

# The Effectiveness of Rational Emotive Therapy on Stress and Irrational Thoughts among Drug Addicts

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**Abstract:** "Drug addiction is a complex neurobiological disease that requires integrated treatment of the mind, body, and spirit". The aim of the study was to evaluate the effect of rational emotive therapy on stress and irrational thoughts among drug addicts. A Quasi-experimental design (one group pre- test post- test design) was used to achieve the aim of the study. The study was conducted at addiction inpatients ward at The Psychiatric and Addiction Treatment Hospital in Mit-Khalf at Menoufia, Egypt. A purposive sample of forty addict patients who admitted to the above mentioned setting during six months duration. Three instruments were used ;(1) A structured interview questionnaire to assess socio-demographic characteristics and clinical data,(2) The irrational ideas questionnaire(3)The perceived stress questionnaire. The findings of the study revealed that, there was a highly statistical significant reduction in both stress factors (frustration and tenseness) and total stress post the rational emotive therapy at  $p = 0.001$ . Also there was a highly statistical significant reduction in irrational beliefs post the rational emotive therapy at  $p = 0.001$ .It was concluded that, the rational emotive therapy proved to be effective on decreasing stress and irrational thoughts among drug addicts. Recommendation, rational emotive therapy should be provided to all drug addicts to reduce stress and overcome their irrational thoughts.

**Keywords:** Rational Emotive Therapy, Stress, Irrational Thoughts.

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## 1. INTRODUCTION

"Drug addiction is a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences" [1].Persons with this complaint regularly have recurrent social and/or interpersonal problems, lose interest in education, work, engage in high-risk behaviors. There is a disturbance of neuronal pathways in brain areas that regulate incentive and mood, experience of pleasure and well-being, memory ,learning, and the ability to suppress unwanted impulses [2]. Furthermore, there is a strong association between drug use and having a history of violence, sexual abuse, and other stressful and traumatic events [3] .Five million deaths and about 42 million new cases of HIV every year are due to drug abuse[4] "Many countries are seeing a change in drug use patterns; away from more traditional plant-based substances towards synthetic compounds, prescription medicines, or other plant-based substances. While globally opioids continue to represent the major threat to public health, this is now being more closely followed by amphetamine-type stimulants" [5].

Addiction is cyclical because individuals who suffer from this disorder move through times of abstinence to a coming back to drug use, and confusing therapeutic efforts. They passed into three phases, one of them characterized by the preoccupation with consumption, with constant obsessing and craving, then the phase of bingeing and intoxication that leads to a period of withdrawal and negative affect . The final stage called "dark side of addiction" and characterized by negative emotional states and stress, ultimately go back to the preoccupation and craving stage, and the cycle begins again[6]. Stress therefore have a very important role in all stages but mostly in the negative affect phase [7]

"Chronic stress decreases gray matter volume in the brain region that is associated with cognitive control and stress regulation". Stress is a main risk factor in addiction initiation, maintenance, relapse, and thus treatment failure. Stressful situations in addition to ineffective coping skills increase the risk of addiction through increasing impulsive responding and self-medication. While it may be difficult to eradicate stress, management of stress is significant. Inability to delay gratification and impulsivity are associated with high level of stress (e.g. smoking, overeating, alcohol and prescription drug abuse) as a way of coping with daily stress [8].

Treatment approaches based on the concept that drug dependence is multifactorial interaction between repeated exposure to drugs and biological and environmental factors [9]. Drug use disorders can be successfully treated using pharmacological and psychosocial interventions. The management aimed at reducing drug use and cravings for drug use, improve health, well-being and social functioning of the affected individual, and prevent future problems by decreasing the risk of relapse [2]. Cognitive behavioral therapy is one of the psychotherapy that used to help individuals learn to identify and correct problematic behaviors by applying a range of different skills that can be used to stop drug abuse and to address a range of other problems that often co-occur with it [10]. "Addiction is often the result of dysfunctional thoughts and behaviors. Rational emotive behavior therapy (REBT) teaches clients how to change their thinking in a way that promotes healthy behaviors and beliefs [11]. Ellis noted that "irrational beliefs may include catastrophizing a situation, judging oneself as worthless, or taking simple desires or preferences and turning them into demands and postulated that if people experience negative behavioral and emotional consequences, more positive consequences will emerge once irrational beliefs are disputed and replaced by new effective beliefs" [12].

