Original Research

Comparing the Effectiveness of Educational Techniques Based On Acceptance and Commitment and Schema Therapy on Career Motivation and Happiness of Medical Students

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Abstract

Background: This research was conducted with the aim of comparing the effectiveness of educational techniques based on acceptance and commitment and schema therapy on career motivation and happiness of medical students.

Method: This research is semi-experimental (design of pre-test, post-test and follow-up test with control group). The statistical population of the research included all medical students in Isfahan, and 42 students were randomly selected in the occupational motivation (14 people), happiness (14 people) and control (14 people) groups. Oxford Happiness Questionnaire and Hackman & Oldham Job Motivation Questionnaire (1975) are the instruments used in the research. Independent variables were performed for two experimental groups. The first and second experimental groups received schema therapy and an approach based on acceptance and commitment. The third group, as the control group, did not receive any treatment during the research. The data was analyzed based on variance analysis with repeated measurements.

Results: The results of the research show that the average of the variables is still high even in the follow-up stage, in addition to the post-test. The effectiveness of both approaches has had an effect size of 45% on increasing the happiness of medical students and 22% on career motivation.

Conclusion: The approach based on acceptance and commitment by changing thoughts and beliefs and the approach based on schema therapy with more emphasis on the evolutionary roots of psychological problems are effective in reducing these beliefs and increasing motivation and happiness in medical students.

Keywords: Approach Based on Acceptance and Commitment, Schema Therapy, Career Motivation, Happiness, Medical Students.

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Introduction

There is no doubt that all of us are naturally in search of favorable and pleasant situations. Traits such as happiness and sadness, courage and fear, self-confidence and self-deprecation, etc. are rooted in human emotions (1). Emotions also shape people's personality in their place; because these feelings are a stimulus for our interaction with our surroundings, if they have a proper balance, they will cause correct and logical decisions in life problems and will lead to success in doing things (2). One of the most important drivers is happiness, which has an important effect on people's success. Happy people have an optimistic attitude towards the events around them and try to use these events optimally instead of being negative about the events around them. Also, happy people with healthy personality will be responsible people and good citizens (3). Happiness has components such as: the presence of positive emotions and the absence of negative emotions (including depression and anxiety), having positive relationships with others, being purposeful in life, having personality development, loving others and loving life (4). Happiness is directly related to the personality and spirit of people. A person who has a happy spirit puts positivity at the forefront of his daily activities and thinks of solutions for small and big problems better than others. In other words, happiness occurs when a person feels more satisfied with himself and his surroundings (5). Therefore, it can be said that happiness is directly related to job motivation. Analysis of the problem of motivation is the answer to the reasons for human behavior, why does a person work in an organization? Why are some people active and some less active? What is the reason for interest in a job or disinterest in a job? These questions and many others are related to the issue of motivation, and the answer to them is summed up in the motivation and motives of employees. Therefore, managers by being surrounded by how to motivate employees and their motivations can easily take steps to achieve their goals with the help of employees and be successful in performing their other duties as well (6). One of the important indicators of the success rate of any organization, in addition to financial resources, is the existence of healthy, capable and committed human resources, and this issue is especially sensitive in professions such as medicine that deal with human services (7). The issue of motivation is an important issue in the fields of psychology, management, health and other social and economic sectors. In fact, the position and role of interested, responsible, researching and efficient human resources for the medical profession is important in serving as competent therapists for the society (8). Among the recent approaches in the field of the third wave of psychology, the Acceptance and Commitment Therapy (ACT) is a new scientific psychotherapy model that is part of what is now called the third wave of cognitive behavioral therapy (9). This approach has been supported by research and experience and provides new and unexpected solutions for issues such as happiness and life satisfaction (10). Instead of learning new techniques to achieve happiness, this approach teaches methods to reduce issues such as conflict and conflict, avoiding and losing the present moment (11). The approach based on acceptance and commitment is based on philosophical and theoretical work as much as it emphasizes on creating techniques, and it is important to reach a general understanding of efficient philosophical and theoretical assumptions (12). On the other hand, schema therapy emphasizes the deepest level of cognition, thus seeking to correct the core of the problem. This approach has a high success rate in improving happiness, health and satisfaction in personal and professional life (13). In this model, the primary maladaptive schema, which is assumed to be the basis of the disorder, is tried to be followed up and treated by cognitive, behavioral, emotional and interpersonal strategies. Therefore, the primary goal of this psychotherapy model is to create psychological awareness and increase conscious control over schemas, and its ultimate goal is to improve schemas and coping styles (14). Since medical students, as a subset of the main forces of the healthcare sector, will be responsible for providing, maintaining and promoting the health of the society in the future, their happiness and career motivation should be carefully taken care of so that they can fulfill their role. To play the role of an expert, manager and therapist well (4). Lack of

