A Causal Model of Factors Influencing Adherence to Standard Precautions Practices Among Chinese Emergency Nurses: A Cross-sectional Study

Yanfang Huang, Wanchai Lertwatthanawilat, Pimpaporn Klunklin, Akeau Unahalekhaka*

Abstract: Standard precautions are essential to prevent cross-infections among emergency nurses, particularly during a pandemic of infectious diseases. However, poor adherence to such standard precautions is an ongoing global health system problem. This may be due to nurses' lack of adequate understanding regarding the influencing mechanisms of various factors that cause cross-infection in practice. In this cross-sectional study, we rigorously utilized the Theory of Planned Behaviors as a guiding framework to develop and test a causal model of factors influencing adherence to standard precautions practices among Chinese emergency nurses. From July 2022 to February 2023, purposive sampling was used to recruit 310 emergency nurses from eight tertiary hospitals in four cities in Sichuan Province, China, during the COVID-19 pandemic. Research instruments included a Demographic Data Form, the Standard Precautions Questionnaire, the Leading Culture of Quality in Infection Prevention Scale, and the Compliance with Standard Precautions Scale. Data were analyzed using descriptive statistics and the Analysis of Moment Structure program to test the influencing factors.

The final model of factors influencing adherence to standard precautions practices among Chinese emergency nurses explained 36% of the variance. This model provides a practical tool for understanding and improving adherence to standard precautions. Infection prevention climate and intention can affect adherence practices directly. In addition, nurses' attitudes to standard precautions, social norms of standard precautions, perceived behavioral control of standard precautions, and infection prevention climate indirectly affected adherence practices through intention as the mediator. Among these factors, infection prevention climate had the most substantial effect on adherence practices. These findings underscore the pivotal role of nursing administrators in highlighting the remarkable benefits of standard precautions, shaping emergency nurses' positive attitudes and confidence toward standard precautions, and creating a supportive climate for infection control. By implementing these strategies, nursing administrators can significantly improve adherence to standard precautions, ensuring a safer healthcare environment for workers, patients, and the public.

Keywords: Attitude, Causal model, Emergency nurses, Infection control, Infection prevention climate, Intention, Nursing, Standard precautions, Theory of Planned Behavior

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Introduction

Standard precautions (SP) are the minimum requirements of infection control practices used in protecting healthcare workers (HCWs) and patients

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against cross-transmission of microorganisms, thereby preventing healthcare-associated infections (HAIs) and potential infectious exposures among HCWs.[1] It has been nearly 30 years since SP were first formally proposed by the U.S. Hospital Infection Control Practices Advisory Committee (HICPAC).[2] Along with the technological advances in medical sciences, lessons from epidemics and pandemics, and facilitated by the World Health Organization (WHO), SP are currently the accepted worldwide principles and practices for infection prevention and control.[3] The Chinese Emergency Care Alliance released the 2019 version of the expert consensus on hospital infection prevention and control in the emergency department, which specifies SP elements, including advanced hand hygiene, appropriate use of personal protective equipment, prevention of sharps injuries, and standardized disposal of medical waste as the primary measures for infection control.[4] Emergency nurses play a crucial role in healthcare services, being at the forefront during public health emergencies and actively engaged in patient triage, providing daily care in the observation unit, and delivering resuscitation nursing in the trauma room.[5] During such emergencies, nurses' roles might conflict when there are complex demands; infection prevention can easily be overlooked, leading to insufficient adherence to SP. Another significant issue is that the infectious status of most attendees in emergency departments (EDs) is often unknown before diagnosis or testing.[6] In early 2022, with COVID-19 cases surging in China, the emergency transport system was overwhelmed, with many patients being diagnosed, cared for, and treated in EDs.[7,8] In such a complex healthcare context, emergency nurses were at risk of infection if they had inadequate nursing protocols, thus making them the most vulnerable population.[9] A recent Chinese multicenter study found that nurses had a 61.5% incidence of needlestick and sharps injuries, up to 41% in EDs.[10] Reports from China, the U.S., and Australia found high-risk, specialized occupational injuries of emergency nurses, especially during the pandemic, that triggered psychological trauma, low job satisfaction, and a possible rise in leave intentions, which initiated many administrative dilemmas.[11-13]

Exploring the mechanisms by which Chinese emergency nurses adhere to SP practices in a fast-paced, dynamic, and urgent working environment should receive unprecedented attention. Therefore, this study sought to develop and test a causal model of factors influencing adherence to SP practices among Chinese registered emergency nurses.

