Assessment of Psychological Symptoms and Cravings among Patients with Substance Related Disorders

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Abstract

Background: Substance use disorders (SUDs) is a chronic and relapsing, yet treatable, brain disease that is characterized by compulsive drug seeking and use, despite negative or harmful consequences. **The study aim:** This study aimed at assessing the psychological symptoms & level of cravings among patients with substance related disorders. **Subjects and Methods**: Descriptive research design was used. This study was conducted at Elmaamoura Hospital for psychiatric Medicine in Alexandria. The subjects of the yielded study embraced 90 patients. Three tools were used in the existing study namely interview questionnaire sheet, substance -related disorders &alcohol Cravings (PACS),and The Symptom Checklist 90 scale - **Results:** more than one half of the studied subjects (61.1%) were craft workers, (94.4%) of the patients were consumed opioid substances like tramadol, heroin ..etc., and 93.3%were consumed cannabis substances. There are distress in the three indices of the psychological symptoms among the studied subjects; Positive symptom index (64.82±15.01), Positive symptom distress index (2.86±0.62), and Global severity index (2.06±0.64).In addition to, more than half (62.2%) of the studied subjects had a high level of craving. **Conclusion:** There is distress in the three indices of the psychological symptoms among the studied subjects, and more than half of the studied subjects had a high level of craving. **Recommendation:** Assessment of level of craving, and psychological symptoms should be incorporated into routine clinical assessment of the patients with addiction and in designing rehabilitation programs grounded on individual requirements.

Keywords: Substance use disorders, psychological symptoms, Craving, Relapse, and Psychiatric NURSING.

Introduction:

Substance use disorders are characterized by repetitive loss of control, persistent and recurring relapsing health disorder that creates negative outcomes on the physical, psychological, interpersonal, legal, and/or financial sides of the patient lifetime **(National Institute of Mental Health (NIDA), 2018).**

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (2013), divided substance-related disorders into two groups ; substance-induced disorders that include conditions of intoxication or withdrawal and other induced mental disorders. Substance-use disorders are considered the other group that relates to pathological patterns of behaviors related to the use of a particular

substance**.** Substance-related disorders encompass ten separate classes of drugs. There are alcohol, caffeine, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics, anxiolytics, stimulants, tobacco, and other (or unknown) substances **(American Psychiatric Association, 2013).**

The more prominent features of addictive behavior are craving. It's an intractable problem that confronts addicts attempting to attain abstinence. In addition to, presence of psychological distress among substance related disorder. Thus, craving and a high levels of psychological distress state that playing an important role in increasing the risk of relapse **(Engel, Schaefer, Stickle, Binder, Heinz, and Richter,2018; Sinha, 2013).**

Substance use disorders are chronically relapsing health problems that is characterized by repeated loss of control that produces harmful consequences on the physical, psychological, interpersonal, legal, and/or financial aspects of the clients' life (**National Institute of Mental Health (NIDA), 2017).**

Significance of Study:

In the past few years, drug addiction has shot up in Egypt. According to Egypt's minister of social solidarity, over 9 million people use drugs, a staggering 10 percent of the country's population. Similarly, it was observed that the painkiller tramadol - which is forbidden to consume without a recipe in Egypt - appeared to be the most usually abused drug, followed by heroin at 26 percent, and cannabis at 23.3 percent (**Mneimneh, 2018).**

Psychiatric nursing often plays a teaching role in addition to providing physical care. They teach patients about the negative consequences of drug abuse, and treatment options that available. Nurses could also teach a patient's family members about what to presume from the rehab process and how they can help their loved one's try to conquer drug addiction (**Mahmoud, Kameg, Germack, 2020**).

Hence, these problems necessitate the importance of paying more attention to assess the psychological symptoms & levels of cravings among patients with substance related disorders. Moreover, assessing the psychological symptoms & cravings may governess the health professional to develop self-help program therapies that aid in improving psychological symptoms & decreasing craving symptoms among patients with substance related disorders.

Aim of the study:

This study aimed to:

● Assessing psychological symptoms of patients with substance – related disorders through the global indices.

● Assessing level of craving among patients with substance –related disorders

Research questions

1.What are the psychological symptoms that present among patients with substance -related disorders?

2.What are the levels of craving among patients with substance -related disorders?

Subjects and Method
Research Design

Descriptive research design was employed to attain the aim of the current study.

Research Setting

The present study was conducted at (outpatient clinic) of Elmaamoura Hospital for psychiatric Medicine in Alexandria. It located in Alexandria Governorate, Egypt.

Research Subjects

Convenient sample of 90 patients with substance-related disorders were chosen for conducting this study

Inclusion criteria:

The patients, who engaged in this yielded study, were designated according to the following criteria

1.Age: 18-45 years old

2.From both genders

3.Educational level: at least read & write.

