

ปัจจัยทำนายประสิทธิผลองค์กรตามการรับรู้ของพยาบาลในโรงพยาบาล เครือมหาวิทยาลัยแพทย์คุนหมิง สาธารณรัฐประชาชนจีน

The Predictors of Organizational Effectiveness as Perceived by Nurses in
Affiliated Hospitals of Kunming Medical University, the People's Republic of China

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บทคัดย่อ

การศึกษาเชิงพหุการนี้มีวัตถุประสงค์เพื่อศึกษาปัจจัยทำนายประสิทธิผลขององค์กรตามการรับรู้ของพยาบาลในโรงพยาบาลเครือมหาวิทยาลัยแพทย์คุนหมิง สาธารณรัฐประชาชนจีน กลุ่มตัวอย่างเป็นพยาบาลจำนวน 410 คน เครื่องมือที่ใช้ในการวิจัยประกอบด้วยแบบประเมินการปฏิบัติภาวะผู้นำ แบบประเมินวัฒนธรรมองค์กร และแบบสอบถามประสิทธิผลขององค์กรซึ่งมีค่าสัมประสิทธิ์อัลฟาของครอนบาคเท่ากับ .97 .96 และ .94 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และการวิเคราะห์การถดถอยลอจิสติก

ผลการศึกษาพบว่า พยาบาลมีการรับรู้ประสิทธิผลขององค์กรในระดับปานกลาง ภาวะผู้นำการเปลี่ยนแปลง (OR = 1.82, 95% CI = 1.22-2.73) และวัฒนธรรมองค์กรสามด้านได้แก่ ด้านมุ่งที่ผลงาน (OR = 4.09, 95% CI = 1.81-9.22) ด้านนวัตกรรม (OR = 2.10, 95% CI = 1.06-4.15) และด้านความมีเสถียรภาพ (OR = 2.23, 95% CI = 1.23-4.04) ร่วมทำนายประสิทธิผลขององค์กรได้ร้อยละ 39.00 (Nagelkerke R^2 = .39) ผลการศึกษารังนี้ยังเป็นข้อมูลพื้นฐานสำหรับการปรับปรุงประสิทธิผลองค์กรโดยการพัฒนาภาวะผู้นำการเปลี่ยนแปลงของหัวหน้าหอผู้ป่วย และวัฒนธรรมองค์กร

คำสำคัญ : ประสิทธิภาพขององค์กร, วัฒนธรรมองค์กร, ภาวะผู้นำการเปลี่ยนแปลง, พยาบาล

Abstract

This predictive research aims to examine the predictors of organizational effectiveness as perceived by nurses in affiliated hospitals of Kunming Medical University, the People's Republic of China. The participants included 410 nurses. The research instruments were composed of the Leadership Practices Inventory, the Organizational Culture Profile, and the Organizational Effectiveness Questionnaire. The Cronbach's alpha coefficients of these instruments were .97, .96, and .94, respectively. Data were analyzed using descriptive statistics and binary logistic regression analysis.

The results revealed that nurses perceived organizational effectiveness at a moderate level. Transformational leadership (OR = 1.82, 95% CI = 1.22-2.73), and three components of organizational culture including performance orientation (OR = 4.09, 95% CI = 1.81-9.22), innovation (OR = 2.10, 95% CI = 1.06-4.15), and stability (OR = 2.23, 95% CI = 1.23-4.04) could explain 39.00% of variability in organizational effectiveness (Nagelkerke R^2 = .39). The results of this study provide basic information for improving organizational effectiveness by developing head nurse's transformational leadership and organizational culture.

Keywords: Organizational effectiveness, Organizational culture, Transformational leadership, Nurse

Introduction

Nowadays, healthcare organizations have encountered great changes and faced new challenges. The hospitals in the People's Republic of China (P.R. China) have no exception. They have experienced the challenge of an aging population resulting in heavy burdens on the healthcare system and the society.¹ Additionally, they face the challenges of a fee-for-service payment system that incentivizes testing and treatments over prevention.² Furthermore, the model of care of the Chinese healthcare system aims to provide quality care for patients. Therefore, all considered changes together induce the hospitals in P.R. China to have organizational effectiveness.