Conceptual Framework and Literature Review

This study extended Ajzen's Theory of Planned Behavior (TPB) as the conceptual framework. The TPB postulates that, ultimately, behavior is influenced by an individual's intention. In contrast, an individual's attitudes to the behavior, subjective norms (i.e., what people around you think and do), and perceived behavioral control (i.e., whether you feel you can perform the behavior) have sometimes been determined to be intentional.[14]

Previous studies based on TPB have explored HCWs' infection control behaviors, such as hand hygiene and mask-wearing.[15,16] The effectiveness of TPB in explaining HCWs' adherence behavior to infection control guidelines was confirmed by an intervention study.[17] However, the overall explanatory ability of TPB in some predicted studies on infection control adherence behavior was, in general, caused by the lack of incorporation of external organizational or environmental factors in TPB components.[18] Meanwhile, a systematic qualitative literature review revealed that an individual's perceived climate or culture in the workplace or organization, in combination with behavioral, motivational, or intentional factors, plays a role in the mechanism by which an individual's adherence to infection control practice can be factored

in.[19] A recent study found that the infection prevention climate was a positive factor significantly influencing the nursing students' adherence to SP during clinical training.[20] Taking these into account, in this study, we incorporated the infection prevention climate variable into TPB as the conceptual framework. The factors involved were the attitude to SP, the subjective norm of SP, perceived behavioral control of SP, intention to adhere to SP, and infection prevention climate.

In TPB, intention is the main factor that directly shapes behavior, as evidenced in previous studies on HCWs' adherence to SP practices.[14,21] Ajzen claimed that a favorable attitude depicts intent to engage in the behavior but is not sufficient to affect the performance of the behavior alone.[22] So, concerning TPB, intention has been demonstrated in prior research to mediate between attitude and behavior.[23] Regarding subjective norms, it has also been proposed that more stress should be placed on standard norms, public order, and morals, leading to positive actions and promoting well-ordered behaviors.[24] Empirical studies have found that subjective norms were a strong predictor of behavioral incentives, further indirectly promoting the emergence of normative behaviors in infection control.[25] It has been established that perceived behavioral control precedes behavioral intent. This intention is determined by assessing the presence or absence of facilitators and barriers to conducting infection control practices.[26]

Additionally, adding the infection prevention climate as a surrounding environmental factor into TPB complements the analysis of SP adherence from the intrinsic perspective of individual rationality. Based on previous studies, it should directly influence SP adherence behaviors by nurses.[20] Emergency departments face unique challenges in infection control and prevention, and Chinese emergency nurses are under unprecedented pressure to surmount these.[27] Nevertheless, knowledge regarding adherence to SP practices and the related variables gained from previous studies may not fit in the Chinese context. Therefore, based on Ajzen's TPB and empirical findings, this study aimed to develop and test the Model of Factors Influencing Adherence to SP Practices among Chinese Emergency Nurses (MFIASPP). It was hypothesized that intention and infection prevention climate directly affected the RNs' adherence to SP practices, such as attitude to SP and subjective norms of SP, perceived behavioral control of SP, and their indirect effect on adherence to SP practices through intention. The pattern and direction of the relationships among these factors are shown in **Figure 1.**

