

Effectiveness of Relaxation Training on Interrelationships between Medical Students

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Abstract

Introduction: Interpersonal relationship is defined as an advanced, selective interaction between individuals. The current study aimed to explore the effect of muscle relaxation training on interpersonal relationships.

Method: This quasi-experimental research was conducted on students (N=623) from the Medical University of Jiroft, south of Kerman Province in Iran. A sample of 30 available students were selected and randomly assigned into two groups: experimental and control. The experimental group received training for one month. To collect data, a self-made questionnaire on interpersonal relationship was applied.

Results: Results showed that there was a significant difference between the two groups regarding pre-test and post-test scores ($p < 0.001$).

Conclusion: Findings from variance analysis and descriptive indicators revealed that muscle relaxation training had a positive effect on interpersonal relationship

Keywords: Muscle Relaxation Training, Interpersonal Relationships, Medical Students

Introduction

Interpersonal relationship is defined as an advanced, selective interaction between individuals. It leads to better recognition of one another and creation of common meanings among people (1). Communicative skill means certain behaviors learned and performed through interpersonal relationships that enhance a specific environment or association. An important factor in clinical environments is to recognize patients' social, psychological, hygienic and treatment needs and to properly direct communications between patients and clinical staff. The main duty of the staff is to provide information to patients on their disease and treatment plans, consider their worries and welfare, and support them emotionally the staff have to communicate

well with patients to better observe and analyze their behavior to analyze their behavior. The results of communication are as follows: increased knowledge about the issues related to the patients, more sense of cooperation between members of the treatment team, increased skill levels, open-mindedness and better quality of surveillance for patients. In addition, communication leads to a decrease in treatment error, stress, occupational burnout, and increases productivity and job satisfaction. Communication is a routine human activity with a wide variety of relationships among health staff. Lack of good relationship between staff and patients causes worries for health policy makers (2). Proper management of excitements and feelings can improve interpersonal relationships and bring

about composure. A useful management/treatment method is called muscle relaxation or gradual relaxation of tension. This method, initially researched by Jacobson in 1934, turns the positive feedback from stress arousal into a negative one. He concluded that under stressful conditions tension is caused by contraction of muscle tissues. (3). When tension is released, stress disappears as well. A person is trained how to contract and relax muscles to release stress and feel calmer (4). This easy method can be applied to every place and time, but little is known about its effect on students. There seems to be a reduction in students' educational efficiency under stressful conditions; thus solving this issue is an emergency. A study by The U.S. National Health Association on medical students (sophomores) showed that mindful-based reduction of stress led to a reduction in tension, confusion, fatigue as well as renewal of energy (5). Stress is an influential factor in interpersonal relationships. Therefore, stress-reductive methods can improve relationships between individuals. In some studies, relaxation exercises and psychological methods have been used to decrease this state over the past thirty years. These methods are significant because (a) each person can practice the same relaxation technique with colleagues or in groups and (b) does it in every place and at every time when control is needed (6). It is a fact that the present demands of life, rapid shifts in societies and complexity of communications have brought about lots of issues; therefore, good tactics are required to prevent behavioral, social and psychological abnormalities (7). Many researches show that under stress students experience fear, anxiety, shyness, anger, etc. they will hurt themselves physically, socially and psychologically if their mental and psychological health is ignored. Therefore, to challenge such issues, new conditions are to be created (8). This study aimed to investigate the effect of relaxation training on medical students' interpersonal relationships.

Methods

This quasi-experimental study had a pre-test and post-test design with a control group. Data were collected in a field study of 623 students from the Medical University of Jiroft, south of Kerman Province, Iran. A number of 30 students were sampled and randomly assigned into two groups (experimental and control). Each group had 15 members. The experimental group included 8 female and 7 male students. The control group had 11 female and 4 male students. Participants were from these departments: medicine, operation room, nursery, obstetrics, anesthesia and environmental health. The pre-test was given to both groups. Also, a relaxation psychologist trained the experimental group for two sessions per week for 45 minutes. Finally, both groups took part in the post-test. A summary of muscle relaxation trainings is provided below: First session (Getting familiar with students and discussing the following subjects: A brief history of muscle relaxation techniques, the role of stress on mental health, the effect of muscle relaxation on reducing stress, and an introduction on how to reach prosperity), second session (training and practice of 16-muscle contraction and assessment of the experiences), third session (training and practice of contraction, relaxing seven muscles and evaluation of experiences), fourth session (training and practice of contraction, relaxing four muscles and evaluation of experiences), fifth session (training and practice of visualization and evaluation of experiences), and sixth sessions (a review of sessions, practice of muscle relaxation and post-test performance). In research instruments, a questionnaire on interpersonal relationships used. A self-made questionnaire was designed to measure the interpersonal relationships and their properties. A number of 47 questions were made. Participants were asked to answer the questions on a 6-point Likert type scale from "never" to "always". For validity purposes, ten

psychologists were consulted and their opinions were considered in the final questionnaire. To determine the reliability of the questionnaire, Cronbach's alpha method was applied with 100 students ($\alpha = 0.8$). Covariance analysis method was used to analyze the data on research hypothesis and control the effect of the pre-test on students.

