



The Effect of Training Emotion Regulation Techniques on Resilience and Psychological Well-Being among Nurses in Zahedan

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Abstract

Introduction: Nurses constitute the largest part of human resources in the health system and play critical roles in taking care of and improving patients' health. This study aimed to examine the effect of training emotion regulation techniques on resilience and psychological well-being among nurses.

Methods: This is a quasi-experimental study that was followed by a pretest-posttest design with a control group. The statistical population of the study included nurses in Zahedan. Forty nurses were selected using the convenience sampling method and were randomly assigned to the two groups. During the training sessions, the subjects were reduced to 19 ones, and the pretest was conducted on both groups. Then eight 90-minute sessions of training emotion regulation techniques were carried out on the experimental group for two months. The posttest was conducted, one-month after the training. The Connor-Davidson Resilience Scale and the Reef Psychological Well-Being Inventory were used to collect the data. The data analyses were carried out using the Analysis of Covariance.

Results: The results indicated that training emotion regulation techniques were effective in increasing resilience and psychological well-being. Moreover, the results showed that .40 of the variances in resilience ($P \geq 0.001$) and .20 of the variances in psychological well-being ($P \geq 0.001$) were determined in the posttest via the independent variable.

Conclusions: Therefore, holding intervention programs based on the emotion regulation techniques are recommended to improve resilience and psychological well-being among nurses.

INTRODUCTION

Nursing constitutes the largest group of healthcare providers and is one of the most critical and stressful professions that can bring about severe physical and mental consequences [1]. The National Association of Safety Professionals in the United States considered nursing at the head of forty professions with high incidence rates of stress-related diseases and believed that nursing is probably at the forefront of stressful healthcare jobs [2].

Recently, special attention has been paid to resilience in the nursing profession. In this regard, Polk (2000) proposed a middle-range theory of resilience in nursing. Resilience refers to the study and discovery of personal and interpersonal capabilities that lead to progress in and resistance to difficult situations [3]. Resilience is the ability to adapt to threatening conditions successfully. Accordingly, it includes sustainability against harms or

threatening conditions and a person's actions and constructive participation in the environment [4]. Due to a decrease in negative emotions and an increase in mental health, resilience leads to high levels of life satisfaction [5].

Occupations in which people play a role in taking care of others and providing medical care pave the way for developing a variety of physical and mental diseases. Psychological well-being is among variables that can play a disincentive and moderating role against such issues [6]. Psychological well-being refers to positive mental health [7]. Research indicated that psychological well-being is a multi-dimensional concept [8, 9], which is a result of the combination of emotional regulation, personality traits, identity, and life experiences [10]. Psychological well-being has been considered along with several elements such as self-acceptance, positive

relationships with others, independence, control over the environment, have a goal in life, personal growth, and quality of life [11]. There are two main concepts of well-being, i.e., enhancing positive and negative emotions and experiencing a pleasant mood as well as living based on simple goals and continuous efforts to achieve personal growth [12].

One of the factors affecting psychological well-being and resilience is emotional regulation. Emotional regulation is defined as a process of modifying one or more aspects of experiences or emotional responses [13]. Self-regulation or self-control is an organized effort made to adjust thoughts, feelings, and actions in order to achieve specific goals and coordinate goals [14]. Emotional regulation involves a wide range of conscious and unconscious physical, cognitive, and behavioral processes [15].

Since stressful events inherently create various ranges of emotions, the ability of individuals to regulate their emotions can be a very significant factor in determining their resilience. The importance of having emotional regulation skills for maintaining mental health has been mentioned in several studies [16]. Research has indicated that people who used a reappraisal strategy to regulate their emotions in their everyday lives showed high levels of resilience to stress [17]. Similar studies demonstrated that positive emotions led to a very high level of resilience to stressful events and issues [18]. Furthermore, people who have high levels of resilience are more likely to display positive emotions in the face of intrusive and unknown emotional events [19], and emotional regulation in resilient people aids them to resist against stressful occasions [20].

Results of previously carried out studies indicated that training emotional intelligence skills promoted levels of resilience among nurses working in psychiatric wards [21] and effective coping strategies, high levels of emotional intelligence, and conflict and resolution management effectively reduced stress and, consequently, led to high levels of resilience among nurses [22].

