

## Effectiveness of Psychological Intervention on Self-Efficacy, Self-Control, and Coping among Patients with Substance Abuse Disorders

Asmaa Hafez Afefe Barakat<sup>1</sup>, Zienab Mohammed Ibrahim<sup>2</sup>

<sup>1</sup>Assistant Professor of Psychiatric/Mental Health Nursing Department, Faculty of Nursing/Ain Shams University, Egypt

<sup>2</sup>Lecturer of Psychiatric/Mental Health Nursing Department, Faculty of Nursing/Modern University for Information and Technology, Egypt.

### Abstract

**Background:** Substance abuse disorder is a dangerous problem that is enough to interfere with the quality of life of the person, family, and society. It negatively affects the socio-economical, cultural aspects, and organization of our community. **Aim:** This study aimed to determine the effectiveness of psychological intervention for patients with substance abuse on their self-efficacy, self-control, and coping patterns. **Research design:** A quasi-experimental study was utilized. **Setting:** This study was conducted at the outpatient clinic affiliated to Abbassia Mental Health Hospital. **Subjects:** a purposive sample of 60 patients with substance abuse disorders from the previously mentioned setting. **Tools:** 1) An interview questionnaire to assess socio-demographic characteristics and knowledge among studied patients with substance abuse disorders 2) Practical skills measured by Behavior and Symptom Identification Scale, and 3) Drug Abstinence Self-Efficacy Scale, 4) Brief Self-Control Scale, 5) Coping Behaviors Inventory. **Results:** The study revealed that there were statistically significant differences between the pre and post-psychological intervention in all study variables; knowledge (P Value= 0.01), Behavior and Symptom Identification Scale, Drug Abstinence Self-Efficacy Scale, Brief Self-Control Scale, and Coping Behaviors Inventory (P Value= 0.05). **Conclusion:** The psychological intervention has effective and positive outcomes in self-control behaviors, self-efficacy, and coping patterns among patients with substance abuse disorders. **Recommendation:** Conduct experimental and longitudinal research to evaluate the effectiveness of the psychological intervention in improving self-efficacy, self-control behaviors, and coping strategies.

**Keywords:** psychological intervention- substance abuse- self-efficacy- self-control- coping.

### Introduction

Substance abuse disorders are chronic mental illness marked by substance cravings and compulsions, as well as a lack of control despite negative consequences. It is considered a "relapsing" disease because patients who are recovering from it are at risk of relapse after years of abstaining from substance misuse (Marc, 2017).

Substance abuse is quickly becoming one of the world's most significant and rapidly expanding problems, approximately 50% of patients with chronic psychiatric disorders are substance used (Kronenber, Slager-Visscher

&Goossens, et al, 2014). Substance abuse behavior in Egypt has reached dramatic levels. According to data from a National Survey for substance abuse disorders by the Mental Health Research Unit, Ministry of Health, 2016, the survey was completed over 6 phases to cover 26 out of 27 Egyptian governorates a total of 106480 subjects were included in the sample, representing approximately 0.2% of the Egyptian population above the age of 15. A proportion of 19.3% were experimental users, 6.7% were regular substance users, and 6.4% were fulfilling the criteria of dependence (Hamdi, Sabry, Sedrak, Khowailed, Loza, Rabie, & Ramy, 2016; Rabie, Shaker & Gaber, et al., 2020).

Self-efficacy is defined as an individual's level of confidence in their capacity to handle difficulties or situations. It entails sense-making, which entails learning to understand oneself and forming expectations for future performance. Self-efficacy is the belief that people can modify their risky health habits on their own impulses. The amount of self-efficacy is mirrored in the person's attitude and behavior, both at home and in society (Gemeay, Shama, Abo-Elyzeed, &Shalaby, 2019).

Self-efficacy among patients with substance abuse disorders means their ability to change their habits of using their substances. Studies have demonstrated that patients, who are trusted in their ability to change their habits, are successful in stopping substance use, despite how much of these substances they use or how heavily they are addicted. Control of substance use can be practically developed by improving self-efficacy. Patients with high self-efficacy can resist substance use in high-stress or risk situations. However, patients with low-level self-efficacy will have negative effects on coping with life stressors. They are liable to relapse again after being treated because they become frangible to resist the trigger or high-risk situations. This means that high self-efficacy serves as a role of resilience and self-control among patients with substance abuse can be suggested as an approach to interventions, helping the psychiatric professionals to identify facets of self-control that are particularly relevant for individual treatment goals(Ghasemnezhad, Ghasemian, Gheyarani, Ghorbani, &Ghahari, 2016).