4.Being detoxified.

5.In rehabilitation stage of addiction

6.Does not participate in other psychological therapies at the time of data collection.

Tools of data collection

The data for the current study were attained using the following three tools:

1.Interview questionnaire sheet that includes Socio- Demographic data patients with substance related disorders., and History of Substance –Related Disorders data

2.Penn Alcohol Craving Scale (PACS): This tool was adapted from Witkiewitz et al. (2010) to be used for assessing craving for both alcohol & other drugs for SUDs patients.

3.The Symptom Checklist 90 (SCL-90 R): This tool was developed by Derogatis et al. (1973), and it was translated to an Arabic language by Elbehiry (2005) to be used to evaluate a broad range of psychological problems and symptoms of psychopathology. The scale consists of 90 items that entails a 5-points Likert-type scale, ranging from 0 (nothing) to 1 (little) , 2 (moderate) to 3 (quite a lot) ,and 4(a lot).Moreover, the scale had global indices that include the global severity index (GSI), the Positive symptom distress index (PSDI), and the positive symptom index (PSI).

Reliability of the tools

The reliability coefficient was computed by the Cronbach's alpha reliability test. The two tools of current study were reliable for being used. Specifically, Cronbach's alpha values were 0.835 for substance –related disorders cravings (PACS), and 0.946 for The symptom assessment -90 (SCL-90).

Ethical considerations:

Prior to study conduction, ethical approval was obtained from the Scientific Research Ethical Committee of the Faculty of Nursing, Ain Shams University. Also, an official permission was obtained from the Ethical Committee of General secretariat for mental health at The Ministry of health in Cairo.

The researcher met the study subjects to clarify the aim of the study and take their approval (oral consent to participate in the study. Anonymity and confidentiality of all study subjects was guaranteed. The subjects' were informed about the right to withdraw from the study at any time without giving any rationalization for obligation.

Pilot study

It was conducted on 9 adult patients diagnosed with substance related disorders (10% of the patients who met the set criteria for the main study) to assess the intelligibility and applicability of the study tools. The time predestined to fill the questionnaire was extended from 30 to 35 minutes. On the other hand, the replies of the study participants in the pilot study were excluded from the main results.

Field work

The researchers collected data of (tool I, II, and III) from studied subjects, then statistically analysis was applied for all responses submission of studied patients'. The data collection of the current study lasted about 3 months starting from the beginning of May to the end of July 2018.

Results:

Table (1): shows that more than two thirds of the studied subjects (67.8%) there age ranged from 18-35 years with a mean age of 33.1 + 6.69 years, the majority of them (97.8) were males, (46.7)of them were single. More than three quarters of patients' (83.3%) were living in urban areas. Regarding the financial status of the patients, it's noticed that more than one half (53.3%) of the subjects had not enough income and more than one half of the patients in studied subjects (61.1 %) were craft workers.

Table(2): represents that 61.1% of the patients were less than or equal eighteen years old when beginning the addiction. On the other hand, it was observed curiosity and imitating friends were the main causes for addiction from patients' perspectives were represent74.4%, 55.6 % respectively. It was found that 61.1% of the studied subjects were consumed five or more type of psychoactive substances. Furthermore, it was observed that the majority of the patients (94.4%) were consumed opioid substances like tramadol, heroin. etc., and 93.3% were consumed cannabis substances.

Table (3): shows that more than half (62.2%) of the studied subjects had a high level of craving.

Table (4): reveals distress in the psychological symptoms three indices among the studied subjects; Positive symptom index (64.82±15.01), Positive symptom distress index (2.86±0.62), and Global severity index (2.06±0.64).

Table (5): describes correlation between craving level and substance that patients with substance related disorders consumed it , there is a significant difference between craving symptoms and type of opioids, cannabis ,and alcoholic substance that patients consumed it .

Table (6): shows the correlation between psychological symptom and age for the patients with substance related disorders. The table reveals there is significant difference between somatization & age. On the other hand, no significant mean differences were found for obsessive-compulsive, interpersonal sensitivity, depression, hostility, phobia, paranoid, and psychoticism.

Table (1): Distribution of the patients with substance- related disorders according to their socio-demographic characteristics.

Variables	N=90	%
Age(years)		
18-35	61	67.8
>35	26	32.2
Min –Max	18-45	
M ±SD	33.1±6.69	
Gender		
Males	88	97.8
Females	2	2.2
Marital status		
Single	42	46.7
Married	36	40
Divorced	12	13.3
Residence		
Rural	15	16.7
Urban	75	83.3
Financial status		
Enough	35	38.9
More than enough	7	7.8
Not enough	48	53.3
Occupation		
Student	3	3.3
Employee	9	10
Day worker (craft worker)	55	61.2
Unemployed	22	23.3
housewife	2	2.2

Table (2): Distribution of the patients with substance- related disorders according to their substance –related disorders profile characteristics.