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attention to the problems of medical students will undoubtedly cause the concentration of their problems and the emergence of various mental and educational disorders for the students. The collection of such negligence causes the waste of efficient human resources in this field (15). Therefore, in the current research, a comparative study of the effectiveness of educational techniques based on acceptance and commitment and schema therapy on career motivation and happiness of medical students has been done. Firouzkohi et al. (2022) investigated the effect of acceptance and commitment training on burnout and job motivation of social security organization employees. The findings showed that acceptance and commitment training is effective on burnout and academic motivation ($P<0.05$). From the above findings, it can be concluded that group training based on acceptance and commitment is effective in reducing burnout and increasing job motivation of social security organization employees (16). Ay et al. (2021) investigated the effectiveness of schema therapy on academic persistence and academic burnout of medical students. The findings showed that there was a significant difference between the experimental and control groups in the variables of academic persistence and academic burnout. In other words, schema therapy increased academic persistence and reduced academic burnout of medical students. The results indicated the effectiveness of schema therapy in improving academic persistence and academic burnout. Therefore, it is recommended to counselors and education specialists to use the schema therapy method to increase academic persistence and reduce academic burnout of students, especially medical students (17).

Fathinia et al. (2021) presented a research entitled "The impact of acceptance and commitment-based training on the happiness of nurses in pediatric special care units: a semi-experimental study". In the pre-test stage, there was no significant difference in the average happiness between the two groups. The comparison of the happiness of the intervention group showed that a significant difference was observed in the mean of this variable and its dimensions after the intervention, while there was no such significant change in the control group regarding happiness and its dimensions except for the dimension of positive mood, 0.409, 0.397, 0.294 and 0.346 respectively variance changes in happiness and dimensions of life satisfaction, self-respect and positive energy are explained by the independent variable. Education based on acceptance and commitment has improved nurses' happiness. This intervention is an applicable, uncomplicated and effective approach and therefore it can be introduced to hospitals as a professional development program by competent authorities (18). Galea et al. (2022) showed that the treatment based on acceptance and commitment was of better quality compared to other treatments, which increased the mental health of patients (19).

Moran et al. (2015) have concluded in their research that treatment based on acceptance and commitment has a positive and significant effect on increasing the job motivation of employees (20).

Method

This research is a semi-experimental type of research (pre-test, post-test and follow-up test with a control group). The statistical population of the research includes all medical students in Isfahan. From the total population, 42 students were randomly selected in the career motivation (14 people), happiness (14 people) and control (14 people) group by available sampling method. The research measurement tool is described as follows:

Career motivation questionnaire was designed by Hackman & Oldham with 15 items and 5 components (variety of skills, task identity, task importance, independence and result feedback) in 1975. Questions 1, 5 and 7 are items related to skill variety, questions 2, 4 and 8 are items related to task identity, questions 3, 6 and 9 are items related to the importance of the task, questions 10, 13 and 15 are items, questions related to independence and questions 11, 12 and 14 are related to performance feedback. The maximum and minimum marks assigned to this questionnaire are 75 and 15, respectively. In order to check the reliability of this tool, Hackman & Oldham conducted a study among 658 employees and supervisors of 7 selected organizations in the United States. The internal reliability of the presented tool was checked and the values

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obtained for all components were more than 0.59 to 0.79, which indicated the appropriate reliability of the tool. This tool was used in many researches in Iran. For example, Ebrahimpour et al used this questionnaire in their study which was conducted among 250 employees of Tehran Broadcasting College. The content validity of this questionnaire was confirmed by 10 experts in the field of management. To determine the reliability of the questionnaire, 25 questionnaires were distributed and collected in the statistical population, the value of which is 0.82 indicating the appropriate reliability of the research tool (21).