Previous studies demonstrated the importance of self-efficacy as a predictor and/or mediator of treatment effects in various domains including, psychopathology, and addictive disorders. People with both the essential skills and

the ability to cope effectively are much more likely to put in the effort required to avoid situations where drinking or drug use is in danger. Highly self-efficacious people are more likely to see it as a brief setback and regain control. Furthermore, self-efficacy was a relatively strong predictor of post-treatment abstinence and the frequency of substance use (Crouch, DiClemente, & Pitts, 2015; Gemeay, et al., 2019).

Based on Bandura's theory, 1997, self-efficacy has a crucial part in maintaining self-control and decreasing personal impulses. Furthermore, self-efficacy helps the person to develop positive coping by understanding the identifiable dangerous situation and dealing with it as a challenge. So, the development of psychological interventions aimed at decreasing relapsing and adapting to a tolerance of drug abstinence through empowering self-efficacy, and self-control as well as promoting positive coping among patients with substance abuse disorders(Khazae-Pool, Naghibi& Pasha et al., 2021).

### Significance of The Study:

Substance abuse disorders can cause physical, psychological, and social problems among abusers. These problems are enough to negatively affect the quality of life of the abusers and their families. In addition to the negative impact on the social, economic, political, and cultural in the community (Ali & Mohamed, 2022). So, it is important for the psychiatric mental health nurses to have a significant role toward patients with Substance abuse disorders to develop their self-efficacy, self-control, and coping skills to empower them with appropriate knowledge and to practice essential skills for preventing substance relapse and for promoting behavioral change as well as solving lifelong

defeating habits. These programs also help patients to build personal goals based on their needs, values, and improve their self-confidence, adapt to their life stressors without abusing drugs, and improve interpersonal functioning and global adjustment.

### **Aim of The Study:**

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The aim of this study was to determine the effectiveness of psychological intervention for patients with substance abuse disorders on their self-efficacy, self-control, and coping patterns.

**This aim could be achieved through the following objectives:**

1. Assessing the level of knowledge and practice among subjects before the psychological intervention (need assessment)
2. Assessing the self-efficacy, self-control, and coping patterns among subjects as baseline data before the psychological intervention.
3. Planning and implementing the psychological intervention based on subjects' needs and assessing study variables.
4. Compare the pretest and post-test scores regarding knowledge and practice among subjects after the psychological intervention.
5. Evaluating the three study variables (self-efficacy, self-control, and coping patterns) after implementing the psychological intervention compared to the baseline data.

### **Research hypothesis:**

1. Patients with substance abuse disorders will obtain higher scores of knowledge and practice after implementing the psychological intervention.
2. Patients with substance abuse disorders will have higher abilities of self-efficacy, and self-control after implementing the psychological intervention.
3. Patients with substance abuse disorders will have more positive coping patterns after implementing the psychological intervention.

### **Subjects and Methods:**

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#### **A- Research design:**

A quasi-experimental research was applied to one group pre/post-assessment.

#### **B- Setting:**

The present study was conducted at outpatient clinics in El-Abbassia Mental Health Hospital which is affiliated to the Egyptian Ministry of Health

#### **C- Subject:**

A purposive sample of 60 patients with a substance abuse disorder was enrolled to participate in the current study from the above-mentioned setting. Exclusion Criteria: Adult ( $\leq 18$  years old), patients with severe cognitive impairment and difficulty comprehending, patients with substance-induced psychosis, and with comorbid physical and/or psychiatric problems. Sample size: based on the statistical records in El-Abbassia Mental Health Hospital in 2018, the total no of patients who attended the outpatient clinics was 1138. The sample size is

calculated according to the purposive sample selection, their agreement as a participant, and the statistical calculation formula. 60 participants are statistically enough to determine a significant mean difference between pre-and post-assessment, as well as by adjusting the power of the test to 80% and the confidence interval to 95% with the significance level at 0.05.

The sample size was calculated by Rosner, 2016 by using the following formula:

$Z\alpha$  = Standard normal deviate for  $\alpha = 1.9800$  .

$Z\beta$  = Standard normal deviate for  $\beta = 0.8816$  .

$B = (Z\alpha + Z\beta)^2 = 7.8889$  .

$C = (E/S\Delta)^2 = 0.1717$  .

$N = B/C = 59.8852$  .

