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The Effectiveness of Group Therapy Based on Compassion on Career Motivation of Medical Students

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Abstract

Purpose: The present study aimed to investigate the effectiveness of group therapy based on Compassion on the career motivation of medical students.
Methods: This study is a quasi-experimental study with a pre-test, post-test, and control group. The statistical population consists of medical students in Tehran. Thirty students who scored low on the questionnaire were selected as the sample group and randomly assigned to two experimental groups (15 students) and control groups (15 students). Pintrich and De Groot's (1990) Motivational Strategies Questionnaire was used as the instrument in this study. Covariance analysis was used to analyze the data.
Results: The findings obtained in two stages of the test in the two experimental and control groups confirmed the effectiveness of group therapy based on Compassion on increasing motivational beliefs and self-regulatory strategies with 0.99 confidence.
Conclusion: In addition to protecting the individual against negative psychological states, self-compassion plays a role in strengthening positive emotional states such as job motivation.

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Introduction

The medical system in any society is the foundation of social, economic, political, and cultural development. For this reason, special attention is paid to it in most societies, and a significant portion of the budget is spent on medical activities annually. Medicine is a profession that relies heavily on motivation. In many cases, a physician's proper performance and, consequently, the health and lives of his patients depend on his motivation (1). Medical students experience high levels of stress and mental strain during their academic years, which can have negative effects on their educational and learning processes and affect their work motivation (2).

Motivation is a psychological process that results from the arousal, direction, and persistence of voluntary action to achieve organizational and personal goals. Job motivation factors have been studied by some researchers, which are divided into two variables: intrinsic and extrinsic. Intrinsic motivation is defined as behaviors that an individual engages in to feel competent and determined (3). Since medical students, as a subset of the main forces in the healthcare sector, will be responsible for providing, maintaining, and promoting the health of society in the future, their career motivation must be carefully monitored so that they can effectively fulfill their roles as specialists, managers, and therapists (4).

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Motivation to perform a task depends on the individual's ability to satisfy a need. Motivation can also be defined in terms of practical behavior. Those who are motivated will put in more effort than those who are not motivated. In fact, motivation is the cause of behavior (5). Motivation refers to the factors within an individual that activate behavior toward a goal. Occupational motivation explains the willingness of individuals to overcome career obstacles and adapt to changing work situations or conditions. This intrinsic drive has been described as a set of personality factors, needs, and interests that are highly contextualized (6). In recent years, the nature of clinical practice has changed and has been influenced by a variety of step-by-step models; this change necessitates the need for individuals to effectively apply the concept of job motivation to their practice (7). In this study, group therapy based on Compassion was used to increase the career motivation of the study subjects.

The basic principles of compassion-based therapy point out that external soothing thoughts, factors, images, and behaviors must be internalized, and in this case, the human mind will calm down in the face of these internals just as it reacts to external factors (8). The main focus of this method is to cultivate a compassionate mind; in fact, the therapist does this gradually by explaining and describing the skills and characteristics of compassion to the client. Furthermore, in compassion-based therapy, individuals learn not to avoid or suppress their difficult feelings, so they can first recognize their experience and feel compassion for it (9). In self-compassion exercises, the emphasis is on body, relaxation, self-compassion, and mindfulness, which play a significant role in calming the individual's mind, reducing stress, and negative automatic thoughts (10).

Hashemi et al. (2024) conducted a study to examine the relationship between self-compassion, resilience, and difficulty in emotional regulation with psychosomatic complaints in medical students. The mean and standard deviation of psychosomatic symptoms among students was 27.14 ± 14.30. The level of psychosomatic complaints had a significant inverse relationship with self-compassion and resilience ($r=0.41$ and $r=-0.28$, $p<0.01$) and a significant direct relationship with difficulty in regulating emotions. Therefore, the three variables of self-compassion, resilience, and difficulty in emotion regulation have a moderate correlation with the severity of psychosomatic symptoms, and the highest correlation was related to the variable of difficulty in emotion regulation (11).

Mehravin et al. (2023) presented a study titled "Compassion-based group intervention on academic procrastination, anxiety, and quality of life in students: A study with a 3-month follow-up." In the procrastination variable, there is no significant difference between the average preparation for homework and the tendency to change procrastination of individuals at different assessment times, but the interaction effect of time and group has a significance level of less than 0.05. Therefore, there is a significant difference between the mean preparation for the tasks of the experimental and control groups at different assessment times ($F=4.439$, $P=0.043$). The effect size of 0.115 indicates a medium effect. There is also a significant difference between the tendency to change procrastination in the experimental and control groups at different assessment times ($F=8.348$, $P=0.007$). The effect size of 0.197 indicates a medium effect. Also, there is a significant difference between the mean anxiety ($F=35.62$, $P=0.000$) and quality of life ($F=14.57$, $P=0.001$) of the experimental and control groups at different assessment times, and the effect size indicates a strong effect. Therefore, group compassion-based intervention can be used as an efficient and effective treatment in working with students, but further studies are needed to examine other variables and compare it with other evidence-based treatments (12).

