิทธิ์อัลฟาของครอนบาคมีค่าเท่ากับ .94 และ .92 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และสัมประสิทธิ์สหสัมพันธ์เพียรสัน

ผลการศึกษาพบว่า

1. ความฉลาดทางอารมณ์ในภาพรวมอยู่ในระดับปานกลาง ($\bar{X}$=4.91, SD=0.84) และในแต่ละด้านของความฉลาดทางอารมณ์ พบว่าด้านการตระหนักรู้อารมณ์ตนเองอยู่ในระดับสูง ($\bar{X}$=5.61, SD=0.87), ด้านการตระหนักรู้อารมณ์ผู้อื่น ด้านการควบคุมอารมณ์ของตนเอง ด้านการใช้อารมณ์ในการจัดการสิ่งต่าง ๆ อยู่ในระดับปานกลาง ($\bar{X}$=4.55, SD=1.19; $\bar{X}$=4.58, SD=1.20; $\bar{X}$=4.90, SD=1.11)

2. ผลของการปฏิบัติงานของพยาบาลในหน้าที่ และการปฏิบัติงานตามสถานการณ์อยู่ในระดับปานกลาง ($\bar{X}$=54.39, SD=10.57; $\bar{X}$=67.54, SD=12.12)

3. มีความสัมพันธ์เชิงบวกระหว่างความฉลาดทางอารมณ์และการปฏิบัติงานของพยาบาลในหน้าที่ (r= .456, p<0.01) และ ความฉลาดทางอารมณ์และการปฏิบัติงานตามสถานการณ์ (r = .432, p<0.01)

ผู้บริหารทางการพยาบาลสามารถพัฒนากลยุทธ์ในการเพิ่มทักษะความฉลาดทางอารมณ์ของพยาบาล ซึ่งจะช่วยให้บุคลากรทางการพยาบาลมีผลการปฏิบัติงานดีขึ้น

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Background and Significance

Job performance of nurses is becoming an important issue in healthcare systems, as nurses' performance during work directly affects health-related patient outcomes (Lee, Chang, Pearson, Kahn, & Rubenstein, 1999). Job performance (JP) refers to the behaviors performed by nurses that contribute directly to the organization's technical core (task performance) and these behaviors maintain the broader social environment in which the technical core must function (contextual performance). (Greenslade & Jimmieson, 2007).

Emotional intelligence (EI) is the ability to assess one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions (Salovey & Mayer, 1990). EI consist of four dimensions: self-emotion appraisal (SEA); other's emotion appraisal (OEA); regulation of emotion in the self (ROE); and use of emotion to facilitate performance (UOE).

Emotional intelligence is one of the most significant personal factors related to job performance. Previous studies in China found that EI can positively affect JP (Lei, 2010; Tao & Song, 2012). However, Chinese scholars used the six-D Job Performance Scale (Schwirian, 1978) to measure nurses' JP, which focused on task performance only, but did not test the data from contextual performance. The behaviors of nurses' contextual performance need to be added in China.

Nurses in tertiary hospitals in Xishuangbanna must have EI abilities, for instance, considering the different cultural backgrounds of patients during nursing care, trying to understand these patients' feelings and emotions during nursing work, and expressing their own emotions in an appropriate way while using positive emotions to guide nursing care; however, tests of EI and JP have still not been administered in Xishuangbanna city.

Objectives

1. To examine nurses' emotional intelligence (EI) in tertiary hospitals in Xishuangbanna city, the People's Republic of China.

2. To examine nurses' job performance (JP) in tertiary hospitals in Xishuangbanna city, the People's Republic of China.

3. To explore the relationship between nurses' EI and their task performance, as well as the relationship between nurses' EI and their contextual performance in tertiary hospitals in Xishuangbanna city, the People's Republic of China.

Conceptual Framework

The conceptual framework of EI was based on the Ability Model of Emotional Intelligence (Salovey & Mayer, 1990) which defined Emotional intelligence as the ability to monitor one's own and other's feelings and emotions (SEA, OEA), to discriminate among them (ROE), and to use this information to guide one's thinking and actions (UOE).