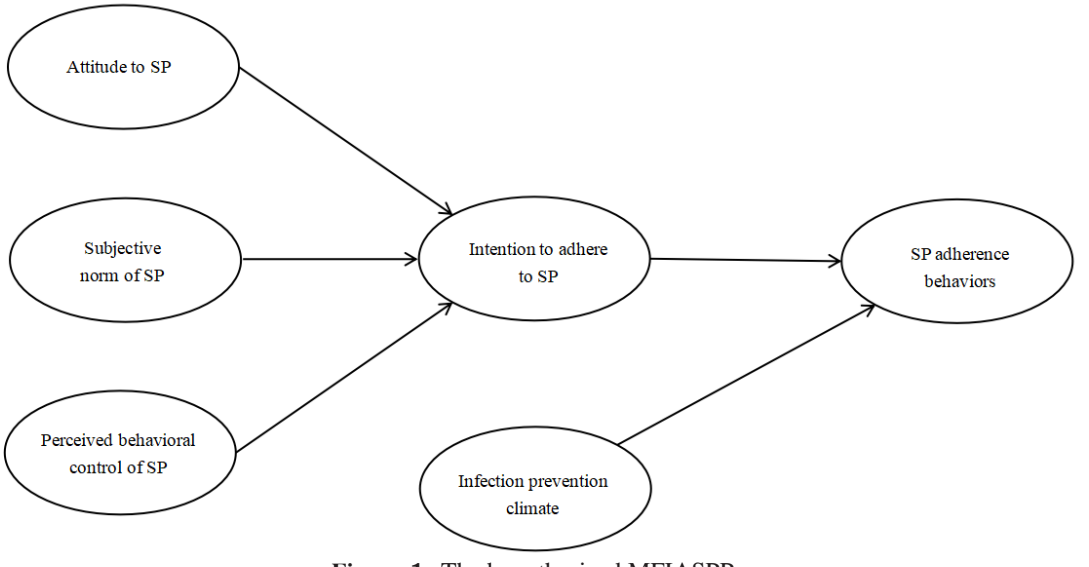

Figure 1. The hypothesized MFIASPP

Methods

Design: This study used a cross-sectional design. This report follows the STROBE guidelines for cross-sectional studies.

Sample and Setting: The purposive sampling method was applied in this study. Due to the high incidence of respiratory diseases, the sample consisted of nurses working at EDs from eight conveniently selected tertiary hospitals in Sichuan province, China. The inclusion criteria were registered nurses (RNs) working for at least one year in EDs. The exclusion criteria were nurse administrators and those on sick leave, parental leave, and study away leave during the data collection period. The sample size was determined using Bentler's proposal for a minimum sample size of five observations for each of the estimated parameter in a model.[28] The assessed sample size comprised 310 participants when the estimated 62 parameters of the hypothesis model were considered. Emergency nurses who participated in the pilot study were omitted from the main study. The questionnaires submitted online met the requested sample size.

Ethical Considerations: The study received ethical approval from the Faculty of Nursing, Chiang Mai University, Thailand, with the code 2022-EXP034. The informed consent form was provided through the Wenjuanxing web application. Participants could only access and complete the questionnaires after providing their signed consent. If participants declined, they were directed to exit the platform and received a thank you message. Participants had the right to refuse participation or withdraw from the study without penalty. All data collected for this study were stored as electronic files on a password-protected computer and kept confidential from unauthorized individuals.

Instruments: Four instruments were used in this study (see below). Table 1 shows each instrument and variable's corresponding content validity and reliability. Through confirmatory factor analysis (CFA), the measurement models of the four scales can reflect construct validity well. All instruments were pilot tested, and completing all tools took participants 15-25 minutes.

The *Demographic Data Form* was developed by the primary investigator (PI) and includes participants' age, gender, marital status, education level, job title, duration of work in the ED, sharps injury exposure history, hepatitis B vaccination status, and training experience about SP.

