The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 10, Issue 1, January- March, 2022
DIP: 18.01.008.20221001, DOI: 10.25215/1001.008
https://www.ijip.in

Research Paper

Developing a Supportive-Offline Therapy Focused on Acceptance and Commitment and Its Effect on Self-Efficacy in Weight Management in Overweight or Obese Individuals

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ABSTRACT

Although research findings show that online psychological interventions can be a good alternative to face-to-face interventions, some people still have time constraints on joining a social support group, even online. Therefore, this study was initially conducted with the aim of developing a supportive-offline therapy focused on acceptance and commitment and then examined its effect on self-efficacy in weight management in overweight or obese people. The development of supportive-offline therapy focused on acceptance and commitment was as follows: In the offline intervention section, instructional videos and some worksheets for 7 sessions were created based on the principles and exercises of acceptance and commitment and were provided once a weekly basis. The duration of each video was about 30 minutes. In the supportive part of this therapy, weekly telephone follow-ups were done with the subjects, during which the progress of the subjects was examined and their possible questions were answered. The method of this research was semi-experimental pretest-posttest with a control group. The statistical population of the study was all volunteers who were invited to this study during the calls for 27 people. 20 people among the mentioned community who met the inclusion criteria entered the study. Volunteers answered the Clark et al.'s (1991) self-efficacy in weight management questionnaire before and after the interventions. The results showed that supportive-offline therapy focused on acceptance and commitment increases the self-efficacy in weight management and all its sub-comparisons ($p < 0.05$). From these findings, it was concluded that supportive-offline interventions can be an effective alternative to some face-to-face or online psychological interventions, especially during the corona pandemic.

Keywords: *Supportive-Offline Therapy, Acceptance and Commitment Therapy, Self-efficacy in weight management, Corona Pandemic Era*

Obesity is a major public health problem at the community level (Dousti, 2021; Foster, 2016) and it is estimated that approximately 1.2 billion people worldwide are obese or overweight (Kelly, Yang, Chen, Reynolds, He , 2021). In Iran, 5.5% of children and adolescents under 18 years of age and 21.5% of people over 18 years of age are

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Received: October 29, 2021; Revision Received: January 03, 2022; Accepted: February 19, 2022

obese (Yaraghchi, Jomehri, Seyrafi, Kraskian Mujembari & Mohammadi Farsani, 2019). This prompted researchers to study obesity and eating behaviors in this regard (Dousti and Hosseininia, 2021; Dousti, Hosseininia, Dousti and Dousti, 2021; Duarte & Pinto-Gouveia, 2016; Laura Mendes, Cristina Canavarro & Ferreira, 2021; Duarte, Pinto-Gouveia & Stubbs, 2017). One of the most important factors in studies related to obesity or overweight is self-efficacy in weight management, and how much people can resist eating in different situations (Dousti and Hosseininia, 2021). In fact, the concept of self-efficacy in weight management, with the beginning of the study of Clark et al. (1991) as a variable entered the research activities of researchers. In other words, the self-efficacy that results from lifestyle changes affecting weight is a multidimensional structure based on a social cognitive approach that means conceptualizing individuals as purposeful, active, self-evaluating, and self-monitoring agents (Saadat, Kalantari & Kajbaf, 2017). Recent research has shown that obese people have the lowest level of self-efficacy in the face of negative emotions and physical discomfort, and during illness, stress, anxiety and depression, and other negative emotions for reasons such as dysfunctional lifestyle can not show effective behavior (Aimé, Villatte, Cyr, Marcotte, 2017). Thus, the lower self-efficacy in weight management, the greater the psychological distress that results from the maladaptive avoidance strategies of these individuals (Ansari Moghadam, Pour Sharifi, Seyrafi & Vali Zadeh, 2019). The disappointing results of old therapies have led some experts to focus less on weight loss as the main goal and often to focus on psychological interventions to address the psychological factors influencing obesity and improve mental health in these people (Ranjbarnoshari, 2017). There are various psychological interventions to improve the characteristics of people with obesity such as CBT (Paul, van Rongen, van Hoeken, Deen, Klaassen, Biter & van der Heiden, 2015). One of the effective treatments on the characteristics of obese or overweight people is acceptance and commitment therapy, which is supported by many research findings (Dousti, Hosseininia, Dousti & Dousti, 2021; Palmeira, Pinto-Gouveia & Cunha, 2017; Griffiths, Williamson, Zucchelli, Paraskeva & Moss, 2018).

However, since December 2019, with the advent of the new Corona virus, people have experienced different psychological dimensions (Dousti, Hosseininia, Ghodrati & Ebrahimi, 2020). The experience of corona virus disease has left various psychological effects on people, such as high perceived stress and catastrophizing (Dousti and Hosseininia, 2021) and Following this epidemic, people's lifestyles changed into a way that minimized the possibility of using face-to-face services in various educational and psychological dimensions, and in some cases online programs were replaced (Wade, 2020) which online programs is supported by some research (Dousti et el, 2021). These findings suggest that online interventions may be a good alternative to face-to-face interventions, but some people still have limitations, even using online sessions, and cannot take the time to attend regular, group-based meetings. On the other hand, it seems that the conceptualization of supportive-offline interventions can be useful in that one can flexibly set one's own schedule. Therefore, this study was initially conducted with the aim of developing a supportive-offline therapy focused on acceptance and commitment and then examined its effect on self-efficacy in weight management in overweight or obese people.