Oxford Happiness Questionnaire: It has 29 items and measures individual happiness. This test was created in 1989 by Michael Argyle based on Beck's Depression Questionnaire (1976). The highest score that the subject can get in this scale is 87, which indicates the highest level of happiness, and the lowest score of this scale is 0, which proves that the subject is dissatisfied with life. The normal score of this test is between 40 and 42. The reliability and validity of this questionnaire in Persian language has been measured by Hadinejad and Zareei (2009). The correlation coefficient of this questionnaire was used with the NEO five personality test questionnaire and the results showed a significant correlation with the dimensions of the Oxford happiness questionnaire (in the range of 0.52 to 0.76). The reliability of this questionnaire showed a correlation coefficient of 0.78 in a 4-week interval. Cronbach's alpha for the total happiness depression questionnaire index was equal to 0.84 in the test phase and 0.87 in the retest phase (22).

The participants in the schema therapy group were trained in 18 one-hour sessions (2 sessions per week). Acceptance and Commitment Therapy (ACT) was performed simultaneously, individually during 18 one-hour sessions (2 sessions per week) on the experimental group. During this period, the control group did not receive any treatment intervention.

Descriptive and inferential statistics indicators were used. In descriptive statistics, frequency tables, mean and standard deviation, and in inferential statistics were evaluated using analysis of variance with repeated measurements of research hypotheses. All data were analyzed by SPSS statistical software.

Results

The mean and standard deviation of the pre-test, post-test and follow-up test of the research variables are reported in Table 1.

Examining the average of the variables shows that:

- Job motivation in experiment 1 group with schema therapy has increased from 53.82 (7.66) in the pre-test to 63.25 (7.52) in the post-test. So that in the follow-up phase, the average is still higher than the pre-test with the amount of 62.75 (12.50).
- Career motivation in experiment group 2 with an approach based on acceptance and commitment has reached from 51.18 (8.82) in the pre-test to 62.53 (6.66) in the post-test. So that in the follow-up phase, the average is still higher than the pre-test with the amount of 62.75 (12.50).
- Happiness in experiment 1 group with schema therapy has reached from 77.68 (7.38) in the pre-test to 93.18 (11.59) in the post-test. So that in the follow-up stage, the average is still higher than the pre-test with the amount of 90.81 (11.80).
- Happiness in the experiment group 2 with an approach based on acceptance and commitment has reached from 81.32 (5.90) in the pre-test to 92.53 (8.00) in the post-test. So that in the follow-up phase, the average is still higher than the pre-test with the amount of 92.75 (7.85).

In Table 2, the analysis of variance with repeated measurements is presented to compare the pre-test, post-test and follow-up test of the research variables in the experimental and control groups.

According to the significance of the stage effect, there is a significant difference between the mean pre-test, post-test and follow-up test scores of job motivation and happiness variables in the experimental and control groups ($P<0.05$). Therefore, it can be said with 95% certainty that the effectiveness of both approaches had an effect of 45% on increasing happiness and 22% on job motivation.

Discussion

The present study was conducted in order to compare the effectiveness of educational

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techniques based on acceptance and commitment and schema therapy on career motivation and happiness of medical students. The research findings are presented as follows:
- The average career motivation of medical students has increased with an approach based on schema therapy; in such a way that in the follow-up stage, the average is still higher than the pre-test.
- The average career motivation of medical students has increased with Acceptance and Commitment Therapy (ACT); So that in the follow-up phase, the average is still higher than the pre-test.
- The average happiness of medical students has increased with the approach based on schema therapy; So that in the follow-up phase, the average is still higher than the pre-test.
- The average happiness of medical students has increased with Acceptance and Commitment Therapy (ACT); So that in the follow-up phase, the average is still higher than the pre-test.
- The effectiveness of educational techniques based on two approaches, with an effect size of 45% on increasing happiness and 22% on career motivation of medical students.

Students who have ineffective attitudes due to the deterioration of their mental and physical condition, have ineffective and negative beliefs about their work activities, show psychological disorders that arise from irrational beliefs about the acceptance and commitment of the individual and are active in problematic situations and processed. But in this research, it was found that Acceptance and Commitment Therapy (ACT) by changing thoughts and beliefs and an approach based on schema therapy with more emphasis on the evolutionary roots of psychological problems are effective in reducing these beliefs and increasing motivation and happiness in medical students.

