



ภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วยและศักยภาพของทีมใน  
โรงพยาบาลมหาวิทยาลัยเมืองเซี่ยงไฮ้ สาธารณรัฐประชาชนจีน

Transformational Leadership of Head Nurses and Team Potency in  
University Hospitals, Shanghai, The People's Republic of China

ชีวชื่อ	ชั้น	พย.ม.*	Qiuzi	Sun	M.N.S.*
เพชรสุรีย์	ทั้งเจริญกุล	พย.ด.**	Petsunee	Thungjaroenkul	Ph.D. **
ทริยาพรรณ	สุภามณี	พย.ด.***	Treeyaphan	Supamanee	Ph.D.***

### บทคัดย่อ

หัวหน้าพยาบาลเป็นบุคคลที่สำคัญต่อประสิทธิภาพในการทำงานของทีมพยาบาล อย่างไรก็ตามความสัมพันธ์ระหว่างพฤติกรรมของผู้นำและศักยภาพของทีมยังไม่มีการศึกษาบ่อย การวิจัยเชิงบรรยายสหสัมพันธ์นี้มีเป้าหมายเพื่อศึกษาภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วยและศักยภาพของทีมพยาบาลรวมทั้งเพื่อศึกษาความสัมพันธ์ระหว่างภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วยและศักยภาพของทีมในโรงพยาบาลมหาวิทยาลัยเมืองเซี่ยงไฮ้ สาธารณรัฐประชาชนจีน กลุ่มตัวอย่างประกอบด้วยพยาบาล 339 คนซึ่งเป็นตัวแทนของทีมพยาบาลจำนวน 113 ทีม เครื่องมือใช้ในการศึกษาในครั้งนี้ประกอบด้วยแบบสอบถามภาวะผู้นำซึ่งพัฒนาโดยคุซซ์ และ โพสเนอร์ (Kouze & Posner 1995, 2002) และแบบวัดศักยภาพของทีมของ กุซโซ และคณะ (Guzzo et al., 1993) ที่มีค่าความเชื่อมั่นของครอนบาคเท่ากับ .96 และ .92 ตามลำดับ ข้อมูลนำมาวิเคราะห์โดยใช้สถิติพรรณนาและการหาค่าสัมประสิทธิ์สหสัมพันธ์ของสเปียร์แมน

ผลการศึกษานี้พบว่าภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วยอยู่ในระดับสูง ( $\bar{x} = 4.25$ ,  $SD = 0.58$ ) ประมาณ 80% ของทีมพยาบาลรับรู้ว่ามีศักยภาพอยู่ในระดับสูงและภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วยมีความสัมพันธ์เชิงบวกในระดับมากต่อศักยภาพของทีมพยาบาล ( $r_s = .57$ ,  $p < .01$ ) ผลของการศึกษาในครั้งนี้เป็นข้อมูลสำคัญที่จะทำให้ผู้บริหารของโรงพยาบาลและผู้บริหารพยาบาลเกิดความตระหนักถึงความสำคัญของภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วยและจัดการอบรมหลักสูตรภาวะผู้นำที่จะเป็นประโยชน์ต่อหัวหน้าพยาบาลในการเพิ่มพูนความรู้และทักษะในการเป็นผู้นำทีมพยาบาลและช่วยในการยกระดับการทำงานของทีมพยาบาลต่อไป

**คำสำคัญ:** ภาวะผู้นำเชิงปฏิรูปของหัวหน้าหอผู้ป่วย, ศักยภาพของทีม, ทีมพยาบาล

\* หัวหน้าหอผู้ป่วย โรงพยาบาลลองฮัว เมืองเซี่ยงไฮ้ สาธารณรัฐประชาชนจีน

\* Head Nurse, Longhua Hospital, Shanghai, the People's Republic of China, ratatt@126.com

\*\* ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่

\*\* Assistant Professor, Faculty of Nursing, Chiang Mai University

\*\*\* อาจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่

\*\*\* Lecturer, Faculty of Nursing, Chiang Mai University



## Abstract

Head nurses are important in relation to nursing teams' effectiveness. However, little is known about the relationship between leader's behavior and team potency. The purposes of this descriptive correlation study were to examine transformational leadership of head nurses and team potency as perceived by nursing teams, as well as to investigate the relationship between transformational leadership of head nurses and team potency in university hospitals, Shanghai, the People's Republic of China. The sample consisted of 339 nurses representing 113 nursing teams. The research instruments included the Leadership Practices Inventory (LPI) developed by Kouzes and Posner (1995, 2002) and the Potency Scale developed by Guzzo et al. (1993). The Cronbach's alpha coefficients of LPI and Potency Scale were .96 and .92. Data were analyzed by descriptive statistics and Spearman's rank-order correlation.

