Original Research

The Effectiveness of Acceptance and Commitment Therapy on Quality of Life in Men with Andropause

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Abstract

Background: The purpose of this study was to investigate the effectiveness of treatment based on acceptance and commitment on the quality of life in men with andropause.

Methods: According to the nature of the subject, the research method was semi-experimental with a pre-test-post-test design with a control group. The statistical population included all men suffering from andropause in Karaj city in 2023, 40 people were selected using the available sampling method, and then 20 people were randomly divided as the control group and 20 people as the experimental group. World Health Organization (1996) quality of life questionnaires were used to collect data. The experimental group was exposed to the treatment protocol based on acceptance and commitment by Hayes et al. (2012) for 8 sessions.

Results: The results of covariance analysis showed that the treatment based on acceptance and commitment had an effect on increasing the quality of life and its dimensions (physical health, mental health, environmental health and social health) in men with andropause ($p<0.01$).

Conclusion: It can be stated that the psychotherapy program based on acceptance and commitment has a significant effect on improving the quality of life in men with andropause and can be of interest to psychologists and therapists as an effective treatment program.

Keywords: Acceptance and commitment, Quality of life, Andropause

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Introduction

Andropause or male menopause, which is the age-related deficiency of testosterone (a type of androgen), is a stage of men's life in the middle age where the changes experienced in it affect their physical, mental and emotional health. Relative androgen disorder usually starts at the age of 40 and causes symptoms such as weakness, decreased sexual desire and erectile dysfunction, depressed mood, anxiety, insomnia and concentration disorder (1). Decreased testosterone in andropause increases the risk of metabolic diseases, diabetes mellitus and cardiovascular diseases. Decreased testosterone is associated with osteoporosis, increased blood pressure, increased blood lipids, decreased physical performance, and kidney diseases (2).

As men age and due to the decrease in androgens, they experience changes that are similar to menopause in women, which is called male menopause (3). Andropause is a natural aging process and a physical condition similar to women, which occurs from the age of 45-50 onwards due to the decrease in the production of androgens in the male body, including testosterone (4). Andropause is a crisis that is mostly psychological and creates inner turmoil and makes men doubt in various aspects of life .Psychologically, a man thinks that his ability to perform various tasks in his married life and sexual life has been reduced, which is a frightening experience for him and he needs encouragement and encouragement to be able to pass this stage. Not all men understand this emotional situation, many men consider this stage safe and do not want to face it as a reality (4).

The decrease in testosterone in andropause increases the risk of metabolic diseases, diabetes and heart and vascular diseases and is associated with osteoporosis, increased blood pressure, increased blood lipids, decreased physical performance and kidney diseases (5). The first and most important reason for the decrease in testosterone level is aging. The level of testosterone increases rapidly after puberty and reaches its maximum level at the age of 20 and then gradually decreases, so that the level of testosterone after the age of 40 years is about 2 -1 percent decreases. To the extent that this reduction at the age of 60 makes testosterone reach less than 50% of its initial level at the age of puberty (6). Apart from aging, other factors are also effective in the significant decrease of blood testosterone. These factors include; Hereditary factors, obesity, nutrition, stress, depression, chronic diseases such as diabetes, heart disease, chronic kidney failure, chronic liver diseases, sleep apnea syndrome, rheumatoid arthritis, use of some drugs such as glucocorticoids, smoking and alcohol) 7).

Various therapeutic approaches have been used to treat patients with andropause. Acceptance And Commitment Therapy is an effective interpersonal therapy that relies on experience and has consistent philosophical and theoretical foundations (8). Treatment based on acceptance and commitment uses strategies based on acceptance and awareness along with strategies of commitment and behavior change with the aim of increasing psychological flexibility (9). This therapy helps people live more in the present moment and focus on important values and goals instead of emphasizing painful thoughts, feelings, and experiences. And by using metaphors, contradictions and practice of experiences, clients establish a healthy contact and communication with thoughts, feelings, memories and fearful physical sensations, and in the meantime, they acquire skills to accept these events and be able to change them, determine your personal values and commit yourself to the required behavioral changes (10). Many psychological treatments have been used to reduce psychological problems by emphasizing emotions and cognitions, but in the third wave of psychotherapies, which are known as postmodern psychotherapies, it is believed that cognition feelings and emotions should be considered as conceptual understanding of phenomena. In other words, instead of changing the form, frequency or situational sensitivity of cognitions and emotions, their function is targeted