The *Standard Precautions Questionnaire* (SPQ) was developed by Michinov and colleagues in English based on the TPB.[29] This instrument was translated into Chinese by the PI and two bilingual experts (Chinese and English), applying the back-translation technique suggested by the World Health Organization (WHO) guidelines.[30] The SPQ contains a total of 24 items with four dimensions reflecting the concepts or variables in this study to measure the socio-cognitive determinants of adhering to SP among healthcare workers, which include attitude to SP (3 items), social norms of SP (6 items), perceived behavioral control of SP (11 items), and intention (4 items). The SPQ uses a 5-point Likert scale (1 = completely disagree to 5 = strongly agree). One negative statement item is reversed. Scoring is done by computing the mean for each item, dimension, and overall mean. Higher mean scores in each dimension indicate a more positive attitude to SP, more consistency with the social norms of SP, greater behavioral control of SP, and a stronger intention to adhere to SP. The CVI and the Cronbach alpha reliability in each dimension for the pilot and main study are shown in **Table 1.**

Table 1. Description of instruments used in the study

Instruments/Variables	CVI	Reliability		Example of items
		Pilot study (n = 30)	Actual study (n = 310)	
SPQ	1	.89	.87	The exemplary behavior of the medical manager influenced me to follow the SP protocol.
Attitude to SP	1	.86	.83	If I follow the SP protocol, I will protect my patients from infections.
Subjective norm of SP	1	.86	.86	The charge nurse will reprimand me if I don't follow the SP practices.
Perceived behavioral control of SP	1	.94	.93	Problems related to the use of infection control equipment.
Intention to adhere to SP	1	.94	.88	I intend to comply with SP protocol. Even if the patient is difficult.
LCQ-IP	.98	.85	.93	Our organization's infection prevention goals and strategic plan are clear and well- communicated.
CSPS	.98	.83	.82	I recap used needles after giving an injection.

Note. SP = Standard precautions, SPQ = Standard Precautions Questionnaire, LCQ-IP = Leading a Culture of Quality in Infection Prevention Scale, CSPS = Compliance with Standard Precautions Scale

The *Leading a Culture of Quality in Infection Prevention Scale* (LCQ-IP) was developed by Pogorzelska et al. in the English language.[31] This instrument was translated into Chinese by the PI and two bilingual experts (Chinese and English) applying the back translation technique as suggested by the World Health Organization (WHO) guidelines.[30] The LCQ-IP has 19 items with four dimensions: psychological safety, prioritization of quality, work environment, and improvement orientation. It is scored on a 5-point Likert scale, with 1 = strongly disagreed and 5 = strongly agreed. For the negative item, the scoring is reversed. Scoring is done by computing the mean for each item, dimension, and overall mean. Higher scores indicate a more favorable perception of the climate for infection prevention quality.

The *Compliance with Standard Precautions Scale* (CSPS) was developed by Lam in English to measure adherence to SP practices (e.g., hand hygiene, PPE, safe injection, et al.) in clinical nurses.[1] Xiong et al. translated the Chinese version of the CSPS.[32] We used the Chinese version with permission from both the developer and the translator. The CSPS has a total of 20 items with both positive and negative statements and is measured in the form of four Likert scales ranging from 1= never to 4 = always. The negative statements are reversed before the summation of the total scores. Only the "always" option in positively worded items and the "never" option in negatively worded items are given a score of 1. The other options are not given any scores. Scores range from 0-20, with a higher score representing better adherence to SP practices.

Data Collection: This was undertaken from July 2022 to February 2023 after obtaining approval from the eight hospitals. The primary investigator (PI) contacted the head nurses of the EDs in the eight settings to explain the purpose and process of the study. The website or QR code of the online questionnaire was shared with each work WeChat group by the head nurses to recruit participants who met the inclusion criteria. Participants who volunteered to complete the questionnaire were sent the informed consent form and explanations about the instruments. Four instruments took participants around 15-25 minutes to complete. The submitted questionnaires were automatically returned to the web data platform. The PI was responsible for checking the integrity and completeness of the questionnaires. Besides, the platform

only permitted one identification for each subject, and the answers were not repeated from the same participants.