In their research, Soleimanpour Moghaddam et al. (2021) compared the effectiveness of compassion and acceptance and commitment training (ACT) on academic self-efficacy and achievement motivation. The results indicated the effectiveness of both compassion and acceptance and commitment training (ACT) in increasing academic self-efficacy and achievement motivation. There was also no significant difference between the two training methods in increasing academic self-efficacy and achievement motivation. According to the findings of the present study, compassion and acceptance and commitment-based education (ACT) methods can be used to increase students' academic self-efficacy and motivation for progress (13).

Beaumont et al. (2016) conducted a study to investigate the effect of compassion-based therapy on self-esteem, suicidal tendencies, self-efficacy, and anxiety. The results of this study showed that compassion-based therapy had a positive effect on self-efficacy and anxiety (14).

Boersma et al. (2015) studied people with social anxiety in their study titled “Compassion-based therapy for coping with shame, self-criticism, and isolation.” The results showed that compassion-based therapy is promising for addressing the problems of the aforementioned individuals (15).

Methods

The method used in this study is a semi-experimental type with pre-test, post-test and control group. Before

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the sessions, the sample group was pre-tested. After randomly assigning the groups to two experimental and control groups, the experimental group underwent the effectiveness of group therapy based on Compassion sessions in the form of eight 60-minute sessions. After the sessions were completed, a post-test was administered immediately, and the pre-test and post-test results were compared in the two groups. The statistical population of this study consists of medical students in Tehran. The sampling method in this study is purposive random. The tools used in this study are:

Motivational Strategies: This questionnaire was developed by Pintrich and De Groot (1990) and has two scales: motivational beliefs (25 items) including questions 1 to 25, and self-regulatory strategies (22 items) including questions 26 to 47, and consists of a total of 47 items. The items in this questionnaire are closed-ended tests with a five-choice Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). It is worth noting that items 29, 30, 40, and 41 of the questionnaire are scored differently than the other items. Cronbach's alpha of the subscales was obtained in a range between 0.60 and 0.84. The reliability and validity of the motivational strategies questionnaire was estimated by Razaviyeh et al. (2006) with a retest of a group of 30 people at a time interval of one month, and was 0.83. In the aforementioned study, Cronbach's alpha was 0.90 for the entire test and ranged from 0.68 to 0.87 for each subtest (16).

After administering the research questionnaire, 30 students who scored low on the questionnaire were selected as the sample group. Then, the subjects were randomly assigned to two experimental groups (15 people) and control groups (15 people), and group therapy based on Compassion sessions were conducted on the experimental group.

The study objectives were explained to the sample group, and after obtaining their consent to participate in the study, they were given the necessary explanations regarding the time and place of the sessions. Then, the training sessions were conducted over eight 60-minute sessions. Immediately after the training sessions, both experimental and control groups were given a post-test. Then, the results obtained from the pre-test and post-test were compared.

To analyze the data in the present study, descriptive statistics methods were used, and in the inferential statistics section, the analysis of covariance method was used.

Results

First, information related to descriptive statistics of research variables in pre-test and post-test of two control and experimental groups is presented. First, frequency distribution related to demographic findings is presented.

Table 1. Number of participants in the control and experimental groups

Groups	Pre-test	Post-test
Experimental	15	15
Control	15	15
Total	30	30

According to Table 1, the sample size in each of the experimental and control groups was 15 people, and the overall sample size was 30 people.

Table 2. Mean and standard deviation of improvement in motivational beliefs and self-regulation strategies in the two control and experimental groups

Groups	Test	Statistical indicator	Variables	
			Self-regulation strategies	Motivational beliefs
Experiment	Pre-test	Mean	65.83	80.46
		Standard Deviation	12.67	10.89
	Post-test	Mean	85.39	99.39
		Adjusted Mean	86.28	99.35
		Standard Deviation	14.49	12.49
Control	Pre-test	Mean	67.83	82.79
		Standard Deviation	9.78	8.13
	Post-test	Mean	70.19	83.57
		Adjusted Mean	69.19	82.48
		Standard Deviation	8.14	7.73

The results of Table 2 show that the mean and standard deviation of self-regulation strategies in the experimental group are 85.39 and 14.49, respectively, and in the control group are 70.19 and 8.14, respectively. As can be seen, the mean of this variable in the post-test of the experimental group was higher than that of the control group.

