Iran J Public Health, Vol. 52, No. 9, Sep 2023, pp.1942-1951

Original Article

Effects of Customized Communication Training on Nonviolent Communication, Nonverbal Communication, and Self-Acceptance: Evidence from Korean Nursing Students

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(Received 10 Apr 2023; accepted 16 Jun 2023)

Abstract

Background: We aimed to investigate the effects of a nonviolent and nonverbal communication and self-acceptance training program among Korean nursing students.

Methods: We enrolled students in nursing departments at three universities in Busan Metropolitan City, South Korea. The students were randomly allocated to the experimental (n = 38) and control groups (n = 36); subsequently, they completed questionnaires before and after training. Data were collected on March 2023. The experimental group was enrolled in a program comprising 390 minutes of lecture, practice, role play, discussion, and reflection in 8-h daily sessions, with a total of eight sessions. The training sought to allow students to understand and practice nonviolent and nonverbal communication. Data were analyzed using descriptive statistics, chi-square tests, and a paired *t*-test.

Results: Compared with the control group, the experimental group showed a significant post-intervention improvement in the nonviolent communication scores (t = -2.442, *P*= 0.020); however, there were no significant between-group differences in the post-intervention nonverbal communication or self-acceptance scores.

Conclusion: Customized communication training programs are required to address communication competencies among medical personnel, including nursing students. Moreover, it is crucial to set standards for communication competency. Specifically, from a long-term perspective, a continuous educational strategy is required to effectively improve the communication capabilities of nursing students in Korea. It is possible to develop training programs that can systematically improve communication competency among nursing students.

Keywords: Communication; Nonviolent communication; Nonverbal communication; Nursing students; Self-acceptance

Introduction

Human communication involves both verbal and nonverbal elements. However, only <35% of the message is conveyed when verbal elements are used. In contrast, >65% of the message is con-

veyed when nonverbal elements are applied (1). This communication approach, which applies linguistic elements, accepts language as a sign system (2). The nonverbal elements of communication include intonation, tone of voice, facial expressions, gestures, and posture, which significantly influence communication effectiveness (2). Most professions, including nursing, require strong communication skills. Nurses are required to provide care that meets their own expectations when interacting with patients, which renders communication skills crucial (3). Interpersonal problems, including neglect; bullying; and verbal abuse from fellow nurses, doctors, and patients; have been identified among recent nursing school graduates with limited experience communicating with patients (4). Moreover, effective communication between nursing students and patients, guardians, and other nurses has been reported as a major stress factor, indicating the importance of communication competency among nursing students (5).

Communication competence among nurses entails the ability to accurately read patient's emotions and respond appropriately, as well as identify and communicate their own needs, while meeting the patient's needs. Accordingly, communication competence requires cultivation through long-term education prior to entering the nursing field. Therefore, there has been increasing interest in person-centered nursing, which focuses on acknowledging the nurse's own needs while also treating the patients humanely (6). However, the communication culture in Korea is generally neglected, with most Koreans failing to express their feelings or desires; it is considered a virtue to refrain from communicating one's needs (7). Unfortunately, although Korean university programs may train nurses to identify patient needs and address their problems, they do not provide training on effective communication methods that facilitate expression of their own feelings and needs. Moreover, there is limited evidence regarding nonverbal communication competency among nursing students. Therefore, there is a need to inculcate nonverbal communication competency among nursing students as well as identify means of efficiently improving communication competency, including verbal and nonverbal elements.

Rosenberg and Chopra (8) created a framework for nonviolent communication that focuses on empathy for others and expressing one's feelings as a means of effective communication in interpersonal relationships. The framework fundamentally involves expressing oneself honestly and listening empathically. This framework has four stages: observation, identifying feelings, identifying needs, and making requests. The first stage involves neutral observation where an individual listens without judgment or preconceived notions about the situation. The next stage involves means of expressing one's feelings without placing blame on others. According to the framework, most emotions arise from unmet desires; accordingly, the third stage involves identifying needs. The final stage focuses on asking for concrete actions, it is important that the requests are clearly communicated so that each person's needs are respected (8).