### Significance of the study

Drug abuse is a dangerous phenomenon in all countries. According to the World Drug Report [13], 29.5 million globally suffer from drug use disorders. In Egypt, the last national survey in Egypt, "which included 106,480 subjects representing approximately 0.2% of the Egyptian population above the age of 15; revealed that about 19.3% were experimental users, 6.7% were regular users, while 6.4% were fulfilling the criteria of dependence" [14]. Bassiony et al., [15] revealed that 43% of substance-using students had drug-related problems and 16% had drug dependence. Stress is a key risk factor in addiction initiation, maintenance, relapse, and thus treatment failure [16]. "Preclinical models of addiction have demonstrated that exposure to stress can enhance the rewarding effects of drugs and the acquisition of drug-seeking behaviors. In this perspective, stress facilitates the formation of associations between contextual information and drugs" [17]. So the aim of the study was to evaluate the effect of rational emotive therapy on stress and irrational thoughts among drug addicts

## 2. METHODS

### 2.1. The aim of the study:

Evaluate the effect of rational emotive therapy on stress and irrational thoughts among drug addicts.

**2.2. Research Hypotheses:** Drug addicts patients who participate in the rational emotive therapy are more likely to have lower score on stress and irrational thoughts post therapy than before

**2.3. Design:** Quasi-experimental design (one group pre- test post- test design) was used to achieve the aim of the study

**2.4. Setting:** The study was conducted at addiction inpatients ward at The Psychiatric and Addiction Treatment Hospital in Mit-Khalf at Menoufia, Egypt.

**2.5. Subjects:** The studied subjects represented a purposive sample of addict patients who admitted to addiction inpatients ward at The Psychiatric and Addiction Treatment Hospital in Mit-Khalf at Menoufia, Egypt during six months duration. The total number of the subjects 40 patients. The sample was selected according to the following criteria:

**The Inclusion Criteria:** Patient with addiction aged 18 or older, agree to participate in the study and Patient who have stress and irrational thoughts.

**The Exclusion Criteria:** Patient who have other psychiatric illnesses, Patient who have diagnosed with brain dysfunction or cognitive impairment, chronic physical illness and Patients in the withdrawal period (from one to two weeks).

**2.6. The instruments:** Three instruments were used to achieve the aim of the study:

**Instrument (1) :** Interviewing questionnaire; it was developed by the researchers based on the review of the relevant literature. It comprised socio-demographic characteristics such as age, sex, occupation, marital status, level of education, residence and family history of addictions, history of previous hospitalization, and addiction data as type, method, causes of addiction, and duration of addiction.

**Instrument (2):** The irrational ideas questionnaire; it was adopted by Al-Rayhani [18] it was Arabic valid and reliable scale to measure the irrational ideas . It was consisted of 52 statements. The responses were yes or no , one point was given for each question answered by yes, The total score were summed and the possible score ranged from (0-52) and the higher scores indicate high level of the irrational ideas (  $\geq 60\%$  of total score considered have irrational ideas) .

**Instrument (3):** The 'perceived stress questionnaire' (PSQ). It was developed by Levenstein [19]. This tool reassessed for psychometric characteristics and factor structure by [20]. It was adopted and translated into Arabic and tested for content validity and reliability by the researchers. It was consisted of 30 items; 22 positive items and eight negative items (1,7,10,13,17,21,25,29). A four-point Likert-type scale, ranging from 1 ('almost never') to 4 ('almost always'). It was divided into two factors; frustration and tenseness. Frustration items (5,7,9,10,12,13,17,20,21,23,24,25) .Tenseness items (2,4,8,11,14,16,18,26,27,28,29,30), Items that did not satisfy discriminative capacity were rejected (1,3,6,15,19,22). The total score was assumed by summing the two factors and range from (24-96) and the higher scores indicate more severe perceived stress.

## 2.7. Procedure of Data Collection:

**Administrative approval:** An official permission to conduct the study was obtained from the directors of The Psychiatric and Addiction Treatment Hospital in Mit-Khalf at Menoufia, Egypt and the committee for research ethics of The General Secretariat of Mental Health Hospitals.

**Ethical consideration:** The informed written consent from the patients were obtained after complete description of the aim, nature and confidentiality of the study.

