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The effectiveness of a cognitive-behavioral therapy program in reducing the risk of relapse for recovering addicts

Amneh Awad Farhan Gharaibeh[1], Khalil Ibrahim Al – Halalat[2], Mohammad Nayef Mustafa Aljalabneh[3]

[1]*PhD, Social work (Casework), The Ministry Of Education, Jordan*
Email Jalabnh82@gmail.com
[2]*Associate professor, Social work department, Faculty of Arts University Of Jordan*
Sociology department, College of arts Humanities and Social Sciences, Sharjah University
Email: K.halalat@ju.edu.jo – kalhalalat@sharjah.ac.ae
[3]*PhD Sociology, Ministry of Social Development, Jordan*
Email: Jalabnh74@gmail.com

Abstract:

The study aimed to identify the effectiveness of the cognitive-behavioral therapy program in reducing the risk of relapse for recovering addicts. The study applied the quasi-experimental approach, where the study sample consisted of (10) individuals addicted to the substance (Ceptagon and Synthetic cannabinoids), who are present in the addiction treatment center / Arjan. They were divided into two equal groups, an experimental group consisting of (5) drug addicts, and a control group consisting of (5) drug addicts. The criteria for evaluating the factors of addict's relapse were applied to them, in addition to the treatment program. Moreover, the study found the effectiveness of the program in reducing the risk of relapse for the recovering addicts, the research sample. It showed the presence of statistically significant differences between the ranks of the degrees of the two measurements, pre and post tests, for the experimental group, and also showed that there were no statistically significant differences between the ranks of the degrees of the two measurements. It also reflected that there were no statistically significant differences between the ranks of the dimensional and follow-up measurement degrees for the experimental group on the relapse scale and its dimensions for the research sample of recovering addicts.

Key words: Cognitive-behavioral therapy, risk of relapse, recovering addicts.

Introduction:

Addiction, which has imposed itself on the world, is considered one of the most serious contemporary challenges that target society and destroy the economic and social entity. It is increasing with the world witnessing a great expansion in the use of information networks and the media. Such means are considered environmental indicators that help in raising the degree of readiness for addiction. (Suhair Lutfi: 2002, 8). Moreover, Jordanian society was not spared from this dangerous plague, from which it suffers greatly. The phenomenon of drug abuse in all its forms and dangerous types has not been spared the Jordanian society. It works to destroy all groups, especially the youth, who are supposed to be the main pillar, the productive force, the building factor and the future leaders of the Jordanian society. The family is considered one of the most important factors that cause children to be exposed to drug addiction, and it is responsible for forming their personality pattern. It is also the framework that covers all the different social roles and is responsible for shaping the morals of the child in general. Moreover, any failure in the family's full performance of its mission is one of the factors that predispose its children to drug addiction. (Mohammed Salama Ghobari: 2002, 53). In this context, (Maysa Al-Abadla: 2010, 4) mentions that 'drugs' is a word with few letters, many meanings, that only brings with it

destruction. It crushes dreams and hopes, hearts and minds, principles and values, individuals and societies. And the complications of addiction are not limited to physical health only, but also to an imbalance in the psychological, mental and social aspect of the addict. Among the most prominent symptoms are physical nervous system disorder, respiratory poisoning, loss of appetite, lack of activity and mentally psychotic symptoms such as paranoia and persecution, and psychological symptoms such as anxiety and depression disorders. (Talhi Farida: 2016, 36). Recovery from drug addiction is a stage of treatment and is given special attention by the addict and those around him, who occupy an important position and place for him. Moreover, recovery is affected by a number of factors, some of which act as obstacles, such as eagerness, friends of addiction, severe anxiety and fear of relapse (WHO 2004, 10). Therefore, those working in the field of addiction treatment have realized the importance of relapse as an essential part of the treatment process, and at the same time it is part of the therapeutic process. There is no such thing as relapse except in a therapeutic journey. The drug abuser, who hesitates for treatment and tries to stop, does not know the relapse, unlike the one who goes through a treatment experience in which he stops for a period of time from taking even once, which is a health, economic and psychological gain (Abdullah Askar 2005, 97-8). A relapse is not in itself a disaster, but rather a procedural event that should be taken into account when the addicted patient undergoes treatment programs of any kind. The ultimate goal of treatment programs is to prevent relapse, prolong the period of cessation, or reduce the level of doses and learn light use as initial stages in treatment that can be dealt with, and also emphasize the awareness of the patient about the difficulty of his disease and help him to avoid relapse situations as much as possible. This is achieved through continuous follow-up of the patient outside the hospital (Aisha Fares Abdullah 2015, 64). The more the addict is about to establish close relationships with the therapist and overcome his mood swings, the fewer relapses he has, while emphasizing that he suffers from a disease that may accompany him throughout his life. It must be dealt with just as we deal with a diabetic patient, and all these hospitals and others achieve outstanding results in the field of addiction treatment and increase the rates of aftercare after recovery. However, the recovering addict sometimes does not adhere to the rules and skills he acquired in the treatment program and thus violates them. So he returns again and again to his addiction identity (Ahmed Okasha 2004, 37-8).

Problem of the Study:

The problem of drug abuse is a serious psychological and social problem, as it affects society in general and the individual in particular. Moreover, its danger lies in its spread among the youth group, which represents the hope of the nation, future leaders and an important building element in the country. When an individual takes drugs, it causes the weakness of his mind, body, morals, and values, and causes negative effects and social evils, most of which end in family disintegration, homelessness, delinquency, or death. According to the World Drug Report (2017), it is estimated that more than 275 million, or more than 5.5%, of the world's population use drugs. Moreover, the number of deaths looking for drug addiction reached nearly (207,400) cases, which is an average of (44) deaths per million people, and they often range in age from (15-64) years (UNODC Report 2018).

Jordan is one of the countries that have not reached a level characterized by drug abuse or trafficking, although there are some issues related to this problem. Moreover, drug crimes during the year (2018) amounted to about (18,500) drug crimes, including (3500) crimes of drug trafficking and (15000) crimes of possession of narcotics. Possession here refers to the seizure of one or more narcotic pills according to the legal articles of the anti-drug law, where this percentage increased in the year (2018) about (32%) compared to the year (2017) (Documents of the Drug Control Department, 2020). The statistics of the Drug Enforcement Administration in Jordan indicate that Jordan is not considered a drug center, but rather a corridor only. Drugs were seized during the year (2018), which exceeds (95%), and they are quantities that were seized due to the fact that they were intended for smuggling out of Jordan. It was noticed that those who committed drug crimes during the year (2018) were under the age of (18), as those crimes amounted to about (340) drug crimes, including (60) drug trafficking crimes, and about (280) offenses of

possession of drugs or narcotic substances. This shows that the rate of increase from the year (2017) is about (96%), and foreigners inside Jordan have committed about (1544) crimes, including (195) crimes of trafficking in narcotics and about (1350) crimes of possession of narcotics and drug use, meaning an increase of about (50 %) compared to the year (2017) (Drug Control Department Documents, 2020). Narcotics and psychotropic substances exist in many types, shapes, sizes and chemical composition. Therefore, their quality cannot be accurately determined except by chemical examination of their components.