Variables	N=90	%
Patients' age at the beginning of addiction		
3-11	2	2.2
12-18	55	61.1
19-35	33	36.7
Main cause of substance addictions from patient's perspectives*		
Imitate friends	50	55.6
Curiosity	67	74.4
Familial problem	12	13.3
Friends offer	29	32.2
Emotional problem/scholastic failure	7	7.8
Death of one or both parents	13	14.4
Exposure to excessive cruelty of the family	6	6.7
Unemployment	4	4.4
Excessive pampering	12	13.3
Addiction of one of the family member	15	16.7
Psychological problem	6	6.7
The patient has ample leisure time	11	12.2
Physical pain	6	6.7
Overcome fatigue and hardship	18	20.0
To be able to have sexual relationship	17	18.9
Number of Substances		
1	4	4.4
2	8	8.9
3	9	10
4	14	15.6
5&more	55	61.1
Types of substance used*		
Substances1: Alcohol &Alcoholic Beverage	74	82.2
Substances2: Cannabis Such As Hashish & Bango	84	93.3
Substances3 :Opioids , Heroin, Tramadol, Codeine ,Nopain , Codaphen-N, Tussilar,&Tussivan	85	94.4
Substances4:Benzodiazepines E.G. Rohphenol , Calmipam, Apetryl, Zanx - Valium – Ativan	70	77.8
Substances5 :Amphetamines E.G. Max , Ivansl ,Cocaine , Ritalin, Ephedrine Derivatives	14	15.6
Substances6 :Volatile Substances	53	58.9
Substances7 : Muscle Relaxants E.G. Sardalod	48	53.3
Substances8 : Hallucinogenic E.G. (Mescaline - L.S.D)	64	71.1
Substances9 : Mescaline, & Thiopental	36	40.0
Substances10: Psychotropic Drugs, Acetone , Nicotine , Cogentin , Migranil, Voodoo, Astrox).	41	45.6

*The answer isn't mutually exclusive

Table (3): The level of craving &total mean score of craving among patients with substance related disorders.

The level of craving &total mean score of Craving	No(N=90)	%
• High level of craving>15	56	62.2
• Low level of craving = <15	37	37.8
Min –Max	0-26	
M ±SD	14±6	

Table (4): The mean score for psychological symptoms (Symptom Checklist-90-Revised) Subscales and Additional Scales among patients with substance related disorder.

Dimensions	Min	_	Max	M	±	SD
Somatization	1.00	–	48.00	20.17	±	11.22
Obsessive-compulsive	7.00	–	40.00	22.30	±	7.04
Interpersonal sensitivity	0.00	–	33.00	19.10	±	6.71
Depression	8.00	–	52.00	32.24	±	9.81
Anxiety	0.00	–	40.00	21.70	±	7.89
Hostility	0.00	–	24.00	12.22	±	5.35
Phobic anxiety	0.00	–	28.00	8.58	±	6.51
Paranoid ideation	1.00	–	24.00	13.64	±	5.35
Psychoticism	3.00	–	37.00	18.80	±	7.28
Additional items	4.00	–	64.00	16.98	±	7.50
Grand Total (GT)	51.00	–	351.00	185.75	±	57.55
-Positive symptom index(PSI)	27.00	–	90.00	64.82	±	15.01
-Positive symptom distress index (PSDI=GT/PST))	1.47	–	4.08	2.86	±	0.62
-Global severity index (GSI= (GT/ 90))	0.57	–	3.90	2.06	±	0.64

Table (5): Correlation between total mean score of craving and substance that patients consumed it   for study group (N=90).

Substance	Total mean score of craving					
	NOT TAKE		TAKE IT		T-TEST	
	M	SD	M	SD	T	P-VALUE
Substance1: include. e.g., Alcohol &Alcoholic beverage	6.50	0.71	3.70	1.96	2.026	**0.048***
Substance2: include e.g. Cannabis such as Hashish &Bango	6.50	0.71	3.70	1.96	2.026	**0.048***
Substance3: include e**.**g**.** Opioids, Heroin, Tramadol l, Codeine, No pain , Coda hen-N, tissular, & Tussivan	6.50	0.71	3.70	1.96	2.026	**0.048***
Substance 4: include Benzodiazepines e.g. Ro phenol, Calmipam, Apetryl, Xanax - Valium - Ativan**.**	4.75	1.67	3.62	2.03	1.463	0.151

    *Significant at P≤0.05   *** * High Significant at P < 0.005**

Table (6): Correlation between psychological symptom (SCL-sub domains) and age for patients with substance related disorders (N=90).