The results of this study revealed that transformational leadership of head nurses was at a high level ( $\bar{x} = 4.25$ ,  $SD = 0.58$ ). Approximately 80% of nursing teams perceived team potency at a high level. Transformational leadership of head nurses had a strong positive correlation with team potency ( $r_s = .57$ ,  $p < .01$ ). The results of the study could provide valuable information for hospital administrators and nurse managers to be aware of the importance of transformational leadership of head nurses and to set up a leadership training program to improve head nurses' knowledge and skills to lead nursing teams. This will be helpful to optimize nursing teams' performance.

**Key words:** Transformational Leadership of Head Nurses, Team Potency, Nursing Teams

## Background and Significance of the Problem

A healthcare team is a collaborative process of increase amount of knowledge and skills to meet patients' complex needs (Hall & Weaver, 2001). The nursing team is a healthcare team in which individual nurses who share collective norms and goals work together as a close group to give quality, safe, and efficient nursing care for patients under the supervision of a team leader (Tiedeman & Lookinland, 2004). Effective teams require capable leaders who have competencies in guidance, encouragement, support, and innovation. Policy research has

reported that there are calls for nursing leaders to bring about change in healthcare organizations and to rebuild the nursing workforce (Canadian Nursing Advisory Committee, 2002; Shaw, 2007). Head nurses are deemed as team leaders in nursing teams. As team leaders, they must provide clear and engaging direction aligned with the organization, challenge the entire team to make decisions with clearly defined authority, utilize team-based reward systems, provide resources, and promote strategic thinking (Northhouse, 2012). Their behaviors are important to team success by enhancing positive team



effect (Watson & Tellegen, 1985). Head nurses' leadership styles perceived by staff nurses have been described as transformational or transactional leadership (Bass, Avolio, Jung, & Berson, 2003). However, Trofino (1995) suggested that transformational leadership has contributed to improved effectiveness of teamwork in health care.

Transformational leadership refers to a collection of practices and behaviors of leaders which could motivate their followers to go beyond expectations, be aware, and accept the group's vision and mission (Kouzes & Posner, 1995, 2002). According to Kouzes and Posner's Five Practices of Exemplary Leadership Model, transformational leadership could accomplish the achievements through five key leadership practices: "Model the way", "Inspire a shared vision", "Challenge the process", "Enable others to act", and "Encourage the heart". Under transformational head nurses' lead, staff nurses' confidence levels are elevated, and job satisfaction is greater increased (Shader, Broome, Broome, West & Nash, 2001). Head nurses with transformational leadership styles can influence organizational commitment by focusing on empowerment and enhancing nurse recruitment, retention, healthy work environment, and team effectiveness as well (Avolio, Zhu, Kon & Bhatia, 2004; Tomey, 2009). Therefore, transformational leadership may be appropriate for the demands of nursing management and may also promote nursing teams' effectiveness.

According to the Input-Process-Output model (IPO model) of team effectiveness developed by Klimoski and Jones (1995), team potency is a moderator in the relationship

between transformational leadership and team outcomes. Guzzo, Yost, Campbell and Shea (1993) defined team potency as the shared belief by group members about the group's general effectiveness or confidence in its general capability across multiple tasks. Nursing teams need team potency for motivation because team members' actions are impacted by their collective beliefs about success (Akgun, Keskin, Byrne & Imamoglu, 2007). There are numerous benefits of team potency for organizations and team members. Teams with stronger team potency have more effectiveness (Shea & Guzzo, 1987; Lester, Meglino & Korsgaard, 2002), greater team empowerment (Kirkman & Rosen, 1999), better team performance (Gully, Incalcaterra, Joshi & Beaubien, 2002), and higher quality of customer service (De Jong, De Ruyter & Wetzels, 2005).