Drugs can be divided into four main types. Depredates, which include drugs that make people feel lethargic or sluggish as they slow down the work of the nervous system and thus help them sleep, and relieve pain and distress. Depredates include opiates, alcohol, etc. Sedatives and stimulants which include drugs that make people feel better by stimulating the nervous system. They help to strengthen focus, mental activity, and reduce appetite. Examples of this kind include cocaine, which is one of the strongest stimulants of natural origin, and the Qat plant, which has a double effect in the system. It is initially a stimulant, then followed by a decline in the functions of the nervous system, as well as vitamins that help to resist fatigue and drowsiness, in addition to the nicotine found in smoke, and the caffeine in coffee and soft drinks. Hallucinogens which include drugs that change the way an individual perceives the world by affecting vision, hearing, taste, and smell and induce delusions and visual and auditory hallucinogens, including marijuana, and LSD, which has no medical use (Durand, M., & Barlow, D., 2012, 326-327). A drug addict suffers from psychological and behavioral disorders that he gets used to and walks with in daily life. After detoxing his body, it requires patience, perseverance, and exercise control over his inclinations, problems and social surroundings, in order to avoid returning to drug abuse and relapse. After leaving the addicts treatment center or after benefiting from external medical treatment, he returns to interact with this environment, which constitutes a source of various pressures. Such pressures are considered stimulants that may push some individuals, who are willing, to use drugs again (Ratab Wassila 2018, 141). Relapse is one of the problems that most treatment programs deal with, as relapse is part of the disease of addiction (Raafat El-Sayed Ahmed 2011, 292). In this context, Ayat Ibrahim Sobeih (2005) indicates that the causes of relapse are related to the recovered person's sense of injustice in society, his protest against reality, watching movies about addiction, and the lack of religious companionship. Moreover, Ahmed Muhammad (2008) indicates that among the most important social factors leading to the relapse of an addict are factors related to family problems, factors related to unpleasant feelings, longing and drug cues, pressures of drug addicts, and relationships with others. The results of a study conducted by Latimer, W., et al., in (2000) indicated that the relapse often occurs within three months, or within six months, as in the study of Gardner, B, R., et al., (2007), and that relapse is likely to occur regardless of gender, but the rate of women's relapse is less than that of men, as in another study conducted by Barker, P, L., in (2000). The reason may be due to women not attending treatment centers, as indicated by a study conducted by Jarvis, T, J., (1992). It has been shown by Holzel, BK, et al, in 2011, that relapse may be mental, physical relapse, or emotional relapse. Mental relapse is a craving for drugs or alcohol, thinking about things associated with past use such as place of use, bad friends, looking for opportunities to relapse, or planning a relapse. Also, mental relapse may lead to physical relapse, which is the start of using the drug after the end of the treatment period and recovery from detoxification. Emotional relapse, on the other hand, is has signs like (persistent isolation, not attending meetings, focusing on others, focusing on poor eating and sleeping habits). Social service has a prominent role in the field of drug addiction, especially the individual service, which depends in its dealings on understanding the personality of addicts and their social status through the use of therapeutic models that include intervention methods based on enhancing self-efficacy and social support (Abdulaziz Al-Braithen 2002, 169). The cognitive-behavioral therapy model is considered one of the therapeutic models that have proven successful in dealing with addicts, as it is based on the integration between cognitive therapy and behavioral therapy through a three-dimensional perspective of cognitive, emotional and behavioral aspects. It also depends on establishing a cooperative therapeutic relationship between the therapist and the addict to bring about therapeutic change

by achieving rational thoughts, positive emotions and desired behaviors (Ali Hussein Zeidan et al. 2015, 76). (Asmaa Saud 2015, 42) indicates that cognitive-behavioral therapy is a psychological treatment focused on a specific problem and directed towards a specific goal through the methods of teaching the counselor to acquire adaptive skills to enable him to modify his cognitive and behavioral maladaptations. Therefore, the therapeutic methods that are used in cognitive-behavioral therapy are to identify and correct irrational thoughts, and these thoughts are considered irrational thoughts that negatively affect the individual's ability to face life events, and then his ability to adapt. This leads to excessive emotional reactions that are incompatible with situation or event. The individual may not be aware of these thoughts until he can identify them and thus deal with them with training and education to correct them. (Ali Hussein Zeidan et al. 2015, 89). This was confirmed by another study conducted by Richard, R., et, al., in (2005). It aimed to know the effectiveness of cognitive-behavioral therapy in reducing addiction to drugs and alcohol, and it showed the effectiveness of the effect of cognitive-behavioral therapy with addicts in helping them to abstain from drug use. In this respect, Cheung & Nagi (2013) conducted a study that aimed at identifying the effectiveness of a cognitive-behavioral program in reducing drug abuse among young people. The most important results reflected the effectiveness of the therapeutic program in treating drug addicted youth. Based on the foregoing, the problem of the current research can be formulated in the following question: **What is the effectiveness of the cognitive-behavioral therapy program in reducing the risk of relapse for recovering addicts?**

Main Objective:

The current study aims to identify the effectiveness of cognitive-behavioral therapy in mitigating the risk of relapse for the recovering addicts of the research sample who will undergo sessions of the treatment program prepared by the researchers, and to reveal the extent of its continuity of impact on the research sample when it is applied after a period of time.

Significance of the Study:

1. Theoretical significance: The relapse of addicts recovering from drug abuse still needs research and study in the Jordanian society. Also, the Jordanian studies that dealt with the risks of relapse of the addict in the service of the individual are very rare, so we hope that this study will help to complete the lack of knowledge in the application of treatment programs for addiction patients. This study is one of the recent studies examining the application of new treatment programs to help recovering addicts reduce the risk of relapse, and its role in treating them.

2. Practical (clinical) significance: This study helps to identify the effectiveness of the cognitive-behavioral therapy program in reducing the risk of relapse for recovering addicts. Moreover, the authorities and institutions concerned with treatment programs for addicts can benefit from the results of this study to achieve the desired benefit from it.

Hypotheses:

1. There are statistically significant differences between the scores of the two measurements, pre- and post tests, for the experimental group, on the relapse scale and its dimensions for the research sample 'recovering addicts'.

2. There are no statistically significant differences between the scores of the two measurements, pre- and post tests, for the control group on the relapse scale and its dimensions for the research sample 'recovering addicts'.

3. There are statistically significant differences between the scores of the pre- and post tests for the experimental and control group on the relapse scale and its dimensions for the research sample 'recovering addicts'.

4. There are no statistically significant differences between the ranks of the post and follow-up measurement's degrees, concerning the experimental group, on the relapse scale and its dimensions for the research sample 'recovering addicts'.

Study Concepts:

1. Effectiveness:

Effectiveness is linguistically defined in the concise dictionary as the ability of a thing to influence. Moreover, it is defined, in the resource dictionary, as the power of influence, effectiveness, or sufficiency. (Munir Ba'albaki 1997, 304). Effectiveness is also defined in the social work dictionary as the ability to help the client achieve the goals of the intervention in an appropriate period of time (Ahmed Shafiq 2000, 63). Procedurally, effectiveness refers to the differences between the mean scores of the pre- and post-measurement for the experimental and control group on the dimensions of the relapse scale.

2. The Cognitive Behavioral Programme:

It is a set of skills that enable an individual to be aware of thoughts and emotions, determine how attitudes and behaviors are affected, as well as improve feelings by changing disturbed thoughts and behaviors, in which skills are acquired and homework is done as determined by cognitive-behavioral therapy (Beck 1993, 14). The Dictionary of Social Work Terms and Concepts defines cognitive-behavioral therapy as a group of concepts related to the method of developing mental abilities related to receiving information and how to deal with and use it. This theory emphasizes that the way of thinking is the goal, not the talent or the unconscious motives, which determine the behavior (Abdul Majid Tash Niazi 2000, 58). Procedurally, the cognitive behavioral programme is known as the value of the differences between the scores of the two measurements, pre- and post measurements, for the cases of the experimental group. This indicates the effectiveness of the professional intervention program and its reduction in the risk of relapse for recovering addicts.

3. Relapse:

The intermediate dictionary of the Arabic language indicated that the relapse is the source of "relapsed" and the patient experiences a relapse after recovery, that is, the recurrence of the disease after feeling cured (The Arabic Language Academy 2001, 310). Moreover, The Social Work Dictionary defined "relapse" as the return of symptoms after they had disappeared as a result of treatment or any other professional interventions (Robert, L, Barker 2002, 407). Relapse is defined as the return of a drug addict to using these substances after his success in abstaining from using them for a certain period (Faisal Al-Zard 2009, 41).

Practically, relapse refers to the return of the addict to the use of narcotic substances after being discontinued for a limited period as a result of exposure to psychological, social and economic stimuli. The World Health Organization has also defined addiction as an organic state that results from the interaction of a drug in the body of an organism. The addiction process results in the so-called attachment and dependence. This also results in different behavioral patterns and responses, including the desire to use and an increase in the dose to feel the required psychological effects (Faisal Al-Zarrad and Abed Abu Mughaisee 2002, 17).

4. The recovered addict:

This term refers to a person who was previously dependent on narcotic substances and then underwent a specialized treatment program for recovery, and was able to get rid of drug abuse.