Another critical element in the communication process is self-acceptance. It involves recognizing and acknowledging oneself, including strengths and weaknesses, emotional tendencies, psychological phenomena, physical condition, behavior, and even one's family. Specifically, it refers to completely accepting oneself, regardless of internal or external evaluation (9). Thus, ineffective communication occurs when one cannot honestly express their feelings in an acceptable way and empathize with another person's perspective (10). When self-acceptance is realized, it engenders strong adaptability to real problems, objective insight, and task comprehension. Accordingly, self-acceptance is an important factor that should precede interpersonal relationships.

Therefore, we aimed to assess the effect of a training program for nursing students on nonviolent and nonverbal communication as well as self-acceptance for improved communication competency. Our hypotheses were as follows:

Hypothesis 1: Communication training will have a positive effect on nursing students' nonviolent communications.

Hypothesis 2: Communication training will have a positive effect on nursing students' non-verbal communications.

Hypothesis 3: Communication training will positively affect nursing students' self-acceptance.

Materials and Methods

Study design

This randomized controlled group study recruited participants through public announcements at three universities (Busan Women's College, Dong-eui University, and Dongseo University) located in Busan Metropolitan City, Korea, in March 2023. The inclusion criteria were as follows: lacking previous nonviolent communication education; lacking physical or mental problems in verbal or nonverbal communication; and provided informed consent for participation.

Participants

We calculated the minimum required sample size using G* Power software (G* Power 3.1.9.2, Heinrich-Heine-University, Düsseldorf, Germany) based on a previous study (11) on the development and effectiveness of communication competency enhancement programs for nursing students. Further, we considered a dropout rate of 30%, given the potential problems with questionnaire responses or failure to attend the program during the pre- and post-surveys. Accordingly, 80 participants were recruited, with 40 participants being randomly assigned to the experimental and control group each. During the study, two and four participants in the experimental and control groups, respectively, dropped out due to health and personal problems. Finally, 38 and 36 participants were included in the experimental and control groups, respectively. Figure 1 presents a flowchart of the participant enrollment.

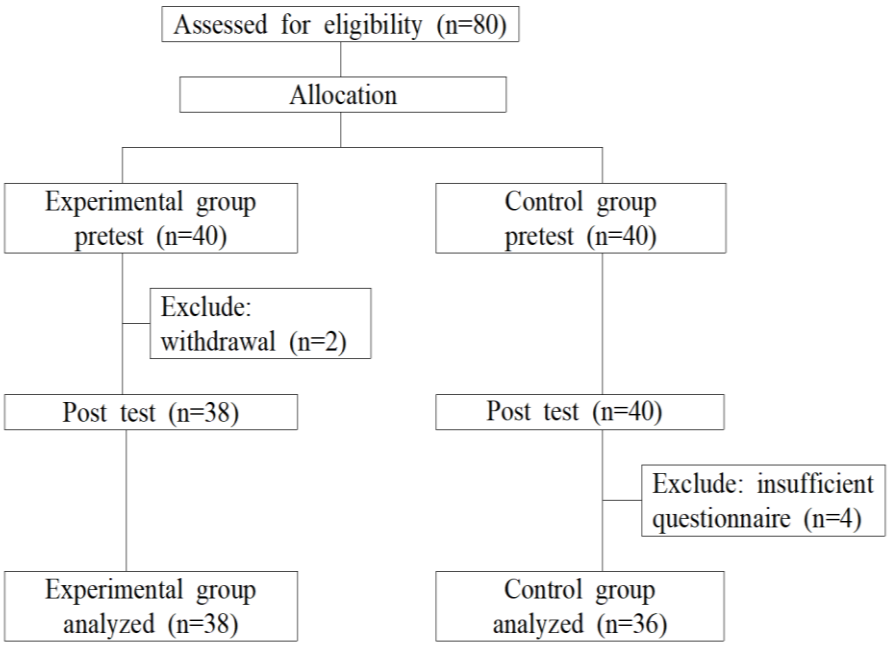

Fig. 1: The flow chart of enrollment of study participants

Ethical considerations

This study was approved by the Institutional Review Board of Dong-eui University (DIRB-202303-HR-R-03).