**The validity of the tools:** The instruments were tested for content validity by jury of five experts in the field of Psychiatric and Mental Health Nursing to ascertain relevance and completeness.

**Reliability of the tools:** The internal consistency of the instrument two was calculated by [21] using Cronbach's alpha with high test re-test reliability and seemed to be strongly reliable at 0.84 . Reliability was applied by the researcher for testing the internal consistency of the instrument three by administration of the same tool to the same subjects under similar conditions on one or more occasions. Answers from repeated testing were compared test-re-test reliability and proved to be reliable at 0.79

**A pilot study:** Pilot study was conducted to test the practicality and applicability of the instruments and to estimate the time needed to fill the instruments. A total of 10% of the sample were recruited for the pilot study. All subjects included in the pilot study met the inclusion criteria. The pilot study revealed minimal modifications in the instrument one only and subjects in the pilot study were excluded from the main study subjects.

**Collection of the data:** Collection of study subject and application of the program began from the beginning of April to the end of September (2019). The researcher met the subjects in the ward. The researcher introduced herself and explained to the subjects the aim of the study and their consent to participate was obtained. Then the researcher interviewed each patient individually to collect the a baseline assessment using the study instruments to assess socio-demographic characteristics , clinical data, irrational ideas and perceived stress(pre-test). An interview was carried out by the researchers for all inpatient group for orienting them about benefits of therapy, the group rules , and schedule for meeting two times each week for one month and half (this is minimum period for discharge) from 10 Am to 12 Pm. After discharge the meeting once per week was in the day- care .Then collecting the post –test after completing three months using the study instruments two and three . The sessions in the day- care were carried out at the meeting room in The Psychiatric and Addiction Treatment Hospital in Mit-Khalf at Menoufia, Egypt.

**The rational emotive therapy :**After reviewing related literature using books, articles, periodicals, magazines and studies related to rational emotive therapy. The researchers adapted the rational emotive therapy from [22].

The rational emotive therapy passed by four stages:

**Initiation stage:** This stage aimed to establishing an appropriate relationship between the researchers and the patients ;the researchers introduced herself to them, provides information about the aim of study and group rules as(confidentiality, commitment to attendance, putting feelings into words not actions, active participation). The written consent for participation in the study was taken and then they were interviewed to complete the socio- demographic data and given pre- test questionnaires.

**Transition stage :** This stage aimed to clarifying the relationship between stress and addiction; through giving two sessions that included introduction about stress , factors influencing stress response, predisposing factors of stress, symptoms and general responses to stress, the relationship between stress and addiction, adaptive coping strategies (awareness,progressive muscles relaxation, meditation)

**Working stage:** this stage aimed to, training the patients to apply ABC framework through giving eight sessions; that outlines the relationship between activating event, beliefs and consequences , practice dysfunctional thought record , cognitive rehearsal and change emotions through meditation ,how to defense shame and low self-esteem, re-evaluation of the problem through seeing the good things from the bad things that related to addiction , record to monitor the feelings of pleasure and pain resulting from addiction and the advantages of abstinence from addiction ,then learn how to counter attack irrational thoughts and cognitive distortions as should and ought, catastrophization, selective abstracting and apply the role modeling ,attention distraction and humor to establish desired adaptive behavior.

**Terminating stage:** this stage aimed to evaluate the effect of the rational emotive therapy and distributing the post-test instruments two and three.

#### Statistical Analysis:

Data were collected, tabulated, statistically analyzed using an IBM personal computer with Statistical Package of Social Science (SPSS) version 22 . Data were presented using descriptive statistics in the form of mean, standard deviation (SD), range, and qualitative data were presented in the form numbers and percentages. Chi-square test ( $\chi^2$ ), Fischer exact test , Student t-test, Paired t-test, Wilcoxon signed rank test (nonparametric test) and Spearman's correlation (r) were used tests of significance. P value of  $>0.05$  was considered statistically non-significant value of  $<0.05$  was considered statistically significant value of  $<0.001$  was considered statistically highly significant.

### 3. RESULTS

**Table (1):** Revealed that the studied patients were at the age group between (20-43) years, 40 % had secondary education, about half of them (47.5%) were single, 80 % were worked, 67.5% were from urban residence, 72.5% had enough income, 65% had negative family history of addiction and 45% were hospitalized previously once to three times .