Conclusion

The approach based on schema therapy aims to identify incompatible schemas and eliminate them. Schema therapy investigates people's false beliefs and takes measures to change these beliefs (23). Programs such as schema therapy used in this research are based on the use of techniques and concepts related to coping styles. Acceptance and Commitment Therapy (ACT) is also based on the assumption that the main problem that most people face is experiential avoidance, which is a person's avoidance of thoughts, feelings, senses and other private events. In this approach, trying to control private experiences is considered as a problem instead of a solution; because instead of being a solution, it creates more problems. Therefore, the main goal of treatment based on acceptance and commitment is to create psychological flexibility in medical students, which has been able to improve the level of happiness and career motivation in them. One of the most important limitations of this research is the use of the available sampling method and the limited number of subjects to Isfahan city and medical students. It is suggested to use more variables and other statistical societies in future researches.

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Authors Contributions

The author contributed to the data analysis. Drafting, revising and approving the article, responsible for all aspects of this work.

Ethical Consideration

None

References

1. Khodapanah F, Tamannaeifar M. Academic Well-Being of Adolescent Girls: The Role of Academic Self-Efficacy and Happiness. Int J Med Invest 2023; 12 (2) :108-120.
2. Tabassum U, Qiang X, Abbas J, Amjad AI, Al-Sulaiti KI. Students' help-seeking mediates the relationship between happiness and self-strength: a comparative study on Chinese and Pakistani adolescents. Kybernetes. 2024 Mar 26.
3. Mollaei R. Environmental And Personality Factors and Strategies on Happiness Enhancement: A Meta-Analysis Study. Int J Med Invest 2021; 10 (1) :10-19.
4. Daniel-Gonzalez L, Moral-de la Rubia J, Valle-de la O A, Martinez-Marti ML, Garcia-Cadena CH. A predictive model of happiness among medical students. Current Psychology. 2023 Jan;42(2):955-66.