(11). Acceptance And Commitment Therapy is a third wave therapeutic behavior. The main goal of this treatment method is to create psychological flexibility, that is, to create the ability to choose a practice among different options that is more suitable, not that the practice is performed solely to avoid disturbing thoughts, feelings, memories, or tendencies, or is actually imposed on the person, in this treatment, first of all, one tries to increase the psychological acceptance of the mental experiences (thoughts, feelings) and, in turn, reduce ineffective control actions. The patient is taught that any action to avoid or control these unwanted mental experiences is ineffective or has the opposite effect and causes them to intensify, and he should fully accept these experiences (without any internal or external reaction to remove them) (12).

Recently, Quality-based Therapy for patients with chronic diseases has increased significantly, and improving the daily performance and quality of life of patients with chronic diseases has become a goal. Quality-based Therapy is a new and comprehensive approach that is based on the orientation of positive psychology (13). In this approach, principles and skills aimed at helping clients to identify, pursue and fulfill needs, goals and aspirations in valuable areas of life have been taught (14). The goal of Quality-based Therapy is to increase professional self-care or inner richness and prevent burnout. In Quality-based Therapy, self-care is equivalent to inner richness and is defined as a feeling of deep relaxation, comfort, alertness and readiness to face daily challenges in a thoughtful, loving, compassionate and comprehensive manner (15).

Based on what was said in the present study, the question was raised whether the acceptance and commitment Therapy has an effect on the quality of life in men with andropause?

Methods

According to the nature of the subject, the research method was semi-experimental, with a pre-test-post-test design with a control group. The statistical population included all men suffering from andropause in the city of Karaj in 2023. 40 people were selected from the mentioned statistical population who visited counseling and treatment centers in Karaj city in the first quarter of 2023, and then randomly 20 people from this group were replaced as the experimental group and 20 people as the control group. The following tools were used to collect the required data and intervention:

Quality of life questionnaire: This questionnaire was designed by the World Health Organization (1996) and contains 26 questions in the form of 4 components. These components include; Physical health (items 3-4-10-15-16-17-18), mental health (items 5-6-7-11-19-26), social relations (items 20-21- 22) and environmental health (items 8-9-12-13-14-23-24-25). It should be noted that the first two questions are not included in any of these components and measure the health status and general quality of life. In this questionnaire, questions 3, 4 and 26 are graded in reverse. After performing the necessary calculations in each component, a score equal to 4-20 was obtained for each component, in which 4 marks are the worst and 20 marks are the best condition of the component. The average score obtained in these components determines the total score of the questionnaire. The quality of life group of the World Health Organization (1996) while verifying the validity of this tool using factor analysis, has reported its reliability using Cronbach's alpha coefficient between 61 and 83. Also, Nejat et al. (2018) in a study calculated the reliability of the mentioned tool using Cronbach's alpha coefficient between 56 and 85 (16). Acceptance and commitment therapy protocol: This protocol was created by Hayes et al. (2012) and is held during 8 sessions of 60 minutes (two sessions per week for a total of 1 month). The summary of the content of the said protocol is as described in Table 1.

In this research, the mean and standard deviation were used in the descriptive findings section and the Kolmogrov- Smirnov test was used in the inferential findings section to check the normality of the data at first. Also, before checking the

assumption of homogeneity of variance matrices, Levin's and Box's M tests were used. Data analysis was also done through statistical tests of covariance analysis using SPSS24 software. A significant level of 0.05 was considered for all tests.

