



DEVELOPMENT AND VALIDATION OF KOREAN VERSION OF PATIENT SAFETY CULTURE MEASUREMENT TOOL

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Objectives

- Patient safety is treated as a top priority in the healthcare agenda around the world, and various activities are being carried out to improve patient safety centered on the World Health Organization (WHO). Since the enactment of the Patient Safety Act in 2015, a comprehensive patient safety plan has been established at the national level in 2018. One of the four strategies of the 1st comprehensive patient safety plan is creating a patient-centered safety culture.
- However, the concept of patient safety culture (PSC) is somewhat ambiguous, and the sub-attributes are multidimensional and show differences according to culture. Therefore, it is necessary to provide support for the formation of a desirable PSC by developing a Korean-style PSC measurement tool that considers the characteristics of the domestic healthcare environment and establishing and promoting a strategy for project execution.
- This study aims to develop a Korean version of the PSC measurement tool and examine its reliability and validity.

Results

Table 1. Dimensions of the Korean version of the patient safety culture measurement tool and number of items by factors

Dimension	Factor	No. of items
1.Organization	1A. Leadership	4
	1B. Safety system	17
2. Unit	2A. Teamwork and collaboration	6
	2B. Safety job performance	8
3. Individual	3A. Safety attitude	3
	3B. Safety knowledge	5
	3C. Safety control	9
Total		52

Table 2. Reliability and patient safety culture score by factors

Factor	Cronbach's alpha	Mean±SD
Safety system	.963	3.88±.66
Safety knowledge	.912	4.19±.59
Safety control	.924	3.92±.59
Safety job performance	.863	3.67±.72
Teamwork and collaboration	.920	4.04±.64
Leadership	.902	4.10±.69
Safety attitude	.859	4.35±.58
Total	.955	3.93±.50

Through this study, a reliable and valid measurement tool of the Korean version of PSC was developed considering the characteristics of the domestic healthcare environment, and it is necessary to develop a tool applicable to other healthcare settings.

Methods

- As a first step, preliminary questions for the Korean patient safety culture measurement tool were developed by reflecting literature review, review of existing PSC measurement tools, and focus group interviews.
- In the second step, an online survey was conducted on 1,313 people, targeting doctors, nurses, pharmacists, medical technicians, and administrative workers with more than 2 years of experience, by nonprobability sample assignment by type, region, and certification status.
- Third, the construct validity, criterion validity, and reliability of the preliminary items were verified and the final tool was developed.

Results

- Through the above research process, a preliminary tool for measuring the Korean version of PSC consisting of 4 dimensions, 12 factors, and 58 questions was developed, and reliability and validity were examined through a questionnaire survey. Finally, a Korean version of the PSC measurement tool consisting of **3 dimensions, 7 categories, and a total of 52 questions** was developed(Table 1).
- As a result of exploratory factor analysis to verify the construct validity of the tool, seven factors were extracted, and confirmatory factor analysis was performed to verify the suitability of the factor structure. The Root Mean Square Residual (RMR) was suitable at **0.031**, the Goodness of Fit (GFI) was **0.857**, which was somewhat low, but acceptable, The Normed Fit Index (NFI) was **0.911**, Incremental Fit Index (IFI) was **0.931**, Comparative Fit Index (CFI) was **0.931**, and Root Mean Square Error of Approximation (RMSEA) was also found to be **0.049**. In other words, judging by all the fit indices, this model was at an appropriate level.
- As a result of verifying the reliability of the final measurement tool, the overall reliability of **Cronbach's alpha** was **0.955**, which was very high, and the reliability of the sub-domain was 0.859 to 0.963, which was very high (Table 2)

Conclusion