Data Analysis: There were 30, 21, 48, 56, 45, 32, 46, and 36 questionnaires submitted from the eight tertiary hospitals, respectively, a total of 314 with a 100% response rate. Only four questionnaires with missing data were deleted, so 310 questionnaires were used for data analysis. SPSS Statistics 25.0 and Analysis of Moment Structures (Amos) 22.0 were used for data analysis. The level of significance was set at 0.05. Descriptive statistics were employed to describe the characteristics of the sample and study variables. Next, the assumptions of multivariate analysis were tested and met, including normality, linearity, homoscedasticity, and multicollinearity. All instruments' construct validity was tested through confirmatory factor analysis (CFA) in Amos. Finally, the hypothesized model was tested using Amos's structural equation model (SEM).

Results

Characteristics of participants

Most participants were female (87.1%), married (70%), and aged 20–54 averaging 31.81 years (SD = 6.11). Most participants (78.39%) had a bachelor's degree and had worked in EDs, averaging 7.66 years (SD = 5.93). Most participants had a sharps injury exposure history (70.97%) and were vaccinated for hepatitis B (81.61%). Almost all (97.42%) had received training on SP.

Scores for study variables

Table 2 presents the scores of the variables in this study. As shown in **Table 3**, five variables, attitude to SP, subjective norm of SP, perceived behavioral control of SP, intention, and infection prevention climate, were significantly correlated with adherence to SP practices.

Table 2. Description of study variables (n = 310)

Variables	Possible score	Actual score	Mean	SD
Attitude to SP	1–5	1.67–5	3.57	0.70
Subjective norm of SP	1–5	1.63–5	4.03	0.85
Perceived behavioral control of SP	1–5	1–5	3.46	1.01
Intention to adhere to SP	1–5	2.5–5	4.49	0.60
Infection prevention climate	1–5	1.58–5	3.92	0.61
Adherence to SP practices	0–20	0–19	12.82	3.61

Note. SP = Standard precautions

Table 3. Correlations matrix of study variables (n = 310)

Variables	1	2	3	4	5	6
1. Attitude to SP	1					
2. Subjective norm of SP	.13*	1				
3. Perceived behavioral control of SP	.14*	.11*	1			
4. Intention to adhere to SP	.32**	.40*	.25**	1		
5. Infection prevention climate	.11*	.30**	.19**	.35**	1	
6. Adherence to SP practices	.25**	.35**	.22**	.46**	.29**	1

SP = Standard precautions *p < 0.05. **p < 0.01.

Testing the model factors

The structural model was tested, and all the hypotheses proposed based on the structural relationships of components in the TPB were supported but did not fit with the data. Hence, the hypothesized model was modified according to the suggestions of the modification indices and theoretical-based support. The modified model identified an indirect effect

correlation between infection prevention climate and adherence to SP practices through intention (**Figure 2**), explaining 36% of the variance in adherence to SP practices and showing good fitness with the data. The chi-square = 294.472, chi-sq/df = 2.606, RMSEA = 0.072, CFI = 0.919, TLI = 0.902.

We found that adherence to SP practices was directly influenced by two independent variables: infection prevention climate and intention. Attitude to SP (β = .28, p < 0.01), social norms of SP (β = 39, p < 0.01), perceived behavioral control of SP (β =.18, p < 0.01), infection prevention climate (β = .35, p < 0.01) had a direct effect on intention altogether explaining 39% of the variance. Attitude to SP (β = .08, p < 0.01), social norms of SP (β = .11, p < 0.01), perceived behavioral control of SP (β = .05, p < 0.01), infection prevention climate (β = .10, p < 0.01) indirectly affected adherence to SP practices through intention, explaining 36% of the variance. The final MFIASPP showed that the infection prevention climate (β = .54, p < .01) had the highest total effect on adherence to SP practices, followed by intention (β = .29, p < .01) (**Figure 2, Table 4**).