Results

In this study, 30 men with andropause participated, whose average age was 28.11 years in the experimental group and 31.21 years in the control group. In the experimental group, the highest frequency of education of men with andropause was related to aunder diploma with 40% and in the control group, a diploma with 42%. Table 2 shows the average and standard deviation of quality of life and its dimensions (physical health, mental health, environmental health, and social health). As the numbers show, there is not much difference between the average of the experimental and control groups in the pre-test stage, but in the post-test stage, the differences between the experimental and control groups are much greater. Inferential statistics were used to check the significance of the differences.

To perform the analysis of covariance test, first all its assumptions were checked. The Kolmogorov-Smirnov test was used to check the normality of the data and the obtained results showed that the distribution of scores in the pre-test and post-test phases of the experimental and control groups was normal. Levine's test was used to determine the homogeneity of variances. The obtained results showed that the assumption of homogeneity of variances was rejected. Also, the results of Box's M Test showed that the variances had homogeneity. Therefore, the analysis of covariance test was applicable. In Table 3, the results of covariance analysis by controlling the pre-test scores showed that the scores of the quality of life and its components were not significantly different among the subjects of the two groups before the implementation of the research. By controlling this non-significant relationship and considering the calculated F coefficient, the difference between the average scores of the quality of life and its components between the two groups is statistically significant ($P<0.001$). In other words, acceptance and commitment therapy has increased the score of quality of life and its components in the experimental group compared to the control group in the post-test stage. η square or effect coefficient indicates that the studied intervention increases the physical health score by 0/30 %, the mental health score by 30.6%, the environmental health score by 0.36% and the social health score by 50.9% of the subjects of the group. The experiment is compared to the control group.

Discussion

This research was conducted with the aim of investigating the effectiveness of acceptance and commitment therapy on the quality of life in men with andropause. The results showed that acceptance and commitment therapy has an effect on the quality of life in men with andropause. This result is consistent with the findings of researches (16), (13), (17), (5), (6) and (18). In this regard, Azadi and Rezaei (2018) state that with increasing age, andropause also reduces men's sexual performance. Components of sexual performance in men include; It is sexual desire, erection and ejaculation that the disorder in any of the above components causes this disorder in men's sexual function (17). The results of some studies show that the sexual desire of people decreases with age, so that the disorder in men's sexual desire ranges from 1.3% to 25.7% and erectile dysfunction from 1% to 39%, respectively. It increases in men from 40 to 79 years old.

Conclusion

Andropause is associated with severe physiological and psychological changes, which in a long period can have a significant effect on the cycle of silent diseases (hypertension, osteoporosis, diabetes, etc.). The symptoms and problems related to this period started quietly and quietly at the beginning, and it does not have a clear clinical picture like menopause, and psychologists who consider the individual as the unit of their studies consider the degree of

desirability of the quality of life as a result of the complete development of the individual's personality, and on that to establish a relationship between the quality of life and human personality traits. According to them, some personality types consider their quality of life as favorable and others as unfavorable. In this field of thought, the quality of life is considered as a type of behavior that is caused by individual characteristics. Psychological explanations of quality of life emphasize the individual differences of people in the way of thinking and feeling about their behavior. Differences that can appear in the form of subtle and minor differences in behavior, and some people consider their quality of life to be unfavorable due to reasons such as increased anger and anger, a little dependence and attachment to others. These explanations can be expressed under the model of psychoanalysis and the model of personality failure, according to the results of this finding, treatment based on acceptance and commitment can have a positive effect on improving the quality of life of men with andropause. The results of the mentioned studies show that there is an inverse relationship between aging and quality of life. Considering the simultaneous occurrence of andropause symptoms and the increased possibility of occurrence or exacerbation of sexual problems in men, paying attention to andropause is particularly important because of the effects it has on other aspects of men's lives and the relationship it has with their quality of life. According to the report of the Iranian Statistics Center, 25.1% of the country's total population is in the age group of 25-40 years, and in the next 20 years, these people will be in the middle-aged age group of the country. As a result, the lack of timely diagnosis and progression of andropause causes this disease to become untreatable or, if treated, to be associated with disability and ultimately a severe reduction in the quality of life of middle-aged men.

