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Original Article

Translation and Validation of the Korean Version of the Global Interprofessional Therapeutic Communication Scale: A Study of the Psychometric Properties among Korean Nurses

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Purpose: This study aimed to validate the Korean version of the Global Interprofessional Therapeutic Communication Scale (K-GITCS), with the ultimate goal of improving therapeutic communication and patient engagement among Korean nurses. **Methods:** The study rigorously adhered to the original authors' translation guidelines. A sample of 300 registered nurses from a tertiary hospital in South Korea participated in this research. Confirmatory factor analysis was conducted to verify the tool's validity, and Cronbach's α coefficients were calculated to evaluate the internal consistency of the K-GITCS. **Results:** The instrument's reliability was substantiated by an adequate comparative fit index (0.984) and a high Cronbach's α coefficient (0.94). The empirical results supported the three-factor structure of the K-GITCS, which comprised trust and rapport building, power sharing, and empathy. **Conclusion:** The study confirms that the K-GITCS is a valid, reliable, and culturally sensitive instrument for assessing therapeutic communication skills among nurses in Korea. It also highlights the importance of culturally tailored therapeutic communication training, particularly for promoting empathy in patient care. The study emphasizes the potential of the K-GITCS to significantly enhance nurses' therapeutic communication practices, thereby improving the quality and safety of patient care. It is recommended to apply this tool among nursing students, academic institutions, and interprofessional healthcare providers to facilitate structured educational interventions that will improve therapeutic communication.

Key Words: Communication; Interpersonal relations; Nurse-patient relations; Psychometrics

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INTRODUCTION

Person-centered nursing is crucial for delivering high-quality and safe nursing care, with therapeutic communication (TC) playing a pivotal role. The key elements of TC include person-centeredness, integrative personalized strategies, and goal-directedness [1]. Mutual, goal-directed communication among healthcare professionals and patients, which is integral to TC, promotes the quality of care [2]. Person-centered and integrated care promoted by TC enables healthcare providers to contribute to positive health outcomes through timely verbal and nonverbal communication [3].

The dynamic process of TC involves healthcare teams, patients, and caregivers. These interactions include the development of treatment plans, decision-making, and the evaluation of clinical outcomes [1,4], as well as the expression of interest and empathy [5]. Effective communication and rapport are significant predictors of patient outcomes [6]. By enabling healthcare providers to understand patients' circumstances in context, TC facilitates the provision of appropriate interventions [7]. It is crucial for patients to participate actively in their care process and decision-making. When implementing evidence-based practices, TC ensures that patients' preferences and situations are considered [5]. Language and cultural background also subtly impact TC [8], highlighting the importance of culturally sensitive communication practices.

Despite the recognized importance of TC, registered nurses (RNs) often find it challenging to communicate effectively with patients or caregivers. Theoretical knowledge can be acquired through study, but practical communication skills—including TC—require systematic and substantive education that incorporates hands-on training.

Reliable measurement tools are necessary to evaluate the efficacy of such an educational approach and assess communication skills. The Global Interprofessional Therapeutic Communication Scale (GITCS) was developed to measure TC competence and culturally sensitive communication techniques [9]. The GITCS was designed for use by multiple healthcare providers and enables a comprehensive evaluation of communication between providers and patients. The GITCS has exhibited excellent reliability and is adaptable for use in different languages and cultural contexts [9,10]. It is critical to acknowledge that communication is inherently shaped by cultural background. The translation developed herein can be utilized to investigate TC and develop a suitable program to improve TC skills for RNs in Korea.

Given the significance of cultural factors in communication, the development and psychometric evaluation of a Korean version of the GITCS (K-GITCS) represent significant steps toward its broader application. This study aimed to validate the K-GITCS, thereby providing a reliable and culturally sensitive tool to measure TC skills among nurses in Korea. The findings provide insights into the communication competencies of Korean nurses and support the utilization of K-GITCS in the evaluation of therapeutic communication skills within clinical settings.

1. Aim(s)

The study aimed to translate the GITCS into Korean, examine its validity and reliability in a cross-cultural context, and determine its suitability for use with RNs to assess their self-reported TC skills.