**Table (2):** Illustrated that more than half (52.5%) of the studied addicts used multiple types of substance, 50 % mentioned that the primary cause of addiction was peer pressure,50 % took the substance through IV and the duration of addiction among them was ranged from one to thirteen years.

**Table (3):** Showed that there was a highly statistical significant reduction in both stress factors (frustration and tenseness) and total stress score post the rational emotive therapy at  $p = 0.001$ .Also there was a highly statistical significant reduction in irrational beliefs post the rational emotive therapy at  $p = 0.001$

**Figure (1):** Illustrated that the mean score of irrational beliefs was decreased from 32.3 before the rational emotive therapy to 17.6 after the rational emotive therapy and total score of stress was decreased from 80.8 before the rational emotive therapy to 51.1 after the rational emotive therapy

**Table (4):** Reflected that there was a positive correlation between irrational beliefs and tenseness, frustration and total stress before the rational emotive therapy at (  $p = 0.026, 0.008$  ) respectively. This means that when the patients have irrational beliefs, the score of tenseness , frustration and total stress are increased.

**Table (5):** Revealed that 36.4% of participants who had moderate stress level were primary educated while 44.8% of participant who had low level of stress had secondary level of education, and there was a significant relation between increased educational level and low stress level (P value 0.036). Also 72.7% of participants who had moderate stress level had positive family history of addiction and 79.3% of participants who had low level had negative history. and there was high significant relation between positive family history of addiction and increased stress levels at **P value 0.007**.

**Table (6):** Revealed that there was no statistically significant relation between irrational beliefs and addiction data of the studied group but there was statistically significant relation between stress and types of addictive substance and the method of addiction

**Table (1): Socio-demographic characters of the studied addicts patients (N =40):**

Socio demographic characters		Study group (N=40)	
		No.	%
<b>Age / years</b>	Mean ± SD Range	32.0±6.58 20 - 43	
<b>Educational level</b>	Illiterate	6	15.0
	Primary	6	15.0
	Preparatory	6	15.0
	Secondary	16	40.0
	High	6	15.0
<b>Marital state</b>	Married	15	37.5
	Single	19	47.5
	Divorced	6	15.0
<b>Occupation</b>	Work	32	80.0
	Not work	8	20.0
<b>Residence</b>	Urban	27	67.5
	Rural	13	32.5
<b>Income</b>	Enough	29	72.5
	Not enough	11	27.5
<b>Family history of addiction</b>	Positive	14	35.0
	Negative	26	65.0
<b>History of previous hospitalization</b>	No	11	27.5
	1 – 3 times	18	45.0
	4 – 8 times	11	27.5

**Table (2): Addiction data among the studied addicts patients (N = 40):**

Studied variables	Study group (N=40)		Studied variables	Study group (N=40)	
	No.	%		No.	%
<b>Type of addictive substance</b>	▪ Keftagon	1	2.50	<b>Method of addiction</b>	14      35.0 6      15.0 20     50.0
	▪ Alcholol	2	5.00		
	▪ Heroin	8	20.0		
	▪ Tramadol	6	15.0		
	▪ Multiple	21	52.5		
	▪ Others	2	5.00		
<b>Cause of addiction</b>	▪ Peer pressure	20	50.0	<b>Duration of addiction in years</b>	<b>5.50 ± 3.16</b> <b>1 - 13</b>
	▪ Much money	3	7.50		
	▪ Shyness	2	5.00		
	▪ Increase sexual ability	2	5.00		
	▪ Family problem	4	10.0		
	▪ Physical ability	9	22.5		

Table(3):Frustration, tenseness , total stress and irrational beliefs pre and post the rational emotive therapy(N =40):

Studied variables	Study group		Paired t- test	P value
	Pre intervention	Post intervention		
<b>Frustration</b> Mean ±SD Range	42.9±4.92 28 - 54	8±6.3992 20 - 45	14.8	<b>0.001**</b>
<b>Tenseness</b> Mean ±SD Range	37.6±4.28 26 - 43	21.2±5.53 12 - 34	17.6	<b>0.001**</b>
<b>Total stress</b> Mean ±SD Range	80.8±7.28 56 - 90	51.1±8.91 34 - 67	22.0	<b>0.001**</b>
<b>Irrational beliefs</b> Mean ±SD Range	32.3±5.71 21 - 49	17.6±9.98 5 - 32	<b>Wilcoxon test=</b> 5.21	<b>0.001**</b>

