

An Effect of Communication Training Program on Communication Skills and Empathic Ability

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Abstract

Background/Objectives: The purpose of this study is to investigate how the communication training program effects on communication skills and empathy ability in dental hygiene students.

Method/Statistical Analysis: 21 students who wanted to participate in the communication program and 23 students who did not want to participate in the program were set as the control group. After implementing the communication program, we evaluated the improvement of communication skills and empathy before and after the program. The communication program consisted of 4 sessions (2-3 hours per session)

Findings: Unlike the control group, the experimental group showed statistically significant effect of the program in both communication ability and empathy ability. Dental hygiene students have a good understanding other's perspectives, while their ability to overcome stereotypical thinking and creative communication is low.

Improvements/Applications: Communication program is effective in improving communication ability and empathy ability, so more detailed and specialized programs should be developed to cultivate communication skill and empathy ability.

Keywords: *Communication training program, Dental hygiene, Communication skill, Empathy ability, Pay attention, Creative communication.*

Introduction

Communication, which is continuously conducted in personal relations through verbal and nonverbal interactions, is essential to the development of personal relations^[1], and serves as an important means to develop individuals' personalities as well as their relationships with other people^[2]. The ability to communicate effectively is necessary in the formation of amicable personal relations. Communication ability refers to the capability to exchange both verbal and nonverbal messages between participants, and necessitates

performance of the complex task of conveying one's own message and accepting that of others^[3]. Empathic ability is indispensable in verbal and nonverbal communication and verbal and nonverbal communication based on empathic ability is important to the communication ability^[4].

Empathy, a concept often used in sociology and psychology, is the internal mental capacity to feel the emotions and experiences of other person as if they are one's own^[5]. Empathy is the basic foundation of personal relations. Empathic understanding in human relations induces altruistic motives and increases prosocial behavior^[6]. A previous study showed that the communication ability of college students has a significant effect on their adaptation to college life, and that those who listen well to others have a higher adaptability to both society and college life^[7]. In addition, information delivery capacity, listening

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capacity, communication ability suitable to subjects, and empathic ability has been proposed as the communication capabilities that college students in Korea currently need to cultivate^[8]. The ability to communicate effectively enables one to grow appropriately, and is necessary for all college students. However, this ability is more important for college students majoring in dental hygiene, because dental hygienists are required to display the ability to effectively communicate with various types of personal relations in dental clinic^[9].

A Communication training program in the curriculum for dental hygiene is necessary to foster the development of dental hygienists equipped with communication ability based on empathic ability. However, there has been little research about empathic ability and communication ability. The present study was conducted to investigate the improvement of communication ability and empathic ability in dental hygiene students by means of the communication training program, as well as to provide the fundamental data necessary to determine the directions of the major curriculum.

Method

The present study was conducted with 44 college students majoring in dental hygiene. The 23 subjects who were willing to participate in the communication training program were allocated to the experimental group, and the 21 subjects those who did not participate in the program were allocated to the control group. The present study was approved by the Institutional Review Board of B University (IRB Office-007).

The communication training program was conducted from May to June 2019. The numbers of subjects were 21 in the experimental group and 23 in the control group. After completion of the communication training program, subjects' improvement in communication ability and empathic ability was evaluated. The communication training program consisted of four sessions, each session 2 to 3 hours long. The program included E-disc testing and group discussion in Week 1, detailed practice according to the E-disc test results in

Week 2, communication method in industries in Week 3, and communication scenario preparation in various settings in Week 4.

The inventory used in the present study was that reconstructed by Jeon^[10] with reference to the communication ability scale for college students and adults, developed by Lee et al.^[11], and the Empathy Index prepared by Bryant^[12] and translated into Korean by Park^[13]. The questionnaire for measuring communication ability included 49 questions related to seven subfactors, specifically information gathering, paying attention, overcoming stereotypical thinking, creative communication, self-revealing, leading communication, and understanding another's perspective. The questionnaire for measuring empathic ability included 30 questions related to cognitive empathy ability and emotional empathy ability.

In the present study, the communication ability and empathic ability of the college students majoring in dental hygiene were measured before and after implementation of the communication training program. The homogeneity of the two groups was tested by a t-test before the experiment. An ANCOVA was performed to analyze the differences between the experimental group and the control group after completion of the training program. The statistical analysis was performed using the SPSS 22.0 software program.