METHODS

1. Design

A methodological research design was employed to verify the psychometric properties of the K-GITCS. This study was conducted in accordance with international regulations based on the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines [11].

The study was conducted in two phases. First, the K-GITCS was developed based on the original authors' translation guidelines. Second, a cross-sectional study was conducted to ascertain its validity and reliability.

2. Translation Process

The GITCS translation process, adapted by Campbell and Aredes [9], involved independent translations from English to Korean by two translators, followed by a synthesis with a local researcher. A bilingual nursing researcher back-translated the K-GITCS into English for semantic evaluation. A panel of experts, including a nursing professor and two experienced RNs with over two years of clinical experience, reviewed and confirmed the final version. A Korean literature specialist assessed linguistic validity. After finalizing the initial version of the K-GITCS, we consulted with Campbell and Aredes, the original authors of the GITCS, to discuss the semantic adjustments based on the back-translation of the K-GITCS. No revisions were deemed necessary based on mutual agreement with the original authors. The completed Kore-

antranslation is available on the GITCS official website (https://nursing-sim.sites.olt.ubc.ca/communication-gitcs/1806-2/).

3. Sampling and Recruitment

The participants in this study were recruited from a tertiary hospital in Seoul, Korea, through convenience sampling. The survey included data from personnel in the medical/surgical general wards and the intensive care unit. However, surveys from the operating room, post-anesthesia care unit, and emergency room personnel were excluded to minimize the heterogeneity of the participants and their TC skills.

The sample required five times more respondents than the number of questions for confirmatory factor analysis (CFA) [12,13]. In addition, conducting CFA requires at least 200 cases [14,15]. To account for potential dropout rates of 30%, 300 survey questionnaires were distributed to active RNs. A total of 271 (90.3%) RNs responded, and after excluding 22 incomplete questionnaires, 249 participants (83.0%) were included in the analysis.

4. Instrument

The GITCS, developed by Campbell and Aredes [9] for use in English-speaking regions, assesses TC skills during simulation education. To tailor the GITCS for use in Korea and enhance its practical application, our research team worked with the original creators to develop a self- reported Korean version, K-GITCS. Our team decided that the first step would be to confirm the validity and reliability of the self-reported K-GITCS, retaining the original 35 items. This approach was chosen despite the existence of a newer, 28-item short-form version [10], underscoring the significance of thorough validation for the initial adaptation of the scale. According to DeVellis (2016), starting with the full version of a scale provides a more robust foundation for cultural adaptation and ensures that the essence and nuances of the original instrument are preserved during the translation process [16]. The K-GITCS utilizes a 5-point Likert scale, with responses ranging from 1 ("strongly disagree") to 5 ("strongly agree") across the 35 items. The questionnaire covers three domains: trust and rapport building, power sharing, and empathy. A higher score reflects a greater level of TC. Items 9, 12, and 16 are phrased negatively and therefore require reverse-scoring. The internal consistency reliability coefficient for the original scale was 0.95.

5. Data Collection

To confirm the validity and reliability of the K-GITCS, researchers surveyed participants during shift breaks from April to May 2019. The research team asked RNs to fill out the questionnaires in a private area, place the completed surveys in provided envelopes, and seal them to maintain confidentiality. Participants were asked to self-report the quality of their TC competence in clinical practice. Completing the K-GITCS took roughly 10 to 15 minutes.

6. Data Analysis

Data were analyzed using SPSS 26.0 (IBM Corp., Armonk, NY, USA) and the lavaan [17] and psych [18] packages in R version 4.1.1 (R Foundation for Statistical Computing, Vienna, Austria). Participants' demographic factors were assessed through descriptive statistical analysis and are presented as means (M)±standard deviations (SD), numbers, and percentages. The construct validity was tested using CFA. Since the K-GITCS consisted of ordinal variables, the diagonally weighted least square method was applied [19]. Like the original GITCS, the K-GITCS was considered to have three factors, eliminating the need for exploratory factor analysis due to the existence of a hypothetical model [14]. Cronbach's α coefficients and omega index (ω_h) values were identified to determine the reliability of the K-GITCS [16].