The mean and standard deviation of the motivational beliefs variable in the experimental group were 99.39 and 12.49, respectively, and in the control group were

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83.57 and 7.73, respectively. As can be seen, the mean of this variable in the post-test of the experimental group was higher than that of the control group.

In order to examine the effect of the independent variable (compassion-based therapy group) on the dependent variables (self-regulation strategies and motivational beliefs), a multivariate analysis of covariance statistical test was used by neutralizing the variance of the pre-test factor (initial differences between the subjects in the two groups).

Research hypothesis: Group therapy based on Compassion is effective in improving motivational beliefs and self-regulatory strategies of medical students.

Table 3. Results of univariate analysis of covariance in the context of multivariate analysis of covariance on adjusted scores of variables improving motivational beliefs and self-regulatory strategies between the two groups.

Source	Dependent variables	Sum of squares	Degree of freedom	F	Significance level	The size of Effect	Test power
Pre-test of self-regulation strategies	Self-Regulatory Strategies	893.89	1	21.44	0.001	0.444	0.985
	Motivational Beliefs	74.13	1	1.19	0.229	0.052	0.204
Pre-test of motivational beliefs	Self-Regulatory Strategies	0.452	1	0.01	0.907	0.001	0.058
	Motivational Beliefs	956.51	1	18.78	0.001	0.409	0.977
Group	Self-Regulatory Strategies	2144.62	1	51.49	0.001	0.656	1.00
	Motivational Beliefs	2350.88	1	46.16	0.001	0.629	1.00

When interpreting the results of univariate analysis of covariance in the context of multivariate analysis of covariance, to prevent committing a type I error, the alpha value is divided by the number of dependent variables and the obtained significance level is compared with this adjusted alpha. Here there are two dependent variables, and the alpha is 0.05 divided by 2, which is equal to 0.025. So the obtained significance level must be less than the adjusted alpha, which is 0.025, to detect a significant difference between the two groups.

According to Table 3, the results of univariate analysis of covariance on adjusted scores of self-regulation strategies with F=51.49 and a significance level of 0.001 show a significant difference between the control and experimental groups ($p<0.025$). Since the adjusted mean of the experimental group (86.28) was higher than the adjusted mean of the control group (69.19), it can be concluded that group therapy based on Compassion is effective in promoting self-regulatory strategies. Therefore, the null hypothesis is rejected and the research hypothesis is confirmed.

The results of univariate analysis of covariance on adjusted scores of motivational beliefs with F=46.16 and a significance level of 0.001 show a significant difference between the control and experimental groups ($p<0.025$). Since the adjusted mean of the experimental group (99.35) was higher than the adjusted mean of the control group (82.48), it follows that group therapy based on Compassion is effective in increasing motivational beliefs. Therefore, the null hypothesis is rejected and the research hypothesis is confirmed.

Discussion

The present study aimed to investigate the effectiveness of group therapy based on Compassion on the career motivation of medical students. The results of the study are presented as follows:

Research hypothesis: Group therapy based on Compassion is effective in increasing motivational beliefs and self-regulatory strategies of medical students.

Although several factors play a role in motivational beliefs and self-regulatory strategies for job motivation, this study examined the effect of group therapy based on Compassion. In the present study, group therapy based on Compassion was used to increase motivational beliefs and self-regulatory strategies of medical students. The results of multivariate regression analysis proved the effect of group therapy based on Compassion on motivational beliefs and self-regulatory strategies and, consequently, their career motivation. Given the high academic and career pressures of medical students, interventions such as compassion-based group therapy can be used as a useful strategy to promote mental health, increase job motivation, and improve professional performance (14). This study shows that paying attention to psychological interventions alongside medical education can help improve the performance and well-being of medical students (12).

Conclusion

Compassion-based therapy is an eclectic approach that draws from social, developmental, and evolutionary psychology, as well as other therapeutic models, with

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effective interventions for a variety of mental health problems.

Compassion therapy exercises emphasize body relaxation, mind relaxation, self-compassion, and mindfulness, which play a significant role in calming the mind, reducing stress, and negative automatic thoughts in people's jobs (3). In addition to protecting the individual from negative mental states, self-compassion also plays a role in strengthening positive emotional states, such as job motivation. According to the results obtained, group therapy based on Compassion has improved individual attitudes towards motivational beliefs and self-regulation strategies of medical students and has improved their career motivation.

One limitation of this study is the limited sample size, which makes it difficult to generalize the results of this study. For further research, it is suggested that future studies examine the effects studied in different age groups and for students in other fields.

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Authors contribution

T. M. conceptualized the study objectives and design.

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Ethics

None

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