JP refers to the behaviors performed by nurses that directly contribute to the technical core of organization (task performance) and those behaviors that maintain the wider social environment (contextual performance) in which the technical core must function (Greenslade, 2007). EI allows nurses to observe and understand their own emotions, and those of the patients and others. This makes nurses more likely to take time to meet the emotional needs of patients and listen to families' concerns (task performance). Meanwhile, EI abilities help

nurses regulate their emotions to a normal state quickly, and use emotions in an appropriate way to guide their work. This helps them inspire the morale of other nurses in their department, and share their knowledge with other nurses (contextual performance).

Methodology

Population and Sample

The target population of this study includes all nurses in two tertiary hospitals.

The sample size of this study was calculated using the formula of Yamane (1973) at the level of significance of 0.05. Considering the possible loss of sample, 20% (Hogg 1995) of the sample size (55 nurses) was added. A stratified random sampling method was employed. A total of 328 questionnaires were distributed, 309 were returned, and 296 (90.24%) were analyzed.

Research Instruments

1. A Demographic Data Form developed by the researcher; closed-end questions were used to collect relevant information from the participants.

2. The Chinese Wong and Law Emotional Intelligence Scale (WLEIS) consists of 16 items. Each item was rated by a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree) (Wong & Low, 2002). The mean score was used to measure each dimension and the overall scores of EI with a higher score indicating higher emotional intelligence.

3. The Chinese Version of Shortened Job Performance Scale (SJPS), developed by Greenslade (2008) and translated by Lin (2012), consists of 25 items including task performance and contextual performance. The items belonging to task performance were answered with a 7- point Likert scale which ranged from 1 (poor) to 7 (excellent). The total score was obtained through summing scores of each item in the task and contextual parts, with a range from 11 to 77 for task performance and 14 to 98 for contextual performance. A higher score indicated a higher level of task and contextual performance.

For the validity of instruments, the Chinese WLEIS was used without changing any words in the instrument, so test validity was not necessary to prove again (Wong & Low, 2002). The validity of the Chinese SJPS displayed a good convergent and criterion validity (Lin, 2012). The reliabilities of the Chinese WLEIS and the Chinese version of the Shortened Nursing Performance Scale were tested in this study. A pilot study was conducted with 20 randomly selected nurses who had the same characteristics before data collection. The Cronbach's α coefficient of the overall WLEIS was 0.942 and the dimensions of SEA, ROE, UOE, and OEA were 0.840, 0.943, 0.909, and 0.940, respectively. The Cronbach's α coefficient of the overall SJPS was 0.942, of Task Performance, 0.856, and Contextual Performance, 0.873.

Ethical Considerations

The study was approved by the Research Ethics Review Committee, Faculty of Nursing, Chiang Mai University. Permission to collect data was obtained from the target hospitals. All participants were informed about the objectives and methods of this study and notified about the right to refuse or withdraw this study at any time without being penalized or affected regarding any benefits.

Data Collection

After getting permission from the directors of tertiary hospitals, the researcher met with the nursing directors to explain the objectives and the process of data collection.

The researcher distributed the package of questionnaires to all participants who were requested to complete the questionnaires in their available time. The participants were asked to keep the information letter and to return the questionnaires and consent form in separate sealed envelopes to a lock box proved in the nursing department. Out of 358 questionnaires distributed, 321 questionnaires were returned (89.66%), 30 questionnaires were incomplete and 37 questionnaires have missing data, Thus, 291 (81.28%) were used for data analysis.

Data Analysis

The statistical package for the social sciences (SPSS) English version 13.0 was used. The significance level was set at 0.01. Mean and standard deviation were used to analyze the level of each dimension of nurses' EI and JP. The relationship was analyzed by using correlation statistics.

Before analysis, data distribution was checked by Kolmogorov-Smirov's (KS). Pearson's Product-Moment correlation was used to examine the relationship between EI and Task Performance, as well as EI and Contextual Performance: $r < 0.3$ was considered a weak relationship, $r = 0.3$-0.5 was regarded as a moderate relationship, and $r > 0.5$ was considered a strong relationship (Burns & Grove, 2009).