Instruments

Nonviolent communication

To assess nonviolent communication, we used the Nonviolent Communication Scale tool developed by Son (12). It comprises four subfactors: observation (four items), feelings (four items), desires (four items), and requests (four items). Each item was assessed on a five-point Likert scale, where 1 corresponded to "not at all" and 5 "very much". A high score indicated a high level of nonviolent communication. Moreover, Cronbach's α in the original study and our study were 0.84 and 0.81, respectively.

Nonverbal communication

To assess nonverbal communication, we used the nonverbal communication scale developed by Moon (13). It comprises 16 items categorized into the following domains: complements, regulation, intimacy, and concentration. The "intimacy" category was excluded since it was irrelevant to our study objective. Thus, we assessed 11 items in three domains (four complement items, four regulatory items, and three concentration items) on a five-point Likert scale, where 1 indicated "not at all" and 5 "very much". Higher scores indicated a higher level of nonverbal communication. Cronbach's α reliability in the original study was 0.78, 0.81, and 0.60 for the complementary, regulation, and concentration domains, respectively, while the corresponding values in our study were 0.69, 0.94, and 0.62, respectively.

Self-acceptance

To assess self-acceptance, we used the Revised-Unconditional Self-Acceptance Questionnaire developed by Chamberlain and Haaga (14). It comprises 15 items, including five items on self-acceptance, six on self-acceptance of discrimination, and four on self-acceptance of feedback. Each item was assessed on a five-point Likert scale, ranging from 1, "not at all," to 5, "very much." A higher score indicates higher self-acceptance. Cronbach's α reliability in the original study and our study was 0.78 and 0.70, respectively.

Data collection

Participants received an Internet link for the informed consent form for participation. The form contained information indicating the research purpose and method, the voluntary nature of participation, freedom to withdraw at any time, and assurance that personal information would remain confidential and not be used for purposes other than this research. In the online response process, if participants did not agree on this form, the survey was automatically closed.

All participants completed an online pre-survey before the experimental training. Subsequently, participants in the experimental group underwent training for 8 hours a day and received a written questionnaire immediately after the training was completed. Moreover, participants in the control group completed an online questionnaire after completion of the experimental training. After each survey, all participants were remunerated for their study participation. After the study was completed, participants in the control group were offered the same communication training program, with 19 of the 36 control participants enrolling in this program.

The communication training program

The communication training program was developed with reference to Rogenberg's (8) nonviolent communication framework and the Nonviolent Communication Workbook by Leu (15). It comprised eight sessions. Session 1 was an introduction, Sessions 2–5 focused on nonviolent communication, Session 6 focused on nonviolent and nonverbal communication, Session 7 refocused on nonviolent communication, and Session 8 was a conclusion. Table 1 presents details regarding the communication program.

Table 1: Communication education program

Session		*Subject*	*Contents*	*Method*	*Time*
1	Introduction	Overview of program Introduction of NVC	General overview of the program and each session Grouping & Ice breaking Understanding of the NVC principles Exploring factors regarding conversation interruption	· Lecture	60 min
2	Observation	Understanding NVC	Difference between observation and judgment Expressing observation using various situational picture cards Practicing the distinction between observation and judgment Mini self-reflection	· Lecture · Discussion · Practice · Reflection	40 min
3	Feelings	Awareness of feelings and honest expression	Understanding words to express feelings Practicing the distinction between feeling and thought Guessing my own feelings and those of others Mini self-reflection	· Lecture · Practice · Reflection	50 min
4	Needs	Understanding needs	Awareness of self-feeling and needs Connecting feelings and desires Practicing identifying needs using the Needs Cards. Mini self-reflection	· Lecture · Practice · Reflection	50 min
5	Request	Requests in connecting and behavioral language	The concept of request Practicing distinction between requesting and compelling Role-playing: Request others while respecting each other's feelings and needs Mini self-reflection	· Lecture · Practice · Role play · Reflection	50 min
6	Empathy	Listening with empathy Application of nonverbal communication	The concept of empathy Role-playing: empathic communication Group-playing: nonverbal communication Practicing expressing empathy with respect to NVC factors and nonverbal communication Mini self-reflection	· Lecture · Practice · Discussion · Role play · Reflection	70 min
7	Graduate	Expressing gratitude	Expressing gratitude Gratitude diary writing Practicing expressing gratitude by applying NVC factors Practicing gratitude diary writing Mini self-reflection	· Lecture · Practice · Reflection	40 min
8	Closing	Self-reflection	Sharing impressions or promises	Introspective writing & sharing	30 min