7. Ethical Considerations

This study received approval from the Institutional Review Board of Yonsei University Health System (Y-2019-0001). Researchers clearly explained the study's purpose to the participants, ensuring their confidentiality before obtaining informed consent. To prevent any influence on the RNs' voluntary participation from their work environment, unit managers were excluded from the decision-making process regarding participation. Researchers conducted briefing sessions with interested RNs at the end of their shifts in the respective wards.

RESULTS

1. Demographics of Participants and Item Response

The participants' M±SD was 31.92±7.10 years. The majority of participants had a bachelor's degree in nursing (n=199, 79.91%). Their workplaces included the medical/surgical general ward (n=159, 63.9%) and the inten-

Table 1. Distribution of Responses to Each Item on the Korean Version of the Global Interprofessional Therapeutic Communication Scale (*N*=249)

Items		Numbers of nurses giving each response					M±SD	Cronbach's α if item deleted
		1	2	3	4	5		
Trust and rapport building	15. Describes what they are going to do BEFORE doing it	0	0	10	116	123	4.45±0.57	0.94
	22. Listens attentively and answers questions	0	0	15	146	88	4.30±0.58	0.94
	11. Personalizes questions providing the patient an opportunity for active communication (open-ended question versus close-ended question)	0	1	20	137	91	4.28±0.62	0.94
	10. Asks permission to touch BEFORE doing anything to the patient (e.g. blood pressure, dressing, palpitation)	1	4	30	106	108	4.27±0.77	0.94
	35. Demonstrates knowledge about patient's case or situation	0	1	24	150	74	4.19±0.61	0.94
	24. Seeks input from the patient regarding their feelings and goals	0	2	23	160	64	4.15±0.60	0.94
	18. Provides appropriate feedback encouraging communication	0	4	32	140	73	4.13±0.69	0.94
	28. Speaks in an appropriate tone and volume given the situation	0	0	38	152	59	4.08±0.62	0.94
	21. Maintains contact appropriate to the culture when talking with the patient and/or family (e.g. eye contact, distance, spatial approximation)	0	3	34	154	58	4.07±0.64	0.94
	17. Makes direct eye contact, if in a face-to-face communication encounter, as appropriate to the culture	0	4	42	137	66	4.06±0.70	0.94
	19. Allows expression of feelings and thoughts	0	5	39	143	62	4.05±0.70	0.94
	20. Identifies potential conflict and finds opportunities to gather information to minimize or manage it	0	2	47	140	60	4.04±0.68	0.94
	27. Touches the patient in a culturally respectful manner	0	3	40	154	52	4.02±0.65	0.94
	29. Encourages feedback and input from patient	0	5	41	156	47	3.98±0.66	0.94
	14. Uses questions in a balanced way, avoiding patient's passive participation (e.g. only responding to questions)	0	3	53	141	52	3.97±0.69	0.94
	34. Where possible provides for privacy and minimal interruptions during the interaction	0	6	54	134	55	3.96±0.71	0.94
	33. Explains differently if necessary according to patient's feedback	1	4	52	142	50	3.95±0.71	0.94
	25. Balances listening and talking	0	8	46	152	43	3.92±0.70	0.94

Table 1. Distribution of Responses to Each Item on the Korean Version of the Global Interprofessional Therapeutic Communication Scale (Continued) (*N*=249)

