

# Gender Comparison of Communication Skills of Nursing Students: Video Analysis of Standardized Patient Interview

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## Abstract

*The purpose of this study was to investigate gender differences in the communication skills of nursing students. The subjects of this study were 99 nursing students at a university. Data were collected by recording the interview process conducted by nursing students with standardized patients, and transcripts were made from the recorded video. To evaluate students' communication skills, researchers analyzed videos and transcripts objectively. Female students scored significantly higher than male students in listening skills ( $p=.002$ ). Among the items assessing poor interview attitudes, too much focus on writing records (61%) was the most frequent. Therefore, the findings suggest the importance of finding ways to improve listening and communication skills in an increasing number of male nursing students.*

**Keywords:** Gender, Comparison, Communication, Skills, Standardized, Patient, Interview, Video analysis

## 1. Introduction

Effective communication with patients is an essential skill for nurses to achieve quality care [1][2], and it is considered very important for patients' healing process [1]. However, due to nurses' lack of communication skills, patient-nurse communication is often reported to be inefficient [3], and this is especially true with novice nurses [4].

Meanwhile, there has been an increase in the proportion of male nurses in South Korea. The number of male students pursuing a nursing degree in 2000 was only 662, which accounted for 1.8% of all nursing students, but in 2011, the number increased to 7,968, which is 13% of all nursing students. This is an almost 12-fold increase in the number [5]. Previous studies showed that female students scored higher in cognitive empathy and emotional response than male students [6]. In terms of communication skills, female students showed higher scores than male students in items including "awareness," "comfort," and "acceptance" [7]. Therefore, female and male students will have a difference in communication skills.

To develop natural and practical communication skills in the actual situation, systematic education and training, as well as various teaching and learning strategies, are necessary [8][9]. Some self-report questionnaires are designed to assess communication skills [9][10], but one of the ways to effectively determine communication skills is to use standardized patients. This method is considered a valid evaluation tool that objectively evaluates nursing students' communication skills in clinical situations [11].

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Therefore, in this study, we tried to examine the nursing students' communication skills in an 'interview for collecting clinical history,' one of the primary communication situations for nurses, and to explore the gender differences in communication skills. We developed a tool to evaluate communication skills through objective observation. The purpose of this study was to investigate the gender differences in nursing students and to reflect them in the curriculum so that it can supplement the communication skills that each gender lacks. Also, the results of this study could be used to develop the program and improve interview skills.

## **2. Method**

### **2.1. Research design**

This study compared the differences in communication skills between male and female nursing students. The subjects of this study were 99 nursing students taking the "Practices in Health Examination" course at a university in C city.

### **2.2. Research tools**

The communication skill assessment tool was developed based on the interview assessment tool by Nam Kung and Kim [12]. We revised the contents and divided them into conversation opening, relationship formation, information collection, and conversation closing. The assessment tool had nine sub-domains and had a total of 28 items. Each item was evaluated on three scales - performed, insufficient, and not performed - converted into 2, 1, and 0 points, respectively. The reliability of the instrument in this study was .81.

### **2.3. Development of the clinical scenario**

The clinical scenario was set as the interview process for collecting the clinical history of the varicose vein patient visiting the hospital for the first time. Using four domains and nine procedures, the following factors were evaluated: greeting, confirmation of the main complaint, follow-up questions about the patient's chief complaint, specific questions on past clinical history, social history, and family history, maintenance of the flow of the interview, understanding of nonverbal expression, empathy, and psychological support, use of easy terminology, closing remarks, and attitudes. Appropriate questions and answers were placed in the scenario to evaluate such factors.

### **2.4. Research procedure**

Research procedures included scenario development, recruitment of standardized patients from the Theater and Film Department and training, development of communication skill assessment tool, video recording and making a transcript of the interview process in Practices in Health Examination class, evaluation of videos and transcripts using communication skill assessment tool (objective evaluation).

### **2.5. Data collection**

Videos were recorded from October 2016 to April 2017. Video and transcript analyses were conducted from April 2017 to August 2017.

## 2.6. Data analyses

Collected data were analyzed using the SPSS 21.0 statistics program at the .05 significance level. The participants' general characteristics were analyzed using frequency analysis to calculate frequency and percentage. The communication skills of male and female students were tested using a t-test and Mann-Whitney test.

## 2.7. Research ethics

This research was approved by S University Institutional Review Board (SMUIRB-AP-2016-004). The research objectives and procedures were explained to all participants, and a consent form was obtained from all participants before their participation.

## 3. Result

### 3.1. General characteristics of the participants

A total of 99 students were included in this study. Among them, 81 (81.8%) were females and 18 (18.2%) were males. In terms of age, 47 students (47.5%) were under the age of 20, 35 students (35.4%) were aged between 21 and 22, and 17 students (17.2%) were aged 23 or over [Table 1].

Table 1. General characteristics of the participants (n = 99)

Category		Frequency (n)	Percentage (%)
Sex	Female	81	81.8
	Male	18	18.2
	Total	99	100.0
Age	20 or less	47	47.5
	21-22	35	35.4
	23 or more	17	17.2
	Total	99	100.0

### 3.2. Gender differences in communication skills

Communication skills were significantly higher for female students than for male students in terms of listening skills ( $p=.002$ ). There was no significant difference in the other items, but male students had numerically higher scores in conversation opening, asking the first question, and conversation closing than female students. Female students scored numerically higher in information collection, interview organization, empathetic support, understanding patients' points of view, and attitude than male students [Table 2].