NVC, Nonviolent communication

Statistical analysis

Data were analyzed using a two-tailed test, with statistical significance set at $P = 0.05$. All statistical analyses were performed using SPSS WIN software (version 24.0; IBM Co., Armonk, NY, USA). First, descriptive statistics were performed using frequency, percentage, mean, and standard deviation. Second, an χ^2-test or t-test was used to confirm between-group homogeneity of the general characteristics and study variables at baseline. Finally, a paired *t*-test was used to assess between-group differences in the post-intervention

scores for nonviolent communication, nonverbal communication, and self-acceptance.

Results

General characteristics of the participants

Table 2 presents the general participant characteristics. There were no significant between-group differences in the general characteristics. Moreover, there was between-group homogeneity in the study variables at baseline.

Hypothesis testing

The results of our hypothesis testing are presented in Table 3. First, the post-intervention score for nonviolent communication was significantly higher in the experimental group (4.19 ± 0.50) than in the control group (4.06 ± 0.36 [t = -2.442, P = 0.020; t = -1.073, p = 0.290]); therefore, hypothesis 1 was accepted. Second, there was no significant difference in the post-intervention scores for nonverbal communication between the control (3.52 ± 0.48) and experimental groups (3.52 ± 0.48 [t = -1.782, P = 0.083; t = -0.588, P = 0.560]); therefore, hypothesis 2 was rejected. Finally, there was no significant difference in the post-intervention scores for self-acceptance between the control (3.35 ± 0.38) and experimental groups (3.43 ± 0.40 [t = -0.393, P = 0.696; t = -0.990, P = 0.329]); therefore, hypothesis 3 was rejected.

Table 2: Homogeneity test of study variables at baseline (n = 74)

Variables	*Categories*	*Experimental group (n = 38)*	*Control group (n = 36)*	*t (P)*
	Age (yr)	23.55 ± 7.04	21.97 ± 2.32	-1.310 (0.197)
Religion	Christianity	3 (7.9)	6 (16.7)	-0.218 (0.828)
	Catholic	3 (7.9)	1 (2.8)	
	Buddhist	5 (13.2)	3 (8.3)	
	Others	1 (2.6)	-	
	None	26 (68.4)	26 (72.2)	
Grade	Over A	3 (7.9)	5 (13.9)	-0.391 (0.697)
	Less than A grade, more than B grade	28 (73.7)	24 (66.7)	
	Less than B grade, more than C grade	7 (18.4)	7 (19.4)	
	Nonviolent communication (average score)	4.01 ± 0.44	3.99 ± 0.39	-0.207 (0.837)
	Nonverbal communication (average score)	3.36 ± 0.51	3.37 ± 0.42	0.104 (0.917)
	Self-acceptance (average score)	3.45 ± 0.52	3.28 ± 0.32	-1.842 (0.070)

Data are expressed n (%) or mean ± standard deviation

Table 3: Between-group comparisons of the post-intervention scores (n = 74)

