

Cognitive Behavior Therapy for Low Motivation to Change: Randomized Controlled Trial in a Psychiatric Hospital in Gaza Strip

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Abstract

The study aimed to evaluate the effectiveness of cognitive behaviour therapy (CBT) program in reinforcing motivation to change among patients with substance use disorders (SUDs) in the Gaza Strip. The experimental design was used, Participants were 30 males distributed randomly into two groups: experimental and control, (n = 15) per group, using a random sampling method. The experimental group was subjected to a CBT program consisting of (16) sessions over two months. The control group did not undergo any program. Motivation to change scale was applied pre, post- and after two months of follow up. The study shows that weight mean for motivation to change in the pre-experimental group equals to 49.4% and the weight mean post-experimental group equals 65.07%, in another hand, the weight mean in pre-control group equals 41.8% and the weight mean post- control group equals 41.3%. The study found P-value equals 0.000, which is less than 0.05 in both groups in the posttest. Also, p-value 0.001 " which is less than 0.05 in pre-test and post-intervention. Besides, the effect size for the CBT program in motivation to change equals 24.7%. The results revealed that p-value equals 0.001 which is less than 0.05 in post-test and follow-up, the results proved the significant effectiveness of CBT and its survival, The study conclude that CBT sessions have been effective and successful in reinforcing the motivation to change among patients with SUDs.

Keywords: Cognitive Behaviour Therapy; Motivation to change; Substance Use Disorders

Introduction

Substance-related disorders are divided into two groups: substance use disorders (SUDs) and substance-induced disorders (APA,2013). Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs (WHO, 2020). The most common substance abused in Gaza is tramadol, sedative tablets (benzodiazepine) marijuana, hashish, various kinds of cough syrups, multiple substance abuse., This was revealed in the Rabea [1] study, in which it found that the most of the subjects were taking Tramadol 33.1%, were taking cannabis 14.1%, taking assival 16.9%, were taking cocaine 11.9%, were taking others 10.6%. We believe that substances abuse leads to addiction and the person becomes taking more quantities of substances to cause the same effect and this is called tolerance, with prolonged time, psychological and physical dependence will produce, where the addict becomes completely dependent on the drug and the body becomes unable to perform functions except with the presence of the drug When a person becomes dependent on the drug and the drug is abruptly stopped, physical and psychological withdrawal symptoms will occur. Mental health problems such as depression, stress, anxiety and other psychosocial dysfunctions frequently are associated to substance abuse, in addition to physical symptoms as headache, general fatigue, diarrhea and convulsion, Study conducted by the Palestinian national institute of public health

[2] show that 26,500 (1.8% of the male population 15+) are high-risk drug users (HRDUs), in the West Bank: 16,453 HRDUs who mostly use Hashish/Marijuana, while in Gaza Strip: 10,047 HRDUs who mostly use Tramadol and Lyrica, 53% of HRDUs in Gaza Strip have more than one drug in their system. According to the World Health Organization (WHO), the global burden of disease attributable to alcohol and illicit drug use is significant by any measure; it amounts to 5.4% of the total burden of disease. Globally, approximately 39 deaths per 100,000 population are attributable to alcohol and illicit drug use, out of which 35 deaths are attributable to alcohol use and four deaths to illicit drug use [3]. In the context of treatment of addiction, the Palestinian Ministry of Health (MOH) paid great attention to the category of addicts who were victims of addiction. It established the Al-Amal Center for the treatment of addiction in the Gaza Strip in the year 2017, we believe that low motivation to change for the better is considered a risk factor for SUDs and leads to an increase in the possibility of relapse in the addiction treatment, thus creating the need to create a cognitive behavior therapy program to reinforce motivation to change for the better among patients with SUDs in Gaza Strip. The study conducted by Breda and Heflinger [4] emphasizes the importance of motivation to change for effecting recovery from substance abuse disorders. Motivation readiness for change is a key strength and success of drug addicts to remain drug-free and prevent relapse [5]. The study conducted by Carey, *et al.* [6] showed that the main reason for the client's failure to change their drug behavior was due to a lack of client motivation.

In Gaza, addiction is treated with reliance on the medical approach and some simple psychological interventions. In this study, we designed a 16-session CBT program designed to reinforce the motivation to change for the better among addicts. Research now shows that counselors can help clients identify and explore their desire, ability, reasons, and need to change substance use behaviors; this effort enhances motivation and facilitates movement toward change [7]. According to our knowledge, no previous studies are dealing with the variables of the current study in Palestine and this study is the first study prepared the CBT program to reinforce the motivation to change for the better. Therefore, the present study aims to evaluate the effectiveness of CBT to reinforcing the motivation to change for the better among patients with SUDs in the Gaza Strip.

Literature review

Motivation is a dynamic process that responds to interpersonal influences, including feedback and an awareness of different available choices [7]. Motivation includes clients' internal desires, needs, and values. It also includes external pressures, demands, and reinforcers (positive and negative) that influence clients and their perceptions about the risks and benefits of engaging in substance use behaviors. Two components of motivation predict good treatment outcomes [8]. According to Finney [9], motivation readiness for change is an important consideration in treatment planning, a study conducted by Breda and Heflinger [4] shows that more serious substance users are motivated better to change at the outset of treatment and experience more rapid declines in substance use after treatment begins [4]. Another study by Alley, *et al.* [10] found that females and young adults with more severe drug problems may be more amenable to behavior change.