So that N is calculated above to be the highest integral provided sample size

#### D-Tools of data collection

- I- **Patients' interviewing questionnaire:** it was obtained from the related standardized references to assess the followings:
1. **Patients' socio-demographic data:** such as age, sex, marital status, education, .... etc.
  2. **History of substance abuse was adopted from Chavarria, Stevens, Jason & Ferrari; Görgülü, 2020; Mathna, Roberts, & Koen, 2020; Ali & Mohamed, 2022.** It includes the duration of substance abuse, type of substance abuse, number of relapses, .... etc.
  3. **Knowledge about substance abuse and management was adopted from National Collaborating Centre for Mental Health, 2008; Substance Abuse and Mental Health Services Administration, 2015.** Twenty-two multiple-choice questions were applied to each subject such as the meaning of substance abuse (one question), types of substances (two questions), risk factors (three questions),

withdrawal symptoms (three questions), cravings (two questions), and relapse prevention (two questions), and the negative impact of addiction on personal and family lives (three questions), treatment (three questions), and management (three questions). The correct answer took two and the incorrect answer took one: scoring system: the total score is the summing of all questions; the satisfactory level takes a score of 27 and above (Satisfactory:  $\geq 60\%$ ).

4. **Practical and behavioral management skills measured by Behavior and Symptom Identification Scale (BASIS-32)** was developed by Eisen, Dill, & Grob (1994) and modified by researchers to measure the main daily functional and behavioral management that are faced by patients with substance abuse. The total number of the original scale is thirty-two and the total subscales are five. The psychosis subscale with its related items was excluded from the scale because substance-induced psychosis is not part of our research. So that the total number of subscales is 4 and dependently the total number of the remaining items is 28. The modified scale was divided into four subscales; 1-*Relation to self/and others* (items 7, 8, 10, 11, 12, 14, and 15) such as "relationships with family members", 2-*Depression/anxiety* (items 6, 9, 17, 18, 19 and 20) such as "adjusting to major life stresses), 3-*Daily living/role functioning* (Items 1, 2, 3, 4, 5, 13, 16, 21 and 32) such as "leisure time or recreational activities", 4- *Impulsive/addictive behavior* (items 25, 26, 28, 29, 30 and 31) such as "controlling temper, outbursts of anger, violence", **Scoring system:** Each item was rated on a five Likert Scale ranging from 4 = No Difficulty to 0 = Extreme Difficulty. Each subscale is measured by summing and dividing by the number of its items. A higher rating on

the total scale indicates a greater ability in managing behavioral and daily life functioning.

**II- Drug Abstinence Self-Efficacy Scale (DASES):** was a modified form of the Alcohol Abstinence Self-Efficacy Scale that was originally developed by **DiClemente, Carbonari & Montgomery, et al, (1994)** and modified by **Hiller, Broome & Knight et al. (2000)**. This scale measures the personal ability to confront withholding drugs to enhance behavioral change and positive coping. Patients are asked how to abstain from drugs in a set of twenty different circumstances. The twenty circumstances are emphasized by four main subscales: 1-*Negative Affect (items no. 3, 6, 14, 16, 18)*, 2-*Social Pressure (items no. 4, 8, 15, 17, 20)*, 3-*Physical and Other Concerns about Using Drugs (items no. 2, 5, 9, 12, 13)*, 4-*Cravings and Urges (items no. 1, 7, 10, 11, 19)*. The tool is rated on a five Likert Scale ranging from 0 (not at all) to 4 (extremely). **Scoring system:** the total score ranged from 0 to 80. Patients who attain higher scores revealed a greater ability in overcoming to take drugs.

**III- Brief Self-Control Scale (BSCS):** it was developed by **Tangney, & Boone, (2004)** to assess the personal ability to regulate own behaviors and control temperament in certain situations such as “I am able to work effectively toward long-term goals”, “I often act without thinking through all the alternatives”. the tool is related to self-control to promote persons’ behaviors and consequently their psychological conditions in the form of accomplishment, control temper, psychological adaptation, interpersonal relationships, moral emotions (e.g., shame and guilt), and personality (e.g., conscientiousness and perfectionism). The scale consists of thirteen items distributed on

a 5-point Likert scale, ranging from 1 (Not at all like me) to 5 (Very much like me). The positive items take no. 1, 7, 9, and 13 distributed in the Likert scale from 1 to 5 while the remaining items are opposite. **Scoring system:** The total score ranged from 13 to 65, the higher scores on the scale the more ability of personal self- behavioral control and psychological adaptation.