Several studies have examined the relationship between transformational leadership and team potency in various settings, but the findings were inconsistent. Gully et al. (2002) did a meta-analysis of 67 empirical studies yielding 256 effect sizes and concluded that transformational leaders could enhance team potency by communicating high confidence, modeling desired behaviors, using intellectual stimulation, promoting consideration of different viewpoints, inspiring collective action, and providing support to followers, which all contributed to team effectiveness. Schaubroeck, Lam, and Cha (2007) conducted a study on 218 bank teams in the United States of America and Hong Kong. They found that transformational leadership had a strong impact on team potency in collectivistic and high power distance teams



( $r = .33, p < .001$ ). Contrary to other studies, Gil, Rico, Alcover, and Barrasa (2005) studied 318 healthcare professionals in 78 teams at hospitals throughout Spain and hypothesized the influence of leadership on team potency. The findings showed that high potency teams were less affected than low potency teams by external influences, such as leadership.

Four university hospitals in Shanghai, China were the research sites because they provide more advanced medical and nursing care than other hospitals. Thus, nurses in each hospital had to provide good nursing care for the patients through collaboration with each other and their head nurses. Chinese head nurses play important roles in wards. They are assigned the responsibility to support, monitor, and evaluate team effectiveness (Xiao, 2010). However, teamwork effectiveness diminishes because of heavy workload, lack of communication skills, and a minimal awareness of the importance of cooperation among nursing teams (Fu, 2009). Furthermore, some head nurses are appointed at a young age because of their high education background and they tend to have no preparation for management or leadership. Since there are mixed ages among head nurses, the nursing teams may have different views of their leader's behaviors (Cheng, 2009). According to a previous study by Hu and colleagues (1999), transformational leadership of head nurses as perceived by individual nurses in Shanghai was at the moderate level. Therefore, it is necessary for head nurses in Shanghai to improve transformational leadership behaviors.

Transformational leadership and team potency are often identified as determinants of

team effectiveness. Many scholars have attempted to study the influences of leaders' behaviors on team members' beliefs about their team capacity. However, several gaps exist in the transformational leadership and team potency literature. Firstly, there are inconsistent findings in the relationship between transformational leadership and team potency. Secondly, most previous study found problems of leadership behaviors of head nurses perceived by individual nurses in Shanghai; however, there has been no study about transformational leadership of head nurses as perceived by nursing team or the relationship between leadership behaviors and nursing team effectiveness in China. Thirdly, most research on team potency has been conducted on various professions other than nursing. The results of other disciplines may not explain transformational leadership in nursing. Therefore, describe perceived transformational leadership of head nurses and team potency in Chinese nursing teams and relationship between transformational leaders and team potency is necessary.

### **Research Objectives**

The research objectives of this study were to describe perceived transformational leadership of head nurses and team potency in nursing teams, and to investigate the relationship between them among nurses working in four university hospitals, Shanghai, the People's Republic of China.

### **Conceptual Framework**

The conceptual framework of this study was based on Kouzes and Posner's (1995, 2002)



theory of transformational leadership and Guzzo et al.'s (19993) theory of team potency. Transformational leadership referred to collective practices and behaviors of transformational leaders. It included five sub-dimensions: "Model the way", "Inspire a shared vision", "Challenge the process", "Enable others to act", and "Encourage the heart". Team potency referred to the collective belief in a team that it could be effective and demonstrates the team's confidence in its general capability. According to the previous studies, transformational leadership influenced team potency by enhancing team capacities. Nursing teams need team potency for motivation because team members' actions are impacted by their collective belief that they can succeed or not. The relationship between transformational leadership of head nurses and team potency as perceived by nursing teams in China was tested in this study.

## Methodology

This descriptive correlational study was aimed to examine transformational leadership of head nurses and team potency as perceived by nursing teams, as well as to investigate the relationships between transformational leadership of head nurses and team potency in university hospitals, Shanghai, the People's Republic of China.

## Population and Sample

The population of this study consisted of 2,133 nurses who were working in four university hospitals affiliated to Shanghai University of Traditional Chinese Medicine, Shanghai, the

People's Republic of China. Nurses working under the supervision of the same head nurse in a ward were considered as a team. The sample size needed in the study was 339 nurses according to the formula of Yamane (1973). In consideration of loss of subjects, other nurses in the same unit of nurses who returned incomplete questionnaires would be added until getting 339 subjects. This study measured two variables as the team level construct. Therefore, the data on transformational leadership of head nurses and team potency would be measured by team, not individual perception. According to Shea and Guzzo's study (1987), a team is a system of at least three members who see themselves as a group. Thus, three nurses in each ward who meet the criteria were selected to be representatives of each nursing team. The inclusion criteria were staff nurses who had worked for at the same hospitals at least two years and were willing to participate in this study. Proportional random sampling method was used to determine nurses in each hospital. There were 113 nursing teams in this study.

