



The Effect of an Emotional Intelligence Intervention on Reducing Stress and Improving Communication Skills of Nursing Students

Lingquan Meng¹, Jianping Qi^{2*}

ABSTRACT

Intensive care units are one of the most anxious environments for its employees, especially for doctors, nurses and nursing students. The current study was designed to test the efficacy of an emotional intelligence intervention on reducing stress and improving communication skills of nursing students. Nursing student volunteers from an introductory psychology class at a moderate western Chinese university participated for class credit (n=85). We randomly assigned the nursing students to an emotional intelligence group and a control group. The sample completed measures of perceived stress and communication skills at baseline and end of study. As expected, perceived stress decreased in the emotional intelligence group, but not in the control group, due to the intervention. Also, communication skills increased in emotional intelligence group but remained unchanged in the control group. Findings suggest that an emotional intelligence intervention can protect nursing students from an increase in perceived stress and a decrease in communication skills in the intensive care units.

Key Words: Emotional Intelligence, Stress, Communication Skills, Nursing Students

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Introduction

Stress is a physical or psychological pressure that causes changes in the autonomic nervous system and imposes demands on individuals (Schneiderman *et al.*, 2005). If the stress is intense or persists for a long time, it may lead to collapse of the person and ultimately lead to physical and mental disorders. Stressful conditions occur for each individual, and nursing students are no exception to this, but they are exposed to more stressful clinical factors so that students in this field are exposed to stressful clinical environment factors in addition to stress caused by the educational environment, and this is one of the factors that cause academic failure and the occurrence of physical and mental illness

(Mirzayi *et al.*, 2010). According to the Martyn (2000) report, 67.9% of nursing students in Scotland had stress. Burnard *et al.*, (2008) reported that the average stress of nursing students was 54.47% in five countries (Albania, Czech Republic, Malta, Brunei and Wales).

In general, stressors in nursing students can be divided into two groups: theoretical training stresses and factors related to clinical and trial (Mahat, 1998). Stressor factors in clinical education include the domain of humiliating experiences, educational environment, clinical experiences, unpleasant emotions and interpersonal relationships that are highly stressful. Some of the stressful situations of clinical education include observing patients'

Corresponding author: Jianping Qi

Address: ¹Institute of Education Sciences, Chifeng University, Chifeng, 024000, China; ²Medical School of Chifeng University, Chifeng, 024000, China

e-mail ✉ 258741962@qq.com

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death, observing people' pain and suffering, fear of mistakes in patient's bedside, dealing with dangerous and contagious diseases, the reminder of the instructor in the presence of a patient and communicating with hospital staff (Martyn, 2000).

The other key element that has been repeatedly emphasized to carry out nursing care is communication skills (Bowles *et al.*, 2001), and some nursing experts believe that the ability to communicate with patients is the heart of all nursing care (Chant *et al.*, 2002). Unfortunately, the results of studies show the weakness of nurses and other medical staff in communicating with patients. Other studies have often reported that nurses have many problems with communicating with their patients (Chant *et al.*, 2002; Booth *et al.*, 1999; McCabe, 2004).

In psychiatric nursing context, special attention has been paid to promote the knowledge, skills and attitude of nurses in communication skills with patients, especially mental patients (Haber *et al.*, 1999; Fakhoury and Wright, 2000), and specific chapters have been allocated to teaching the theories and principles of communication in all psychiatric nursing books (Bugge *et al.*, 1999). However, studies have shown that many nurses avoid close contact and emotional interaction with their mental patients and spend little time communicating with them. Also, the conversations conducted between them were very superficial and were mostly related to the physical problems of patients (Fakhoury and Wright, 2000).

On the other hand, about half of the course of nursing education is conducted in clinical settings, and clinical education plays a key role in shaping the professional skills of nursing students (Nahas *et al.*, 1999). Currently, nursing students' learning of communication skills is conducted by indirect and empirical modeling of faculty members and clinical staff, and nursing students, as expected, are not able to communicate effectively with their patients.