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Authors Contributions:

NVCM, SKM conceptualized the study objectives and design. NVCM, SKM are infectious disease specialists who contributed to data collection from patients along with NVCM, SKM drafted the study design protocols to be submitted to research centers. Data were was analyzed by NVCM, SKM. Manuscript was drafted by NVCM, SKM. All authors contributed in revisions.

Ethical Consideration:

None

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Tables:

Table 1. Summary of acceptance and commitment therapy sessions

Sessions	Session titles	Summary
First	Interview and assessment, explanation of conditions and treatment process, explanation of the underlying pattern of acceptance and commitment therapy	1) Training and implementation of mindfulness exercises, which are required in every session. 2) change through the use of creative frustration exercise 3) hard cover exercise to explain the treatment process
Second	Explaining the concept of acceptance and living in the now	1) Mindfulness practice 2) In this meeting, we talk about satisfaction, primary and secondary suffering 3) Using the metaphor of a wanderer 4) Using the metaphor of walking in the rain
Third	Explanation of the concept of contextual self	1) Practicing mindfulness 2) Contextualizing oneself 3) Parable of smooth sands 4) Throwing an ax at the root of reasoning 5) Using the mismatching technique
Fourth	Explaining the concept of breaking from language threats	1) Practicing mindfulness 2) Contextualizing yourself 3) Practicing facing a giant iron man 4) How to face "Yes, but"
fifth	Initial assessment of values and explanation of goals	1) Mindfulness practice 2) Thought suppression practice 3) Tug-of-war with a monster
sixth	Clarification of values	1) Mindfulness practice 2) Allegory of burial ceremony 3) Allegory of bus passengers 4) Compass of values 5) Goal setting 6) Activity planning
seventh	Explanation of the concept of committed action	1) Mindfulness practice 2) Observer practice 3) Chess board analogy
Eighth	Ending the meetings and drawing conclusions with the aim of preparing for relapse and preventing relapse	1) Practicing the content on the card 2) The lifelong task of Nim's life

Table 2- Mean and deviation of quality of life measure and its dimensions

Group	Experimental group				Control group			
The dependent variable	Pre-test		Post-test		Pre-test		Post- test	
	Average	standard deviation	Average	standard deviation	Average	standard deviation	Average	standard deviation
Physical health	12.40	5.25	15.75	2.60	11.60	4.51	11.95	3.09
mental health	11.81	4.4	18.60	2.89	10.50	3.15	11.25	2.86
Environmental health	10.46	3.47	18.95	3.36	12.35	5.95	12.70	20.70
Social health	10.04	3.89	19.30	2.53	10.26	3.18	11.80	3.62
quality of life (total)	89.27	13.55	107.20	12.59	88.07	14.72	88.50	13.37

Table 3: Investigating the effect of multivariate covariance of acceptance and commitment therapy on dimensions of quality of life (physical health, mental health, environmental health and social health) in men with andropause

Source of change	dependent variable	sum of squares	Degrees of freedom	mean square	F	P	η
Pre-test	Physical health	5804.535	1	5804.535	3.157	0.064	0. 103
	mental health	56.679	1	56.679	1.413	0.073	0.061
	Environmental health	110.491	1	110.491	2.540	0.115	0.085
	Social health	7.775	1	7.775	0.565	0.457	0.016
Group	Physical health	3.850	1	3.850	10.007	0.001	0.300
	mental health	248.949	1	248.949	14.990	0.001	0.306
	Environmental health	322.683	1	322.683	19.101	0.001	0.360
	Social health	17688.998	1	17688.998	35.279	0.001	0.509
Error	Physical health	17688.998	34	520.265			
	mental health	564.667	34	16.608			
	Environmental health	574.378	34	16.893			
	Social health	467.493	34	13.750			