Previous Studies:

A study was conducted by (Mohammed Hassan Mohamed Obeid 2020). It was entitled "The Effectiveness of Cognitive Behavioral Therapy in Achieving Social Support for a Sample of Drug Addicts: An Experimental Study to Prevent Relapse". The study aimed to identify the effectiveness of cognitive-behavioral therapy in achieving social support for a sample of drug addicts in Aswan. The study included (20) addictive patients at the Mental Health and Addiction Treatment Hospital in Aswan. Moreover, this sample was divided into two equal groups: an experimental and a control group, and each group consisted of (10) addicted patients. The social support scale was applied in addition to the treatment programmes. Besides, the study found the effectiveness of the program used in achieving social support and preventing relapse among the research sample. It showed that there were statistically significant differences in favor of the post-measurement of the experimental group, and there were no statistically significant differences between the degrees of the pre and post measurements for the control group on the social support scale and its sub-dimensions. The study also indicated that there were statistically significant differences between the ranks of the post-measurement degrees of the two groups on the social support scale and its dimensions for the research sample. Such differences were in favor of the

experimental group, and showed that there were no statistically significant differences between the ranks of the post-measurement scores of the experimental group on the social support scale and its dimensions for the research sample.

Another study was conducted by (Husam Hussein Abdo 2020). It was entitled "The Effectiveness of Treatment Programs Provided to Drug Addicts: A Study Applied in the Drug Addiction Treatment Center / Arjan". The study aimed to identify the social and economic characteristics of drug addicts in the Addiction Treatment Center / Arjan, affiliated to the Drug Control Department - Public Security Directorate, and the effectiveness of the social, psychological, religious and medical treatment programs provided to drug addicts in the center. The study was applied in a comprehensive survey method on 50 addicts from the study population, where a questionnaire was designed to collect data. Moreover, the descriptive approach was used. The study concluded that the level of effectiveness of the treatment program provided to drug addicts in the addiction treatment center was high, as the effectiveness of the program (psychological treatment, religious treatment, social treatment, medical treatment) was high. It also found that the highest percentage of those receiving treatment are from the age group (18-29 years) at a rate of (86.0%). As for the nationality variable, the Jordanian nationality got the highest percentage, which is about (92.0%), while the social status of the single was the highest at (70.0%), and housing with the family occupied the highest percentage, which is (76.0%). The highest percentage of monthly income reached between (200-399) Jordanian dinars. As for the educational level, the percentage of secondary education recorded the highest rate of (32.0%), and with regard to the nature of work, it was found that the highest percentage of individuals who were treated in the center are the category who work in the private sector at a rate of (38.0%). As for the length of stay in the center, the highest percentage (64.0%) was for the period of stay (two weeks - less than a month), and the results showed that no member of the sample had a stay of more than 3 months. As for the duration of use before treatment, the highest percentage (44.0%) was for users of more than 3 years and the lowest (4.0%) for users of less than a month. Concerning the substance variable, the highest percentage is (42.0%) for the substance of the synthetic cannabinoids, with no abuse of cocaine.

Another study on this topic was conducted by Manawer Obeid Saleh Al-Anzi in (2020). It was entitled "Social and economic factors leading to the relapse of drug addicts: A field study on specialists working in the Great Hope Complex in Riyadh". The study aimed to identify the types of narcotic substances that mostly lead to high rates of relapse, identify the social and economic factors that lead to the relapse of drug addicts, and the most prominent therapeutic methods that specialists can practice with the returner to drug addiction. The study sample consisted of (85) specialists, and the social survey method was used; a comprehensive survey method by applying a questionnaire tool to all social and psychological specialists at Al-Amal Medical Complex. The study concluded that the most common types of narcotics are hashish, stimulants, alcohol, then heroin, sedatives, hypnotics and cocaine. The most important social factors were the addict's irregularity in an integrated treatment plan, the failure to cut ties with former friends, the addict's involvement in deviant activities in his free time, family conflicts and weak family control. Among the most important economic factors are the family's suffering from poverty and deprivation, the difficulty of the recovering person to get a job and the lack of wages, and the lack of confidence of others in the participation of the recovering person in work. And among the treatment methods are following up on recovering people to prevent relapse in the long term, increasing awareness programs for addicts, taking the recovered person away from the environment that caused him to fall into addiction, helping the addict to participate and interact with others, diversifying treatment programs and providing distinguished treatment and prevention services for addiction returnees.

A study was also conducted by Ahmed Mumtaz Abdullah Mahmoud in (2018). It was entitled "The effectiveness of a cognitive-behavioral program to reduce the likelihood of psychological relapse among tramadol addicts in Gaza governorates". The study aimed to know the effect of a cognitive-behavioral counseling program to reduce the possibility of psychological relapse among tramadol addicts in Gaza governorates. The study sample included (16) addicts from the inmates of Asdaa Central Prison in Khan Yunis, divided as follows: the experimental group consists of (8)

addicts, and the control group consists of (8) addicts. The study followed the quasi-experimental approach, and the researcher used the following tools: (the psychological relapse probability scale), along with the cognitive-behavioral counseling program. The study found that there were statistically significant differences between the mean scores of the experimental and control group members in the post measurement on the scale of the possibility of psychological relapse after applying the counseling program, in favor of the experimental group. Also, it was noted that there were statistically significant differences between the mean scores of the experimental group members in the pre and post measurements on the scale of the possibility of psychological relapse after applying the counseling program. Such differences were in favor of the post-measurement. It was also noted that there were no statistically significant differences between the mean scores of the experimental group in the post and follow-up measures on the scale of the possibility of psychological relapse after five months of applying the counseling program. This indicates the effectiveness of the prepared counseling program in reducing the possibility of psychological relapse among tramadol addicts in Gaza governorate.

In this context, a study was conducted by Abdel-Malik Sheehan in (2018). It was entitled "Case Study of Cognitive-Behavioral Therapy in Reducing Drug Abuse Symptoms in Schooled Adolescent Girls". The study aimed to identify a case study of cognitive behavioral therapy in reducing the symptoms of drug abuse among female adolescents who use hallucinogenic pills. The study sample consisted of (three) female addicted adolescents. The clinical approach with its various tools (case study, clinical interview, clinical observation) was also used. The study proved the effectiveness of cognitive-behavioral therapy in reducing addictive behavior in three cases of schoolgirls.

A study was also conducted by Ratab Wasila in (2018). It was entitled “The effectiveness of a group treatment program to alleviate the symptoms of relapse among drug addicts”. The study aimed to build a group treatment program to alleviate relapse symptoms in drug addicts. The program was built on a number of techniques inspired by cognitive-behavioral therapy and rational emotive therapy. The quasi-experimental method was also used. The study sample consisted of (6) individuals, whose ages ranged between (25-35) years, out of the relapsed addicts who attended the Frantz Fanon Hospital in Blida. A multidimensional relapse scale was also used. The study proved the effectiveness of the group treatment program in alleviating the symptoms of relapse among drug addicts.

Another study was conducted by Rasha Zobaa in (2017). It was entitled "Treatment of addiction and prevention of relapse". The study aimed to identify drug addiction, its factors and methods of treatment, as well as the recovery period and its importance, in order to identify relapse, its symptoms and causes, and the most important global models for the prevention of falling into it. The sample consisted of (78) recovered persons, divided into (57) males and (21) females. The questionnaire was used as a research tool. One of the most prominent results of this study is that the most influential dimensions of relapse situations are the dimension of pressure from drug addicts (68.06%), followed by interpersonal disorders (62.39%), then family problems with an average of (62.05%), and then the unpleasant feelings with an average of (61.89%), then the pleasant feelings with an average of (61.17%).

A study was also conducted by Mahmoud Al-Muntasir Ratib Abdel Samie in (2016). It was entitled "The Effectiveness of Cognitive-Behavioral Therapy in Reducing the Resistance of the Addict". The study aimed to determine the effectiveness of the practice of cognitive-behavioral therapy in reducing the resistance of the addict (aggressive, defensive, passive) to treatment. The study sample consisted of (10) drug-resistant addicts. The quasi-experimental approach was used, and the study concluded that there are significant statistically significant differences between the mean scores of the study cases for the pre and post measurements for the treatment addict's resistance scale. It was also noted that there were statistically significant differences between the mean scores of the study cases in the two measurements, before and after, concerning resistance (aggressive, defensive, passive). Such differences were in favor of the post measurement. It was also noted that there were significant statistically significant differences between the mean scores of the study cases for the pre and post measurements with respect to the evidence of observing the addict's resistance

to treatment. The study proved the effectiveness of the professional intervention program prepared by the researcher using cognitive-behavioral therapy in reducing the resistance of the addict.