## Instruments

The questionnaire included three parts. The first part was a Demographic Data Form which consisted of age, gender, marital status, educational level, professional title, working unit, and number of years working in the present unit. The second part was the Leadership Practices Inventory (LPI) developed by Kouzes and Posner (1995, 2002) translated by Chen and Baron (2007). It was composed of 30 items in five sub-dimensions: "Model the way", "Inspire a shared vision", "Challenge the process",



“Enable others to act”, and “Encourage the heart”. Each item was rated on a 5-point Likert scale rating from 1 = *seldom or rarely* to 5 = *very often*. Individual scores were averaged across team members to get a team score. Higher scores represented a higher level of perception of transformational leadership of head nurses. The reliability of the LPI in this study was .96 and sub-dimensions of “Model the way”, “Inspire a shared vision”, “Challenge the process”, “Enable others to act”, and “Encourage the heart” were .83, .90, .91, .84, and .83, respectively. The third part of the questionnaire was the Potency Scale developed by Guzzo et al. (1993) and translated into Chinese by using the back-translation method. It had eight items, and the subjects responded on a 5-point Likert scale ranging from 1 = *To no extent* to 5 = *To a great extent*. Scores by representative nurses in each team were averaged across team members to get a team potency score. A higher score indicated that the team had a stronger sense of potency and greater belief. The reliability of the Potency Scale was .92.

### Ethical Considerations

The study was approved by the Research Ethics Committee, Faculty of Nursing, Chiang Mai University and the directors of nursing departments in the four hospitals in China where the data were collected. The participants were informed the purposes of this study and methods of data collection. They were given a consent form to sign to ensure human rights protection. The participants were also informed that participation in the study was voluntary and

they had rights to refuse, stop, or withdraw from the study at any time without any consequences. Their anonymity and confidentiality were maintained throughout, and the information they provided was only used in study.

### Data Collection

After ethical approval was obtained from the hospitals, the researcher met the directors of the nursing departments, who were requested to inform all the nurses about the study. The questionnaires were distributed by a coordinator in each hospital. The subjects were asked to return the sealed envelopes with questionnaires within two weeks. Data were collected from March to May in 2014.

### Data Analysis

Data were analyzed by the SPSS13.0 computer program. Descriptive statistics were used to describe the demographic characteristics of the subjects. The analysis of transformational leadership of head nurses and team potency were conducted in terms of frequency, percentage, mean, and standard deviation. Normality testing by Kolmogorov-Smirnov showed the data to be in non-normal distribution, so Spearman's rank-order correlation coefficient was used to examine the relationship between transformational leadership of head nurses and team potency.

### Results

The subjects were 339 nurses representing 113 nursing teams in four university hospitals affiliated to Shanghai University of Traditional Chinese Medicine, Shanghai, the People's



Republic of China. Demographic characteristics  
of the subjects are shown in Table 1.

**Table 1** Frequency, Percentage, Mean, Standard Deviation, and Range of the Subjects Categorized by Demographic Characteristics

Demographic Characteristics	Frequency (n)	Percentage (%)
Age (years) (n = 334, $\bar{x}$ = 32.80, SD = 6.44, range = 21-53)		
21-30	141	42.22
31-40	150	44.91
>40	43	12.87
Gender (n = 334)		
Female	331	99.10
Male	3	0.90
Marital status (n = 333)		
Single	96	28.83
Married	234	70.27
Others (such as divorced, widowed)	3	0.90
Educational level (n = 334)		
Diploma degree	191	57.19
Bachelor degree	143	42.81
Professional title (n = 333)		
Junior nurse	89	26.73
Senior nurse	173	51.95
Nurse in charge	71	21.32
Number of years working in the present unit (n = 334, $\bar{x}$ = 8.80, SD = 6.91, range = 0.5-32)		
< 3	61	18.26
3-10	175	52.40
11-20	75	22.46
>20	23	7.88

Transformational Leadership of Head  
Nurses and Team Potency as Perceived by  
Nursing Teams  
Nursing teams perceived overall

transformational leadership of head nurses at a  
high level ( $\bar{x}$  = 4.25, SD = 0.58) (Table 2). In terms  
of team potency, most nursing teams (79.65%)  
perceived high levels of team potency, but





20.35% of the nursing teams only perceived moderate levels of team potency (Table 3).