Result and Discussion

- 1. Students' communication ability and empathic ability prior to the program:** [Table 1] shows the students' communication ability and empathic ability prior to the program. The average communication ability scores were 3.31 in the experimental group and 3.26 in the control group; these scores were not significantly different. No differences were found between the two groups in any of the seven sub-categories. The average scores for empathic ability were 3.57 in the experimental group and 3.54 in the control group, again with no significant difference between the two.

Table 1. Pre-test

Variables	EG	CG	t value	P
	Mean±S.D.	Mean±S.D.		
Communication Skill				
Total	3.31±0.27	3.26±0.21	-0.70	0.49
Information gathering	3.46±0.44	3.34±0.37	-1.05	0.30
Pay attention	3.55±0.36	3.44±0.39	-0.96	0.34
Overcoming stereotypical thinking	2.72±0.45	2.71±0.40	-0.05	0.96
Creative Communication	2.91±0.32	2.80±0.26	-1.33	0.19
Self-reveal	3.43±0.58	3.54±0.47	0.70	0.49
Leading communication	3.28±0.55	3.30±0.39	0.14	0.89
Understanding other’s perspective	3.82±0.55	3.70±0.31	-0.96	0.34
Empathy Ability				
Total	3.57±0.48	3.54±0.30	0.90	0.83
Cognitive empathy	3.56±0.51	3.54±0.36	0.78	0.90
Emotional empathy	3.58±0.53	3.54±0.31	0.83	0.78

* p<.05 ** p<.01, EG: Experimental group, CG: Control group

2. Change after the program: [Table 2] shows the students’ communication ability and empathic ability after the program. The communication ability score of the experimental group was 3.62, higher than that of the control group (3.18). Among the sub-categories, the scores of the experimental group were higher than those of the control group in information gathering, paying attention, overcoming stereotypical thinking, creative communication, leading communication, and understanding other’s perspective (p < .05). The empathic ability score of the experimental group was 3.62, higher than that of the control group (3.25). The scores of the experimental group were also higher in the categories

of cognitive empathy ability and emotional empathy ability.

As shown in Table 1 & 2, the communication ability score was increased by the communication training program in the experimental group from 3.31 to 3.59, but the score was decreased in the control group from 3.26 to 3.18. Similarly, the empathic ability was slightly increased in the experimental group from 3.57 to 3.61, while it was decreased in the control group from 3.54 to 3.25. The scores in the experimental and control groups, which showed no significant difference prior to program, did show a significant difference after the program (p < .05).

Table 2. Post-test

Variables	EG	CG	t value
	Mean±S.D	Mean±S.D	
Communication skill			
Total	3.59±0.39	3.18±0.33	-4.12**
Information gathering	3.63±0.50	3.18±0.38	-3.40**
Pay attention	3.73±0.45	3.21±0.56	-3.06**
Overcoming stereotypical thinking	2.80±0.45	2.31±0.60	-3.34**
Creative Communication	3.08±0.51	2.63±0.31	-3.58**
Self-reveal	3.59±0.65	3.37±0.62	-1.11
Leading communication	3.58±0.59	3.20±0.52	-2.25*
Understanding other’s perspective	3.91±0.52	3.44±0.52	-3.05**

Variables	EG	CG	t value
	Mean±S.D	Mean±S.D	
Empathy ability			
Total	3.61±0.51	3.25±0.40	-2.74**
Cognitive empathy	3.60±0.53	3.27±0.44	-2.22*
Emotional empathy	3.65±0.57	3.23±0.43	-2.81**

* p<.05 ** p<.01, EG: Experimental group, CG: Control group

Discussion

In the diverse medical environment, empathy-based communication ability is emphasized as a capability with which dental hygienists should be equipped^[9]. The present study was conducted to investigate improvements in communication ability and empathic ability in college students majoring in dental hygiene by means of the communication training program, and to provide the fundamental data necessary to determine the directions of the curriculum.

As shown in Table 1 and 2, the communication ability in the experimental group was increased from 3.31 to 3.59. In contrast, that of the control group was slightly decreased from 3.26 to 3.18. While the two groups did not show a difference in communication ability prior to implementation of the training program, they showed a significant difference after the implementation. The average communication ability identified in a previous study using the same questionnaire was 3.77, slightly higher than those of the subjects of the present study^[14]. This finding highlights the need to provide a training program for effective communication to students majoring in dental hygiene.