Items		Numbers of nurses giving each response					M±SD	Cronbach's α if item deleted
		1	2	3	4	5		
Trust and rapport building	26. Recognizes and responds to patient's non-verbal reactions	0	5	57	146	41	3.90±0.68	0.94
	32. Offers patient opportunities to organize and express their thoughts about the messages	0	13	62	125	49	3.84±0.80	0.94
	23. Provides balanced time on psychosocial and clinical aspects of patient care depending on the context	0	8	71	130	40	3.81±0.74	0.94
	13. Conducts the communication in a culturally safe manner	0	12	78	118	41	3.76±0.78	0.94
	31. Encourages patient reflection on their behavior to mobilize change	0	20	112	90	27	3.50±0.79	0.94
Power-sharing	3. Verifies comprehension (patient understands information)	0	1	8	123	117	4.43±0.58	0.94
	2. Provides a professional greeting given the context	0	5	15	126	103	4.31±0.68	0.94
	7. Purposefully explains mutually established goals for the visit	0	2	29	113	105	4.29±0.71	0.94
	6. Encourages feedback and enhances clarity of communication session	0	2	22	139	86	4.24±0.64	0.94
	4. Verbalizes interest in patient and their perspective, encouraging rapport	0	4	25	129	91	4.23±0.70	0.94
	8. Provides accurate information to the patient at the level they understand	0	1	23	144	81	4.22±0.62	0.94
	1. Introduces self by name and title without prompting	0	3	38	118	90	4.18±0.73	0.94
Empathy	5. Demonstrates appropriate proximity to the patient or family according to culture and context	0	0	25	171	53	4.11±0.55	0.94
	16. Gives unsupported (false) reassurance	4	11	31	123	80	4.06±0.88	0.94
	30. Sits or remains level with the patient when possible given the context/situation	0	9	61	130	49	3.88±0.76	0.94
	9. Infers falsely, jumps to conclusions related to patient's behaviors	7	16	33	160	33	3.79±0.86	0.94
	12. Gives advice rather than explaining options and alternatives	10	23	63	132	21	3.53±0.92	0.94

sive care unit (n=90, 36.1%).

Table 1 shows the number of responses to each item. Most participants responded with scores of 4 or 5 on the scale. The highest score was for item number 15 ("Describes what they are going to do before doing it") (4.45±0.57). The lowest score was for item number 31 ("Encourages feedback and input from the patient") (3.50 ±0.79).

2. Construct Validity of K-GITCS

To measure the fit of the components to the data, con-

Table 2. Goodness of Fit Indices for the Korean Version of the Global Interprofessional Therapeutic Communication Scale (*N*=249)

Variables	x^2 (p)	df	CFI	RMSEA	SRMR
Acceptable criteria	$p \geq .05$		$\geq .95$	$\leq .08$	$\leq .08$
Measurement model value	1,353.60 ($p < .001$)	557	0.98	0.08	0.08

CFI=comparative fit index; RMSEA=root mean square error of approximation; SRMR=standardized root mean square residual.