**Table 2** Means, Standard Deviations, and the Level of Overall and Sub-Dimensions of Transformational Leadership of Head Nurses as Perceived by Nursing Teams (n = 113)

Transformational Leadership (TL)	Mean	SD	Level
Overall transformational leadership	4.25	0.58	High
Sub-dimensions of TL			
Enable others to act	4.45	0.49	
Model the way	4.34	0.52	
Encourage the heart	4.27	0.50	
Inspire a shared vision	4.19	0.57	
Challenge the process	4.04	0.52	

**Table 3** Frequency and Percentage of Nursing Teams across the Level of Team Potency (n = 113)

Team Potency	Frequency (n)	Percentage (%)
Moderate level	23	20.35
High level	90	79.65

### The Relationship between Transformational Leadership of Head Nurses and Team Potency

The results of Spearman's rank-order correlation coefficient showed that the relationship between transformational leadership of head nurses and team potency was statistically significant. There was a strong positive correlation between transformational leadership of head nurses and team potency at a team level ( $r_s = .57, p < .01$ ).

### Discussion

Transformational Leadership of Head Nurses as Perceived by Nursing Teams

The results of this study showed that the majority of nursing teams perceived that their head nurses had a high level of overall transformational leadership ( $\bar{x} = 4.25, SD = 0.58$ ) (Table 2). This result was inconsistent with a previous study of transformational leadership among nurses at the individual level in Shanghai, China by Hu and colleagues (1999), which showed that individual nurses only experienced a moderate level of overall transformational leadership of head nurses. This increase might be due to progress of transformational leadership of head nurses in the past several years in China due to improvements in educational levels, role expectations, and multiple leadership training





programs.

Considering each sub-dimension of transformational leadership of head nurses, the results revealed that nurses in this study rated “Enable others to act” as the highest mean score (Table 2). A probable explanation for this finding might be the nursing hierarchy in the hospital organization. Chinese head nurses have been reported to involve nurses in planning and in their own decision making (Jin, 2005). Therefore, the head nurses could foster collaboration by promoting goals of cooperation and building mutual trust through empowering followers. Head nurses in China have been shown to be aware of the importance of empowerment in their leadership behavior (Chen, Liang & Zhang, 2008). They trusted their followers’ capabilities and competencies in the nursing profession and allowed followers to collaborate freely. This power sharing made nurses feel capable and gave them a sense of ownership for their work. Thus, nurses were strongly committed to take responsibilities in nursing teams.

“Encourage the heart” and “Model the way” are vital leadership functions that involve leaders as role models, showing appreciation for individual excellence and making followers feel esteemed (Kouzes & Posner, 2002). The results of the present study indicate that nursing teams in Shanghai thought their head nurses practiced these two functions skillfully. This might be due to Chinese culture and the value that is placed upon head nurses and the expectation of their competencies. Chinese cultural values are based significantly on Confucianism, which influences nursing

leadership (Chang, 2008). Confucianism considers personal integrity (Yi) in that one’s leaders come first, which exemplifies how leaders work with their staff in the present nursing environments in China. As team leaders, they direct the way both emotionally and professionally, forming strategic planning, setting standards, and implementing risk prevention, motivating nurses to achieve their goals, and rewarding these achievements (Kang & Chang, 2001). According to the competency-based orientation, the competencies of head nurses in tertiary hospitals include expert knowledge and skill in nursing profession, personality competencies, and management competencies (Zhang, Li & Li, 2009). Because of these competencies, head nurses in Shanghai who had the most prominent personality in the nursing teams served as role models. By praising and celebrating achievements together, head nurses give the staff nurses a sense of belonging and ownership with nursing teams (Hong, Li, Zhang & Lu, 2013).