Emotional intelligence can prevent stress complications (Littlejohn, 2012). Osmon *et al.* (2004) described emotional intelligence as the ability of the capacity and skill of perceiving, evaluating and managing the emotions of individual and others and with a group of people. People with higher emotional intelligence express their feelings and desires more, and consequently, provide a wider social network and more social support for themselves (Gawda and Szepietowska, 2013; Ebrahimi *et al.*, 2017).

Having social support also improves mental health and protects against stress. Studies have shown that emotional intelligence transforms stress into mental health (Bell and Brominck, 1998). There is evidence suggesting that some forms of emotional intelligence may protect people from stress and, consequently, lead to better adaptation (Ciarochi *et al.*, 2002). On the other hand, the result of studies indicates that emotional intelligence can be considered as an appropriate framework for interpersonal communication and has a role in creating and interpersonal relationships (Bar-On, 2006). All in all, evidence concerning direct relationships between emotional intelligence strategies, perceived stress and communication skills is weak.

The current study sought to evaluate the efficacy of the emotional intelligence program intervention approaches to help nursing university students attain reduced perceived stress and improved communication skills. The study used the variable tension as an indicator of perceived stress (Häfner *et al.*, 2014) and the variables verbal, audible and feedback as indicators of communication skills (Burton, 1990). It was hypothesized that: 1) The emotional intelligence intervention protects nursing students from an increase of tension at the intensive care units; 2) The emotional intelligence intervention has a positive impact on the variables Verbal, audible, feedback; 3) The emotional intelligence intervention has a positive impact on perceived emotional intelligence at the intensive care units.

Methods

Participants

The sample of current study was recruited from introductory psychology classes at a moderate western Chinese university and received course research credit to participate in a "happiness, social communication & community nurses" study. The inclusion criteria were age 20 or older, ability to complete a follow-up 4 weeks after intervention. A total of 85 nursing students (35 male students, 50 female students) between the ages of 20 to 25 (mean age = 21.17 years, SD = 1.34 years) completed assessments and were randomized to an emotional intelligence group (n = 42) and a control group (n = 43). Participants in the groups had a racial composition of Asian (about 28.5 percent), White (about 49.7 percent),

African American (about and 6.3 percent), and other (about 15.5 percent).

Measures

Tension

The Perceived Stress Scale (PSS) is a 14-item questionnaire that screens for tension disorder. The questionnaire assesses the stress levels of life situations in a person on three factors: uncontrollability, unpredictability, and difficulty of life (Cohen *et al.*, 1983). This scale was made for use in normal samples with a minimum of secondary education.

Verbal, audible and feedback skills

The Communication Skills Inventory (CSI), developed by Burton (1990), examines communication skills in three levels of verbal, audible and feedback. The inventory consisted of eighteen items. Many studies showed the reliability and validity of the inventory. The inventory ranged from 1 (I disagree) to 5 (I completely agree). Getting a higher score in each of the verbal, audible and feedback sections represents the communication skill in the same section.

Perceived emotional intelligence

The Schutte Self-Report Emotional Intelligence Test (SSEIT) has been developed based of the first pattern of emotional intelligence Mayer and Salvoes (2008). The questionnaire, formed 33 descriptive sentences, consisted of three components, including emotion regulation, evaluation and expression of emotion, and taking advantage of emotion. Since the questionnaire has been used in many studies, it has acceptable reliability and validity. The questionnaire ranged from 1 (I disagree) to 5 (I completely agree).

Conditions

Routine training only

Participants in the control condition only discussed important aspects of the training courses in the occupational context. In addition, they completed the assessment of Tension and perceived emotional intelligence at baseline and follow-up. We thanked the nursing students in the control condition for the completion of the assessment and their time.

Emotional intelligence intervention only

The emotional intelligence program of this study was researcher-made and included: training

pamphlet, poster, a 4-session general conference program and 6-session in-group program. The training programs were conducted 2 sessions per week (2 hours per session). In these programs, emphasis was placed on 15 subscales of emotional intelligence, particularly anxiety reduction programs. In the training programs, the necessary training was first done on the above, and then they were taught how to think, express emotions, attachments, change their perceptions and judge about their beliefs. They were also taught methods of adaptation to stressors and stressful environment.