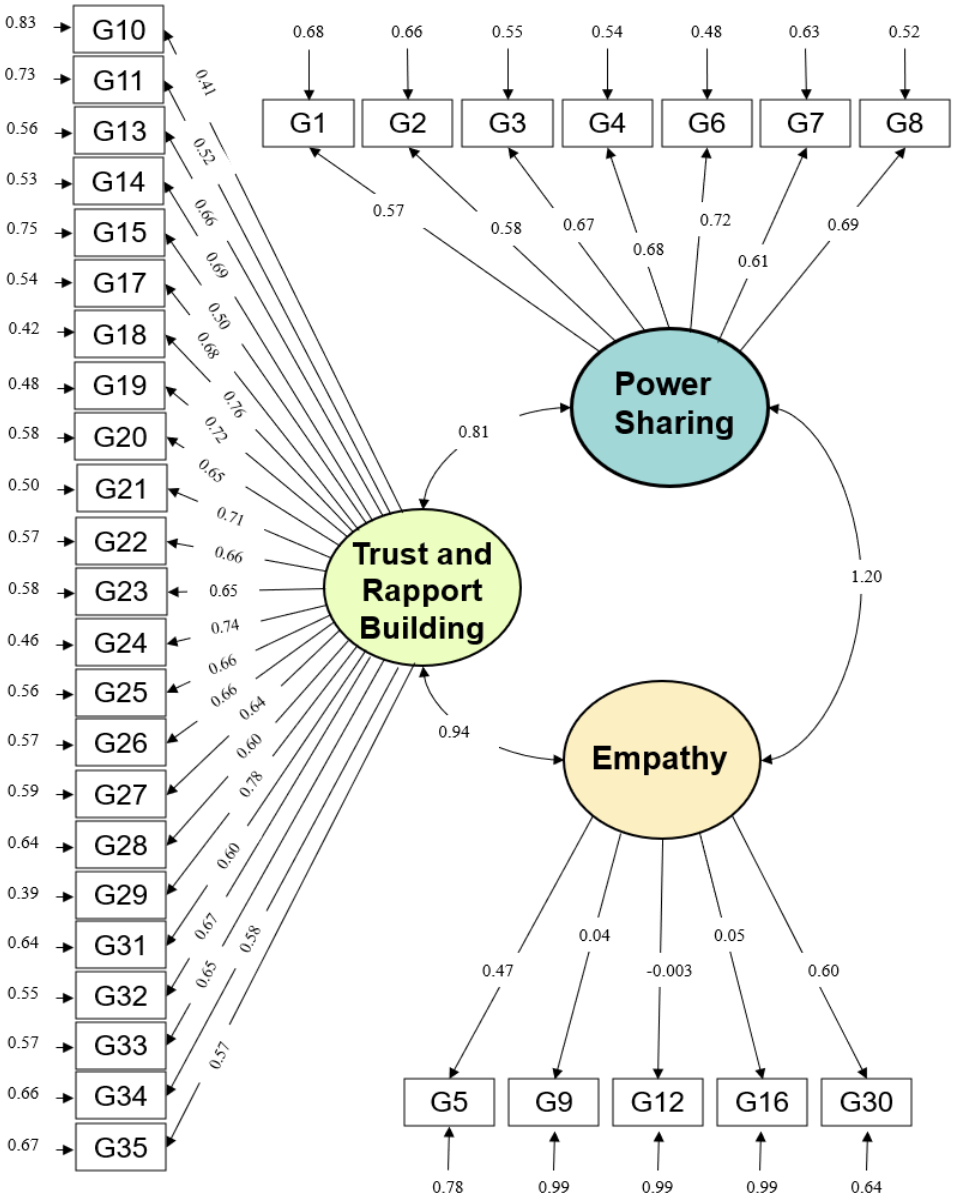

Figure 1. Structural validity of the Korean version of the Global Interprofessional Therapeutic Communication Scale.

struct validity was assessed for the 35 items of the K-GITCS using CFA (Table 2, Figure 1), yielding statistically significant results (x^2=1,353.60, df=557, p <.001). These results meant that the model fit did not perfectly match the data of this study. The comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) have been suggested as fit indices [20].

The CFA results were as follows: CFI=0.98, TLI=0.98, RMSEA=0.08, and SRMR=0.08. An SRMR value not exceeding 0.08 is deemed acceptable for well-fitted models [21]. When selecting a model with fewer parameters, the RMSEA is sensitive, and the criterion for a well-fitting model is 0.08 or less [20]. Meanwhile, it has been argued that the CFI should exceed 0.70 [22], while another source proposed that a value above 0.95 is needed to ensure a good fit [21].

3. Descriptive Statistics for the Three Domains

The three factors of the K-GITCS scores were evaluated to determine the presence of ceiling and floor effects. No significant clustering of cases was found at the extremes of the statistical distribution for any factor, as confirmed by additional histogram tests. Consequently, there was no indication of skewness or kurtosis in the data.

4. Reliability of the K-GITCS

Cronbach's α was employed to assess the internal consistency of the K-GITCS. In this study, Cronbach's α for the entire scale was 0.94, and the omega index (ω) for the entire scale was 0.95, demonstrating good internal consistency (Table 3).

The Cronbach's α values for each of the three domains ranged from 0.39 to 0.94, while the omega indices varied from 0.28 to 0.86. Two domains of the K-GITCS—"trust and rapport building" (23 items, Cronbach's α= .94, ω_h =0.86) and "power sharing" (seven items, Cronbach's α =.79, ω_h=0.70)—demonstrated acceptable reliability. In contrast, the "empathy" domain (five items, Cronbach's α =.39, ω_h=0.28) exhibited low reliability. Additionally, the K-GITCS empathy subscale showed poor internal consistency in the self-reported questionnaire.