**IV- The Coping Behaviors Inventory (CBI):** it was developed by **Litman, Stapleton & Oppenheim et al, (1983)** to assess the cognitive and behavioral patterns faced by patients with substance abuse to inhibit their re-engagement in drug abuse. The CBI consists of thirty-six items rated on a four-point Likert scale: 3 (usually), 2 (often), 1 (sometimes), and 0 (never). There are two subscales; *the cognitive coping* contains 20 items (items 1, 4, 5, 6, 7, 9, 11, 13, 15, 17, 19, 22, 23, 25, 26) and *the behavioral coping* contains the remaining 16 items. Examples of cognitive coping subscale: “Thinking about how much better off I am without a drug”, “Stopping to examine my motives and eliminating the false ones”. Examples of behavioral coping subscale: “Keeping in the company of non-abusers”, “Working harder”. **Scoring system:** the total score ranged from 0 to 108 by summing the responses, higher scores mean more frequent use of positive coping strategies.

#### **Tools validity and reliability :**

##### **1) Validity :**

The content validity was evaluated by three professors of the psychiatric/mental health nursing department at, the Faculty of Nursing, Ain Shams University. The modified Behavior and Symptom Identification Scale was reviewed for its relevance, clarity, comprehension, and

applicability. All tools were translated into the Arabic language. After that, the professors checked them for their information accuracy and relevance between translated and original tools formats.

## 2) The Reliability :

The reliability of tools was assessed for the approved reliability value, by the Cronbach alpha coefficient statistical test. It was 0.87 for the interviewing questionnaire, 0.93 for the Behavior and Symptom Identification Scale (BASIS-32) 0.91 for the Drug Abstinence Self-Efficacy Scale (BSCS), and 0.93 for the Brief Self-Control Scale (CBI).

### Pilot study:

A pilot study was conducted on a sample of 6 patients with substance abuse disorders in the outpatient clinic to test the applicability of the tools as well as to assess that the subjects could understand and answer the tools. The researchers have estimated the time duration to fill the tools, and based on the pilot study, the essential corrections were applied. These subjects were excluded from the study sample.

### Ethical considerations:

The study approval was obtained from the ethical committee in the Faculty of Nursing, Ain Shams University as well as a letter of permission from the Director of Al-Abasia Mental Health Hospital. The researchers obtained written informed consent from the participants for their involvement in the current study. Confidentiality of all information and data was maintained to protect the patient's rights, The participants have the right to discontinue at any time of the current research.

### Pilot Study:

It was applied on 7 patients who represent 10% of the studied patients to test the applicability and clarity of the tools, as well as to estimate the time needed to fill in the tools. Necessary modifications were done for the used tools and patients included in the pilot study were excluded from the sample group.

### Field Work:

The psychological intervention program was carried out within 8 months from January 2019 until August 2019 as follows:

#### Assessment phase:

It took one month to obtain the baseline data from the studied participants in the form of measuring research variables and needs. The participants filled the assessment tools in the presence of researchers to guide them to answers. Each participant spent 30 to 45 minutes filling the tools.

#### Planning phase:

After completing the pre-assessment tools and reviewing the related works in literature, the researchers develop a psychological intervention program. the program consists of objectives, handouts, and teaching methodology (e.g., discussion, brainstorming, presentations, role play), teaching media (e.g., PowerPoint, and illustrative pictures) and the planned sessions (total number of sessions needed, objectives of each session, session duration, number of participants involved, specific content of each session and the needed teaching methodology and media). The program contents were evaluated by three professors of Psychiatric Mental Health Nursing for their comprehensiveness, feasibility, understanding, and relevance to the study

objectives. The program planning was completed and reviewed within two months.

### Implementation phase:

The psychological intervention program consumed four months after program planning in 16 consecutive sessions. All participants were classified into 4 groups (15 in each group). Each group meeting was conducted once a week. The researchers implemented the program two days (Sunday and Tuesday) every week and met two groups on one day (one group from 10.00- 12.00 and the other group from (12.30-14.30). The first two sessions were providing simple information about substance abuse and care management, the 14 sessions were guiding the patients to acquire the necessary skills to manage daily life and misbehaving as follows: practicing relaxation techniques and exercising (two sessions), anger and impulsivity control (two sessions), overcoming negative thoughts and cognitive restructuring, and recognizing and expressing emotions appropriately (three sessions), communication skills, social activity, leisure time and recreational activities, seeking family and social support, and guiding for participation in a self-help group (two sessions), problem-solving skills such as managing day-to-day life (handling money, decision making, academic study) and adjusting to major life stresses (three sessions), and dealing with cravings (two sessions). During the program sessions, the researchers provided explanations, justifications, and feedback as well as encouraged the participants for questions and discussion. If one session was missed by one or more subjects, the researchers implemented it one hour early before starting the next session .