Additionally, the results of several studies showed that resilience could play a significant role in regulating emotions [23], and hardiness and forgiveness personality traits were two supportive factors that prevented emotional maladaptation [24]. Resilient people compared to people with low levels of resilience applies more positive emotion regulation strategies [25]. Moreover, nurses who have high levels of resilience used more positive emotion regulation strategies compared to others [26]. Studies have demonstrated that treating emotion regulation had a positive impact on various aspects of psychological well-being and attributional styles and led to an improvement in general health [27]. Also, emotional regulation had

positive effects on mental well-being and physical health [28]. Training emotion regulation had a significant impact on psychological well-being and adaptation to stressors [29, 30]. Training emotional regulation can significantly affect people's emotional well-being, and there was a significant direct relationship between emotional intelligence and psychological well-being among nurses [31, 32].

Therefore, given what was mentioned earlier and considering that the nursing profession inherently makes stress and this stress affects nurses' resilience and psychological health, it is better to equip nurses with personal, psychological, and personality capacities which can aid them when experiencing stressful and challenging situations rather than just focusing on knowing stress resources and the mere recommendations provided to reduce the stress resources; accordingly, this study tries to answer the following question: Does training emotion regulation techniques affect resilience and psychological well-being among in a sample of nurses?

METHODS

This quasi-experimental study was designed based on a pretest-posttest. The current study had a statistical population, including 330 nurses working at Imam Ali (AS) Hospital in Zahedan in 2015. The sample was selected from Imam Ali (AS) Hospital as one of the largest hospitals in Zahedan with various wards, which its clients are from all part of the city. A convenience sampling method was applied to select samples. Hence, 40 volunteer nurses who gave their informed consent to participate in this study were selected as the sample (experimental group = 20; controls = 20). The inclusion criteria for this study were given full consent to take part in the study and obtaining lower than the mean scores on the Resilience Scale and the Psychological Well-Being Inventory. The exclusion criterion was being under any psychiatric and psychological treatments during the time this study was implemented.

In this regard, 40 volunteer nurses working in surgery, emergency, pediatric, and neurology wards were chosen as samples. At the end of the sessions, the number of subjects in both experimental and control groups reduced to 19 subjects.

Based on their scores on the Resilience Scale and Psychological Well-Being Inventory, the subjects were assigned randomly into two identical groups, i.e., an experimental group (20 people) and a control group (20 people). In the posttest, since some subjects placed in the experimental and control groups abandoned the study, 19 people in the experimental group and 19 people in the control group filled out the questionnaires. The experimental group took part in eight 90-minute sessions of the emotion regulation training during two

months. Before initiating these sessions, a pretest (Resilience Scale and Psychological Well-Being Inventory) was conducted on both experimental and control groups, and a posttest (Resilience Scale and Psychological Well-Being Inventory) was carried out one-month after the completion of experimental sessions.

The contents and objectives of these sessions were the process model proposed by Gross [33]. The main objectives of carrying out these sessions were improving the subjects' levels of resilience and psychological well-

being. It was attempted to hold these sessions in the forms of question-and-answer and group discussion. At the end of each session, a homework assignment was provided for the next session. The contents of these sessions were recognizing various types of emotions and training subjects to change attention, stopping rumination, changing cognitive assessments, training the reappraisal strategy, changing behavioral and physiological consequences of emotions, applying reappraisal, and eliminating practical barriers (Table 1).

Table 1. Summary Manual of Gross's Emotion Regulation Strategies Training Sessions

Sessions	Objects	Content
First	Introducing the participants to each other	Beginning a mutual relationship between the group leader (consultant) and members and performing exercises to become more familiar with one another.
Second	Recognizing emotions and arousing situations	Teaching different acts of emotions, discussion of information regarding different aspects of emotion, and short-term and long-term effects of emotions.
Third	Assessing the extent of vulnerability and the emotional skills of the members	1) Self-assessment to recognize one's own emotional experiences; 2) self-assessment to recognize the extent of emotional vulnerability in the individual; 3) self-assessment to identify regulatory strategies.
Fourth	Making a change in the emotion-stimulating situation and teaching interpersonal skills	1) Preventing social isolation and avoidance; 2) Teaching the problem-solving strategy; 3) Teaching interpersonal skills (conversation, self-expression, and conflict resolution).
Fifth	Redirecting attention and stopping rumination and worrying	1) Putting an end to obsessive thinking and worrying; 2) teaching attention.
Sixth	Changing the cognitive assessment and teaching reappraisal strategies	1) Identification of incorrect assessments and their impact on emotional states; 2) teaching the reappraisal strategy.
Seventh	Changing the behavioral and physiological consequences of emotion	1) Identification of the rate and method of applying the inhibition strategy and examining its emotional outcomes; 2) confrontation; 3) teaching emotion expression; 4) behavior modification through environmental reinforcement; 5) teaching emotional catharsis, relaxation, and reverse action
Eighth	Reappraisal and removing practical barriers.	1) Assessing the extent of achievement of personal and group goals; 2) application of learned skills in the natural environments outside the session; 3) examining and resolving barriers to performing assignments.