An item-total correlation coefficient over 0.40 indicates a suitable correlation between the item and the total score [23]. Except for items 9, 12, and 16 in the empathy domain, the correlation between each item and the total K-GITCS score exceeded 0.40.

DISCUSSION

This cross-cultural validation study conducted a psychometric evaluation of the K-GITCS, confirming its suitability for use with RNs and validating the hypothesis that the K-GITCS is a reliable and valid tool for measuring the TC skills of RNs. We analyzed the construct validity and reliability of the K-GITCS among RNs who were working at a tertiary hospital.

The original instrument, the GITCS, was designed to assess participants' TC in simulation situations. A Korean version was verified in self-reported measurement to facilitate wider application through collaboration with the original and Korean research team. During the translation process, modifications were made to the self-report format. For instance, the introductory phrase "I..." was added to the beginning of the questionnaire and presented to participants. Before the completion of the questionnaire, the research assistant provided a verbal explanation to the participants, indicating that they should consider their typical work practices when responding. The issue of self-reported measurement is a topic of ongoing debate [24]. Although the translation process was free of errors, K-GITCS requires further statistical interpretation. The study maintained the three-factor structure of the original instrument, as outlined by Campbell and Aredes [9]. The K-GITCS demonstrated a robust three-factor structure based on CFA. Reliability analysis indicated good internal consistency for the overall questionnaire, with values for "trust and rapport building" and "power sharing" exceeding the acceptable threshold of 0.70. However, the "empathy" subscale, composed of five items, exhibited lower Cronbach's α and omega index values.

The empathy factor did not meet the validity and reliability criteria; however, our team decided to retain the original items in the empathy domain after a thorough

Table 3. Internal Consistency of Each Subscale of the Korean Version of the Global Interprofessional Therapeutic Communication Scale (*N*=249)

Subscale	n	M±SD	Cronbach's α	Cronbach's α if factor deleted	Omega index (ωh)
Total	35	141.98±13.99	0.94		0.72
Factor 1. Trust and rapport building	23	92.69±10.40	0.94	0.74	0.86
Factor 2. Empowering	7	29.92±3.27	0.79	0.93	0.70
Factor 3. Empathy	5	19.37±2.30	0.39	0.95	0.28

discussion. We determined that the GITCS comprehensively captured TC concepts such as information exchange, mutual respect, and participation. Empathy, as a concept, varies culturally and linguistically. For example, the Oxford Dictionary defines it as "the ability to understand another person's feelings, experience, etc." [25] whereas the Standard Korean Language Dictionary describes it as "the feeling of having the same feelings, opinions, and arguments as another" [26]. These varying interpretations underscore the complexity of empathy in healthcare and may explain the lower reliability of the empathy domain observed in our study. Further research is needed to fully comprehend how empathy functions in TC across different cultural contexts.

The ability of TC is a significant skill for healthcare providers and students alike. It forms the cornerstone of effective patient care and interprofessional collaboration. A great deal of interventions and measurements have been devised to facilitate the development of this competency [27,28]. Previous studies have reached a consensus that it is of the utmost importance for TCs to gain an understanding of the context of the patient [29]. In particular, the strength of GITCS lies in its capacity to embrace a diverse range of cultural and contextual perspectives [9]. The scale's design incorporates feedback from global healthcare professionals, ensuring its applicability and relevance in varied clinical environments. By promoting an inclusive approach to communication assessment, the GITCS not only enhances the communication skills of healthcare providers but also fosters more empathetic and culturally competent patient interactions.

The K-GITCS offers the benefit of comprehensive GITCS functionality while reflecting the cultural characteristics of Korean nurses. Cultural differences are important in measuring communication skills. Prior studies have shown that cultural background significantly affects the validity and reliability of such measurements [30,31]. Researchers must establish measurement invariance when validating cross-cultural instruments [32]. For example, items 5 and 30 of the K-GITCS could be perceived as contradictory by some participants, reflecting the importance of cultural sensitivity in instrument adaptation. Compared to other interpersonal communication measurements, the K-GITCS uniquely addresses these cultural nuances, enhancing its applicability and effectiveness across diverse populations.