Another study in this list was conducted by Yousef Barak in (2014). It was entitled "The effectiveness of aftercare programs for drug addicts in their social rehabilitation: A field study conducted in the mental health hospital in the Hail region". The study aimed to identify the effectiveness of aftercare programs for drug addicts in their social rehabilitation in Hail region, from the point of view of the beneficiaries in the mental health hospital in the region. It relied on the social survey method for (91) individuals who received treatment for drug addiction. The most important results of the study indicated that the psychological aftercare programs were very successful and tangible, and that the skills acquired in rehabilitating addicts had a positive role in helping them to quit using drugs.

A study was also conducted by Abdullah Al-Juhi in (2008). It was entitled "The effect of the cognitive-behavioral therapy program in treating a sample of heroin addicts". The study aimed to test the effectiveness of the cognitive-behavioral therapy program in changing some of the beliefs associated with addiction, due to the positive results achieved by this type of psychotherapy in general in the recovery of many addiction patients. The study sample included (80) patients distributed into two groups equally, one of them is experimental and it is related to the cognitive-behavioral treatment program, the traditional treatment program, and at the end of the program, the scales were applied again (post application). The results reflected the positive impact of the cognitive-behavioral model program used. It was also noticed that there was a clear improvement in the degree of false and negative beliefs associated with the main axes of the addictive process. The results confirmed that the improvement in these beliefs indicates the possibility of adopting more positive beliefs, and reflects the importance of cognitive-behavioral aspects and the need to pay attention to them in the addiction treatment program.

Another study was conducted by Rahaman, M, M., et al., in 2016. It was entitled "Factors Associated with Relapse in Drug Addicts in Bangladesh". The study aimed to identify the psychological and social factors associated with the relapse of drug addicts in Bangladesh. It used the descriptive approach. Moreover, the study sample consisted of (60) individuals recovering from addiction. Their ages ranged between (18-41) years. The study concluded that there is a relationship between psychological factors and relapse, such as feelings of sadness, frustration, anger, anxiety, and resentment. It proved that there is no relationship between the nature of the relationship between parents and relapse, but there is a relationship between former peer pressure and relapse. The influence of psychological factors on relapse after recovery was also observed more than social factors.

A study was also conducted by Golestan et al., in (2010). It was entitled "The role of family factors in the relapse of addicted adolescents". The study aimed to identify the role of familial factors and their impact on the relapse of opiate-dependent adolescent males after treatment in Kerman "Iran". It used the social survey method, along with a tool for collecting demographic data and family factors influencing the return to drug abuse. The study sample consisted of (226) male adolescents, their ages ranged from (13-20) years. They got treatment from addiction at addiction treatment centers in Kerman "Iran". The study concluded that the sample members returned to addiction due to drug abuse within the family (especially the parents). Also, family conflicts (conflict between parents and children and family disputes between spouses) were a reason for their return to addiction.

In this list is also a study conducted by Elgaily, et al., in (2005). It was entitled "Dangerous situations for relapse and self-efficacy: A comparative study between alcoholics and heroin addicts". The study aimed to find out the difference between alcohol addicts and heroin addicts in relation to relapse variables and attitudes, and to compare them with self-efficacy to resist to use again after treatment. The descriptive analytical method was used. Also, (a list of drug abuse attitudes was used to measure high-risk situations that cause relapse, in addition to testing attitudes of confidence and measuring the patient's ability to control himself). The study sample consisted of (180) patients at Al-Amal Hospital in Saudi Arabia. The main group was divided into two groups according to the type of substance given, the first group: heroin addicts (105) individuals, and (78.1%) of the sample members entered

treatment before that, and relapsed more than four times, while the second group: Alcohol addicts (75) individuals, and (37%) of the respondents relapsed more than four times. The study concluded that the rate of relapse among heroin addicts is statistically significant higher than that of alcohol addicts. The causes of relapse, in order, are represented in: negative emotions, availability of the drug, social pressures, craving for the drug in both groups, and the alcoholic is higher in the average of self-efficacy and is statistically significant than heroin addicts.

A study was also conducted by Major John in (2004). It was entitled "Self-efficacy as a source for the prevention of drug relapse". The study aimed to find out the relationship between self-efficacy and relapse prevention. The experimental method was used. The study sample consisted of (52) individuals divided into two groups (29) males and (23) females. The patients underwent a treatment program to improve self-efficacy during their stay in the hospital. Then the patients were followed up for (6) months after discharge from the hospital. The study found a statistically significant relationship at the level (1.,0) between self-efficacy and a longer recovery period.

In this respect, a study was conducted by Karl E. Miller in (2002). It was entitled "Depression, substance abuse, discontinuation and relapse rates. The study aimed to examine the relationship between depressive disorder or dependence on psychoactive substances, and the relationship of recurring depressive episodes with the occurrence of relapse, and return to use. The study sample included (250) patients in the addiction treatment unit, who abuse cocaine, heroin and alcohol. The researcher used the clinical approach by using the structured interview to diagnose mental disorders and substance abuse disorders, according to the Fourth Statistical Diagnostic Manual of Mental Disorders. The study found that patients with severe disorder were less able to continue abstaining from substance use after treatment, and had higher rates of relapses. It also revealed a significant correlation between the occurrence of depressive episodes and the occurrence of relapse among addicts, as the occurrence of episodes precipitate relapse.

Similarly, a study was conducted by Steva, Bill and Mike in (2000). It was entitled "Factors leading to re-addiction". The study aimed to determine the factors leading to the return to addiction, and to measure the effect of self-efficacy, and psychological dependence on alcohol. The study sample included (60) male alcoholics. The researcher used the descriptive approach by applying some scales, including "the scale of factors leading to relapse, prepared by researchers". The study found that increasing self-efficacy had a greater effect in reducing addiction recurrence. It also revealed that self-efficacy and mental balance are the most influential factors in relapse into alcoholism.

A note on the previous studies:

It is clear from previous studies that they varied in several Arab and foreign countries. They also focused on various fields regarding addicts, some of which dealt with the social and economic factors that lead to the relapse of addicts, while others dealt with the effectiveness of the cognitive-behavioral program to reduce the psychological relapse of addicts, and to provide them with social support. As the research methodology varied (experimental method, social survey method, clinical method) most of the studies were applied, so it was characterized by its comprehensiveness and credibility for its application of these methods .

The importance of the current study lies in filling the gap in the field of research in the Jordanian environment, and in shedding light on the application of cognitive treatment programs on addicts in general, and addicts who have experienced relapse more than once in particular. It also lies in the importance of its results, which open the door for researchers to do new Arab research, and that the justification for the current study is the scarcity of studies and research in Jordan that dealt with the application of the cognitive-behavioral therapy program in reducing the risk of relapse for recovering addicts in general, which gives it a distinct place. To shed light on recovering addicts after completing their treatment phase and their role in giving and production in general, and in order to preserve their physical, mental and psychological health in particular.

Methodological Procedures:

First: Study Type:

This study is considered one of the quasi-experimental studies, which adopted the random method in the selection and distribution of the experimental and control groups. It seeks to test the effect of an independent experimental variable, which is cognitive-behavioral therapy,

on a dependent variable, which is reducing the risk of relapse for recovering addicts.

Second: Methodology:

The present study relied on the quasi-experimental approach in order to test the effectiveness of training on the strategies and methods of cognitive-behavioral therapy in reducing the risk of relapse among the research sample. The design of the two equivalent groups (experimental - control) included a pre-post measurement for the control group and a (pre-post- follow-up) measurement for the experimental group.

Third: Delimitations of Study:

A. Place: Addiction Treatment Center / Arjan, affiliated to the Drug Control Department - Public Security Directorate. It was selected due to the application of the research to the target sample concerning its importance and objectives.

B. People: This study is limited to addicts who relapsed after recovery in the Addiction Treatment Center/ Arjan. Their number reached (10) individuals who use the substance (Ceptagon and Synthetic cannabinoids). They were divided into two equal groups, an experimental group consisting of (5) drug addicts, and a control group consisting of (5) drug addicts.