\*\*High significant

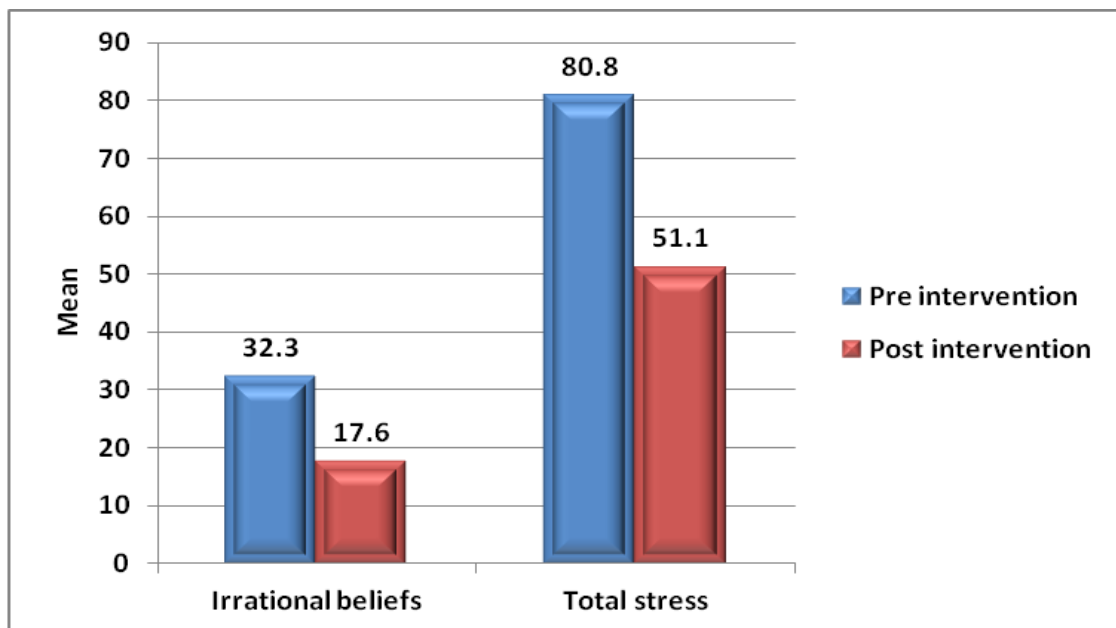


Figure (1): The mean score of irrational beliefs and total stress among the studied subject pre and post the rational emotive therapy

Table (4): Correlation between irrational beliefs and frustration, tenseness and total stress before the rational emotive therapy (N =40):

Item	Frustration		Tenseness		Total stress	
	r	P value	r	P value	r	P value
<b>Irrational beliefs before the intervention</b>	0.277	0.084	0.352	<b>0.026*</b>	0.411	<b>0.008**</b>

\*Significant \*\*High significant

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Table (5): Relation between irrational beliefs, stress and socio- demographic characters of the studied addicts patients (N =40):

Characteristics	Irrational beliefs				Test of sig.& P1 value	Levels of stress				Test of sig.& P2 value
	Present (N=12)		Absent (N= 28)			Low (N=29)		Moderate (N= 11)		
	n	%	n	%		n	%	n	%	
<b>Age / years</b> Mean ±SD Range	31.3±7.91 21 - 43		32.3±6.07 20 - 42		t-test= 0.430 0.670	32.7±6.43 20 - 43		30.0±6.85 22 - 41		t-test= 1.20 0.236
<b>Educational level</b> Illiterate Primary Preparatory Secondary High	1 2 2 6 1	8.30 16.7 16.7 50.0 8.30	5 4 4 10 5	17.9 14.3 14.3 35.7 17.9	X <sup>2</sup> 1.50 0.825	5 2 3 13 6	17.2 6.90 10.3 44.8 20.7	1 4 3 3 0	9.10 36.4 27.3 27.3 0.00	X <sup>2</sup> 9.38 <b>0.036*</b>
<b>Residence</b> Urban Rural	8 4	66.7 33.3	19 9	67.9 32.1	FE= 0.005 1.00	20 9	69.0 31.0	7 4	63.6 36.4	FE= 0.103 0.748
<b>Marital state</b> Married Single Divorced	4 5 3	33.3 41.7 25.0	11 14 3	39.3 50.0 10.7	X <sup>2</sup> 1.34	10 14 5	34.5 48.3 17.2	5 5 1	45.5 45.5 9.10	X <sup>2</sup> 0.623 0.733
<b>Occupation</b> Work Not work	8 4	66.7 33.3	24 4	85.7 14.3	FE= 1.90 0.510	24 5	82.8 17.2	8 3	72.7 27.3	FE= 0.502 0.660
<b>Income</b> Enough Not enough	8 4	66.7 33.3	21 7	75.0 25.0	FE= 0.293 0.704	22 7	75.9 24.1	7 4	63.6 36.4	FE= 0.598 0.439
<b>Family history of addiction</b> Positive Negative	4 8	33.3 66.7	10 18	35.7 64.3	FE= 0.021 1.00	6 23	20.7 79.3	8 3	72.7 27.3	FE= 9.49 <b>0.007**</b>
<b>History of previous hospitalization</b> No 1 – 3 times 4 – 8 times	2 7 3	16.7 58.3 25.0	9 11 8	32.1 39.3 28.6	X <sup>2</sup> 1.44 0.485	7 12 10	24.1 41.4 34.5	4 6 1	36.4 54.5 9.10	X <sup>2</sup> 2.61 0.271