Clinical environments, patient-RN relationships, and cultural contexts significantly impact the validity and reliability of the GITCS. North American and East Asian cultures, for instance, have distinct views of healthcare providers and communication practices. In Canada, TC is performed with cultural understanding, considering the diverse population [33]. In contrast, Asian cultures emphasize politeness and respect [1,34]. Therefore, family- centered decision-making must be considered in cultures like Asian and Hispanic ones, where family dynamics are crucial [35]. Advanced communication skills, including empathy, are vital for person-centered care, highlighting the need for ongoing research to explore empathy's role in TC in various cultural contexts.

Addressing these factors could improve the applicability and effectiveness of communication measurement tools like the K-GITCS, promoting better therapeutic interactions and patient outcomes globally.

1. Strengths and Limitations of the Work

This study has several notable strengths. First, it conducted a rigorous scientific validation and analysis of the tool, specifically tailored to the Korean cultural context. This customization ensures the tool's relevance and applicability in this particular setting. Second, the study accounted for the diverse situations that nurses encounter in real clinical environments, offering a comprehensive assessment that enhances the practical utility of the K-GITCS. Thus, the study confirmed the instrument's robustness and effectiveness in evaluating TC skills among RNs across different practical situations.

This instrument development study has several limitations. First, it surveyed experienced RNs from a single tertiary hospital, which limits the generalizability of the results. Thus, care should be taken when generalizing the results, and additional research is needed to confirm the external validity and reliability of the K-GITCS in different settings, including learning environments that use simulations. Secondly, the Cronbach's α and omega index were employed to evaluate the instrument's reliability. However, as the original instrument was translated, test-retest reliability could not be assessed to determine the instrument's stability. Further research is necessary to fully establish the reliability of this tool. Finally, although the GITCS was first developed to assess interdisciplinary students in simulated or clinical settings by instructors, this study focused exclusively on active RNs, which may not fully capture the measurement's applicability to other healthcare professionals. Further research is needed with other healthcare providers and students.

CONCLUSION

This study makes a twofold contribution to the existing

literature on the subject. Firstly, it facilitated the development of the K-GITCS, a tool designed to address the needs of a diverse array of healthcare providers. Secondly, the tool addresses the cultural and communication needs of Korean registered nurses, thereby enhancing its applicability and effectiveness in evaluating therapeutic communication within this cultural context. Users should remember that the K-GITCS is a self-report questionnaire when interpreting the results. Finally, further research is necessary to confirm the instrument's validity and reliability across various settings and healthcare professional disciplines, including simulation-based learning environments.

1. Suggestion

At its core, the K-GITCS offers a structured approach to improving TC, emphasizing person-centered, integrative, and goal-directed communication strategies, which are critical in clinical settings for the quality and safety of patient care. This study shows that empathy goes beyond emotional resonance to include understanding and actively collecting patient experiences for effective care. This understanding is vital in clinical practice for establishing rapport and trust with patients, especially in multicultural societies.

Moreover, the K-GITCS could serve as a valuable tool for continuous learning and improvement in communication skills. Although RNs undergo TC training, there is a recognized discrepancy between theoretical knowledge and practical implementation. The K-GITCS not only facilitates the evaluation of communication competencies but also aids in the creation of specialized training programs, ensuring that healthcare providers are adequately prepared to address the varied and changing needs of patients.

CONFLICTS OF INTEREST
The authors declared no conflict of interest.

AUTHORSHIP
Project administration and supervision; writing - original draft-Lee JH; writing - review and editing; methodology; data curation; and funding acquisition. Park S: Writing - review and editing. Campbell SH: Resources; writing - review and editing. Aredes NDA: Writing - review and editing. Hong S: Investigation; Data analysis and curation; writing - original draft; writing - review and editing; methodology; and funding acquisition.

DATA AVAILABILITY
Please contact the corresponding author for data availability.

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