Organizational effectiveness refers to the ability of an organization to mobilize its centers of power for action, production, and adaptation.³ Thus, an effective organization should be able to analyze contingencies and define strategies to reach its goals for producing greater and higher quality outputs, retaining a balance of production, efficiency, satisfaction, adaptiveness, development, and allowing

an organization to survive in a competitive environment.⁴ Organizational effectiveness can guarantee the organization's existence and growth.⁵ Organizational effectiveness is, therefore, considered as a primary goal for many healthcare organizations. A literature review found that transformational leadership had a significant positive correlation with organizational effectiveness.^{6,7} Additionally, types of organizational culture influences organizational effectiveness; innovative cultures promote creativity; a performance-oriented culture produces quality outcomes; and a competitive culture leads to employees' achievement-oriented.⁸

According to the studies conducted in different disciplines and different countries in over various decades, low and moderate levels of organizational effectiveness were found.^{6,7,9} In P.R. China, a moderate level of organizational effectiveness was found in the hospitals of Kunming Medical University.¹⁰ However, as there have been various changes during the past six years, for example, the implementation of 5G intelligent medical treatments with big data and artificial intelligence in Yunnan

province, organizational effectiveness may have been impacted.¹¹ Also, there was limited knowledge about factors predicting organizational effectiveness. Therefore, a study of organizational effectiveness should be conducted to reaffirm and improve organizational effectiveness and explored factors predicting organizational effectiveness since its findings can contribute to an improvement in hospital effectiveness.

Research Objectives

This study aims to examine the predictability of organizational effectiveness as explained by transformational leadership and types of organizational culture perceived by nurses in affiliated hospitals of Kunming Medical University, P.R. China.

Hypothesis

Transformational leadership and types of organizational culture could predict the organizational effectiveness perceived by nurses in affiliated hospitals of Kunming Medical University, the People's Republic of China.

Conceptual Framework

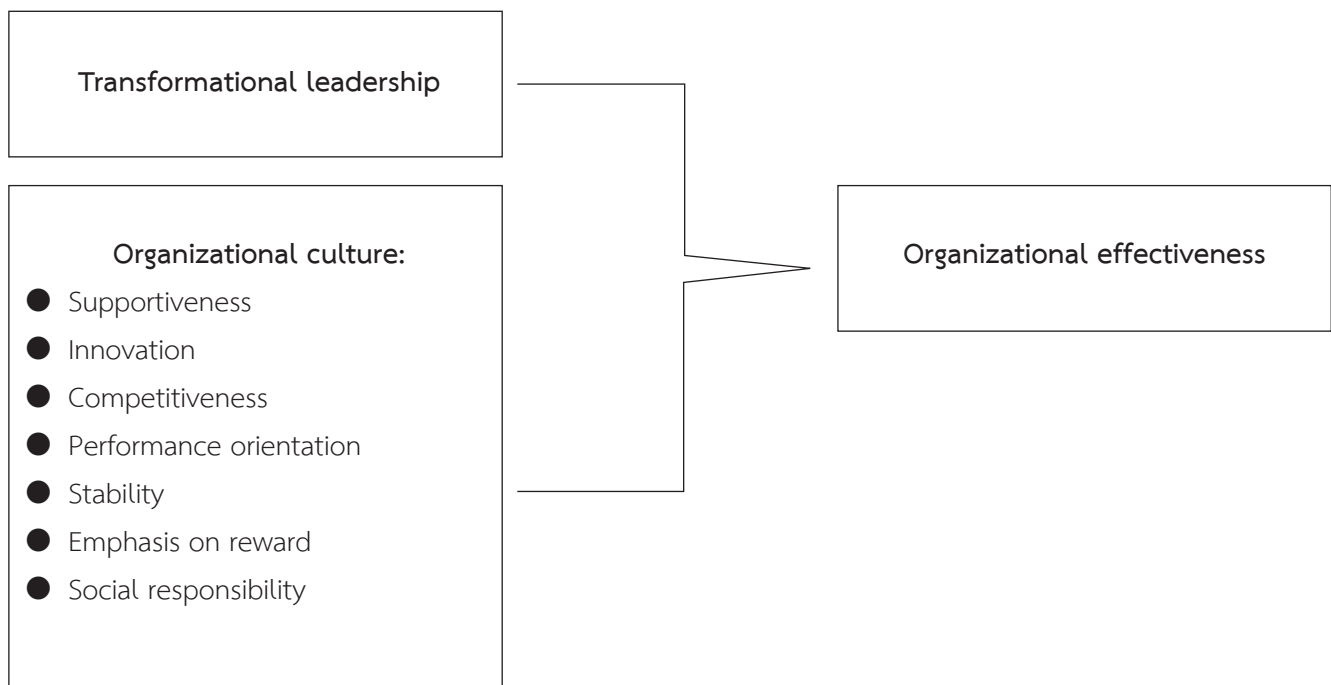


Figure 1 Conceptual framework

The conceptual framework of this study was based on the concept of organizational effectiveness which consists of productivity, adaptability, and flexibility.³ Transformational leadership refers to a collection of practices and behaviors performed by leaders to motivate their followers to work more than

expected through five key leadership practices: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart.¹² Organizational culture is a system of shared values and norms that define appropriate attitudes and behaviors for

organizational members. It consists of seven components: supportiveness, innovation, competitiveness, performance orientation, stability, emphasis on reward, and social responsibility.⁸ Transformational leaders lead employees to change, grow, and improve. Organizational culture promotes creativity and achievement-orientation of employees, which then can improve the effectiveness of the organization afterwards.