Methodology

Sample

The sample consisted of (30) patients with SUDs who were admitted to the Al-Amal Center in a psychiatric hospital in the Gaza Strip. The sample was distributed randomly into two groups: experimental and control. (15 per group). Each participant must be diagnosed with SUDs according to DSM-5 criteria by a psychiatrist and not comorbid with physical or psychological diseases, psychiatric assessment, mental state examination, urine test to screen drugs by psychiatrists to ensure diagnosis.

Method of sample size collection

The type of sample is a simple random sampling (probability sample).

The number of patients registered for voluntary admission to the Al Amal Center during the first half of the year 2019 was 90. A special number was given to each person. These numbers were put in a box and randomly 30 people were selected. The sample was divided randomly into two control and experimental groups (15 per group). We have chosen 30 people because the department has a capacity of 30 beds in addition to the number of 15 people that is appropriate to achieve the goal of the program.

Instruments

Motivation to change scale is a measure developed by Emad (2019), consisted of 10 items, (Annex 1) the questionnaire was applied pre-post and after two months.

CBT program

It was built by Emad (2019) consists of 16 sessions. (Annex 2) A committee of experts and researchers evaluated the program and the program was applied to 15 addicts residing in the hospital. Monitoring of session efficacy at home, the patient was approved on a form of commitment to continue applying session exercises as homework. Besides, each participant was contacted by calling the phone for follow-up, home visits and integrating the family to ensure the continuity of the effectiveness of the program.

Validity and reliability

A pilot sample was conducted on 30 addicts and they were excluded from the study. In addition, internal consistency and structure validity was measured as it was showed that the correlation coefficients are significant at $\alpha = 0.01$ or $\alpha = 0.05$. Besides, the reliability was measured by using Cronbach’s Alpha coefficient and Half Split Method, the result ensures the validity and reliability of the questionnaire.

Results

The weight means for motivation to change in pre-experimental group equals 49.4% and the weight means post-experimental group equals 65.7% that refers to increases in motivation to change after interventions, while the Weight means for motivation to change in pre-control group equals 41.8% and the weight means post- control group equals 41.3%. Table 1 shows the level of motivation to change in the control and experimental groups before and after the program.

Groups	Domain	N	Total	Pre			Post		
				Mean	Std. Deviation	%	M	SD	%
Experimental	Motivation for change	10	50	24.73	4.59	49.47	32.87	2.77	65.73
Control	Motivation for change	10	50	20.93	3.15	41.87	20.67	1.80	41.33

Table 1: Means, STD deviation, and weight mean for experimental and control members in pre and posttest.

There are significant differences between experimental and control groups in the posttest at $\alpha \leq 0.05$ in motivation to change. That means the effectiveness of CBT in reinforcing motivation to change among addicts. Table 2 shows that the p-value equals 0.000, which is less than 0.05 in a total of motivation to change.

Total post	Group	N	Mean	Std. Deviation	t	P- value
	experimental	15	32.87	2.77	14.290	0.000
	control	15	20.67	1.80		

Table 2: Independent t-Test to test the relationship between experimental and control groups in posttest.

There are statistically significant differences in the mean scores of the experimental group grades between the pre-and post-measurement on the measure of motivation to change in favor of post-test after applying the CBT program and effect size equal 24.7%. Table 3 Shows that p-value 0.001 which is less than 0.05 in the total motivation of change.

Motivation to change	Ranks	N	Mean Rank	Sum of Ranks	Z	P- value	Effect size
	Negative Ranks	7 ^p	10.14	71.00	-3.178 ^b	0.001	24.7
	Positive Ranks	22 ^q	16.55	364.00			
	Ties	1 ^u					

Table 3: Wilcoxon Signed Ranks Test to view up the relationship between pre-intervention and post-intervention in motivation to change among addicts.

There are statistically significant differences between the grades ranking averages of intervention group respondents regarding the post and follow-up measurements on the motivation to change scale after two months of applying for CBT program, the p-value equal 0.001 which is less than 0.05 in post-test and follow-intervention. Table 4 Shows the p-value equal 0.001 which is less than 0.05 in post-test and follow-intervention.

Motivation to change	Experimental group	N	Mean Rank	Sum of Ranks	Z	P- value
Total-post-follow	Negative Ranks	0 ^s	0.00	0.00	-3.418 ^d	0.001
	Positive Ranks	15 ^t	8.00	120.00		
	Ties	0 ^u				
	Total	15				

Table 4: Wilcoxon Signed Ranks Test to view the relationship between post-intervention and follow-measure in motivation to change among addicts.