Table (1): The characteristics of the study sample

Variables		Control group		Experimental group		Total	
		K	%	k	%	K	%
Age groups	30 -20	2	40	2	40	4	40
	40- 30	2	40	2	40	4	40
	50- 40	1	20	1	20	2	20
Qualification	Illiterate	1	20	1	20	2	20
	Diploma	1	20	1	20	2	20
	High qualification	1	20	1	20	2	20
	Master Degree or Ph.D.	2	40	2	40	4	40
Marital Status	Single	3	60	3	60	6	60
	Married	1	20	1	20	2	20
	Divorced	1	20	1	20	2	20
	Widow	-	-	-	-	-	-
Drug	Ceptagon	3	60	3	60	6	60
	Synthetic cannabinoids	2	40	2	40	4	40
Number of previous treatment attempts	One time	1	20	1	20	2	20
	Two times	1	20	1	20	2	20
	Three times	3	60	3	60	6	60
	More than three times	-	-	-	-	-	-
	One time	1	20	1	20	2	20

The number of relapses	Two times	2	40	2	40	4	40
	More than two times	2	40	2	40	4	40
	Total	5	%50	5	50 %	10	50

It is noted from the previous table that the control and experimental groups are homogeneous in terms of age group, qualification, marital status, number of treatment attempts, drug substance and number of relapses. To make sure that the experimental and control groups started the experiment and there were no differences between them in the scale for assessing the factors of addicted relapse, the scale was applied to the two groups, then the differences and standard deviation between the means were calculated. The following table shows the differences between the two means:

Table (2): Means, Standard Deviation, and T-Value for the experimental and control groups before applying the cognitive-behavioral therapy program

Group	Mean	Standard deviation	Degrees of freedom	Calculated T-Value	Significance	Effect size	Significance of effect size
Experimental	65.67	4.25	22	0.73	G.D	0.02	weak
Control	64.50	3.55					

It is obviously noticed in the previous table that the calculated (t) value amounted to (0.73) which is less than the tabular (t) value (2.07). This means that there are no differences between the mean scores of the experimental group and the control group. It also shows that the two groups have a large degree of homogeneity in the factors of addictive relapse. We note that if there is a change in the value of (t) and its significance after the application of the program, the change can be attributed to the impact of the professional intervention program; the cognitive-behavioral therapy. To ensure the extent of homogeneity in each dimension of the scale, the averages and standard deviations between each of the three dimensions were calculated, and the value of (t) was calculated for each dimension. The following table shows the difference between the two groups regarding scale dimensions.

C. Time:

The program was implemented from (17/7/2021) to (23/9/2021), and the follow-up session was completed four weeks after the end of the training program by applying the follow-up measurement (23/10/2021).

Tools of the Study:

a. Scales for evaluating the factors of addictive relapse, prepared by / Ahmed Ibrahim Al-Basousy: This scale includes three axes, including the following: the axis of the self-confidence scale which contains (20) phrases, the axis of the drug craving sensitivity assessment scale, which contains (14) phrases, motivation scale axis which includes (two pictures); picture (A) includes gains from drug use, and contains (20) phrases, while picture (B) includes losses caused by drug abuse and it contains (20) phrases.

Table (3): Means, standard deviations, and difference in scale dimensions between the experimental and control groups before applying the cognitive-behavioral program

Dimension	Group	Mean	Standard deviation	Degrees of freedom	Calculated (t) value	Significance	Effect size	Significance of effect size
Self-confidence	Experimental	22.17	3.04	22	1.45	G.D	0.09	Weak
	Control	20.33	3.17					
Determination of sensitivity to the drug	Experimental	19.08	2.11	22	1.26	G.D	0.07	Weak
	Control	20.25	2.42					
Motivation to use	Experimental	24.42	2.27	22	0.58	G.D	0.02	Weak
	Control	23.92	1.93					

It is obviously reflected in the previous table that there are slight differences in the (t) values, but all the values came at a lower level of significance, as the tabular (t) value at (11) degrees of freedom amounted to (2.07). The calculated T-values in the three dimensions were less than (2.07). This means that there are no significant differences between the two experimental groups before the application of the cognitive-behavioral therapy program, and that any change in the values of (T), which may occur after the application of the program, can be traced back to the effectiveness of the professional intervention program with cognitive-behavioral therapy, while controlling all other variables.

Scale stability:

The stability of the scale was calculated by test-retest by applying the following steps:

-The scale was applied to (15) individuals, who were randomly selected out of the study sample.

- The first application was done on the dimensions of the scale as a whole, then the second application was repeated after (15) days of the first application on the same sample.

- Then statistical treatments were conducted to identify the stability of the scale and the correlation coefficient (t) and the significance of the correlation (t) were calculated for each dimension of the scale and then they were calculated for the scale as a whole. The following table shows this.

Table (4): The correlation coefficient of the scale dimensions between the first application and the second application

Scale Dimensions	Correlation Coefficient)R(	Significance of Correlation (T)	Level of Significance
First Dimension	0.96	9.7	Significant at 0.01
Second Dimension	0.98	13.87	Significant at 0.01
Third Dimension	0.98	13.87	Significant at 0.01
Total	0.98	13.87	0.01

It is clear from the previous table that the reliability coefficient of the scale as a whole is (0.98), and this indicates that the high reliability of the scale and the calculated (T) value is

(13.87) > the tabular (T) value (3.250) at a significant level (0.01). This indicates a strong and statistically significant correlation indicating the validity of the scale for use.

Theoretical background:

Cognitive-behavioral therapy (CBT):

Objectives of CBT:

The main goal of CBT is directed treatment to correct cognitive distortions by reorganizing a person's "self-talk", then changing their behavior and the nature of reinforcement selected from the environment. In this way, which focuses on the relationship between feelings, thoughts, and behaviors, the addicts will be able to assess their own contributions to their problems, and thus be taught correct alternative behaviors (Rowa, K, Beling & Segal 2005, 208).

Cognitive-behavioral therapy seeks to achieve the following goals:

1. Reducing anxiety, hatred and aggression, as it provides the individual with a way to help him reduce self-blame, others, and circumstances through a logical analysis of his problem.

2. Finding the means that help addicts to overcome the problems they face, change for the better, achieve peace with themselves and others, and achieve the life they desire.

3. Develop customer control skills in different situations.

4. Changing, correcting, modifying and changing the customers' misperceptions. This leads to the disappearance of their misunderstandings.

5. Training addicts on continuous self-observation, activating the role of non-adaptive behavioral self-monitoring, and training them on the steps of problem solving and decision-making.

6. The individual becomes aware of what he is thinking and distinguishes between sound thoughts and distorted thoughts, and replaces various judgments with accurate and correct controls.

7. Recognize unequal automatic thoughts, and dysfunctional tendencies, and help individuals to correct misperceptions and perceptions as well as eradicate inappropriate thoughts. (Rashad Mousa, Madiha El-Desouki: 2014, 361-362).

8. Changing the minds of addicts in the situations they face and leading them to emotional disturbances, and trying to prevent them in order to avoid negative emotional experiences, encourages activities and behaviors that are related to positive emotions and behaviors. (Malcolm, Payne 2014, 175)

9. Teaching them how to change emotional and behavioral disorders to healthy ones.

10. Helping them achieve unconditional self-acceptance and unconditional acceptance of others.

11. It helps clients examine situations in which they understand themselves and their world and try out new ways of behaving and doing (Corey, Gerald: 2013, 271).

Steps of cognitive behavioral therapy for drug addicts:

(Alaa El-Din Farghali: 2008, 192) shows the steps of cognitive-behavioral therapy for drug addicts as follows:

First: Self-directed change, which includes: (Guided Self - Change)

1. Motivational strategies and actions.

2. The person's choice of therapeutic goals.

Second: Relapse Prevention Strategies: It includes five stages commensurate with the five stages of change as follows:

1. Evaluation and commensurate with the stage of pre-reflection.

2. Motivational interview and commensurate with the stage of meditation.

3. The treatment plan of the person concerned and appropriate to the stage of the initiative.

4. Preventive psychological counseling in its early stages and in proportion to the stage of action.

5. Preventive psychological counseling, in proportion to the prevention stage.

Third: Defining and activating adaptive skills:

1. Adaptation strategies in the early stages.

2. Coping with thirst for the drug.

3. Refusal of the drink or the drug.

4. The skill of facing practical problems.

5. Coping with physical problems.

Cognitive-behavioral therapy methods:

Cognitive-behavioral therapy approaches are categorized into three main approaches:

1. Cognitive methods: These include identifying the addict's wrong ideas, studying negative self-talk, analyzing ideas in light of the determinants of rational objective thinking, putting forward new ideas, discussing the damages of old ideas, increasing the addict's self-confidence, developing individual self-responsibility, and strengthening the ability to take action, decision, encourage flexibility, accept difference and live with reality (Abdel Nasser Awad: 2018, 198).