Methods

This study was a predictive study.

Population and Sample

The population of this study was 6,716 nurses selected from five affiliated hospitals of Kunming Medical University. According to the formula of Yamane¹³, the sample size was calculated into 378 nurses. Since the possible loss of subjected is taken into account, 20% of the sample was added. Thus, the total participants were 454 nurses who had working experience above one year and were working in inpatient and outpatient department. Nurses who were on sick leave, continuing their education, or in an administrative position were excluded from the study. A multistage sampling method was used to select participants.

Instruments

A set of questionnaires consisted of 1) the Demographic Data form; 2) the Leadership Practice Inventory¹² translated into Chinese by Chen & Baron¹⁴ The questionnaire is ranged in a 5-point Likert scale. The mean score was classified into three levels (1.00 - 2.33 = low; 2.34 - 3.66 = moderate; 3.67 - 5.00 = high). Its content validity and Cronbach's alpha coefficient was .96¹⁴ and .97 respectively; and 3) the Organizational Culture Profile¹⁵ which was translated into Chinese by Yao.¹⁶ It is ranged in a

5-point Likert scale as well. Organizational culture was classified into "prominent" for a mean score higher than the norm and "less prominent" for a mean score lower than the norm. The norms for seven components are: 3.70 for supportiveness, 3.37 for innovation, 3.37 for competitiveness, 4.02 for performance orientation, 3.46 for stability, 3.61 for emphasis on rewards, and 3.93 for social responsibility. The factor analysis was used to confirm the validity of the Organizational Culture Profile.¹⁵ Its Cronbach's alpha coefficient was .96; 4) the Organizational Effectiveness Questionnaire⁶ translated into Chinese by using the back-translation method¹⁷. The content validity was .96⁶ The Cronbach's alpha coefficient was .94. The Organizational Effectiveness was classified into three levels (1.00-2.33 = low; 2.34-3.66 = moderate; 3.67-5.00 = high)

Ethical Considerations

This study was approved by the Research Ethics Committee, Faculty of Nursing, Chiang Mai University, Thailand (2020-EXP022). All subjects were informed about the purpose of the study before participating with voluntary. They could refuse to participate or withdraw from the study at any time without any effects on their performance evaluation. To maintain anonymity and confidentiality of the participants, a code number was assigned instead of using the names of the subjects, and the results of the study were presented as a group. The subjects were asked to sign a consent form.

Data Collection and Analysis

Data were collected from March to May 2020. Of the 454 distributed questionnaires, 430 questionnaires (94.71%) were returned and 410 questionnaires (90.31%) were completed. Data were analyzed using a computer program. The

demographic data of participants, as well as the scores of overall organizational effectiveness, transformational leadership, organizational culture, and each component of organizational culture were analyzed by using frequency, percentage, mean, and standard deviation. Testing the assumptions found non-normality of organizational culture. Binary logistic regression analysis (enter method) was used to analyze the predictability of transformational leadership and organizational culture on organizational effectiveness.

Results

The average age of the participants was 32.63 (SD = 6.33) although 52.20% of participants were between 23 to 30 years old. The vast majority of the participants were female, accounting for 94.15%, and most of the participants were married (71.22%). In addition, 88.54% of the participants had a Bachelor's degree and roughly three-fifths of the participants (58.54%) were senior nurses. In terms of monthly salary, most of the participants (42.68%) had a monthly salary ranging from ¥ 6,001 to ¥ 8,000. All participants had been engaged in nursing jobs for

2 to 37 years (Mean = 9.87, SD = 6.98) with most of the participants working for between 2 to 10 years (68.78%). Approximately two-thirds of the participants (66.34%) worked with their present head nurse for 1-5 years.