Variables	*Experimental group (n = 38)*			*Control group (n = 36)*		
	Pre	Post	t (*P*)	Pre	Post	t (*P*)
Nonviolent communication	4.01 ± 0.44	4.19 ± 0.50	-2.442 (0.020*)	3.99 ± 0.39	4.06 ± 0.36	-1.073 (0.290)
Observation	3.95 ± 0.60	4.26 ± 0.56	-3.569 (0.001**)	3.90 ± 0.72	4.00 ± 0.58	-1.029 (0.311)
Feelings	3.80 ± 0.68	3.92 ± 0.66	-1.146 (0.259)	3.69 ± 0.70	3.67 ± 0.62	0.101 (0.919)
Needs	4.07 ± 0.54	4.22 ± 0.63	-1.440 (0.158)	4.01 ± 0.54	4.15 ± 0.45	-1.384 (0.175)
Request	4.24 ± 0.48	4.37 ± 0.64	-1.255 (0.218)	4.38 ± 0.52	4.41 ± 0.48	-0.307 (0.761)
Nonverbal communi-	3.36 ±	3.52 ±	-1.782	3.37 ±	3.52 ±	-0.588

nication	0.51	0.48	(0.083)	0.42	0.48	(0.560)
Supplement	4.01 ± 0.62	4.34 ± 0.56	-2.886 (0.006**)	4.22 ± 0.48	4.19 ± 0.63	0.176 (0.861)
Restriction	2.28 ± 1.08	2.23 ± 0.95	0.287 (0.776)	1.97 ± 0.95	2.11 ± 1.12	-0.815 (0.420)
Concentration	3.78 ± 0.66	3.98 ± 0.67	-1.548 (0.130)	3.92 ± 0.62	3.93 ± 0.58	-0.084 (0.933)
Self-acceptance	3.46 ± 0.52	3.43 ± 0.40	0.393 (0.696)	3.28 ± 0.32	3.35 ± 0.38	-0.990 (0.329)
Being	3.43 ± 0.57	3.49 ± 0.53	-0.674 (0.504)	3.14 ± 0.42	3.29 ± 0.54	-1.422 (0.164)
Judgment/discretion	3.50 ± 0.65	3.39 ± 0.74	0.976 (0.336)	3.43 ± 0.64	3.40 ± 0.53	0.209 (0.836)
Feed back	3.45 ± 0.63	3.41 ± 0.50	0.374 (0.711)	3.26 ± 0.42	3.35 ± 0.42	-0.971 (0.338)

Data are expressed mean ± standard deviation
*$P < 0.05$, **$P < 0.01$; tested by paired *t*-test

Discussion

This study investigated whether a communication training program for nursing students would have a positive effect on nonviolent communication, nonverbal communication, and self-acceptance capabilities.

In contrast to previous similar studies, which included 7–12 participants per group (16,17); we included a relatively higher number of participants (38 and 36 in the experimental and control groups, respectively). Moreover, in contrast to a previous intervention study targeting college students, that applied a training duration of 90–10 minutes (16,18); our training duration was relatively longer (390 minutes). Consistent with previous studies on nonviolent communication training (19-20), we utilized case studies, roleplay, and videos to provide training. However, the participants' motivation and active participation were encouraged through activities such as grog cards (feeling and desire cards), picture cards, worksheets, and examples. In contrast to previous studies (19-20), we used a nonviolent communication measuring tool to directly evaluate post-intervention changes in the four elements of nonviolent communication. Chang et al. (17) used the training program to assess whether college students could be transferred to the regular curriculum of the university.

As pre-medical professionals, it is crucial that nursing students receive long-term education, ranging from the regular curriculum to education in clinical practice, on how to efficiently utilize nonviolent communication. In the lower grades, it is important to teach the use of nonviolent communication in daily life. Whereas in the higher grades, stepwise nonviolent communication practice should be implemented in various clinical settings to ensure nurses are competent in nonviolent communication at both work and in daily life.

In our study, post-intervention scores for nonviolent communication were significantly higher in the experimental group than in the control group. Additionally, there was a difference in the pre- and post-intervention scores of nonviolent communication in the experimental group; however, among the four subfactors, only observation showed a significant difference.

The observation section in our training focused on encouraging participants to objectively consider facts using picture cards. Specifically, the student observed the situation on the picture card and recorded its content on a worksheet. Subsequently, any errors were discussed and corrected or complemented through comparisons with the observations written by the instructor. Errors mainly resulted from preconceptions, judgment, and prejudice. Finally, the students were guided

on how to objectively observe without evaluating (8).