Results

Table 1 indicates the standard deviation (SD) and means for the age of individuals in both experimental and control groups. As shown in Table 2, the pre-test mean scores and standard deviation for interpersonal relationship were 106.13 and 25.89 for the experimental group respectively. Concerning the control group, it was 97.53 and 17.06 respectively. In addition, for the post-test, it was 131.8 and 28.44 for the experimental group and 97.33 and 16.46 for the control. Thus, there was a difference between scores. To see if the scores of variance was the same or not, the Levene's test was used and to examine the significance of the difference and control the pre-test effect, the covariance analysis statistical test was

applied with the following results. Based on the results of Levene test in table 3, the assumption that variances were homogeneous was not rejected ($p > 0.05$). The covariance analysis was used to analyze data on hypothesis and control of the pre-test effect. According to table 4, assuming that the control variable is the pre-test scores, there was a significant difference between the post-test interpersonal relationship scores of the experimental and control groups ($p < 0.001$). The rate of difference was 60 %, meaning that 60 percent of the interpersonal scores variance was associated with group membership. Statistical power (1) shows that the sample's volume was sufficient. Table 5 displays the balanced means of interpersonal relationships after controlling the pre-test effect according to group membership. After eliminating the pre-test effect, post-test mean scores of the interpersonal relationships for the experimental and control groups were 127.8 and 101.1 respectively (table 5).

Table 1. The standard deviation and means for students' age in the sampled groups

| Group | Means | Standard Deviation |
|--------------|--------|--------------------|
| Experimental | 201.18 | 4.39 |
| Control | 21.01 | 4.45 |

Table 2. The standard deviation and means for students' age in the sampled groups

| Time | Group | Means | Standard Deviation |
|-----------|--------------|--------|--------------------|
| Pre test | Experimental | 106.13 | 25.89 |
| | Control | 97.35 | 17.06 |
| Post test | Experimental | 131.8 | 28.44 |
| | Control | 97.33 | 16.46 |

Table 3. The results of Levene's test

| Significance | Degree of Freedom Denominator | Degree of Freedom Numerator | Statistics Test |
|--------------|-------------------------------|-----------------------------|-----------------|
| 0.52 | 28 | 1 | 0.65 |

Table 4. Results of covariance analysis test on scores of interpersonal relationship

| Variable | Sum of Squares | df | Mean of Square | F | p | Rate of significance | Statistical balance |
|----------|----------------|----|----------------|-------|------|----------------------|---------------------|
| Pre-test | 11832.1 | 1 | 11832.1 | 97.13 | 0.01 | 0.78 | 1 |
| Group | 5022 | 1 | 5022 | 41.22 | 0.01 | 0.60 | 1 |
| Error | 3289.1 | 27 | 121.81 | | | | |
| Sum | 417797 | 3 | | | | | |

Discussion

The research hypothesis indicating that there was a significant difference between students' mean scores before and after relaxation training in interpersonal relationships was affirmed. The results are in line with other studies. In a random interference-control group study (11) on the impact of muscle relaxation and programmed visualization on depression, anxiety, anger and the quality of women's life with breast cancer, the symptoms were significantly decreased for the experimental group compared with the control group (9). Trasket. *al* . observed that the relaxation technique significantly released the tension and stress on cancerous patients and improved their quality of life in 2nd and 3rd months (10). According to another study by Liyavali, this technique can reduce such variables of the standard questionnaire as depression, psychosis, and instability; and it can enhance the relationships between individuals (11). The relaxation method causes physical and mental calmness, which is an important factor for a good communication in society. When people are more healthy, they have more ability to interact respectfully with others; consequently, this positive interaction motivates them to

preserve, enhance and protect personal and social relationships.

Conclusion

Findings from variance analysis and descriptive indicators revealed that muscle relaxation training had a positive effect on interpersonal relationship.

Ethical issues

No applicable.

Authors' contributions

All authors equally contributed to the writing and revision of this paper.

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