### Evaluation phase :

The study tools were re-assessed again by the subjects after implementing the program. The

submitted scores were measured and compared before and after implementing the psychological intervention, and then, the significant differences were estimated to evaluate the effectiveness of the psychological intervention on the subjects.

### Data analysis:

The data was coded and computerized by using the SPSS program version 25. The data was tabulated by using the number, and percentages for descriptive data as well as the mean and standard deviation for comparing the differences between pre and post-test to evaluate the program's effectiveness. Pearson Correlation Coefficient to test the correlation between the study variables.

## Result

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**Table 1** shows the demographic characteristics of the studied patients with substance abuse disorder. 60% of the study participants were between 30-40 years old. It is obvious that 100% of the study participants were males and 56.7% of them were married and had jobs. Regarding the level of education, 46.7% reached the school level. Concerning their economic status, 81.7% of them were not satisfied with their income.

**Table 2** clarifies that cannabis was the most common substance abused by study participants (91.7%) followed by opiates (76.7%). 46.7 % of study participants misused drugs between 5 to 10 years and 41.7% of them experienced more than two times of relapses.

**Table 3** compares the participant's level of knowledge before and after implementing the psychological intervention. The study participants obtained higher mean scores in post-test assessments, e.g., the mean scores of questions about craving, relapse prevention, and

management improved from 2.66, 2.18, and 2.45 to 3.82, 3.33, and 5.13 respectively. Therefore, statistically significant differences were found in the total knowledge (P Value= 0.01).

**Table 4** illustrates the differences in study participants' practices which are measured by the Behavior and Symptom Identification Scale before and after implementing the psychological intervention. The mean scores of three out of four subscales increased; Relation to self/others, Daily living/role functioning, and Impulsive/addictive behavior (the mean lowered from 15.77, 22.28, and 13.44 to 25.6, 33.97, and 21.87 respectively). A statistically significant difference in the total scale among study participants between pre-and post-assessments (P Value= 0.05).

**Table 5** denotes that study subjects attained higher mean scores on the Drug Abstinence Self-Efficacy Scale in the post-assessment after conducting the psychological intervention compared to the pre-assessment. The mean scores increased in three out of four subscales: social pressure, physical and other concerns about using drugs, cravings, and urges (mean changes from 10.12, 11.33, 8.09 to 15.23, 17.11, 14.44 respectively). Therefore, a statistically significant difference was observed in the total scale (P Value= 0.05).

**Table 6** reveals that most items in the Brief Self-Control Scale were increased in their mean scores as reported by study participants, e.g., the submitted mean scores of some items such as participants' ability to resist temptation, say inappropriate things, and act without thinking were statistically improved from 2.22, 2.92, and 2.85 to 3.89, 4.15, and 3.96 respectively. Consequently, a statistically significant difference was observed in the total scale (P Value= 0.05).

**Table 7** clarifies that there was a positive change in the mean scores submitted by study participants in both cognitive and behavioral subscales (the mean scores raised from 28.62, and 17.23 to 44.33, and 38.72. As well, a statistically significant difference was obvious in the total Coping Behaviors Inventory scale (P Value= 0.05).

**Table 8** shows the correlation between the Coping Behaviors score with the four variables. There was a strong positive correlation between total CBI and the total knowledge, BASIS-32, DASES, and total BSCS ( $r= 0.895, 0.872, 0.843,$  and  $0.881$  respectively).

Table (1): Distribution of Studied Patients' Socio-demographic Characteristics

<i>Item</i>	No no = 60	%
<b>Age (years)</b>		
18- ≤ 30	21	35
31- ≤ 40	36	60
40 +	3	5
<i>Mean ± SD= 29.487±3.489</i>		
<b>Gender</b>		
Male	60	100
Female	0	0.00
<b>Marital status</b>		
Single	23	38.3
Married	34	56.7
divorce	3	5
<b>Level of education</b>		
Illiterate	8	13.3
Read & write	12	20
School education	28	46.7
Higher education	12	20
<b>Work status</b>		
Work	34	56.7
Not work	26	43.3
<b>Financial satisfaction</b>		
Yes	11	18.3
No	49	81.7
<b>Residence</b>		
Urban	29	48.3
Rural	31	51.7