\*Significant \*\*High significant

Table (6): Relation between irrational beliefs, stress and addiction data of the studied addicts patients (N = 40):

Addiction data	Irrational beliefs				Test of sig& P1 Value	Total stress				Test of sig& P2 value
	Present (N=12)		Absent (N= 28)			Low (N=29)		Moderate (N= 11)		
	No.	%	No.	%		No.	%	No.	%	
<b>Type of addictive substance</b>										
Kebtagon	0	0.00	1	3.60	X2= 1.93 00.858	1	3.40	0	0.00	X2= 16.2 <b>0.006**</b>
Alcoholol	1	8.30	1	3.60		0	0.00	2	18.2	
Heroin	3	25.0	5	17.9		8	27.6	0	0.00	
Tramadol	1	8.30	5	17.9		3	10.3	3	27.3	
Multiple	6	50.0	15	53.6		17	58.6	4	36.4	
Others	1	8.30	1	3.60		0	0.00	2	18.2	
<b>Cause of addiction</b>										
Peer pressure	5	41.7	15	53.6	X2= 2.43 0.786	16	55.2	4	36.4	X2= 6.95 0.224
Much money	1	8.30	2	7.10		2	6.90	1	9.10	
Shyness	1	8.30	1	3.60		2	6.90	0	0.00	
Increase sexual ability	0	0.00	2	7.10		1	3.40	1	9.10	
Family problem	1	8.30	3	10.7		4	13.8	0	0.00	
Physical ability	4	33.3	5	17.9		4	13.8	5	45.5	
<b>Method of addiction</b>										
Oral	3	25.0	11	39.3	X2= 0.760 0.684	6	20.7	8	72.7	X2= 0.59 <b>0.008**</b>
Inhalant	2	16.7	4	14.3		5	17.2	1	9.10	
IV	7	58.3	13	46.4		18	62.1	2	18.2	
<b>Duration of addiction</b>										
Mean ±SD	4.41±2.39		5.96±3.37		U= 1.18	5.93±3.44		4.36±1.96		U= 1.21
Range	1 - 8		1 - 13		0.237	1 - 13		1 - 8		0.262

\*Significant \*\*High significant

#### 4. DISCUSSION

Drug addiction has spread at an extraordinary rate and reached each part of the globe, creating overwhelming problems. Addiction has a long term influence on the user, the family, and the community [23]. So it is essential to implement intervention to confront or prevent this problem. Therefore the current study was designed to evaluate the effect of rational emotive therapy on stress and irrational thoughts among drug addicts.

The finding of the current research reflected that the studied patients were in the age group (20-43) years. This may be related to characteristic problems of young adulthood and the significant peer influence and pressure. This result was consistent with Hamdi et al., [14] who studied "Socio-demographic indicators for substance use and abuse in Egypt", "they found that substance abuse was more common in the age group (26-35)". However, "Center for Behavioral Health Statistics and Quality [24] revealed that more than one quarter (26.9 %) of admissions aged 18 to 30 years that initiated substance use between the ages of 18 and 24 reported primary substance abuse".