However, this study illustrates that head nurses as team leaders should improve leadership practices regarding “Inspire a shared vision” and “Challenge the process”. Head nurses in Shanghai face some problems which impede optimal performance in these two functions. Firstly, head nurses met a lot of stressors. As the first-line managers, they experienced a lack of participation in decision making in hospitals. The power structure of the hospital culture required the head nurses to follow doctors’ authority and behave strictly according to their rank in the organizations (Shao & Webber, 2006). Moreover, the standards of nursing care are increasing and technology is



changing rapidly. Although head nurses try to find opportunities to change and innovate, they may receive limited management support from their organizations. Secondly, head nurses were not willing to take risks with innovation for fear of failure. This might be due to its impact on year-end head nurse evaluations. In addition, failure would reduce their confidence and desire towards creating and innovation.

### **Team Potency as Perceived by Nursing Teams**

The results of this study demonstrated that the majority of the nursing teams (79.65%) perceived their teams as having high team potency. They believed that with some effort, their teams could achieve good performance in their tasks of nursing care. One probable explanation for this finding might be related to the demographic characteristics of the subjects. According to the findings (Table 1), the average number of years working in the present unit for team members was 8.80 years. About half (51.95%) of the subjects were senior nurses, and 21.32% of the subjects were nurses in charge. Senior nurses and nurses in charge had adequate knowledge and skills to achieve complex tasks and to guide junior nurses in nursing care. Individual members' knowledge and skills influenced the team's sense of confidence in performance. This finding was consistent with the findings of Guzzo et al.'s study (1993). Another probable explanation is that working in teams was a natural work condition for nurses in clinical nursing care. The current nursing work pattern in Shanghai was that nurses worked in teams, taking set responsibilities to provide holistic care to a specific group of patients (Gong,

Lu, Wang & Wu, 2012). Team members worked with cooperation and inter-dependence. Thus, nurses believed the success of task achievements to be a team effort. Moreover, in this team condition, positive attitudes and beliefs from head nurses or colleagues might help to transform the general belief of the whole nursing team.

However, 20.35% of the nursing teams perceived their teams had moderate levels of team potency, which would reduce nursing team effectiveness. The subjects sometimes felt that some tasks were too difficult for their group to complete. A possible explanation would be that individual members regarded that they did not get enough support from the organizations. Perceived organizational support has been shown to be positively related to a sense of potency in teams (Shelton, Waite & Makela, 2010). Nursing teams expected more resources from the organizations to do their work more effectively, such as information, training programs, budget, human resources, and materials.

### **The Relationship between Transformational Leadership of Head Nurses and Team Potency**

The results of this study showed that overall transformational leadership of head nurses significantly strongly positively correlated to team potency at the team level ( $r_s = .57, p < .01$ ). The findings of this study were congruent with previous studies done in other professions that showed transformational leadership had a positive relationship with team potency (DeGroot et al., 2000; Gully et al., 2002; Sivasubramaniam et al., 2002; Schaubroeck et



al., 2007). It could be interpreted that effective transformational leadership of head nurses increased team potency.

According to Guzzo et al.'s theory (1993), team potency was an important indicator of capabilities of the nursing team. Head nurses with transformational leadership behaviors influence team potency beliefs by changing the internal and external factors that shape potency.

Firstly, head nurses with transformational leadership behaviors effectively carried a stronger belief in nursing team capacity to perform well since they worked on the floor with nurses. They fostered acceptance of team goals within the nursing teams and shaped members' team identification by inspiring a shared vision. Nurses generated enthusiasm through verbal persuasion from their head nurses. Shared values and common goals became salient to the members when each member viewed their role in terms of their relationship and value to the group (Wu, Tsui & Kinicki, 2010).

Secondly, transformational head nurses had high expectations for themselves and their followers. Head nurses motivated and promoted individual members' self-efficacy by using "Enable to act" and "Encourage the heart". They had the confidence necessary as well as the knowledge and skills to engage in nursing care (Lam, 2012). Furthermore, celebrating team achievements together and the accumulation of successful experiences for nurses in teamwork could build a sense of belief that the nursing teams were high-performing teams.

Additionally, transformational head nurses created a learning environment in nursing teams.

They set examples for their followers and looked for opportunities and innovative ways to improve their nursing teams. During this process, nurses were sharing knowledge and learning from failures. According to the effect of learning behavior, team members felt they could solve problems by common effort (van Emmerik, Jawaha, Schreurs & De Cuyper, 2011).

Therefore, team potency was likely to be higher in nursing teams if head nurses practiced transformational leadership well. Team potency reflected members' confidence by successfully carrying out nursing care tasks. To build member confidence in nursing teams, head nurses could display optimism and positive attitudes, express confidence in the team, set goals that define success, help and support team members to find ways to overcome obstacles, and celebrate progress.