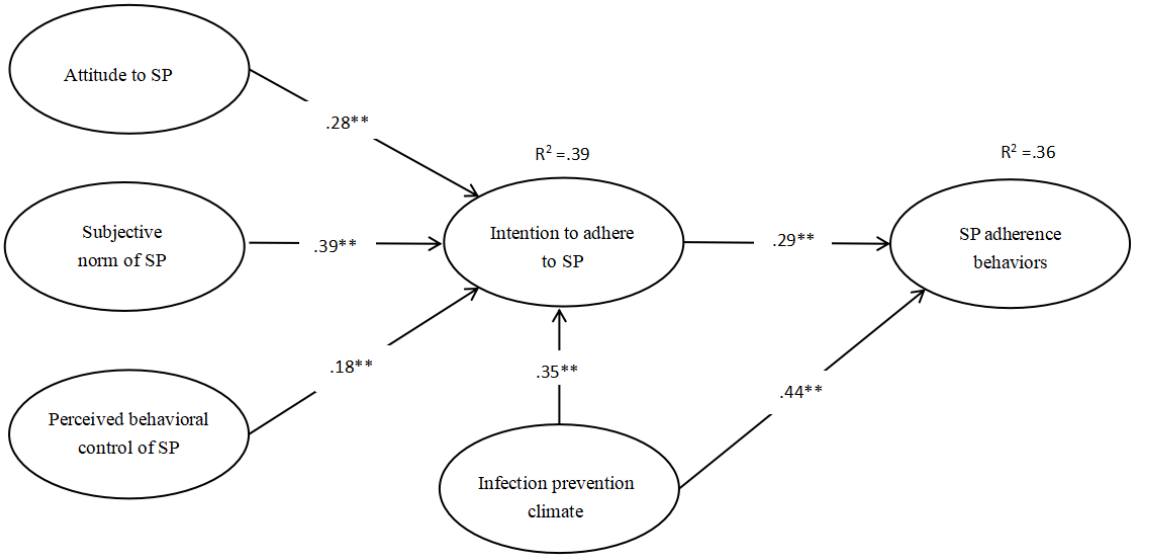

Figure 2. The final MFIASPP among Chinese Emergency Nurses
Note. *p < 0.05, **p < 0 .01, SP = Standard precautions

Table 4. Direct and indirect standardized coefficient for MFIASPP

Causal variables	Intention to adhere to SP			Adherence to SP practices		
	DE	IE	TE	DE	IE	TE
Attitude to SP	0.28**		0.28**		0.08**	0.08**
Subjective norm of SP	0.39**		0.39**		0.11**	0.11**
Perceived behavioral control of SP	0.18**		0.18**		0.05**	0.05**
Infection prevention climate	0.35**		0.35**	0.44**	0.10**	0.54**
Intention to adhere to SP				0.29**		0.29**
Explained variance	R^2=0.39			R^2=0.36		

Note. DE = direct effect, IE = indirect effect, TE = total effect; *p < .05, **p < .01

Discussion

Overall, we found that the participants needed more adherence to SP practices. However, most of them had received training on SP, which is consistent with previous research reporting that the SP adherence practices of HCWs were suboptimal.[33] The possible reasons for this may be the limitations of training effectiveness in the short period of intensive training surrounding complex SP during the COVID-19 pandemic, mainly through online training on practical skills such as donning and doffing protective clothing.[34] However, these findings are valuable and timely during the pandemic.

The final model demonstrated that adherence to SP practices was directly influenced by intention, which is consistent with previous studies.[23] Besides, this finding supported the TPB model, in which the intention structure is the core and proximal predictor of behavior. The conceptual framework between intention and behavior is paramount to researchers studying behavior change.[35] Interestingly, the results revealed that infection prevention climate directly and indirectly affects SP adherence practices. In a similar study, the culture of safety environment and infection control within the organization significantly influenced Korean emergency nurses' adherence to SP practices.[36] The possible explanation might be that a favorable infection control climate implies a more favorable feeling among healthcare staff regarding some factors such as strong leadership support, clear communication and education about infection prevention, as well as a culture of accountability and responsibility with a priority of work requirements for infection control quality in the workplace and an emphasis on SP' adherence to reduce infection risk.[37]