The results of the current research revealed that about half of the studied subjects were single (47.5%) and had secondary education (40%). This may be due to individuals with the secondary level of education are usually work technicians, or commercial jobs with the relatively high income which is directed to the use of substance instead of other useful activities. This finding was in congruent with Stanton and Shadish [25] who study "Outcome, attrition, and family-couples treatment for drug abuse". He found that substance use was (25.7%) among those who are divorced or separated. However Hamdi et al., [14] "reported that the less educated people were more common users of substance(s) and the highest prevalence among those married twice (30.9%), which points to a probable relationship between an unstable marriage and the substance use and abuse either as a cause or an effect". This finding was consistent with Johnston, et al



[26].”They found that the less educated people were more common users of substance: 34.2% of those graduated from primary school, 25.1% of illiterate persons, and 23.2% of those graduated from preparatory school”. Moreover, Karajibani, et al [27] who studied “the effectiveness of educational program on nutritional behavior in addicts and they found that most addicts patients had a medium level of education”.

The finding of the current research found that more than two thirds of the studied subjects (67.5%) were from urban residence. It may be explained by the fact that the urban regions are accessible for drug cultivation and drug deals, due to issues related to security and surveillance. On the other hand in rural areas, the stronger family bonds and social relations, and fear of stigma make people to keep themselves away from addiction in addition to alcohol and drugs are forbidden as unacceptable behavior and is not encouraged by families and the society by cultures, beliefs, religion and law. This result was consistent with McInnis and Young [28] who study “urban and rural student substance use and they found that nearly one quarter of people with substance abuse were from rural origins (29.3%)” .Also Hamdi et al., [14], “reported that most substance users were coming from urban areas”.

Regarding family history of addiction, the current study found that about one third(35%) of the addict patients had positive family history of addiction and two thirds had negative family history of addiction. This may be due to the effect of peer pressure , social media and environmental factors more than the family effect. This result was congruent with Taheri et al [29] who studied “factors affecting tendency for drug abuse in people attending addiction treatment centers" they showed that (28.5%)of the sample had a drug user in the family”.

The present study revealed that more than half (52.5%) of the studied addict patients use multiple types of substance. This is may be due to the addict patients try more than one drug mainly to intensify the effects of a certain drug or achieve a stronger high. This result in the same line with Bassiony et al., [30] who studied "Psychiatric comorbidity among Egyptian patients with opioid use disorders attributed to tramadol" and “they found 59% of the sample used multiple substances”.

Concerning to the causes of addiction, the current study indicated that half (50 % ) of the studied patients addict mainly because of peer pressure. This is may be due to teenagers turn to drugs because they are just curious and want to experiment these substances with their peers who give him the feeling that he becomes mature enough. This result was consistent with Singh and Gupta, [9] who studied "Drug addiction: current trends and management" who indicated that “outcome expectancies in teens about drug’s effects was strongly influenced by the beliefs of their peers”. Beside Qureshi and Al-Habeeb [31] who studied " Socio-demographic parameters and clinical pattern of drug abuse in Al-Qassim region "and “they found that substance abuse was initiated as a result of peer pressure”.

Regarding the effect of the rational emotive therapy on stress among addict patients, the current study reflected that that there was a highly significant reduction in both stress factors (frustration and tenseness) and total stress post the rational emotive therapy at  $p = 0.001$ . This can be due to the researcher tries to activate and motivate participants, communicate with them and encourages them to express their feelings in addition to teaching them how to practice stress management techniques effectively . This result was in the same line with, Ogbuanya et al., [32]who studied" Effects of rational emotive coaching on occupational stress and work ability ",and “they indicated that rational emotive behavioral therapy was considered an effective approach for stress management”. Moreover, Ugwoke, et al [33] illustrated that “implementing rational emotive behavioral intervention was helpful in reducing stress and burnout symptoms”. This finding was in harmony with the results obtained by Igbokwe et al. [34] who studied "Rational emotive intervention for stress management among english education undergraduates implications for school curriculum innovation" and they found that “rational emotive intervention program significantly reduced the stress in the intervention group compared to the control group and the reduction in stress was maintained after 3 months when the researchers conducted a follow-up”.