Table (2): Distribution of History of Substance Abuse among Studied Patients

<i>Item</i>	No no = 60	%
<b>Type of substance abuse</b>		
Cannabis	55	91.7
Opiate	46	76.7
Stimulants	34	56.7
Inhalers	23	33.3
Alcohols	11	18.3
Sedative	32	53.3
<i>Numbers are not mutually exclusive</i>		
<b>Duration of substance abuse</b>		
1-≤ 5 years	19	31.7
5-≤ 10 years	28	46.7
+ 10 years	13	21.7
<b>No. of relapse</b>		
One	13	21.7
Two	22	36.7
More than two	25	41.7
<b>Number of hospital admission</b>		
No	8	13.3

Item	No no = 60	%
One	12	20
Two	28	46.7
More than two	12	20

**Table (3): Comparison of Studied Patients' Knowledge regarding Substance Abuse and Management before and after Implementing the Psychological Intervention.**

Knowledge	Before		After		t-test	P-value
	Mean	SD	Mean	SD		
Meaning of substance abuse	1.38	0.26	1.66	0.61	2.853	0.821
types of substances	2.74	1.23	2.87	1.11	2.745	0.893
Risk factors	4.42	0.39	5.36	0.28	2.4341	0.753
Withdrawal symptoms	3.88	0.78	5.22	0.54	2.953	0.05*
Cravings	2.66	0.24	3.82	0.28	3.33	0.05*
Relapse prevention	2.18	1.05	3.33	0.55	3.36	0.05*
Impact of addiction on personal and family lives	3.11	1.11	5.36	0.42	3.41	0.01**
Treatment	2.99	0.86	5.11	0.23	3.12	0.00***
Management	2.45	1.33	5.13	0.61	3.43	0.00***
<b>Total knowledge</b>	<b>25.81</b>	<b>7.25</b>	<b>37.86</b>	<b>4.63</b>	<b>9.43</b>	<b>0.01**</b>

\* = Statistically significant at 0.05

\*\* = Statistically significant at 0.01

\*\*\* = p 0.001

Satisfactory:  $\geq 60\%$

Unsatisfactory:  $< 60\%$

**Table (4): Comparison between Mean Scores of Behavior and Symptom Identification Scale among the Studied Patients before and after Implementing the Psychological Intervention.**

Behavior and Symptom Identification Scale (BASIS-32)	Before		After		t-test	P-value
	Mean	SD	Mean	SD		
1. Relation to self/others	15.77	2.66	25.61	2.35	4.12	0.05*
2. Depression/anxiety	11.28	3.66	14.88	1.28	3.35	0.252
3. Daily living/role functioning	22.28	2.95	33.97	1.77	5.21	0.05*
4. Impulsive/addictive behavior	13.44	2.82	21.87	1.46	4.436	0.05*
<b>Total</b>	<b>59.77</b>	<b>12.09</b>	<b>96.33</b>	<b>6.86</b>	<b>7.69</b>	<b>0.05*</b>

\* = Statistically significant at 0.05

**Table (5): Comparison between Mean Scores of Drug Abstinence Self-Efficacy Scale among the Studied Patients before and after Implementing the Psychological Intervention.**

Drug Abstinence Self-Efficacy Scale (DASES)	Before		After		t-test	P-value
	Mean	SD	Mean	SD		
1. Negative Affect	11.43	3.22	14.82	1.11	3.33	0.191
2. Social Pressure	10.12	3.91	15.23	2.01	3.46	0.05*
3. Physical and Other Concerns about Using Drugs	11.33	2.85	17.11	0.92	3.85	0.05*
4. Cravings and Urges	8.09	2.11	14.44	2.56	3.29	0.05*
<b>Total</b>	<b>40.97</b>	<b>12.09</b>	<b>61.6</b>	<b>6.6</b>	<b>8.59</b>	<b>0.05*</b>

\* = Statistically significant at 0.05

**Table (6): Comparison between Mean Scores of the Brief Self-Control Scale among the Studied Patients before and after Implementing the Psychological Intervention.**