## Conclusion

Nursing teams in university hospitals, Shanghai, the People's Republic of China perceived transformational leadership of head nurses at a high level. The majority of nursing teams perceived team potency at a high level. The study revealed that transformational leadership of head nurses had a significant strong positive relationship with team potency.

## Implications and Recommendations

The results of the study could provide valuable information regarding the importance of transformational leadership of head nurses and team potency within nursing teams in Shanghai university hospitals. To increase team confidence in patient care, health care



organizations should provide enough resources for nursing teams to cope with tough tasks and do effective work. Furthermore, transformational leadership of head nurses is important to team potency. Healthcare organizations should provide multiple forms of training programs; the training programs may not only focus on professional knowledge and technical skills of head nurses or staff nurses, but also emphasize transformational leadership skills, relationship skills, critical and creative thinking, and emotional intelligence.

A future study should be conducted in other regions of China. A qualitative study should be conducted to identify the reasons why nursing teams perceived transformational

leadership of head nurses and team potency at high levels and identify the factors that highly influenced their perception of team effectiveness. A comparative study should be done between team leaders and team members to gain more knowledge about the issue of nursing administration.

### Acknowledgements

A sincere appreciation is expressed to the Faculty of Nursing, Chiang Mai University and to the Graduate School of Chiang Mai University for providing research funding and also to everyone who helped support this study.

### References

- Akgun, A. E., Keskin, H., Byrne, J., & Imamoglu, S. Z. (2007). Antecedents and consequences of team potency in software development projects. *Information & Management*, 44(7), 646-656.
- Avolio, B. J., Zhu, W., Koh, W., & Bhatia, P. (2004). Transformational leadership and organizational commitment: Mediating role of psychological empowerment and moderating role of structural distance. *Journal of Organizational Behavior*, 25(8), 951-968.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, 88(2), 207.
- Canadian Nursing Advisory Committee. (2002). Our health, our future: Creating quality workplaces for Canadian nurses.
- Chang, Y. (2008). The impact of Chinese cultural values on Taiwan nursing leadership styles: comparing the self-assessments of staff nurses and head nurses. *Journal of Nursing Research*, 16(2), 109-119.
- Chen, H. C., & Baron, M. (2007). Psychometric properties of the Chinese leadership practices inventory. *International Journal of Nursing Education Scholarship*, 4(1), 23-37.
- Chen, Y., Liang, P., & Zhang, H. C. (2008). Exploring new management mode in contemporary nursing. *Journal of Practical Medical Techniques*, 15(6), 800-801.
- Cheng, X. W. (2009). To strengthen head nurse management to improve nursing service quality [in Chinese]. *Chinese Nursing Research*, 23(12), 3362-3363.
- DeGroot, T., Kiker, D. S., & Cross, T. C. (2000). A meta-analysis to review organizational outcomes related to charismatic leadership. *Canadian Journal of Administrative Sciences*, 17(4), 356-372.