Discussion

The current study showed significant effects of the CBT program in reinforcing motivation to change, as it was before the program 49.4% and became after the program 65.07%. This result agree with study by Lua PL [11] found that Abusers with < 20 months treatment were significantly “more ready” for behavioral changes (p < 0.05). This supported by study of Breda and Heflinger [4] suggest that more serious substance users are motivated better to change at the outset of treatment and experience more rapid declines in substance use after treatment begins. In addition, the result of current study inconsistent with the study by Gossop., et al. [12] showed that readiness for change measures were not associated with illicit drug use outcomes. We believe that there are factors and reasons that contributed to the lack of motivation for change before the intervention, including low self-awareness, low self-compassion, no encouragement towards positive change, negative adaptation and lack of social support.

After the program, we found many factors that promoted the motivation for change, the most important of which are the sessions of the program itself, increasing self-awareness and identifying the protective and dangerous factors, providing them with a positive adaptation plan and developing good plans for positive change, in addition to engaging the family in encouraging change and increasing motivation. In other hand, the result of the current study agree with Study conducted by Al Mukhaini and Hamdi [13] showed that the effectiveness of

the CBT program in reducing the desire for Drugs. According to Ibrahim., *et al.* [5] Motivation readiness for change is a key strength and success of drug addicts to remain drug free and prevent relapse the weight mean in pre-control group equal 41.8% and the weight mean post- control group equal 41. 3%. We found that no significant change in pre-control and post-control group, in our study, we focused on introducing the addicts with factors that enhance addictive behaviors and factors that prevent addictive behavior, The current study result showed there are statistically significant differences between intervention and control groups in posttest in favor of the experimental group, Also the study found that effect size of CBT program equal 24.7%.that’s means the effectiveness of the CBT program in reinforcing motivation to change among patients with SUDs, It should, of course, be mentioned that the participants in the current study in the experimental group had been subjected to a CBT program throughout 2months by 16 sessions to reinforce the their motivation level to change for better. Also, the study found that there are significant differences in in post-intervention test and follow - intervention test regards follow-measure, which the improvement in motivation to change is continue in follow up in the experimental group, This result is in agreement with the findings of studies Al Mukhaini and Hamdi [13], García., *et al.* [14], Niknejad and Farnam [15], Lua PL [11],Breda and Heflinger [4]. Some factors have kept motivation at a high level between post and follow up, including the skills and exercises of the program such as homework, relaxation and meditation, family and social support for change and follow-up from researchers to ensure commitment to practice program sessions at home [16-18].

Conclusion

SUDs are a serious threat to health and society, focusing on the motivation to change of the addicts and reinforcing them through the CBT program is an important factor in addiction treatment. Generally, this current study shows that the CBT sessions have been effective and successful in reinforcing the motivation to change among the participants in this study. And this was confirmed by the results of the pre-test, post-test and follow up test. At the end of the CBT program and at 2-month follow-up, all improvement gains were maintained.

Motivation to change questionnaire (Annex 1)

No	Statement	Totally agree	Agree	Don't Know	disagree	Totally disagree
Motivation to change for the better						
1	I have a strong desire to quit addiction.					
2	I avoid people who focus only on my mistakes and discourage my resolve					
3	I have the desire to change for the better and to be a productive person and a contributor to society.					
4	Carefully follow the therapist’s team tips and ask for help when needed					
5	I often repeat positive statements such as “I can.” “This is possible”					
6	All that concerns the addiction of me is more important than anything else.					
7	I do not think I will pick anything instead of the drug I used to.					
8	I hope to get a dose of the drug now.					
9	I Communicate with people who contribute to my encouragement for change for the better					
10	Severe stress inhibits my trial to quit of addiction					

CBT Program (Annex 2)

No	Items	Description
1	Named	CBT to reinforce motivation to change for better among patients with SUDs in Gaza Strip.
2	Its Construction	Prepared and designed by Emad, 2019.
3	Clinical category	Patients with SUDs as DSM-5.
4	Its purpose	Reinforce motivation to change for better among patients with SUDs in Gaza Strip.
5	Number of sessions	16 session, 2 session weekly.
6-	Main Objective	Reinforce motivation to change for better.
7	Specific Objective	<ul style="list-style-type: none"> • Providing participants with information about protective factors, risk factors and techniques for coping with life’s difficulties. • Increasing the level of self-esteem and self-confidence among the sample members. • Increase the self-awareness of the participants to be able to recognize their personal responses to stress. • To be familiar with self-compassion techniques may help them cope with feelings of helplessness and hopelessness. Training in new behavioral cognitive responses. • Improve motivation for change for the better and prevent relapse. • Providing information to the participants regarding positive and negative coping strategies in order to adopt the positive ones. • Training the participants how he can replace false beliefs and negative perceptions with positive beliefs. • Modify negative personality traits by using cognitive reconstruction, which is to replace negative thoughts with positive thoughts <ul style="list-style-type: none"> • Training on relaxation technique. • Providing emotion skills technique.
8	Techniques	-Psychoeducation-relaxation-meditation-ABC technique, -self-monitoring- discussion and dialogue- Role play-homework’s-check emotion.
9	Session type	Closed
10	Duration of follow-up	2 months
11	Program evaluation	Motivation to change (pre-post –after two month follow up).

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