Brief Self-Control Scale (BSCS)	Before		After		t-test	P-value
	Mean	SD	Mean	SD		
1. I am good at resisting temptation	2.22	1.22	3.89	0.85	1.55	0.05*
2. I have a hard time breaking a bad habit	2.66	1.03	3.47	0.92	1.23	0.136
3. I am lazy	2.91	1.08	4.01	0.44	1.45	0.05*
4. I say inappropriate things	2.92	1.11	4.15	0.25	1.66	0.05*
5. I do certain things that are bad for me if they are fun.	2.49	0.98	3.89	1.03	1.25	0.05*
6. I wish I had more self-discipline	2.99	1.02	4.16	0.22	2.82	0.05*
7. Pleasure and fun sometimes keep me from getting work done	2.55	1.01	3.86	0.56	2.1	0.05*
8. I have trouble concentrating	2.21	1.32	3.55	0.88	2.22	0.05*
9. I am able to work effectively toward long-term goals	2.54	1.05	3.99	0.59	1.87	0.05*
10. Sometimes I can't stop myself from doing something, even if I know it is wrong.	2.11	1.33	3.07	0.99	1.96	0.144
11. I often act without thinking through all the alternatives	2.85	1.06	3.96	0.75	1.82	0.05*
12. I refuse things that are bad for me.	2.36	1.24	3.79	0.48	2.11	0.05*
13. People would say that I have iron self-discipline.	2.76	1.14	3.08	0.62	2.39	0.256
<b>Total</b>	<b>33.57</b>	<b>14.59</b>	<b>48.87</b>	<b>8.58</b>	<b>9.23</b>	<b>0.05*</b>

\* = Statistically significant at 0.05

**Table (7): Comparison between Mean Scores of Coping Behaviors Inventory among the Studied Patients before and after Implementing the Psychological Intervention.**

Coping Behaviors Inventory (CBI)	Before		After		t-test	P-value
	Mean	SD	Mean	SD		
1. The cognitive coping	28.62	12.23	44.33	8.22	4.23	0.05*
2. The behavioral coping	17.23	9.87	38.72	6.28	4.48	0.05*
<b>Total</b>	<b>45.85</b>	<b>22.1</b>	<b>83.05</b>	<b>14.5</b>	<b>5.58</b>	<b>0.05*</b>

\* = Statistically significant at 0.05

**Table (8): Correlation between CBI with knowledge, BASIS-32, DASES, and BSCS among the Studied Patients after Implementing the Psychological Intervention.**

Variables	Total CBI	
	Pearson correlation coefficient	P-Value
Total Knowledge	0.895	0.001***
Total BASIS-32	0.872	0.001***
Total DASES	0.843	0.001***
Total BSCS	0.881	0.001***

\*Correlation is significant at the 0.05 level    \*\*Correlation is significant at the 0.01 level

\*\*\* Correlation is significant at the 0.001 level

## Discussion

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Substance abuse disorders is a dangerous problem that is enough to interfere with the quality of life of the person, family, and society. It negatively affects the socio-economical, cultural aspects, and organization of our community (**Bahrebar, Ahadi&Aghayoabusefi, 2019**). In Egypt, substance abuse disorders has been growing among the population and become a major health problem with representing high incidence rates in the mental health hospital (**El Sayed, Ali, Ahmed &Mohy, 2019**).

So that developing effective measures to improve the quality of life and prevent relapse among patients with substance abuse disorder is the main core of psychiatric mental health professionals. Therefore, the significance of the current study can provide a psychological intervention for patients with substance abuse to help them ameliorate their heir self-efficacy, ability to control negative emotions and impulsivity, as well as acquire effective coping strategies to deal with negative life events instead of abusing drugs.

The current study reveals that there was a significant improvement in the study participants' knowledge about substance abuse such as information about withdrawal symptoms, predisposing factors, treatment, and care management. This improvement in the post-psychological intervention phase might reflect the effectiveness of the psychological intervention to provide essential information about the disorder and its management. On the other hand, the study participants were motivated to encourage the researchers for more

explanation and discussion as well as giving summary and feedback. The present study was in congruence with **Moshki&Aslinejad, 2013** who confirmed that the life skills intervention enhanced knowledge and awareness among 118 workers with substance dependence. The results of the current study also agreed with **Nazarpoor, Pouzesh, Raoufi, Sadagat et al., 2010** who found that the study participants improved their information and social participation following their attendance in the workshop. They also asserted that the acquired necessary knowledge is important to enhance the participants' attitudes and behaviors for positive change.