2. Emotional methods: It includes a set of therapeutic methods that the therapist uses with the patient to reduce and calm his negative emotions towards a specific problematic situation, such as the feelings of anxiety, anger, tension, fear, and replace them with more positive feelings in order to get rid of emotional disturbance, and to form a positive vision about the self and thinks in a balanced way (Sharon: 2005, 41).

3. Behavioral methods: They are used by the therapist so that the patient can modify his abnormal behaviors and replace them with normal behaviors or work to reduce or increase some behaviors in order to alleviate the problems that the patient suffers from. They include some of the techniques of positive reinforcement - negative reinforcement, modeling, role playing, self-control, and homework (Bernsten, et al., 2013, 66).

Relapse:

The problem of drug abuse and addiction is a serious phenomenon at all levels. But the most serious problem is the increase in the number of addicts who relapse or who have received treatment, recovered and then returned to using drug after leaving the treatment centers and clinics that provided them with care and support services in order to help them get rid of drugs and enable them to return to their healthy lives normally (Ayman Jibril Al-Hababah 2015, 2).

A relapse is not in itself a disaster, but rather a procedural event that should be taken into account when the addictive patient undergoes treatment programs of any kind. The ultimate goal of treatment programs is to prevent relapse, prolong the period of cessation or reduce the level of doses, learn light use as initial stages in treatment that can be dealt with, and also emphasize the awareness of the patient about the difficulty of his disease and help him to avoid relapse situations as much as possible, through continuous follow-up of the patient outside the hospital (Aisha Fares Abdullah 2015, 64).

In this context, (Mishra & Ressler: 2000) indicates in (Salman Al-Ghadyan: 2013, 3) that relapse is a complex problem, as there are a number of factors that lead to relapse and the return of a person to the practice of deviant behavior. The most important factors are shown in Table (5).

Table (5): Factors leading to relapse

Personal skills	Social/cultural	Familial	Personal Factors
Lack of skills to deal with social pressures	No support systems	Stress in the relationship between a son and his parents	Feeling isolated
The inability to deal with the problem of the relationship with others	Staying away from friends	Parents' divorce	Impulse control pressure

Hide negative feelings	Cutting ties with friends	Use of drugs at home	Great personal pressure
Physical thoughts or symptoms that trigger the desire to use drug	Constantly changing school	Functional dysfunction in the family structure	Inability to control anxiety and anger
Lack of skills to deal with difficult situations	No moral or religious values	Parents suffering from mental disorders	Depression
Desire for self-control after drug use	Interacting often with friends who use drug	Death or loss of a family member	Denial of drug use
Denial of loss of control	Not being able to stop drinking at parties	Detecting sexual or physical abuse that occurred in childhood	Distortion of reality and concealment of feelings
Deficiency in life change skills	Inability to make friends	Constant absence of parents	Desire to seek recovery
Deficiency in the skills of changing the habit of using and making positive friends	Bad economic situation	Living in an environment teeming with distractions	Solitude in search of recovery
Learning disability	Unorganized social environment	The unemployment	Contrasting addictive behaviors
		Internal violence	Feelings of guilt about past abuse
		Neglect in childhood	Excessive self-confidence
			Power challenge

Marlatt's theory of relapse:

Marlatt's model is one of the psychosocial models of relapse as a transitional process consisting of several episodes that lead to each other until they end with the occurrence of relapse. It also depends on two types of determinants, the most important of which are:

a. Direct or close determinants: It consists of several episodes, the first of which is that the recovering person faces one of the reversible situations called (risk situations), and the second episode consists of (the skills of facing reversible situations and how to respond to them). If he has the skills necessary to confront, the skills of feeling self-efficacy rise, and the possibility of relapse decreases, while low self-efficacy enters the recovering addict in the fourth cycle (starting to abuse or setback), and this setback may enter the recovering addict into the last cycle, which is (complete relapse).

B. Remote or implicit determinants: These determinants include an unbalanced lifestyle, meaning that the recovering person lives a life full of duties and requirements without having the equivalent ability to satisfy his personal needs, which represents a high level of hardship. This hardship may express itself in the form of eagerness and urgency to practice abuse. There are positive trends towards drug abuse called (distortions, or cognitive distortions), and these make it easier for the recovering to achieve his desire for self-enjoyment without holding himself responsible, such as justification and denial. These mechanisms push the recovering

addict away from feeling close to relapse. (Abdulaziz al-Gharib 2006, 74-76).

The role of the social worker in working with individuals in addiction treatment centers:

The way people work with drug addicts depends on understanding the addict's personality. This requires the presence of a specialist to work with the individual to know the effect of addictive behaviors on the social relationships of the addict, and his social status in general, and then develop an integrated treatment plan. The specialist practices a method of working with the individual since entering the treatment clinic. There are steps and procedures that the social worker operates, and these steps can be summarized in the following:

1- The social worker assists the addict since entering the sanatorium, starting with the reception and then the full study drawn from the addict himself if his condition, allows him or whoever helped him to come to the sanatorium. This includes a brief, written presentation of the social situation to the members of the treatment team either through the book in the file, or by making the presentation orally during the case conference in which members of the treatment team in the clinic usually participate (physician, psychiatrist, social worker, psychiatrist, addiction counselor, supervising nurse).

2- After the withdrawal symptoms are gone, the social worker mobilizes the social file of the addict and collects information from the addict and his family if the opportunity is available, and the data is supposed to be hopeful and accurate to arrive at an accurate diagnosis of the problem and its causes. It is also possible to use the old file of the addict in repeated cases to verify the information obtained, make a comparison between recent and old data, and try to identify the cause of the relapse.

3- The social worker determines the steps of professional intervention, and the means required for the intervention, while recording all of this in the addict's file, and then proceeds to implement them according to a drawn plan called the treatment plan.

4- The profession of social worker plays the main role in communicating with the families of addicts, in a way that does not contradict the principle of confidentiality, in order to help them solve their problems that may be a cause of addiction or one of its causes, or it may be just a reason to return again to drug abuse (relapse).

5- The social worker narrows the gap that may occur between the addict and some social parties such as the family, the educational facility, and work, and tries to create a natural climate for the addict in order to contribute to solving the problem.

6- The social worker coordinates between the administration of the clinic and other departments with regard to addicts and their social needs, as well as community institutions to benefit from the community's resources and from other social services that are available in the community (Al-Braithen 2002, 170-169).

Table No. (6): Cognitive-behavioral therapy sessions

Session number	Session topic	Objectives	The techniques used
First	Getting to know the study sample members and collecting data before starting the application of the program	Agreeing with the sample members on the date of the sessions, emphasizing the commitment to attend, and establishing a therapeutic relationship between the researcher and the group	Individual interviews, dialogue, discussion
Second	Introducing the concept of a cognitive	The study sample members learned about the	Discussion, dialogue, homework

	behavioral therapy program	effectiveness of the cognitive-behavioral therapy program	
Third	Recognizing the methods used in the cognitive-behavioral program and the techniques of cognitive therapy used with cases	Knowing the methods used (behavioral methods, cognitive ....) and knowing the techniques used with them	Discussion, illustration, modeling, dialogue, homework.
Fourth and fifth	Recognizing the concept of relapse, and helping the addict to know the factors and reasons that can cause relapse into abuse again.	Knowing the concept of relapse and the factors and reasons that lead to it	Dialogue, logical discussion, lecture, homework
Sixth and seventh	Recognizing the effect of emptiness among young people, and bad companions in the occurrence of relapse	Helping the addict occupy his spare time with useful work, forming new positive social friendships, and staying away from friends of drug abuse.	Logical discussion, illustration, modeling, homework
Eighth	Recognize the addict's avoidance of conditional stimuli associated with the drug	Helping the addict to know how to avoid the conditional stimuli that are associated with the drug, and replace them with other stimuli that are not associated with the drug at all: Safe alternatives	Logical discussion, lecture, illustration, homework, modeling
Ninth	Learning the skills of dealing with cravings for drugs	Helping addicts overcome the feeling of craving for drugs and thus protecting them from relapse	Dialogue, feedback, persuasion, homework
Tenth	Recognizing the psychological tricks that addicts are exposed to during the recovery stage and are one of the	Training addicts on how to deal with the psychological tricks they are exposed to	Logical discussion, clarification, persuasion, homework, dialogue, role playing

	factors causing relapse	during the recovery phase	
Eleventh	Knowing the positive aspects of recovery	Modifying the negative outlook through which the addict looks at a positive one	Dialogue, Persuasion, Discussion
Twelfth (concluding)	Final evaluation of the professional intervention program sessions	Applying the dimensional scale to the study sample members to identify the improvement that occurred in the study sample members	Logical discussion, clarification, dialogue
Thirteenth	Conducting the follow-up application of the research sample by applying the criteria for assessing the factors of the addict's relapse, with the aim of identifying the impact of the program after a period of at least one.	Training addicts on how to deal with the psychological tricks they are exposed to during the recovery phase	