The findings revealed that the nurses' attitude to SP indirectly affected SP adherence practices through intention, which was consistent with the TPB. Ajzen claimed that an attitude that offers intent to engage in the behavior is insufficient to affect the performance of the behavior alone.[22] However, another study in China found that attitude directly affected nurses' use of SP.[38] Fishbein explains the possible reasons for inconsistent findings. When assessing the attitude construct, it is essential to differentiate between attitudes toward the object itself and the behaviors associated with that object.[39] It suggested that when examining the attitudes of healthcare professionals towards infection control, it is crucial to distinguish between attitudes towards these infections as a concept and attitudes towards the implementation of specific infection control behaviors; failure to make this distinction may result in variations in measurement outcomes.

Subjective norms of SP indirectly affected adherence to SP practices, similar to a recent study, which found that subjective norms have a mixed effect on behavior change, particularly in a highly cooperative environment in emergency nursing.[21] Hence, it is proposed that more stress should be placed on standard norms and public order, leading to positive actions and thus promoting well-ordered behavior.[24]

Perceived control behavior of SP indirectly influenced SP's adherence practices, which was inconsistent with a previous study.[16] Some studies have found that perceived behavioral control directly affects behavior performance, regardless of whether a mediator is involved. This was the original rationale for introducing perceived control into the TPB model by Ajzen, which was in part grounded on the view that behavioral manifestation is shaped by both intent and ability (behavioral control).[14] Possible reasons for this were the complexity of the content of SP and, in particular, the high demand and standardization of SP practice during the COVID-19 period of this study, which made the participants not confident or competent to acquire the full SP range of practice requirements. It also resulted in their inability to accurately assess their behavioral control over SP, especially during the pandemic.[40]

Limitations

The primary limitation of this study is that the assessment of SP adherence level relied on self-reported data, the results of which might reflect social desirability. Additionally, the generalizability of the study findings is limited due to the sample being comprised solely of emergency nurses from the teaching and regional tertiary hospitals. Lastly, it is essential to consider potential variables, such as the participants' risk perception and adventurous personalities, which may influence their adherence to SP practices during this pandemic.

Conclusions and Implications for Nursing Practice

Guided by the Theory of Planned Behaviors, the findings of this study showed a causal pathway of influencing adherence to SP practices among Chinese emergency nurses. The final model fitted with the empirical data and accounted for 36% of the variance in adherence to SP practices. Infection prevention climate and intention directly influence adherence to SP practices. The attitude to SP, the subjective norm of SP, and the perceived behavioral control of SP indirectly affected adherence to SP practices. Among these factors, the infection prevention climate was the most vital influencer. According to the research findings, administrators should provide a supportive work environment for emergency nurses, establish high priority in infection control, and emphasize the weighing of SP adherence in the quality of nursing assessment to strengthen the culture of infection control within the organization. Meanwhile, administrators should increase publicity about the connotations and practices of SP in multiform and value the exemplary models of adherence to SP practices to foster a positive attitude and more confidence regarding SP for emergency nurses. Further, public media could widely advocate measures such as wearing proper personal protection and respiratory hygiene, especially during the COVID-19 pandemic. Moreover, developing an SP plan and monitoring the implementation process in health settings will help improve nurses' SP intentions and behaviors. For example, visual biology detection devices can facilitate the better translation of handwashing intentions into handwashing practices among emergency nurses.[41]

Regarding education and training, nursing educators should offer continuous, adequate training on SP to improve the attitudes and risk perceptions involved with poor adherence to SP in emergency nurses. Diverse course designs and a hybrid model of web multimedia-based education are worth promoting.

In nursing practice, it is suggested that the influence of colleagues' exemplary modeling of best practice in SP can positively impact nurses' behaviors as a social norm and should not be underestimated in clinical settings. Co-workers should jointly standardize infection control behaviors to ensure that SP practices are routinely followed during nursing care to meet minimum infection control standards.