Regarding the degree of practice among study participants, a statistically significant improvement in the Behaviors and Symptom Identification Scale after implementing the psychological intervention. This might be due to significant improvements in the mean scores of the items in the practical sessions such as guiding the participant in managing day-to-day functions such as handling money, shopping, organizing time as well as having leisure time and recreation. Furthermore, the psychological intervention represented the necessary social, and communication skills, finding support from family and significant others. The researchers provided the opportunity for the study participants to discuss negative emotions associated with craving and misbehaving. This analysis was supported by **Ahmed, Loutfi&Zaki, 2022** who investigated coping skills and drug craving among addicts on a 100 patients with substance abuse and highlighted that there is a decrease in the psychological nursing interventions programs to provide the

patients with valuable skills for promoting positive behaviors and overcoming cravings such as practicing relaxation techniques and redirecting positive thinking. The current study results were supported by the results of

**Ahmadpanah, Alavijeh&Allahverdipour, et al., 2015** who found that there was a significant improvement in the studied patients' behavioral symptoms regarding overcoming cravings and the number of relapses after exposing them to cognitive restructuring training and reframing skills. These findings were also supported by **Singh, Balhara, Gupta, & Christodoulou, 2020**, who asserted that psychological intervention including practicing the drug inhibition skills is important to change the patients' insight on how to retain their role functions and handle their daily living appropriately.

Based on the findings in the current study, after implementing the psychological intervention, statistically significant differences in the total Drug Abstinence Self-Efficacy Scale and the three subscales: social pressure, physical and other concerns about using drugs, cravings, and urges. Likewise, **Muafi, Hartati&Gusaptono, 2010** applied an experimental study to evaluate the effect of the psychiatric intervention program on self-efficacy, self-esteem, life interest, and role behavior among unemployed adults who abused drugs. They confirmed that there is a significant improvement in the self-efficacy pre-and post-program intervention. These findings also agreed with **Khazace-Pool, Naghibi, Pashaei, et al., 2021** who confirmed that intervention programs based on self-efficacy knowledge and skills convey positive results for

patients who abuse drugs, as well as adjust patients' behaviors.

Another important finding in the present study was that significant differences in the total of the Brief Self-Control Scale. This might be due to increasing the mean scores of the scale items after applying the psychological intervention, such as the ability to resist temptation, say inappropriate things, and act without thinking which was improved in the post-test. This finding was supported by **Namazpoor, Sheikhi, Ghavami, &Radfar, 2017**, who recommended the importance of conducting psychiatric intervention programs as they found that the study participants have difficulty tolerating stress, loss their temper, and cannot control their impulsivity. These factors are enough to disrupt the participants' social relationships and find a support system.

Concerning the coping patterns among studied patients with substance abuse, significant improvements in the mean scores of both cognitive and behavioral coping subscales after conducting the psychological intervention. This could explain the statically significant changes in the total score Coping Behaviors Inventory. Likewise, the study conducted by **Shahram & Kamran, 2016** who found significant differences in the favor of studied patients with substance abuse regarding their coping strategies after implementing the cognitive-emotional training. The researchers asserted also that learning coping skills can promote recovery from misusing drugs and prevent relapse.

The result of the present study revealed that there was a strong positive

correlation between the Coping Behaviors Inventory and the four variables (knowledge, Behaviors and Symptom Identification Scale, Drug Abstinence Self-Efficacy Scale, and the Brief Self-Control Scale). It means that patients with substance abuse disorders have positive coping patterns when they improved their knowledge and behavioral skills, enhanced their self-efficacy, and increased their ability to control inappropriate behaviors. This result agreed with **Kumar, 2017** who found a strong correlation between coping strategies among patients with substance abuse disorders and self-efficacy, social support, and their psychological wellbeing. The study also interpreted the research results as the fact that increased self-efficacy can assist the study participants to deal with and control their behaviors when they are exposed to daily life stressors. Another study also supported the current research which was conducted by *El Sayed et al., 2019*, and found a strong positive correlation between knowledge, attitude, daily life behaviors, and self-efficacy among participants after the program intervention. Another study mentioned mental health among patients with substance abuse disorders can be determined by the level of their self-efficacy and coping strategies as well as self-control of their behaviors (*Bavojdan, Towhidi & Rahmati, 2011*).

### Conclusion

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Based on the results of the present study, it can be concluded that the psychological intervention has effective and positive outcomes in self-control behaviors, self-efficacy, and coping patterns among patients with substance abuse disorders. As

well, the patients with substance abuse disorders attained higher mean scores on the knowledge, Behaviors and Symptom Identification Scale, Drug Abstinence Self-Efficacy Scale, and the Brief Self-Control Scale after implementing the psychological intervention.

### Recommendations

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- Conduct experimental and longitudinal research to evaluate the effectiveness of the psychological intervention in improving self-efficacy, self-control behaviors, and coping strategies.
- Other psychological programs should be implemented as preventive measures for school-age and adolescents to modify their cognitive and behavioral abilities to face the negative life events and challenges without engaging in drug abuse.

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