Ethical Considerations

The main objectives and protocols of this study were explained to the subjects. They were assured of the confidentiality of the collected information and the freedom to withdraw from the study whenever they wanted. Informed consent was obtained from all the subjects. Afterward, the questionnaires were distributed among them. Whenever a question seemed vague, some additional explanations were also provided. It should be noted that these explanations were provided to avoid any kinds of ambiguity and/or bias. Data collection tools were questionnaires on resilience and psychological well-being.

The Resilience Scale

This scale was developed by Connor and Davidson in 2003 to measure a subject's ability to cope with pressures and threats. It includes 25 items instrument scored based on a five-point Likert-type scale ranging from 0 (totally wrong) to 4 (totally right)—scores on this scale range from 0 to 100. High scores indicate a subject's high levels of resilience. Its developers verified the validity (using factor analysis, a convergent validity, and divergent validity) and reliability (using a test-retest method and a Cronbach's alpha coefficient) of this scale in

various groups [4]. The reliability of this scale, using the Cronbach's alpha coefficient, was 93%, and the results of the factor analysis, using the principal component analysis, indicated the existence of a general factor in this scale [34]. In the current study, the Cronbach's alpha coefficient of the Resilience Scale was 89%.

The Psychological Well-Being Inventory

Ryff and Singer developed this inventory in 1989. It has 18 items and six components of self-acceptance, purpose in life, personal growth, positive relations with others, environmental mastery, and autonomy [35]. A general psychological assessment is scored based on a 7-point Likert-type scale ranging from 1 (highly disagree) to 7 (highly agree). Several studies have examined the psychometric properties of the short version of the Ryff's test and have reported that the reliability of its components ranged from .93 to .86 [36]. Additionally, this inventory was conducted on a sample of 1179 people, and it was confirmed by using structural equation modeling [37, 38]. Results of the reliability test, using a test-retest method in Iran, showed that the coefficient obtained for the whole inventory was 0.82 and coefficients of self-acceptance, purpose in life,

personal growth, positive relations with others, environmental mastery, and autonomy were .71, .77, .78, .77, .70, and .78, respectively [38]. In the current study, Cronbach's alpha coefficient of the whole Psychological Well-Being Inventory was .83.

RESULTS

The sample included 38 nurses with an age range of 29 to 50 years. The mean age of the experimental group was 32.75 years, and the mean age of the control group was 35.95 years. Their educational statuses varied from a high school diploma to an M.A. degree. The others

characteristics of subjects in experimental and control groups were respectively: 2.6% and 15% had a high school diploma; 75% and 45% had an M.A. degree; 70% and 45% were in the age range of 29 to 39 years, and 40% and 70% were in the age range of 40 to 50 years; 70% and 75% were married; 75% and 70% were female.

Also, the different hospital ward of subjects, in experimental and control groups were respectively, 21.1% and 25.3% were in the surgery ward; 26.3% and 26.3% were in the emergency ward; 21.1% and 3% were in the pediatric ward, and 31.6% and 26.3% were in the neurology ward.

Table 2. Means and Standard Deviations of Scores on Resilience and Psychological Well-Being in the Experimental and Control Groups

Variable	N	Pretest M ± S.D.	Posttest M ± S.D.
Resilience			
Experimental	19	9.04 ± 58.10	9.71 ± 75.36
Control	19	14.53 ± 63.10	15.77 ± 57.57
Psychological well-being			
Experimental	19	29.65 ± 122.87	33.85 ± 165.57
Control	19	36.09 ± 150.68	41.98 ± 137.68

Table 3. Levene's Test of Equality of Error Variances scores on Resilience and Psychological Well-Being in the Experimental and Control Groups

Variable	F	df1	df2	Sig
Resilience	2.67	1	36	0.11
Psychological well-being	0.81	1	36	0.37

Table 4. Results of the Analysis of Covariance Conducted to Examine the Effect of Emotion Regulation Training on Resilience in the Experimental and Control Groups

Source	Sum of Squares	df	Mean of Squares	F	Sig	Eta-Squared
Intergroup	889.38	1	889.38	5.88*	0.02	0.14
Intragroup	3579.22	1	3579.22	23.69**	0.001	0.40
Error	5287.66	36	151.07			
Total	177096	38				

Table 5. Results of the Analysis of Covariance Conducted to Examine the Effect of Emotion Regulation Training on Psychological Well-Being in the Experimental and Control Groups

Source	Sum of Squares	df	Mean of Squares	F	Sig	Eta-Squared
Intergroup	6132.12	1	6132.12	4.64*	0.03	0.11
Intragroup	12108.49	1	12108.49	9.16**	0.005	0.20
Error	46228.60	36	1320.81			
Total	933454	38				

Results presented in Table 2 indicate that the mean scores of resilience and psychological well-being obtained by the experimental group in the pretest and posttest were increased compared to the control group. The analysis of covariance was applied to answer the research question, i.e., does training emotion regulation techniques affect resilience and psychological well-being among nurses? ANCOVA is used when there is a covariate variable. In this research, the covariate was the pretest (Resilience Scale and Psychological Well-Being Inventory). Accordingly, in these variables, the effect of the previous differences among the subjects of experimental and control groups was omitted from the results.