With respect to the subfactors of the communication ability, as shown in Table 1, the scores in the areas of paying attention and understanding other’s perspective were, respectively, 3.55 and 3.82, slightly higher than those of other subfactors. Since paying attention is an ability that has a positive effect on social adaptation, the ability of the subjects to pay attention to others may be used as an important communication skill in their future clinical settings. In contrast, the scores of overcoming stereotypical thinking and creative communication were, respectively, 2.72 and 2.91, and these scores were not significantly changed even after implementation of the communication program.

The ability to overcome stereotypical thinking is closely related to the capacity to communicate smoothly

with the various patients that dental hygienists meet in the clinic. The ability to overcome stereotypical thinking may be increased not only through communication training with individuals of a variety of backgrounds, but also as a result of undergoing various experiences^[15]. Therefore, the college students may need to participate in a variety of voluntary services, and an innovative teaching method including various communication skills may be necessary. The lack of creative communication may be related to the unique features of the dental hygiene major. The students majoring in dental hygiene may not have the space for developing creative thinking, because the lectures are designed as training for skills requiring accuracy and agility, such as prevention of dental diseases and cooperation in dental treatment. Further studies may need to be conducted using an in-depth open-type questionnaire to investigate the causes of the lack of creative communication ability in the subjects. In addition, a customized communication training program may need to be developed to improve the students’ ability in the two subfactor areas.

Understanding other’s perspective was increased in the experimental group from 3.59 to 3.9, but it was decreased in the control group from 3.7 to 3.4 (Tables 1 and 2). The ability to understand other’s perspective has been reported as an essential element of communication ability, as it is closely related to the abilities to pay attention and empathize^[16]. Understanding other’s perspective is also considered an essential aspect of communication ability in the communication with the patients that the hygienists will encounter in dental clinics. Therefore, emphasis should be placed on the ability to understand other’s perspective in developing a communication training program customized to the major.

With respect to the empathic ability scores before and after implementation of the program, as shown in Tables 1 and 2, the scores were increased in the experimental group but slightly decreased in the control

group. A similar pattern was found in the sub-categories of cognitive empathy and emotional empathy. As the empathic ability is closely related to the communication ability, these two factors have been reported to have mutual mediating effects^[17]. In addition, empathic ability is necessary to develop good relationships with others and is closely related to prosocial behavior^[18].

In the present study, as the empathic ability was decreased in the control group after implementation of the program, a significant difference was observed between two groups. This result may be related to the period when the post test was conducted, is not necessary during the final examinations. The result may be consistent with those of previous reports that found that the stress induced by studies had a negative effect on communication^[19, 20]. A similar pattern was found in empathic ability. These results suggest that a communication training program for students majoring in dental hygiene should be prepared by investigating the categories in which the subjects lack ability, in order to provide programs customized to individual majors and individual subjects.

The present study was conducted to investigate the effect of the communication training program on the improvement of communication ability and empathic ability in the students majoring in dental hygiene. This study has several limitations. First, the results of the present study have limited generalizability to all students majoring in dental hygiene, because the subjects of the present study were students majoring in dental hygiene at a single university located in Chungnam. Second, since the present study was dependent upon a self-reporting questionnaire, the results of the present study may have a low objective reliability owing to the possibility of self-defending and subjective thinking by the subjects. Third, the present study did not take into consideration the background variables and the various factors that may affect the communication ability of the college students, including academic grades, income level, and family environment.

However, the present study is significant because the improvement of the communication ability and empathic ability of the students majoring in dental hygiene was investigated after implementation of the communication training program. The results of the present study may be used as fundamental data to prepare a systematic program to improve the communication ability and empathic ability of college students.

Conclusion

The results of the present study showed that the communication training program is effective in improving the communication ability and empathic ability of college students majoring in dental hygiene. With regard to the subfactors, the students majoring in dental hygiene showed high communication ability scores in paying attention to others and understanding other's perspective, but showed low scores in overcoming stereotypical thinking and creative communication. Therefore, communication training programs or courses customized to individual subjects may be needed in preparing a communication training program for students majoring in dental hygiene.

Ethical Clearance: Not required

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Conflict of Interest: Nil

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