Empathy is among the key elements of person-centered nursing (6). Rosenberg and Chopra (8) reported it is helpful to use terms for specific feelings when expressing feelings; accordingly, they suggested increasing vocabulary about feelings. Since the nonviolent communication model pays attention to oneself and others as well as promotes empathic connections (21), applying the four elements of nonviolent communication could result in qualitative changes in human relationships.

Unlike Western culture, Korean culture is not attuned to expressing one's feelings or desires either to oneself or others. Moreover, it is considered a virtue not to actively ask for what one desires (7). Among the four elements of nonviolent communication, desire is the core since it focuses on the values and demands that everyone sympathizes with and captures the physical and mental response depending on whether one's needs are satisfied (8). Thus, future communication programs for Korean nursing students should apply the four elements of nonviolent communication to encourage honest expression of feelings and desires while considering Korean cultural factors.

In this study, there was no significant between-group difference in the scores for nonverbal communication. However, the experimental group showed a significant post-intervention improvement in the complements score. Nonverbal communication comprises stimuli other than language projected by humans or the environment that have potential communication utility for both senders and receivers (22). Aspects of nonverbal communication allow enhancement of the expression of the communicator's message (23). In our nonverbal communication assessment, students were asked to guess the communicator's emotions and desires with consideration of the physical language. We can presume that there was improvement in the scores of the complementary items as the communicator and student shared and reflected on their experiences through nonverbal communication. Only 7% of human communication involves words, with nonverbal communication comprising most of the communication. Specifically, pitch, intonation, and tone account for 38%, while visual elements such as facial expressions, gestures, and postures, account for 55% (24). Since nonverbal communication competency requires comprehension of various factors, it is considered important in nursing education; however, there remains insufficient research in this study. Therefore, future studies are warranted to develop a reliable and valid tool for assessing nonverbal communication in medical and premedical personnel as perceived by the patients receiving care in clinical settings.

Lee (25) hypothesized that a communication coaching program would have a positive effect on self-acceptance. However, in our study, we observed no significant between-group differences in terms of self-acceptance, which comprised presence, judgment discrimination, and feedback. Self-acceptance involves complete and unconditional acceptance of oneself, regardless of one's performance or evaluation of others (14). Although there was no between-group difference, self-acceptance can be predicted to exert a positive effect on empathy for others, resulting in a positive effect on relationships with others. Therefore, future programs should assess changes in self-acceptance aspects following communication education focusing on empathy, starting with self-empathy, which involves objectively observing oneself. Nonviolent communication focuses on an individual's capacity for love and compassion and helps people apply them in conversations (8). When practicing nonviolent communication, one reframes how they express themselves and listen to others. Further, one can clearly understand what they observe, feel, and want; moreover, they develop consideration and empathy for the feelings and needs of others.

Our communication program could serve as a valuable first step in the development of a long-term communication curriculum aimed at changing the language and communication methods used by pre-medical and medical personnel (8). Based on our results, future provision of customized communication education content for nurs-

ing students at each stage, with consideration of Korean cultural factors, may achieve effective education and training, and thus improve communication ability.

However, this study had several limitations. First, since we included nursing students at local Korean universities, care must be taken when generalizing results to other settings. Second, we only included a short research period during which changes in communication could be observed. Therefore, future long-term studies are warranted. Third, we performed assessments using self-reported questionnaires, which have several limitations, including potential self-bias. Nevertheless, the strength of this study is that we did directly measured the outcome variable following the communication intervention using nonviolent dialogue, which placed emphasis on teaching nonverbal communication.

Conclusion

Compared with the control group, the experimental group showed significant improvement in nonviolent communication but not nonverbal communication and self-acceptance. From a long-term perspective, a continuous educational strategy is required to effectively improve communication skills among Korean nursing students. Our results can inform the establishment of such a strategy that systematically improves the communication competency in nursing students.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

This study was supported by the National Research Foundation of Korea (NRF-2022RIFIA1073970).

Conflict of Interest

The author declares no conflicts of interest.

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