METHODOLOGY

Sample

The statistical population of the study was all volunteers who were invited to this study during the calls for 27 people. 20 people among the mentioned community who met the inclusion criteria entered the study. Volunteers answered the Clark et al.'s (1991) self-

efficacy in weight management questionnaire before and after the interventions. Inclusion criteria included informed satisfaction, body mass index between 25 and 40, no medical problems due to overweight and no concomitant psychological or medical interventions. In order to comply with the ethics of the research, the candidates were given explanations about the research design and were given the freedom to leave the research whenever they wished.

Instruments

One measure was used in this study,

Self-efficacy in weight management questionnaire: The self-efficacy in weight management questionnaire was developed by Clark et al (1991) to measure self-control ability among obese individuals seeking treatment. This questionnaire is a 20-item self-report tool that measures a person's confidence in abstaining from eating in a variety of situations. This questionnaire has 5 dimensions: Self-efficacy when negative emotions, Self-efficacy when food is available, Self-efficacy during social pressure, Self-efficacy in physical discomfort, and Self-efficacy during positive activities. Factor loads for these 20 items ranged from 0.62 to 0.92. Internal consistency coefficients (alpha), respectively, 0.76 and 0.83 for the subscale of availability, 0.87 and 0.99 for the subscale of negative emotions, 0.82 and 0.84 for the subscale of physical discomfort, 0.70 and 0.79 were obtained for positive activities and 0.90 and 0.89 for social pressure subscale.

Procedure

The method of this research was semi-experimental pretest-posttest with a control group. This study was initially conducted with the aim of developing a supportive-offline therapy focused on acceptance and commitment and then examined its effect on self-efficacy in weight management in overweight or obese people. The development of supportive-offline therapy focused on acceptance and commitment was as follows: In the offline intervention section, instructional videos and some worksheets for 7 sessions were created based on the principles and exercises of acceptance and commitment and were provided once a weekly basis. The duration of each video was about 30 minutes. In the supportive part of this therapy, weekly telephone follow-ups were done with the subjects, during which the progress of the subjects was examined and their possible questions were answered. The model of meetings is borrowed from the model of Dousti et al (2021) based on acceptance and commitment therapy for obese people, which has been developed with changes in the form of supportive-offline therapy focused on acceptance and commitment. Its summary is given in Table 1.

Table No. 1 Summary of sessions

Session	Targets	Description
First session	Express the goals of the sessions Values Mindfulness	Express the goals of the sessions. To identify values for weight loss, a worksheet was presented to illustrate the limitations created by overweight. People were checked their commitment to previous weight management programs. Explain that the body becomes interested in eating because of the evolutionary system after dieting programs, and in general the body maintains our current weight like a thermostat. Mindful eating and homework to eat at least one meal this way. Summary and end of

Session	Targets	Description
		the session. Following by phone
Second session	Mindfulness Acceptance instead of experiential avoidance	Talking about how the experience of stress can help us gain weight and what is its evolutionary root? Practice Mindful breathing and do your homework at least three times a day. Exercises to get people to accept their emotions instead of avoiding them. Explaining that our ancestors used to eat to store energy for themselves when they experienced stress and threats, and now we sometimes do that. Social support and related worksheets. Summary and end of the session. Following by phone
Third session	Identify inefficient strategies and take committed action Defusion Mindfulness	Practice identifying old eating habits and physical activity and determining what I want to change, along with the worksheet. How does raising our awareness with self-monitoring help us? What are emotion regulation systems like? How does self-criticism cause us to gain weight? How does shame prevent us from losing weight? How do we move towards self- acceptance? The practice of writing thoughts on a T-shirt and paper and carrying them with you was presented. Summary and end of the session. Following by phone
Fourth session	Acceptance and Defusion Mindfulness	The exercise of recognizing thoughts was presented when changing habits. Mind radio exercises and related worksheets were presented. The metaphor of the carrot was used instead of the stick. Summary and end of the session. Following by phone
Fifth session	Identify goals and take committed action Acceptance instead of experiential avoidance Mindfulness	What does SMART goal mean? The SMART goal setting exercise was presented. Motivation worksheet provided. Strict teacher training was provided with its worksheet. Explain what emotional bumps are like? How do we receive them and pass them by? They are a natural part of being human. An emotion recognition worksheet was provided. Summary and end of the session. Following by phone
Sixth session	Acceptance and committed action Identify inefficient strategies	Talking about how and when people break their commitment? We may overeat in different situations and in different places. Worksheet for Identifies Breaking Commitment Situations. What does it mean to talk about acceptance? Our human minds naturally create unpleasant thoughts and emotions. Metaphor of Treasure Island with its worksheet. Summary and end of the session. Following by phone

Session	Targets	Description
Seventh session	Preparing for the end of the sessions	Browse past sessions Following by phone

RESULTS

The Table No. 2 lists the demographic characteristics of the study.