Results

1. The samples reported that overall EI was at a moderate level (Table 1).

2. The samples reported that task performance was at a moderate level. In addition, contextual performance was indicated at a moderate level. (Table 2)

Table 1 Mean, Standard Deviation and Level of Overall and Each Dimension of Emotional Intelligence of the Subjects (n = 296)

Emotional Intelligence	Mean	SD	Level
Overall EI	4.91	0.84	Moderate
Self-emotion appraisal (SEA)	5.61	0.87	High
Other's emotion appraisal (OEA)	4.54	1.20	Moderate
Regulation of emotion in the self (ROE)	4.57	1.19	Moderate
Use of emotion to facilitate performance (UOE)	4.89	1.10	Moderate

Table 2 Mean, Standard Deviation and Level of Each Dimension of Job Performance of the Subjects (n = 296)

Domain of Job Performance	Range	Mean	SD	Level
Task performance	19-77	54.29	10.48	Moderate
Social support	4-28	18.85	4.47	Moderate
Information provision	7-28	19.32	4.56	Moderate

Table 2 Mean, Standard Deviation and Level of Each Dimension of Job Performance of the Subjects (n = 296) (continue)

Domain of Job Performance	Range	Mean	SD	Level
Technical care	4-21	16.12	3.02	High
Contextual performance	20-98	67.14	12.04	Moderate
Interpersonal support	5-35	25.51	4.37	High
Job-task support	4-28	16.48	4.83	Moderate
Organizational support	9-35	25.14	4.88	High

3. There was a significantly moderate positive relationship between Emotional Intelligence and Task Performance ($r = .456$, $p < 0.01$), as well as a significantly moderate positive relationship between Emotional Intelligence and Contextual Performance ($r = .432$, $p < 0.01$).

Discussion

Nurses' Emotional Intelligence

The results of this study showed that nurses were at a moderate level for overall emotional EI. In this study, the dimension of SEA showed a high level, while the other three dimensions (OEA, ROE, and UOE) were found at moderate levels.

Self-emotional Appraisal (SEA): The results illustrated that nurses can understand their deep emotions and express these emotions naturally and well. One possible reason might be due to the fact that nurses can keep their emotions in check and balance. This kind of emotional awareness can contribute to the ability to understand their emotions well (Rojell, Pettijohn, & Parker, 2006).

Other's Emotional Appraisal (OEA): It can be seen that the sample nurses were not sensitive to other's emotions and could not understand them well. A reasonable explanation might be that high stress during work makes nurses feel emotionally exhausted and lacking the energy to care about other's feelings (Fernández-Castro et al., 2017). Serious stress during work makes them ignore others' emotions sometimes. Therefore, the sample nurses received a moderate level for OEA.

The results showed that sample nurses reported a moderate level in regulation of emotion in the self (ROE). About half of the sample nurses agreed that they had a good ability to control their tempers and emotions as illustrated in items of "I am able to control my temper so that I can handle difficulties rationally" (52.37%). The ability to control emotions helps nurses calm down quickly in nervous or hysterical conditions. Moreover, the high workload causes nurses to not have enough energy to manage their own emotions. The exhausted emotion caused by heavy workload means they are more likely to lose their temper, and it is not easy for them to calm down (Greenglass et al., 2001).

The nurses had a moderate level of use of emotion to facilitate performance (UOE) in this study. Under the Chinese medical organization structure, nurses work with less respect and are often regarded as assistants of physicians (Qiao & Wang, 2010). A previous study found that nurses' professional self-conception had significant negative association with low personal accomplishment (Cao, Chen, Tian,

Diao, & Hu, 2015). When nurses perceive themselves with less respect and autonomy in their working environment, they may be less likely to motivate and encourage themselves to do better.

Nurses' task performance

The results revealed that task performance was at a moderate level. Task performance refers to the behaviors that directly contribute directly to an organization's technical core (social support, information provision, technical care).

The explanation as to why the sample nurses perceived a moderate level of social support might be that hospitals and professionals in China pay more attention to curing a patient's physical illness as soon as possible (Bai, 2018). Nursing care rather focuses on those behaviors that are the most urgent and most necessary to the patients, such as medical administration, intravenous injections or indwelling catheters (Lan, Zhao & Yang, 2007). Under this environment, nurses may be less likely to offer social support to patients. The explanation for this may be that sample nurses perceived a moderate level of information provision which might be the result of lower work autonomy for nurses in China in which nurses are often seen as doctors' helpers and do not have an opportunity to really control and direct their job performance (Qiao & Wang, 2010). Nurses who work in a less autonomous environment are more likely to focus on basic nursing care and have no motivation to learn more or give more information to others. The results showed a high level of technical care. One possible reason could be that the sample hospitals paid attention to the development of nurses' technical care like many other hospitals in China, so the nurses took it seriously and got high scores in this dimension (Wan & Huang, 2007).