### 3.3. Gender differences in poor nonverbal interview attitudes

Among the items assessing poor nonverbal interview attitudes, 61% focused too much on writing records, 50% showed a meaningless smile, and 27% repeated meaningless motions. Both male (50%) and female (63%) students showed the highest percentage of too much focus on writing records. Female and male students had no significant difference in eye contact, pronunciation, response, facial expression, motion, meaningless smile, and writing

attitude [Table 3]. Transcript analysis showed that the percentage of open-ended questions asked was 35.71% and 42.71% for female and male students, respectively.

Table 2. Gender differences in communication skills (n=99)

	Item	Total	Female		Male		Mann-Whitney U	p
		Mean (±SD) or n(%)	Mean (±SD) or n(%)	Mean ranking	Mean (±SD) or n(%)	Mean ranking		
Communication skills (Objective evaluation)	Conversation opening	1.24 (±0.45)	1.23 (±0.44)	48.54	1.29 (±0.52)	56.56	611.00	.270
	Asking the first question	1.08 (±0.42)	1.07 (±0.42)	49.22	1.11 (±0.44)	53.53	665.500	.462
	Information collection	0.91 (±0.37)	0.91 (±0.37)	47.32	0.91 (±0.41)	48.25	670.500	.895
	Interview organization	0.72 (±0.41)	0.74 (±0.43)	50.70	0.60 (±0.32)	41.53	576.50	.204
	Listening	1.11 (±0.61)	1.17 (±0.59)	53.01	0.81 (±0.64)	36.47	485.50	.002*
	Empathetic support	0.78 (±0.38)	0.79 (±0.38)	50.66	0.72 (±0.41)	47.03	675.50	.619
	Understanding the patient's point of view	0.73 (±0.54)	0.75 (±0.51)	50.97	0.65 (±0.66)	45.64	650.50	.460
	Conversation closing	0.45 (±0.53)	0.44 (±0.51)	49.72	0.50 (±0.59)	51.25	706.50	.826
	Attitude	1.29 (±0.60)	1.31 (±0.60)	50.58	1.19 (±0.60)	44.72	634.00	.414
	Total	1.01 (±0.27)	1.02 (±0.27)	51.01	0.96 (±0.28)	45.44	647.00	.457

\* p<.05

#### 4. Discussion

A comparison of communication skills in male and female students showed that female students scored significantly higher in listening skills (p=.002) among nine communication skill areas than male students. There were no significant results in the other items. So, it is hard to say that there is a difference in the communication skills of males and females. Such findings contrast the previous study [13], which compared dental hygiene college students' communication ability and showed that communication ability was significantly higher in female students than in male students according to gender.

In addition, the findings contrast another research [6], which studied gender differences in empathizing-systemizing traits in medical students and showed that cognitive empathy and emotional response were significantly higher in female students than in male students. In another study that compared communication skills [7], female students scored significantly higher than male students in "awareness," "comfort," and "acceptance." However, in our study, direct comparisons with previous studies may be difficult because few papers compare the communication skills of male and female nursing students with the objective evaluation of the instructor as done in this study. However, according to the previous study, the difference

in empathy between males and females may be due to gender differences in brain structure or disposition [6].

Table 3. Gender differences in poor nonverbal interview attitudes (n = 99)

		Total Frequency (%)	Sex		X <sup>2</sup>	P
			Female Frequency (%)	Male Frequency (%)		
Eye contact	Yes	88 (88.9)	72 (88.9)	16 (88.8)	2.116	.225
	No	11 (11.1)	9 (11.1)	2 (11.2)		
Pronunciation	Accurate	83 (83.8)	68 (84.0)	15 (83.3)	.066	1.000
	Inaccurate	16 (16.2)	13 (16.0)	3 (16.7)		
Response	Appropriate response	83 (83.8)	66 (81.4)	17 (94.4)	1.689	.295
	No response	16 (16.2)	15 (18.6)	1 (5.6)		
Facial expression	Yes	81 (81.8)	66 (81.4)	15 (83.3)	.480	.496
	No	18 (18.2)	15 (18.6)	3 (16.7)		
Motion	No meaningless motion	72 (72.7)	60 (74.1)	12 (66.6)	.332	.573
	Meaningless motion	27 (27.3)	21 (25.9)	6 (33.4)		
Meaningless smile	No meaningless smile	50 (50.5)	41 (50.6)	9 (50.0)	.119	.799
	Meaningless smile	49 (49.5)	49 (49.4)	9 (50.0)		
Writing attitude	Not too much focus on writing	39 (39.4)	30 (37.0)	9 (50.0)	1.04	.429
	Too much focus on writing	60 (61.6)	51 (63.0)	9 (50.0)		

Therefore, it is necessary to acknowledge such gender differences and to make efforts to improve the educational effect on both male and female nursing students. Moreover, the ability of nurses to communicate in clinical settings is essential, suggesting that this study should consider how to improve communication and listening skills in an increasing number of male nursing students.

On the other hand, in the items assessing poor nonverbal interview attitudes, too much focus on writing records (61%) was the most frequent for both male (50%) and female (63%) students, suggesting that continuous training is needed to correct nonverbal behaviors that may have adverse effects.

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