Procedures

We approved the current study by a university counseling center in China. First, we obtained the completed written informed consent from participants in both groups and then randomly assigned into one of two groups stratified by gender. The two experimental groups were an emotional intelligence group and a control group. All the nursing students participated in the study first completed measures of stress and communication skills. Participants completed the follow-up assessments approximately 5 weeks following pretest (Fig. 1).

Results

Baseline descriptive statistics

The nursing students in our study were mainly female (about 66%), with a mean age of 38.26 years (SD=2023). About 56% of the sample were third and fourth-year university (emotional intelligence group: n=25(60%); control group: n=23(53%)). At before the intervention, participants reported a tension score of an average of 2.33 (SD=0.51) in the emotional intelligence group and 2.31 (SD=0.44) in the control group. At baseline, there were no differences concerning verbal skill (emotional intelligence group: M=15.14, SD=3.15; control group: M=15.19, SD=2.66), audible skill (emotional intelligence group: M= 9.22, SD=2.44; control group: M=9.17, SD=2.13), and feedback skill (emotional intelligence group: M=6.95, SD=3.07; control group: M=6.89, SD=3.24). We observed a high rate of completion with 95% of participants (n=81) returning for outcome measures.

Influence of intervention on tension

The first hypothesis of the study was that the emotional intelligence intervention would be

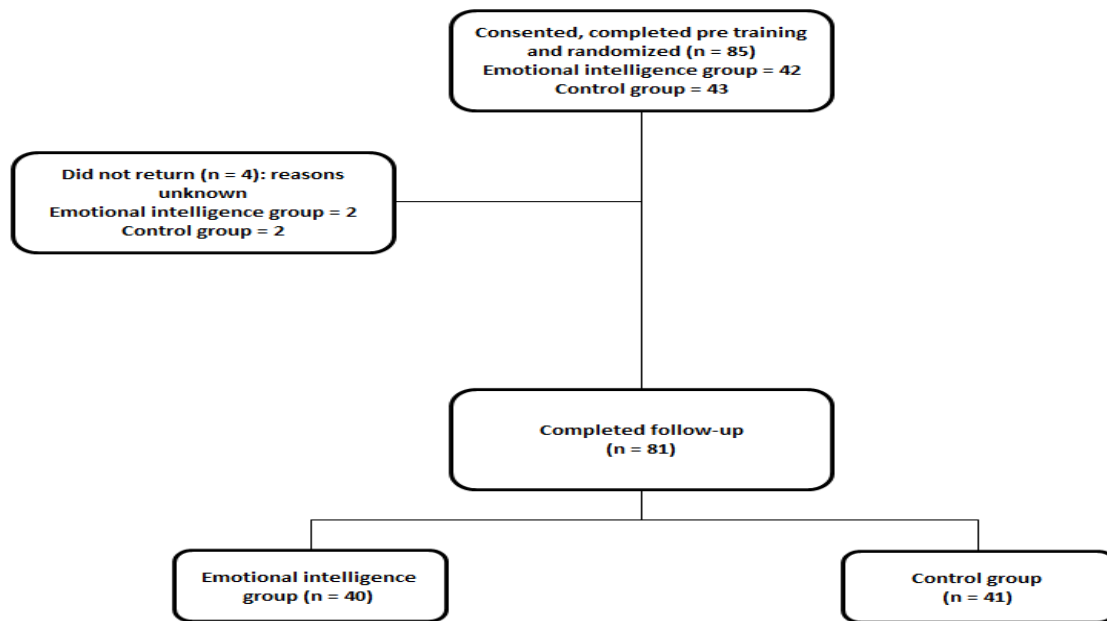


Figure 1. Participants' procedure

Table 1. Baseline general characteristics in our study

	Total (n = 85)	Emotional intelligence group (n = 42)	Control group (n = 43)
Age [mean (SD)]	38.26 (2.23)	39.11 (1.79)	40.04 (1.08)
Gender, female [n(%)]	56 (66)	29 (69)	27 (63)
Academic year at baseline			
First and second years [n(%)]	37 (44)	17 (40)	20 (47)
Third and fourth years [n(%)]	48 (56)	25 (60)	23 (53)

Table 2. Mean and standard deviations of the variables in the emotional intelligence group and control group