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5. Deb S, Thomas S, Bose A, Aswathi T. Happiness, meaning, and satisfaction in life as perceived by Indian university students and their association with spirituality. Journal of religion and health. 2020 Oct;59:2469-85.
6. Fahmi I, Ali H. Determination of Career Planning and Decision Making: Analysis of Communication Skills, Motivation and Experience (Literature Review Human Resource Management). Dinasti International Journal of Management Science. 2022 May 20;3(5):823-35.
7. Shahraki M, Sharifzadeh G, Hosseini S M R, Gholamishiri S, Jorabian A. The Effect Of Training Professional Pre-Hospital Emergency Approaches On Job Motivation Of Emergency Medical Technicians In South Khorasan Province. Int J Med Invest 2023; 12 (1) :37-45.
8. Stefurak T, Morgan R, Johnson RB. The relationship of public service motivation to job satisfaction and job performance of emergency medical services professionals. Public Personnel Management. 2020 Dec;49(4):590-616.
9. Morris EM, Johns LC, Gaudiano BA. Acceptance and commitment therapy for psychosis: Current status, lingering questions and future directions. Psychology and Psychotherapy: Theory, Research and Practice. 2024 Mar;97(1):41-58.
10. Shahini M, Mohajer Z S. The Effectiveness Of Training Techniques Based On Acceptance And Commitment And Cognitive Behavior On Reducing Emotional Ataxia And Job Burnout Of Health Care Service Centers Employees. Int J Med Invest 2023; 12 (2) :34-42.
11. Bai Z, Luo S, Zhang L, Wu S, Chi I. Acceptance and Commitment Therapy (ACT) to reduce depression: A systematic review and meta-analysis. Journal of affective disorders. 2020 Jan 1;260:728-37.
12. Arch JJ, Fishbein JN, Finkelstein LB, Luoma JB. Acceptance and commitment therapy processes and mediation: Challenges and how to address them. Behavior therapy. 2023 Nov 1;54(6):971-88.
13. Mourkani S S. The Effectiveness Of Treatment Schemas On Reducing Marital Conflicts And Increasing Mental Health. Int J Med Invest 2021; 10 (1) :76-84.
14. Koppers D, Van H, Peen J, Dekker JJ. Psychological symptoms, early maladaptive schemas and schema modes: predictors of the outcome of group schema therapy in patients with personality disorders. Psychotherapy Research. 2021 Oct 3;31(7):831-42.
15. Ommering BW, Wijnen-Meijer M, Dolmans DH, Dekker FW, van Blankenstein FM. Promoting positive perceptions of and motivation for research among undergraduate medical students to stimulate future research involvement: a grounded theory study. BMC medical education. 2020 Dec;20:1-2.
16. Firouzkohi Moghadam, Bita, Thanagovi Mohrar, Gholamreza, Shirazi, Mahmoud. (2022). Investigating the effect of acceptance and commitment training on burnout and job motivation of social security organization employees, Roish Psychology, 11 (4), 121-132.
17. Ai, Efat, Mahdinjad, Vali, Janabadi, Hossein. (2021). The effectiveness of schema therapy on academic persistence and academic burnout of medical students, scientific-research bimonthly educational strategies in medical sciences, 14 (2), 20-27.
18. Fatehinia, Mahnaz, Fattah Moghadam, Laden, Ashk Tarab, Tahereh. (2021). The effect of education based on acceptance and commitment on the happiness of nurses in pediatric intensive care units: a semi-experimental study, Tehran Islamic Azad University Medical Sciences Quarterly, 31 (3), 346-357.
19. Galea Holmes MN, Wileman V, Hassan S, Denning J, Critchley D, Norton S, McCracken LM, Godfrey E. Physiotherapy informed by Acceptance and Commitment Therapy for chronic low back pain: A mixed-methods treatment fidelity evaluation. British Journal of Health Psychology. 2022 Sep;27(3):935-55.
20. Moran DJ. Acceptance and commitment training in the workplace. Current Opinion in Psychology. 2015 Apr 1;2:26-31.
21. Bahmani, Akbar, Mousavi Davoudi, Seyed Mehdi, Almasi, Mehran. (2019). Correlation of spiritual leadership, job motivation and organizational trust of nurses and employees of Dr. Heshmat Rasht State Hospital, Health Promotion Management Quarterly, 8(3), 27-34.
22. Hadinejad, Hassan, Zarei, Fatemeh. (2009). Reliability, validity, and standardization of the Oxford Happiness Questionnaire, Psychological Research, 12(1-2), 62-77.

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23. Joshua PR, Lewis V, Kelty SF, Boer DP. Is schema therapy effective for adults with eating disorders? A systematic review into the evidence. Cognitive Behaviour Therapy. 2023 May 4;52(3):213-31.

Tables

Table 1. Mean and standard deviation of pre-test, post-test and follow-up test of variables

Variable	Group	Pre-test	Post -test	follow-up
		M	M	M
Job Motivation	Control	50.57 (5.92)	51.24 (8.14)	51.37 (6.02)
	Experiment 1	53.82 (7.66)	63.25 (7.52)	62.75 (12.50)
	Experiment 2	51.18 (8.82)	62.53 (6.66)	63.21 (9.05)
Happiness	Control	80.57 (4.85)	80.44 (4.78)	81.17 (6.54)
	Experiment 1	77.69 (7.38)	93.18 (11.59)	90.81 (11.80)
	Experiment 2	81.32 (5.90)	92.53 (8.00)	92.75 (7.85)

Table 2. Analysis of variance with repeated measurements to compare pre-test, post-test and follow-up test.

Scale	source of the effect	sum of squares	Degrees of freedom	mean square	F	meaningful	Eta squared
Happiness	Stage	2122.44	2	1056.83	60.165	0.001	0.619
	Group stage	1101.88	4	277.23	14.629	0.001	0.450
	error	1346.05	80	15.083			
	group	676.20	2	337.60	14.21	0.001	0.451
	error	847.38	40	20.37			
Job Motivation	Stage	1487.54	2	748.27	13.47	0.001	0.275
	Group stage	656.04	4	162.38	2.465	0.013	0.142
	error	3915.88	80	48.10			
	group	502.20	2	251.05	4.593	0.007	0.222
	error	1829.97	40	45.045		0.001	

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