Concerning the effect of the rational emotive therapy on irrational thoughts. The finding of current study reflected that there was a highly significant reduction in irrational beliefs post the rational emotive therapy at  $p = 0.001$ . This could be attributable to the program that contained sessions about the main irrational thoughts among addict patients and training the patients to, practice dysfunctional thought record and learn them how to counter attack irrational thoughts and cognitive distortions as should and ought, catastrophization, selective abstracting and apply the role modeling ,attention distraction and humor to establish desired adaptive behavior.This finding was in harmony with the results obtained by Turner and Davis [35]who studied" the effects of rational emotive behavior therapy on the irrational beliefs and self-

determined motivation ",and they found that rational emotive intervention lead to decreased irrational beliefs and increased self-determined motivation". Moreover Alsakhan [22] illustrated that "there was statistically significant reduction in irrational beliefs post the rational emotive therapy than pre in the study group".

The current study revealed that there was a positive correlation between irrational beliefs and tenseness, frustration and total stress before the rational emotive therapy at (  $p = 0.026, 0.008$  ) respectively. This means that when the patients have irrational beliefs, the score of tenseness, frustration and total stress are increased. This irrational beliefs and thoughts often recognize everything in their life in a more stressful manner because the irrational beliefs and thoughts have a negative effect on the stress response. This result was consistent with Yildiz, et al [36] who study "irrational beliefs and perceived stress in adolescents: the role of self-esteem" and concluded that irrational beliefs can cause low self-esteem and stress in adolescents. Also Ogbuanya, et al [37], acknowledged that meanwhile stress was caused by an individual's irrational beliefs, any alterations to irrational beliefs would invariably lead decline of stress.

The finding of the current research reflected that there was a significant relation between increased educational level and low stress ;low stress level was found among secondary educated patients than primary educated patients. It may be due to secondary educated patients have the ability to deal and cope effectively with different stressful situations .This result was in the same line with Lunau et al [38], who "observed positive coefficients for respondents with low education, thus indicating higher levels of work stress as compared to respondents with high education" .Also this finding was in harmony with the results obtained by Yigitoglu and Keskin [39], who study "Relationship between dysfunctional beliefs and stress coping methods in drug-addicted patients". He reported that "there was significant relation between educational level and coping with stress and they also indicated that addict patients experience difficulties while coping with stress as their educational level declines".

Regarding relation between stress level and history of addiction, there was high significant relation between positive family history of addiction and increased stress levels. This means that patients with positive family history of addiction had moderate stress level in contrast to patients with negative family history of addiction had low stress level . It may be due to participants with positive family history of addiction had fear of the consequences of addiction that experienced by other family member on himself, his family and finally the stigma of being addict in the community . It may also be due to patterns of interaction between parents and their sons struggling with substance abuse have several key characteristics that can negatively impact the psychology of those involved and lead to mental health issues like stress. This result was in the same line with Bortolon et al.,[40], who study "Family functioning and health issues associated with codependency in families of drug users and they found a strong link between addiction and the disruption of family relationships and stress".

The current study found that there was statistically significant relation between stress and types of addictive substance .This is could be due to the addicts have more stress and he want to overcome it by mixing more than one drug or try another drug to diminish the negative effects of stress and achieve a certain sensation .This study was consistent with Kelly et al [41] who studied "The relationship between psychological distress and adolescent polydrug use", and found that "polydrug users reported more psychological distress than alcohol users". However this finding was inconsistent with Kelly and Parsons [42] who studied "Predictors and comparisons of polydrug and non-polydrug cocaine use in club subcultures", and found that "Polydrug use among cocaine users was not significantly associated with stress, depression, anxiety or coping capacity"

The current study found that there was statistically significant relation between stress and the method of addiction. This could be due to the full effects of the drug are expert very quickly through IV, typically in seconds and gets a stronger effect from the same amount of the drug. This result was in the same line with Khalatbari and Bazarganiyan, [43] who studied " Comparison the depression, anxiety and stress in intravenous drug abusers, with and without HIV/AIDS", and "reported that intravenous drug users was associated with psychological problems".

## 5. LIMITATION OF THE STUDY

This study was lacked a control group, and small sample size hence limiting the generalization of the results.

## 6. CONCLUSION

The findings supported that the rational emotive therapy proved to be effective on decreasing stress and irrational thoughts among drug addicts.

## 7. RECOMMENDATION

The psychiatric hospital should utilize rational emotive therapy to all drug addicts to reduce stress and overcome their irrational thoughts. Also using rational emotive therapy as primary prevention of stress among high risk individuals .

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