Levene's test was used for the two variables to examine the assumption of the equality of variances (Table 3). Given that the significance level of the test was more than .05 ($P \geq 0.05$), accordingly, the data did not violate

the assumption of the equality of variances, and the Analysis of Covariance can be applied to examine the practical effect.

As shown in Table 4, in the posttest, the mean resilience score has significantly changed due to the effect of the independent variable (the emotion regulation training) ($P \leq 0.05$, $P \leq 0.001$). 40% of the variances in resilience in the posttest has occurred as a result of the independent variable (the emotion regulation training) ($P \leq 0.0001$).

As shown in Table 5, in the posttest, the mean psychological well-being score has significantly changed due to the effect of the independent variable (the emotion regulation training) ($P \leq 0.05$, $P \leq 0.001$). 20% of the variances in psychological well-being in the posttest has occurred as a result of the independent variable (the emotion regulation training) ($P \leq 0.0001$).

DISCUSSION

Nowadays, results of studies have indicated that using any unique strategy has different consequences, and some strategies for cognitive emotion regulation play an important role in people's resilience, mental health, and psychological well-being. This study aimed to examine the effect of emotion regulation training on resilience and psychological well-being among the nurses. The results demonstrated that emotion regulation training was effective in improving resilience and psychological well-being, and, compared to the pretest, the resilience and psychological scores obtained by the experimental group significantly increased in the posttest. These findings are in line with some results obtained from some studies [16-29].

The results of studies by Troy and Mauss, Carlson et al., and Tugade and Fredrickson have shown that emotion regulation skills are useful in maintaining mental health and they play essential roles in people's resilience [16, 18]. Also, Stein et al. and Skidmore et al., in their studies, showed that in the face of emotional events, high-resilient people could resist stressful events [18, 20]. Results of studies carried out by Moradi and Kalantari and Gholami and Vahedi showed that resilience could play a significant role in regulating emotions [23, 25]. Furthermore, in a similar study, Mazaheri et al. demonstrated that the hardiness and forgiveness personality traits were two supportive factors that prevented emotional maladaptation [24]. Barck and Bardman, Wingerahat, Ashkani, and Heidari, Dargahi et al., in their research, found that emotional regulation training had a positive effect on people's psychological well-being [27-29, 31]. Moreover, Tabrizchi and Vahidi revealed that methods of mindfulness could be considered as significant factors in increasing psychological well-being [30]. In another study, Dargahi et al. showed that emotion regulation training could significantly affect people's emotional well-being [31]. The authors could not find any studies with opposite results, and the results obtained from this study are in line with a part of the results obtained from similar studies.

CONCLUSIONS

Applying emotion regulation training has various benefits, including reducing unwanted emotional experiences and costs such as non-adaptive physiological responses or impaired social functioning.

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The use of emotion regulation training, including reappraisal, led to a reduction in experiencing negative emotions and, thereby, enhances levels of resilience and psychological well-being. Therefore, training emotion regulation to nurses helps them to reduce their negative feelings by using correct emotions, knowing their emotions and accepting them, and expressing emotions, especially expressing positive emotions in life situations which reduce negative emotion in people and, consequently, aid people to increase their psychological well-being and improve their adaptability.

Among limitations of this study, the fact that a number of the subjects abandoned that study and that the statistical population was limited to the nurses in Zahedan can be mentioned.

According to the findings of the present study, it is suggested that, in order to improve nurses' psychological well-being and mental health, healthy networks of social support and interpersonal communications be created through short-term educational programs. In this way, essential grounds will be provided by designing programs for increasing levels of resilience, emotion regulation, and psychological well-being.

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Authors' Contribution

All authors equally participated in the design, implementation, drafting, and revision of the manuscript.

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There was no financial disclosure.

Ethical Approval

The approval of the Ethics Committee University of Sistan and aluchestan in Zahedan, Iran (IR.USB.REC.1399.012) was obtained

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Conflict of Interests

The authors declared no conflict of interest.

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