Table No. 2 Demographic characteristics

Age	Sex	
Mean	M	F
29/3	6	14

The Table No. 3 describes the research variables in the post-test.

Table No. 3 Descriptive characteristics of research variables in the post-test

	Examination Group			Control group		
Variable	**Mean**	**Std**	**N**	**Mean**	**Std**	**N**
Self-efficacy in weight management	125/00	32/67	10	62/30	32/52	10
Self-efficacy when negative emotions	21/50	4/74	10	14/10	7/99	10
Self-efficacy when food is available	24/00	9/48	10	13/50	7/09	10
Self-efficacy during social pressure	21/52	4/75	10	13/70	7/94	10
Self-efficacy in physical discomfort	28/00	7/37	10	14/50	9/21	10
Self-efficacy during positive activities	31/00	7/30	10	14/80	8/81	10

Before performing parametric analysis, the normality of the data was checked using Kolmogorov-Smirnov analysis and the results showed (P>0.05), so the data are normal. Also, the equality of variances with Leven test was examined and the results showed (P>0.05), so the variances are equal. Table No. 4 shows the analysis of covariance.

Table No. 4 Analysis of covariance

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
Group	Self-efficacy in weight management	840/125	1	840/125	541/143	0/001	0/974
	Self-efficacy when negative emotions	20/984	1	20/984	260/901	0/001	0/956
	Self-efficacy when food is available	7/512	1	7/512	118/618	0/001	0/908
	Self-efficacy during social pressure	77/373	1	77/373	273/240	0/001	0/958
	Self-efficacy in physical discomfort	28/788	1	28/788	448/627	0/001	0/974
	Self-efficacy during positive activities	90/894	1	90/894	558/061	0/001	0/979
Error	Self-efficacy in weight management	22/347	12	1/862			
	Self-efficacy when negative emotions	0/965	12	0/080			

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
	Self-efficacy when food is available	0/760	12	0/063			
	Self-efficacy during social pressure	3/398	12	0/283			
	Self-efficacy in physical discomfort	0/770	12	0/064			
	Self-efficacy during positive activities	1/955	12	0/163			

The findings of Table No. 4 show that the value of F is significant in all research variables ($p < 0.05$) Therefore, it can be concluded that supportive-offline therapy focused on acceptance and commitment has been effective on self-efficacy in weight management and all its sub-comparisons.

DISCUSSION

The findings of this study showed that supportive-offline therapy focused on acceptance and commitment has been effective on self-efficacy in weight management and all its sub-comparisons ($p < 0.05$). This study, in turn, is the first to developing a supportive-offline therapy focused on acceptance and commitment for self-efficacy in weight management, and no comparable findings were found, but the findings of this study in terms of the effect of acceptance and commitment therapy on weight and eating problems, with the findings of Dousti et al. (2021), Palmeira et al. (2017) and Griffiths et al. (2018) are consistent. In explaining these findings, we can say: One of the most significant achievements of the research was the effectiveness of offline psychological interventions. This method is useful for all people who are not able to use face-to-face or online psychological services in any way. Also, as the word support suggests, support is an interactive-social process. Focusing on support throughout the course and the presence of a person who answered participants' questions over the phone and followed their progress plan, as a motivation, encouraged participants and alleviated their concerns.

On the other hand, as mentioned in recent research, obese people have the lowest level of self-efficacy in the face of negative emotions and physical discomfort, during illness, stress, anxiety and depression, and other negative emotions in weight management. Training in acceptance and commitment skills seems to help people to be able to replace previous behaviors with more appropriate responses (Hayes, Strosahl & Wilson, 1999). In this process, people learn to identify their old dysfunctional habits for change and to take stronger steps to achieve their values by choosing and setting smart goals (Hayes, 2004). Therefore, with the acceptance created in people and distancing themselves from self-blame, people's self-efficacy increases.

This study, like any other study, had its limitations. The time allotted for people to watch the videos are unavoidable, but at the same time it was caused people watch them with delayed. It is suggested that researchers consider a more limited time frame for subsequent similar studies or reduce the time interval between the supporter person contact with the subjects.

Mental health professionals are also advised to use these interventions in cases where in-person or online psychological interventions are not possible.

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Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Dousti P. & Hosseininia N. (2022). Developing a Supportive-Offline Therapy Focused on Acceptance and Commitment and Its Effect on Self-Efficacy in Weight Management in Overweight or Obese Individuals. *International Journal of Indian Psychology*, *10*(1), 083-090. DIP:18.01.008.20221001, DOI:10.25215/1001.008