- De Jong, A., De Ruyter, K., & Wetzels, M. (2005). Antecedents and consequences of group potency: A study of self-managing service teams. *Management Science*, 51(11), 1610-1625.
- Fu, R. (2009). The establishment and management of effective nursing team [in Chinese]. Symposium conducted at the meeting of Chinese Nursing Association, 184-187.
- Gil, F., Rico, R., Alcover, C. M., & Barrasa, Á. (2005). Change-oriented leadership, satisfaction and performance in work groups: Effects of team climate and group potency. *Journal of Managerial Psychology*, 20(3/4), 312-328.
- Gong, M. F., Lu, Q. F., Wang, J., & Wu, Y. H. (2012). The application of flat responsibility nursing care model in the projects of quality of care [in Chinese]. *Chinese Journal of Modern Nursing*, 18(25), 3055-3057.
- Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, 87(5), 819-832.
- Guzzo, R. A., Yost, P. R., Campbell, R. J., & Shea, G. P. (1993). Potency in groups: Articulating a construct. *British Journal of Social Psychology*, 32(1), 87-106.
- Hall, P., & Weaver, L. (2001). Interdisciplinary education and teamwork: a long and winding road. *Medical Education*, 35(9), 867-875.
- Hong, S., Li, Q. J., Zhang, L. T., & Lu, D. M. (2013). The relationship among nurses' transformational leadership, organizational commitment and innovative behaviors. *Chinese Journal of Nursing*, 48(3), 248-250.
- Hu, Y., Yang, Y. H., Ma, M. Z., Lu, T. Y., Wang, P. L., & McNeese-Smith, D. (1999). Leadership behaviors of head nurses and work effectiveness of nurses: a study from Shanghai [in Chinese]. *Chinese Journal of Nursing*, 8(34), 1-6.
- Jin, R.X. (2005). Application of mental encouragement to improve the quality of nursing management. *Journal of Nursing Administration*, 5(7), 34-38.
- Kang, T. L., & Chang, A. H. (2001). Development of a new three-dimensional leadership model in technological and vocational education in Taiwan. *Global Journal of English Education*, 5(2), 139-146.
- Kirkman, B. L., & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *Academy of Management Journal*, 42(1), 58-74.
- Klimoski, R., & Jones, R. G. (1995). Staffing for effective group decision making: Key issues in matching people and teams. *Team effectiveness and decision making in organizations*, 291-332.
- Kouzes, J. M., & Posner, B. Z. (1995). *The leadership challenge: How to keep getting extraordinary things done in organisations*. San Francisco, CA: Jossey-Bass.
- Kouzes, J. M., & Posner, B. Z. (2002). *The Leadership Challenge*. San Francisco, CA: Jossey-Bass.
- Lam, T. M. (2012). The influence of team trust, potency and leadership on the intent to share knowledge and team creativity. DBA thesis, Southern Cross University, Lismore, NSW.



- Lester, S. W., Meglino, B. M., & Korsgaard, M. A. (2002). The antecedents and consequences of group potency: A longitudinal investigation of newly formed work groups. *Academy of Management Journal*, 45(2), 352-368.
- Northouse, P. G. (2012). *Leadership: Theory and practice*. Sage.
- Schaubroeck, J., Lam, S. S., & Cha, S. E. (2007). Embracing transformational leadership: team values and the impact of leader behavior on team performance. *Journal of Applied Psychology*, 92(4), 1020-1030.
- Shader, K., Broome, M. E., Broome, C. D., West, M. E., & Nash, M. (2001). Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center. *Journal of Nursing Administration*, 31(4), 210-216.
- Shao, L., & Webber, S. (2006). A cross-cultural test of the 'five-factor model of personality and transformational leadership'. *Journal of Business Research*, 59(8), 936-944.
- Shaw, S. (2007). *International council of nurses: nursing leadership*. Blackwell Pub.
- Shea, G. P., & Guzzo, R. A. (1987). Group effectiveness: What really matters. *Sloan Management Review*, 28(3), 25-31.
- Shelton, P. M., Waite, A. M., & Makela, C. J. (2010). Highly effective teams: A relational of group potency and perceived organizational support. *Advances in Developing Human Resources*, 12(1), 93-114.
- Sivasubramaniam, N., Murry, W. D., Avolio, B. J., & Jung, D. I. (2002). A longitudinal model of the effects of team leadership and group potency on group performance. *Group & Organization Management*, 27(1), 66-96.
- Tiedeman, M. E., & Lookinland, S. (2004). Traditional models of care delivery: What have we learned?. *Journal of Nursing Administration*, 34(6), 291-297.
- Trofino, J. (1995). Transformational leadership in health care. *Nursing Management*, 26(8), 42-49.
- Van Emmerik, H., Jawahar, I. M., Schreurs, B., & De Cuyper, N. (2011). Social capital, team efficacy and team potency: The mediating role of team learning behaviors. *Career Development International*, 16(1), 82-99.
- Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, 98(2), 219.
- Wu, J. B., Tsui, A. S., & Kinicki, A. J. (2010). Consequences of differentiated leadership in groups. *Academy of Management Journal*, 53(1), 90-106.
- Xiao, W. (2010). The influence of head nurse on nursing team cohesion [in Chinese]. *Chinese Journal of Misdiagnostics*, 10(11), 2621-2622.
- Yamane, T. (1973). *Statistics: An introductory analysis*. Tokyo: Harper International.
- Zhang, H., Li, Q., & Li, Y. (2009). Construction of head nurse competency model: comparing tertiary hospital and secondary hospitals. *China Health Human Resources*, (12), 64-65.