The statistical methods used in analyzing the results of this research:

The researcher used:

- the arithmetic mean, standard deviation and the calculated (t) value and compared it with the tabular (t) value to find out the differences between the scores of the experimental and control groups, in order to identify the effectiveness of the professional intervention program using the cognitive-behavioral therapy program in reducing the risk of relapse for recovering addicts.

- Wilkeson coefficient to compare the different measurements of the unrelated samples.

First: The results of the study based on Wilkeson's test, the arithmetic mean, standard deviation and (t) value:

The results for the first hypothesis: There are statistically significant differences between the scores of the two measurements, pre and post, for the experimental group on the relapse scale and its dimensions for the research sample of recovering addicts.

Table (7): The scores of the experimental group and the median in the pre- and post-measurement of the experimental group in the scale and its dimensions

Scale and dimensions	Pre-measurement	Post-measurement

	Respondents' scores	Median	Respondents' scores	Median
Self-confidence	451	45.5	376	38
Determination of sensitivity to cravings	428	42	375	37
Motivation to use drug	400	40.5	351	34.5
The scale	1279	126	1102	110

It is clear from the previous table that the degrees of the study sample (respondents) concerning the first dimension "self-confidence" (pre-measurement) reached (451) degrees, and that the median's degree reached (45.5) degrees. And the degrees of the respondents (post-measurement) in the same dimension reached (376) degrees, and the median degree was (38). This means that the self-confidence dimension of the study sample was modified as a result of the professional intervention in the cognitive-behavioral therapy program. The degrees of the respondents in the second dimension "determining sensitivity to the drug" (pre-measurement) reached (428) degrees, and the median degree reached (42) degrees, while the degrees of the respondents after (the post-measurement) reached (375) degrees, and the median's degree reached (37) degrees. This means that the second dimension was modified in the study cases after the period of professional intervention in the cognitive-behavioral therapy program. Also, the scores of the respondents in the third dimension "motivation to use drug" (pre-measurement) reached (400) degrees, and the median degree reached (40.5) degrees. The degrees of the respondents after (post-measurement) reached (351) degrees, and the median degree was (34.5) degrees. This indicates that the third dimension was modified in the experimental group. The scores of the respondents in the relapse scale and its dimensions reached (1279) degrees, the median (126) degrees, the dimension of professional intervention (1102) degrees, and the median degree (110) degrees. This indicates that the relapse problem of recovering addicts was modified to some extent in the study sample after the first professional intervention period using the cognitive-behavioral therapy program.

Table (8): The significance of the differences between the ranks of the experimental group scores in the pre and post measurements in the relapse scale as a whole

Ranks	Number of Ranks	Mean Rank	Sum of Ranks	Calculated z-value	Level of significance
Negative Ranks	10	5.5	55	2.805	0.005
Positive Ranks	0	0	0		
Ties	0	0	0		
Total	10	5.5	55		

It is clear from the previous table that there are statistically significant differences at the level of significance (0.005) between the ranks of the experimental group scores in the two measurements, the pre and post measurements, in favor of the post-measurement of the relapse scale and its dimensions, and that the calculated Z value was (2.805). The number of negative ranks was (10), while positive ranks and neutral ranks recorded a zero number. Moreover, the average ranks were (5.5), and the sum of ranks were (55). This indicates that there

was a modification to some extent in reducing the risk of relapse among the recovering addicts of the experimental group as a result of the professional intervention in the cognitive-behavioral treatment program, and this explains the validity of the first hypothesis of the study.

The results for the second hypothesis:

There are no statistically significant differences between the scores of the pre and post measurements for the control group on the scale of relapse and its dimensions in the research sample of recovering addicts.

Table (9): The scores of the respondents and the median of the members of the control group in the pre and post measurements in the scale and its dimensions

Scale and its dimensions	Pre-measurement		Post-measurement	
	Respondents' scores	Median	Respondents' scores	Median
Self confidence	451	45.5	449	34.5
Determination of sensitivity to cravings	428	42	430	41
Motivation to use drug	400	40.5	396	39
The scale	1279	126	1275	122

It is clear from the previous table that the respondents' scores in the dimension of self-confidence in the pre-measurement before professional intervention was (451) degrees, and that the median's degree was (45.5) degrees, while their degrees in the post-measurement on the same dimension was (449) degrees, and the median was (34.5). This indicates the lack of modification or change in the members of the control group using the cognitive-behavioral therapy program. The scores of the respondents in the dimension of estimating craving for the drug reached (428) degrees, and the median degree was (42) degrees, while in the dimensional measurement of the same dimension, it reached (430) degrees, and the median degree was (41) degrees. This indicates that there is no modification or change in this dimension, among the members of this group using the cognitive-behavioral therapy program. Also, the group's degrees in the dimension of motivation to use drug, in the pre- measurement reached (400) degrees, and the median was (40.5) degrees, while their degrees in the post-measurement reached (396) degrees, and the median was (39) degrees. This indicates the lack of modification and change in this dimension. Likewise, the respondents' scores in the regression scale in the pre-measurement reached (1279) degrees, the median (126) degrees, and in the post-measurement they reached (1275) degrees, the median was (122) degrees. This clearly indicates that there was no modification or change in the degrees of the respondents and the mediator of the members of the control group in the pre and post measurements, in the scale and its dimensions. Thus, the validity of the second hypothesis of the study is confirmed.

Table (10): The significance of the differences between the scores of the control group in the pre and post measurements in the relapse scale for recovering addicts

Ranks	Number of ranks	Mean	Sum of Ranks	Calculated Z-Value	Level of significance

Negative Ranks	5	2.5	55	1.805	0.005
Positive Ranks	5	3	0		
Ties	0	0	0		
Total	10	5.5	55		

It is clear from the previous table that there are statistically significant differences at the level of significance (0.005) between the scores of the control groups in the pre and post measurements of the members of the control group on the relapse scale. Also, the calculated Z value was (1.805), and the number of negative ranks was (5), positive ranks (5), neutral ranks was zero, the average ranks were (5.5), and the total ranks were (55). This indicates the lack of modification among the members of the control group with regard to the dimensions of the scale, whether self-confidence or determination of craving for the drug, or motivation to use, compared to the members of the experimental group. This confirms the validity of the second hypothesis of the study.

There are statistically significant differences between the pre and post measurement scores of the experimental and control groups, on the relapse scale and its dimensions for the research sample of recovering addicts. In order to verify the validity of this hypothesis, the relapse scale and its dimensions were applied to the members of the experimental and control groups, after applying the cognitive-behavioral treatment program to the experimental group. The scale was corrected. Moreover, the arithmetic mean and standard deviation were calculated, and the value of (T) for the total score of the scale was calculated between the application results for the two groups. The following table shows the results.

The results for the third hypothesis:

Table (11): The arithmetic mean, standard deviation, and the (t) value of the total score concerning the results of the experimental and control groups after applying the cognitive-behavioral therapy program

Group	Mean	Standard deviation	Degrees of freedom	Calculated t-value	Significance	Effect size	Significance of effect size
Experimental	79.17	4.84	22	6.91	0.0001	0.68	Very big
Control	76.00	3.72					

It is clear from the previous table that the calculated (t) value was (6.91), in favor of the experimental group, which is greater than the tabular (t) value as it reached (2.07). By comparing the value of (t) between the two groups in the pre-application, we find that the value of (t) was (0.73), which is not significant. This is due to the practice of the cognitive-behavioral therapy program (the experimental variable) with the recovering members of the experimental group. That is, the rates of relapse from addiction and the factors associated with it have been mitigated to some extent and the rate of recovery from addiction increased for members of the experimental group but not the control group.