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แบบจำลองเชิงสาเหตุของปัจจัยที่มีอิทธิพลต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐานของพยาบาลห้องฉุกเฉินชาวจีน : การศึกษาภาคตัดขวาง

Yanfang Huang, วันชัย เลิศวัฒนวิลาศ พิมพาภรณ์ กลั่นกลิ่น อะเคื้อ อุณหเลขกะ*

บทคัดย่อ: การป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน เป็นการปฏิบัติที่สำคัญสำหรับการป้องกันการติดเชื้อในพยาบาลห้องฉุกเฉิน โดยเฉพาะอย่างยิ่งในช่วงการระบาดของโรคติดเชื้อ อย่างไรก็ตามยังขาดความเข้าใจเกี่ยวกับปัจจัยต่างๆ และเส้นทางของแต่ละปัจจัยที่มีอิทธิพลต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน การศึกษาวิจัยภาคตัดขวางนี้มีวัตถุประสงค์เพื่อพัฒนาและทดสอบแบบจำลองเชิงสาเหตุของปัจจัยที่มีอิทธิพลต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐานของพยาบาลห้องฉุกเฉินชาวจีน โดยใช้กรอบแนวคิดทฤษฎีพฤติกรรมตามแผน สุ่มตัวอย่างแบบเจาะจงเพื่อคัดเลือกพยาบาลห้องฉุกเฉินจำนวน 310 คน จากโรงพยาบาล 8 แห่งในประเทศจีน ตั้งแต่เดือนกรกฎาคม พศ. 2563 ถึง เดือนกุมภาพันธ์ พศ.2566 เครื่องมือวิจัยประกอบด้วย แบบสอบถามข้อมูลพื้นฐาน แบบสอบถามการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน แบบประเมินวัฒนธรรมผู้นำด้านคุณภาพการป้องกันการติดเชื้อ และแบบประเมินการปฏิบัติตามการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน วิเคราะห์ข้อมูลโดยใช้สถิติเชิงบรรยาย และทดสอบปัจจัยที่ส่งผลต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน ด้วยโปรแกรม Analysis of Moment Structure (Amos)

ผลการศึกษาพบว่า โมเดลสุดท้ายอธิบายความแปรปรวนของการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐานของพยาบาลห้องฉุกเฉินได้ร้อยละ 36 (R^2 = 0.36) ตัวแปรบรรยากาศการป้องกันการติดเชื้อ และความตั้งใจมีอิทธิพลโดยตรงต่อในการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน นอกจากนั้น ทัศนคติต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน บรรทัดฐานของสังคม การรับรู้ในการควบคุมพฤติกรรม และบรรยากาศการป้องกันการติดเชื้อส่งผลต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐานผ่านทางความตั้งใจในการปฏิบัติ โดยที่บรรยากาศการป้องกันการติดเชื้อมีอิทธิพลมากที่สุดต่อการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน ผลการวิจัยนี้เป็นแนวทางสำหรับผู้บริหารในการเน้นถึงประโยชน์ที่สำคัญของการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐานโดยเน้นให้พยาบาลห้องฉุกเฉินมีทัศนคติเชิงบวก และสร้างบรรยากาศให้เอื้อต่อการควบคุมการติดเชื้อเพื่อยกระดับของการปฏิบัติการป้องกันการแพร่กระจายเชื้อแบบมาตรฐานอันจะนำมาซึ่งสภาพแวดล้อมในการดูแลสุขภาพที่ปลอดภัยยิ่งขึ้นทั้งต่อบุคลากรสุขภาพและผู้ป่วยต่อไป

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คำสำคัญ: ทัศนคติ แบบจำลองเชิงสาเหตุ พยาบาลห้องฉุกเฉิน การควบคุมการติดเชื้อ บรรยากาศการป้องกันการติดเชื้อ ความตั้งใจ การพยาบาล การป้องกันการแพร่กระจายเชื้อแบบมาตรฐาน ทฤษฎีพฤติกรรมตามแผน

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