Participants perceived the overall organizational effectiveness at a moderate level (Mean = 3.66, SD = 0.53). Classified into groups, participants perceived the organizational effectiveness at a high level for 50.0 percent and at a moderate level for 50.0 percent. The transformational leadership of the head nurse was perceived at a high level (Mean = 3.70, SD = 0.75). Four types of organizational culture, including supportiveness (Mean = 3.83, SD = 0.66), innovation (Mean = 3.67, SD = 0.65), competitiveness (Mean = 3.61, SD = 0.66), and stability (Mean = 3.58, SD = 0.69) were perceived as prominent whereas the other three types, including performance orientation (Mean = 3.60, SD = 0.68), emphasis on rewards (Mean = 3.50, SD = 0.72), and social responsibility (Mean = 3.87, SD=0.62) were perceived as less prominent. Table 1 shows predicting factors of organizational effectiveness.

Table 1 Binary Logistic Regression Analysis of the Factors Predicting Organizational Effectiveness (n = 410)

Variables	B	SE	Wald	p-value	OR	95% CI
Transformational leadership	.60	.21	8.49	.004**	1.82	1.22-2.73
Innovation (1)	.74	.35	4.51	.034*	2.10	1.06-4.15
Performance orientation (1)	1.41	.42	11.48	.001**	4.09	1.81-9.22
Stability (1)	.80	.30	6.94	.008**	2.23	1.23-4.04

Note. (1) = Prominent; OR = Odds Ratio; CI = Confidence Interval; a less prominent type of organizational culture is used as a reference group; * p<.05. ** P<.01

According to table 1, binary logistic regression revealed that transformational leadership, innovation, performance orientation, and stability could explain 39.00% (Nagelkerke $R^2 = .390$) of variability in organizational effectiveness. The increase of every one point in the perception of transformational leadership of head nurse is likely to improve the perception of high organizational effectiveness by 1.82 times. Participants who perceived prominent innovation were 2.10 times as likely to perceive high levels of organizational effectiveness as those who perceived less prominent innovation. The participants who perceived prominent performance orientation were 4.09 times as likely to perceive high levels of organizational effectiveness as those who perceived less prominent performance orientation. Moreover, the participants who perceived prominent stability were 2.23 times as likely to perceive high levels of organizational effectiveness as those who perceived less prominent stability.

Discussion

The overall organizational effectiveness as perceived by nurses in the affiliated hospitals of Kunming Medical University was at a moderate level. The possible explanation might be that the affiliated hospitals of Kunming Medical University can adapt themselves in response to the changes, such as using an intelligent blood collection system to reduce waiting time or using an IT system for automatic reports of laboratory tests.¹¹ In addition, these hospitals have the ability to adjust quickly in order to cope with temporally unpredictable overloads of work or emergency situations during the COVID-19 pandemic. They have managed the situation of COVID-19 by screening high-fever patients through remote temperature equipment and efficiently completing the novel Coronavirus nucleic acid test within 3 hours. However, there is a serious shortage of nurses in

China these days.¹⁸ As a result, limited human resources may lead to poor nursing care services and increase the risk of adverse events such as hospital-related mortality, hospital-acquired pneumonia¹⁹, which represents a low quality of care, thus in turn lowering their productivity. The results of this study were consistent with studies conducted by Hser⁶ in Myanmar, Kraisree⁷ in Thailand, and Wang¹⁰ in China.

The findings of this study showed that four factors significantly predicted high organizational effectiveness. In the affiliated hospitals of Kunming Medical University, managers display high leadership practices and enable others to act.²⁰ According to Kouzes and Posner¹², transformational leaders will envision the future by imagining exciting and ennobling possibilities and enable others to act to change the status quo. They also seek for changes and innovation²¹ to grow and improve themselves. These help increase productivity and flexibility, thus improving the effectiveness of the hospitals. In addition, since 2019, the nursing department of the First Affiliated Hospital has implemented performance reforms which motivated nurses to focus on work performance.¹¹ The hospitals are working to cultivate an innovative spirit in their nurses to carry out innovation competitions in order that they could adapt to changes more effectively. As a consequence, prominent innovation has contributed to a high level of adaptability and to organizational effectiveness. Furthermore, the hospitals are public healthcare settings run by the government. Public employees typically enjoy better job security than private employees since their positions become permanent appointments after a probationary period; it is very unlikely for an employee to be laid off. Prominent stability offers a sense of calm, employment security, and low conflict, which leads to increased productivity in a hospital. Organizational culture,

therefore, can predict organizational effectiveness.

Implication of the Study

Based on the results of this study, nursing administrators should improve the transformational leadership of head nurses by providing opportunities for training or continuing their education. Also, an organizational culture of performance orientation, innovation, and stability should be cultivated in the hospitals.

Recommendation for Future Study

The following areas are recommended for further studies: 1) conducting research on organizational effectiveness at different levels and types of hospitals in other regions of China and 2) studying programs or strategies to improve the innovation, performance orientation, and stability of organizational culture.

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