Thus, this indicates the effectiveness of the professional intervention program using cognitive-behavioral therapy in mitigating the risk of relapse for recovering addicts (the research sample is from the members of the

experimental group) without the control group. This confirms the validity of the main hypothesis of the study. The arithmetic mean and standard deviation were also calculated and the value of (t) was calculated between the results of the application for the two groups for the first dimension (self-confidence). The following table shows the results.

Table (12): Arithmetic mean, standard deviation, and (t) value of the first dimension (self-confidence) concerning the results of the experimental and control groups after applying the cognitive-behavioral therapy program

Group	Mean	Standard deviation	Degrees of freedom	Calculated t-value	Significance	Effect size	Effect size significance
Experimental	26.83	3.10	22	3.92	0.001	0.41	Very big
Control	21.83	3.16					

It is clear from the previous table that the calculated (t) value is (3.92), in favor of the experimental group, which is greater than the tabular (t) value (2.07). And by comparing the value of (t) between the two groups in the pre-application, we find that the value of (t) is (1.45), which is not significant. This is due to the practice of the cognitive-behavioral therapy program (the experimental variable) with the recovered addicts members of the experimental group. That is, the self-confidence has improved and increased for the members of the experimental group but not the control group. In the professional intervention program, a set of treatment methods were applied and some activities were practiced. They are methods that enhance the values of self-confidence and self-development among addicts. This indicates the validity of the third sub-hypothesis and confirms the effectiveness of the cognitive-behavioral therapy program in improving the self-confidence of the members of the experimental group but not the control group. The arithmetic mean, standard deviation and (t) value were calculated between the results of the application for the two groups for the second dimension (determination of drug craving). The following table shows the results.

Table (13): Arithmetic mean, standard deviation, and t-value for the second dimension (determination of drug craving) concerning the results of the experimental and control groups after applying the cognitive-behavioral therapy program

Group	Mean	Standard deviation	Degrees of freedom	Calculated t-value	Significance	Effect size	Effect size significance
Experimental	27.08	3.23	22	5.06	0.001	0.54	Very big
Control	21.08	2.54					

It is clear from the previous table that the calculated (t) value was (5.06) in favor of the experimental group. It is greater than the tabular (t) value (2.07). And by comparing the value of (t) between the two groups in the pre-application, we find that the value of (t) was (1.26), which is not significant. This is due to the practice of the cognitive-behavioral therapy program (the experimental variable) with the recovered addicts members of the experimental group. That is, the craving for the drug was reduced for members of the experimental group without the control group. The arithmetic mean, standard deviation and (t) value were calculated between the application results for the two groups for the second dimension (determination

of drug craving). The following table shows the results.

Table (14): Arithmetic mean, standard deviation, and t-value for the third dimension (motivation to use drug) concerning the results of the experimental and control groups after applying the cognitive-behavioral therapy program

Group	Mean	Standard deviation	Degrees of freedom	Calculated t-value	Significance	Effect size	Effect size significance
Experimental	27.25	3.22	22	3.61	0.001	0.11	Very big
Control	21.08	1.16					

It is clear from the previous table that the calculated (t) value is (3.61), in favor of the experimental group and is considered to be greater than the tabular (t) value (2.07). By comparing the value of (t) between the two groups in the pre-application, we find that the value of (t) was (0.85), which is not significant. This is due to the practice of the cognitive-behavioral treatment program (the experimental variable) by the recovering addicts members of the experimental group, which indicates the lack of motivation to use drug among the members of the experimental group compared to the control group, which confirms the validity of the third hypothesis.

The results for the fourth hypothesis: There are no statistically significant differences between the ranks of the post and follow-up measurement degrees for the experimental group on the scale of relapse and its dimensions in the research sample of recovering addicts.

Table (15): The significance value of the difference between the average ranks of the post and follow-up measurements on the relapse scale for recovering addicts

Scale	Type of measurement	Number	Mean	Standard deviation	Number and distribution of ranks		Rank mean	Total ranks	Z Value	Significance level
Relapse scale	Pre-	5	64.71	2.563	Negative ranks	5	6.5	3	0.17-	Insignificant
	Follow-up	5	64.57	4.503	Positive ranks	5	3	15		

It is clear from the previous table that there are no statistically significant differences between the mean scores of the two measurements; post-measurement and follow-up measurement, for the experimental group on the scale of relapse and its dimensions, (which confirms the fulfillment of the fourth hypothesis).

Results discussion:

1. The results confirmed the validity of the first hypothesis of the research, which indicates that there are statistically significant differences between the ranks of the pre and post measurements of the experimental group on the scales for evaluating the factors and dimensions of the addict's relapse among the research sample of recovering addicts as a result of professional intervention in the cognitive-behavioral treatment program with members of the experimental group, in its three dimensions that were applied with the study sample, which

are (self-confidence, sensitivity to drug craving, motivation to use). Several remedial methods were applied during the professional intervention program, including (dialogue, logical discussion, modeling, homework, clarification). This contributed to improving the level of recovery from addiction among the members of the experimental group. This result is consistent with the study of (Hossam Hussein Abdo: 2020), (Ahmed Mumtaz Abdullah Mahmoud: 2018), the study of (Abdul-Malik Sheehan: 2018), the study of (Ratab Wassila: 2018), the study of (Mahmoud al-Muntasir Abd al-Sami': 2016), and (Abdullah Al-Juhi: 2008), which confirmed the effectiveness of the cognitive-behavioral therapy program in reducing the risk of relapse for addicts.

2. The results also indicated the validity of the second hypothesis of the research, which indicates that there are no statistically significant differences between the scores of the pre and post measurements of the control group on the scales for evaluating the factors of the addict's relapse and its dimensions in the research sample of recovering addicts, due to the lack of exposure of the members of the control group to the cognitive-behavioral therapy program compared to the experimental group.

3. The results of the research also confirmed the validity of the third hypothesis, which states that there are statistically significant differences between the levels of the pre and post measurements of the experimental and control groups on the scales for evaluating the factors and dimensions of the addict's relapse among the research sample of recovering addicts, due to the exposure of the members of the experimental group to the cognitive-behavioral treatment program. The control group was not exposed to the same treatment program. This is in agreement with the studies of (Ahmed Mumtaz Abdullah Mahmoud: 2018), (Ratab Wassila: 2018), (Mahmoud Al-Muntasir Ratib Abdul-Sami: 2016), which confirmed the effectiveness of the cognitive-behavioral program in alleviating the symptoms of relapse for drug addicts in the experimental group.

4. The results also indicated the validity of the fourth hypothesis, which indicates that there are no statistically significant differences between the ranks of the post and follow-up measurement degrees for the experimental group on the scales for evaluating the factors and dimensions of the addict's relapse among the research sample of recovering addicts, given that the members of the experimental group were affected by the intervention program; the professional cognitive-behavioral therapy, which contributed to their maintaining the level of the result they reached in terms of recovery from addiction and not relapse after a period of time after the end of the treatment program. This is consistent with the study of (John, Major.,: 2004), which emphasized the improvement of self-efficacy during their stay in the hospital after undergoing a treatment program, and then the patients were followed up for (6) months after discharge from the hospital. It also agrees with the study of (Ahmed Mumtaz Abda Allah Mahmoud: 2018), which confirmed the effectiveness of the prepared counseling program in reducing the possibility of psychological relapse among tramadol addicts in Gaza governorates after five months of implementing the counseling program.

Recommendations:

- Focusing on educating the families of the recovering on how to deal with the recovered after they leave the addiction treatment center, through educational sessions with social workers and psychologists, to reduce the risks of relapse.

- The necessity of the presence and training of social and psychological specialists to follow up on this category of addicts after their release from the addiction treatment center to help them and provide them with social and psychological support to mitigate the risks of relapse.

- Carrying out intensive and continuous awareness campaigns in various public and private media about the harm of drugs to individuals.

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