Nurses' contextual performance

Contextual performance was defined as behaviors that maintain the broader social environment in which the technical core must function (interpersonal support, job-task support, organizational support).

Interpersonal support refers to the behaviors that assist team members; it was at a high level. One possible reason could be that there is a harmonious interpersonal relationship among nurses as well as trust between the organization and staff, creating a willingness in nurses to help and support each other in the sample hospitals. Altuntas and Baykal (2010) found that nurses who trust their institutions, managers, and co-workers demonstrated behaviors of promoting group work effectiveness and improving coordination in teamwork more frequently.

The results revealed that the job-task support of sample nurses was at a moderate level. A possible reason might be that this is due to professional training courses that enhance nurses' work motivation, but there are also limited medical resources in public hospitals.

Organizational support refers to additional behaviors and duties for the hospital, for example assisting hospital committees to ensure that materials and equipment are not wasted or participating in meetings regarding the hospital (Greenslade & Jimmieson, 2007).

The results showed a high level. It seems that nurses from tertiary hospitals in Xishuangbanna City are willing to support their hospitals. The explanation might be adequate support from supervisors or head nurses could increase the nursing behaviors of organizational

support in hospitals (Fu, 2018). Perceived support from supervisors or head nurses makes nurses turn it back to the organization during daily work in the sample hospitals.

The relationship between nurses' EI and Task Performance

The results showed a moderate positive relationship between nurses' EI and task performance ($r = .456$, $p < 0.01$) which indicated that nurses who have high levels of emotional intelligence were usually able to do better in task performance.Previous studies found that employees who have high EI are able to understand their clients' needs and provide them with constructive feedback (Praveen & Narashiman, 2013). They tend to be positive and active in directing their emotions toward good job outcomes (Law, Wong, Huang, & Li, 2008) and be more competent and accurate at work as compared to employees who score lower in EI (Dhani et al., 2016). Therefore, when nurses have higher ability in emotional intelligence, they are more likely to be sensitive to patients' emotional needs, and are then able to offer social support appropriately, as well as be more self-motivated and accurate during nursing work. That is why nurses who have high levels of EI usually do better in task performance.

The relationship between nurses' EI and Contextual Performance

The findings indicated that there was a moderate positive correlation between EI and contextual performance ($r = .432$, $p < 0.01$). That means nurses who have high levels of emotional intelligence may score higher in contextual performance. Scholars found that employees with high emotional intelligence are said to have better working relationships with other employees (Dhani et al., 2016). They trust in consistent learning and concentrate on imparting vision, and also are often considered as "star performers" (Dhani et al., 2016; Joseph & Newman, 2010). In addition, they could create greater satisfaction in their jobs, and make employees more committed to the organization and less likely to leave organizations (Law et al., 2008; Praveen & Narashiman, 2013). Therefore, nurses who have high emotional intelligence would have better working relationships with others, more concentration on work, and would be more loyal to the organization. Therefore, they can perform better on the contextual performance part.

Conclusion

Nurses from tertiary hospitals in Xishuangbanna City reported that the overall scores for EI were at a moderate level. In terms of each dimension of EI, the mean score of SEA was indicated at a high level. ROE, UOE, and OEA were at a moderate level. Additionally, the scores for task performance and contextual performance were at a moderate level.

There was a significantly positive relationship between EI and Task Performance for nurses' who work in tertiary hospitals in Xishuangbanna City ($r = .456$, $p < 0.01$) and a significantly positive relationship between EI and Contextual Performance of those nurses ($r = .432$, $p < .01$).

Implications and Recommendations

Further study is necessary using different samples (nurse managers) and different types of hospitals (private hospitals, secondary hospitals, or primary hospitals) in China. EI is an important ability in any working environment, and further study could explore how to enhance EI by developing interventions and strategies focused

on increasing EI in future and current working nurses.

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