Variables	Emotional intelligence group (n= 40)				Control group (n= 41)			
	Baseline		End of study		Baseline		End of study	
	M	SD	M	SD	M	SD	M	SD
Tension	2.33	0.51	2.04*	0.47	2.31	0.44	2.26	0.62
Verbal skill	15.14	3.15	31.17**	2.94	15.19	2.66	16.05	2.43
Audible skill	9.22	2.44	15.24*	2.31	9.17	2.13	9.45	2.87
Feedback skill	6.95	3.07	10.48*	3.11	6.89	3.24	7.16	3.18
Perceived emotional intelligence	21.27	4.28	38.67**	4.11	21.32	4.54	22.16	4.48

* $\rho < 0.05$, ** $\rho < 0.01$

associated with lower rates of tension at after the intervention. At end of study, we observed a significant decrease of tension in the emotional intelligence group (M=2.33, SD=0.51 at baseline, and M=2.04, SD=0.47 at end of study) but a non-significant tendency decreased tension in the control group (M=2.31, SD=0.44 at baseline, and M=2.26, SD=0.62 at end of study) (Table 1).

Influence of intervention on communication skills

As expected at follow-up, the nursing students in the emotional intelligence group reported an increase of verbal skill (M=15.14, SD=3.15 at

baseline, and M=31.17, SD=2.94 at end of study), audible skill (M=9.22, SD=2.44 at baseline, and M=15.24, SD=2.31 at end of study), and feedback skill (M=6.95, SD=3.07 at baseline, and M=10.48, SD=3.11 at end of study), whereas the nursing students in the control group reported a slight non-significant increase of verbal, audible and feedback skills (the second hypothesis).

Influence of intervention on perceived emotional intelligence

The third hypothesis was that the emotional intelligence program has a positive effect on



perceived emotional intelligence. As expected at end of study, we observed a significant increase of perceived emotional intelligence in the emotional intelligence group (M=21.27, SD=4.28 at baseline, and M=38.67, SD=4.11 at end of study) but a non-significant tendency increased perceived emotional intelligence in the control group (M = 21.32, SD=4.54 at baseline, and M=22.16, SD = 4.48 at end of study) (Table 1).

Discussion

Findings from our study suggest that an emotional intelligence intervention may support improvements in perceived stress and communication skills among nursing students. Significant benefits of the emotional intelligence intervention on the variables tension, verbal skill, audible skill, feedback skill and perceived emotional intelligence were found in the intervention group compared to the control group. So, our hypotheses could be partially supported.

The skill of establishing appropriate communication is one of the important characteristics for people working in health care and it has been shown that promotion of communication skills of these people has a great influence on the therapeutic outcomes of patients (Iezzoni *et al.*, 2006). Studies have shown that communication skills training to physicians increase their patients' satisfaction (Trumble *et al.*, 2006). Also, another study found that 85% of the faculty members had a very good attitude toward communication skills training for students (Zamani *et al.*, 2003). The results of a study have shown that nursing students have difficulty communicating with internal-surgical patients (Norouzinia *et al.*, 2016). About communicating with psychiatric patients, the results of Iezzoni, Ramanan and Lee's study (2006) showed that, from the viewpoint of students, communication with mental patients is very frightening and these students considered one of the main causes of the frightenedness of this connection as lack of their skills in communicating with these patients (Iezzoni *et al.*, 2006). Unfortunately, contrary to the process of clinical and practical training that has been developed by several patterns for their education, studies on communication skills training for communication with patients and assessment of these educational programs in the field of nursing education are few, and few patterns have been introduced, and there is very little research evidence about these patterns

(Wilkinson *et al.*, 1998) so that Lane and Rollnick (2007) in a review study concluded that the result of studies about the effect of communication skills training using the simulation and role-play methods is ambiguous and even these two appropriate models have many limitations, and most of the studies in this area have a weak structure and their results are not highly trusted. The results of this study showed that high emotional intelligence has a significant role in controlling and decreasing situational anxiety and can have a significant effect on the mental health of nurses and physicians and prevention of negative and destructive personal and social consequences of stress and anxiety. In this training program, participants attempted to overcome their stress and anxiety states by the relaxation exercises and the intellectual concentration methods.

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