A Comparative Study of a State-Owned and A Private Regional Hospitals in Taiwan by Safety Attitudes Questionnaire from Viewpoints of Physicians and Nurses

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Abstract—This study evaluates if physicians and nurses perceive the patient safety culture differently in a state-owned and a private regional hospitals in central Taiwan by using the data of six dimensions of safety attitudes questionnaire in 2016. Mann-Whitney U test for two independent samples is used to compare if the perceptions from physicians and nurses are significantly different with \( \alpha = 0.05 \) for both hospitals. The results show that physicians and nurses do not have different perceptions in safety climate, perceptions of management, and job satisfaction statistically. However, physicians and nurses in the private regional hospital have better perceptions in teamwork climate and stress recognition significantly. In contrast, physicians and nurses in the state-owned hospital have better working conditions statistically.

Index Terms—patient safety culture, safety attitudes questionnaire, private regional hospital, state-owned regional hospital, Mann-Whitney U test for two independent samples

I. INTRODUCTION

Sabouri et al. [1] stated that patient safety culture is critically important to promote safety and improve the quality of patient care by changing the organizational culture and adapting it to progress in quality of care. A healthcare organization should develop a patient safety culture among its medical staffs and establish its structural interventions to enhance quality and safety. Chi et al. [2] pointed out that assessing the existing patient safety culture enables hospital management to have a clear vision of a healthcare organization to identify its strengths and weaknesses. Safety attitudes questionnaire developed by Sexton et al. [3] possesses good psychometric properties and great internal consistency, has been validated in different languages, and is considered as an effective tool to assess the patient safety culture from employees’ viewpoints in healthcare organizations [2], [4], [5].

Physicians and nurses are the core staff of each healthcare organization and their performance would directly influence quality of care and patient safety [2], [6], [7]. However, the patient safety culture perceived by physicians and nurses from a state-owned hospital or a private hospital might be somewhat different. For instance, Li et al. [8] concluded that state-owned companies tend to have poor quality performance due to employees’ attitudes and companies’ structures. Kim et al. [9] highlighted that state-owned companies tend to be more collective, whereas private companies tend to be more individual for Chinese employees due to different
Physicians and nurses are required to fill out thirty questions as shown in Table I. Each question uses a five-point Likert’s scale ranging from strongly agree to strongly disagree for each respondent. Items 2 and 11 are the reversed questions such that each respondent’s answer needs to be adjusted. For instance, if a respondent’s answer is strongly agree, the numerical value of one should be used instead of the original numerical value of five. The score for each dimension is to aggregate the scores of the questions under that particular dimension. For instance, there are seven questions in safety climate. Therefore, the score of safety climate ranges from seven to thirty five for each respondent. By the same token, the scores of the other five dimensions can be computed.

### III. Research Method

The purpose of this study is to identify whether or not physicians and nurses perceive the patient safety culture differently when they are in a state-owned regional hospital or in a private regional hospital. The selected state-owned hospital is under Department of Health and Welfare in Changhua County, Taiwan, while the selected private hospital is located in Taichung City, Taiwan. In order to assess the differences between these two hospitals from viewpoints of physicians and nurses, thirty questions from safety attitudes questionnaire as shown in Table I are used. The internal survey results conducted in 2016 from these two hospitals are used and compared. By removing incomplete questionnaire, the number of the effective questionnaire in the state-owned hospital is 310, while the number of the effective questionnaire in this private hospital is 432. The demographic information of these two hospitals is shown in Table II. The distribution of the total score for each dimension for both hospitals does not follow a normal distribution such that Mann-Whitney U test for two independent samples is selected for analyses with $\alpha = 0.05$.
The mean values of six dimensions. To make a
dimension of both hospitals are summarized in Table III.

In contrast, this study uses Mann-Whitney U test for two
in patient safety culture are different in 2016 and 2017. In
to evaluate if the perceptions from physicians and nurses
distribution, independent sample t-test cannot be applied
in both 2016 and 2017 does not follow a normal
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accomplish their tasks. In stress recognition, physicians and nurses in the private regional hospital have higher mean score than those in the state-owned hospital, showing that physicians and nurses might receive more pressure or be more stressful in the private hospital. Finally, physicians and nurses in the state-owned hospital have better working conditions than those in the private hospital, indicating that physicians and nurses in the state-owned hospital receive more training and/or support from hospital management.

V. CONCLUSIONS

This study evaluates the perceptions of physicians and nurses in patient safety culture based on the data in 2016 from the six dimensions of safety attitudes questionnaire of a state-owned and a private regional hospitals. Physicians and nurses in the private hospital have better perceptions in teamwork climate and stress recognition, while physicians and nurses in the state-owned hospital have better working conditions. For a private hospital, physicians and nurses might feel more pressure and be more stressful with p-value less than 0.001 in order to achieve better performance set up by the hospital. In order to gain the incentives from the private hospital, physicians and nurses might need to work as teams. On the contrary, physicians and nurses in the state-owned hospital have better working conditions with p-value less than 0.001 showing the hospital management might not setup higher goals for them to achieve and/or is willing to provide needed training and support for them when both stress recognition and working conditions are taken into account.

REFERENCES


Chih-Huan Huang received his Ph.D. in consumer behavior from Queensland University of Technology, Brisbane, Australia in 2013. He is a Lecturer in the School of Business Administration at Hubei University of Economics, Wuhan City, China since August 2016. He was elected as an International Economics Development Research Center (IEDRC) Fellow Member in Jan. 2016. In addition, he received Chu Tian Scholar Award from the Hubei Province of China in 2016. Dr. Huang is a guest editor of International Journal of Management, Economics and Social Sciences (indexed in Inspec) and serves as a Reviewer for INQUIRY: The Journal of Health Care Organization, Provision, and Financing (indexed in Social Science Citation Index), Journal of Management Research, and Journal of Business and Management. His research in these areas has appeared in a journal such as Asia Pacific Journal of Marketing and Logistics, International Journal of Health Care Quality Assurance, Journal of Management Research, Asia Journal of Business and Management, Journal of Computing and Information Science in Engineering, etc. His research interests include green consumer behavior, relationship marketing, sustainable management and patient safety culture.

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