Dimensions	Age =<35		=<45		T-test	
	M	SD	M	SD	T	P-value
Somatization	1.69	0.90	2.52	0.97	-2.602	**0.013***
Obsessive-compulsive	2.36	0.60	2.55	0.65	-0.905	0.371
Interpersonal sensitivity	2.34	0.74	2.11	0.69	0.893	0.377
Depression	2.73	0.70	2.59	0.58	0.572	0.570
Anxiety	2.46	0.72	2.41	0.68	0.226	0.822
Hostility	2.09	0.83	2.58	0.86	-1.679	0.100
Phobic anxiety	1.50	1.01	1.26	0.62	0.728	0.470
Paranoid ideation	2.59	0.74	2.42	0.62	0.662	0.511
Psychoticism	2.06	0.54	2.15	0.52	-0.500	0.620
Additional	17.91	9.77	19.09	4.18	-0.387	0.701
GT	202.12	51.23	212.09	36.69	-0.596	0.554
PSI	67.12	14.08	74.45	14.30	-1.496	0.142
PSDI	3.02	0.47	2.93	0.63	0.527	0.601
GSI	2.25	0.57	2.36	0.41	-0.596	0.554

Significant at P≤0.05**   * High Significant at P < 0.005**

Discussion

Negative psychological states &craving were playing an important role in the substance use relapse **(Engel, etal., 2018).** Consequently, assessing level of craving, and psychological symptoms surrounded by addict patients could be of value in enlightening substance relapse outcomes.

In the yielded study, the majority of the patients were below 35 years old. From the researcher point of view, this may be due to the most of patients having career problems, searching for stable work condition as well as they were struggle for building new family and house.

This is in line with the study which observed that 53.6% patients to be below 35 years old. Studies from Italy, united states, and India has reported similar observations during this concern **(Bhol, Nayak, Mahanta, Sethi, and Dash, 2019; Gallo, 2015; Kumar, Kanchan, Unnikrishnan, Thapar, Mithra, Kul karni, Papanna, Holla, Sarathy, 2013).**

The result of present study reflects the highest percent of patients were male. This might due to the male have a simple access to illicit substances than females and Egyptian culture doesn't support addiction among female. Furthermore, all the patients who attended the rehabilitation centers were males. On the other hand, the use of some substances is considered acceptable in Egyptian culture as, it reflects the masculinity in some popular areas for the males.

Also, the decreased numbers of female patients at the rehabilitation centers may be endorsed to indoors; the poor health seeking behavior among females, as a result of the shame and humiliation they may face on revealing this behavior to their families and people.

The study is in the line of **Ali ,et al (2011)** research entitled " Profile of drug users in Karachi City, Pakistan " that also reported a male prevalence (**Ali, Bushra, and Aslam ,2011;Ali ,2018) .**

More than a half of patients in the present study (53.3 %) had either divorced or separated. The result of this study may be due to the many issues; people who used drugs might tell multiple lies to keep covering their tracks ,neglect their responsibilities , ignore their spouse, suffering from financial problems, difficulty to get intimate relationship with their partners, hindering the sexual ability ,misunderstanding ,and conflicts usually continue to grow so, divorce or separation.

This study is in the line of a study conducted by **Winslow, Ng, Mythily , Song, Yiong (2006)** that entitled with " socio-demographic profile and help-seeking behavior of buprenorphine abusers in Singapore". The results of this study also reveals about one quarter of the patients were divorced or separated.

Regarding residence of the studied subjects, the present study revealed that urban patients constitute 83.3% , which representing higher percentage of addiction than those of rural areas: as the majority of the studied students who addict was living in urban areas.

From the researcher point of view, this be related to that the larger communities are characterized by weaker social cohesion than smaller ones, providing lesser opportunities for socialization and a lower sense of safety and belonging. Such characteristics may not protect adolescents from abusing the substances, as there hindering those alternative ways to cope with negative

feelings, which may lead to addiction. Additionally, lower risk in rural areas may be related to contextual factors, such as neighborhoods with lower crime, socialization, and generally less stressful life circumstances, which may hinder addiction vulnerability. Moreover, the availability of the way of access to the substances that are decreased in rural areas may be another protective factor from addiction

It was observed that 61.2% of the studied subjects were day workers (craft worker). According to the researcher point of view, these results may be attributed to; the daily availability of money with those patients' ,to increase the ability to endure the hard working &pain, and to increase their sexual ability as they believe. On the other hand, many patients reported their first use of drugs were due to their business owners abuse, as they tucked these drugs into patients eating ,and drinking to endure work hard for a longer period of time .

These results were consistent with **Badel,and Greaney (2013**) in study entitled" exploring the link between drug use and job status in the U.S" The researcher reported that" those that are unemployed or otherwise out of the work force may face financial hardship or just have more unstructured time, either of which may end in a higher propensity to consume these substances". The predominate age for the initiation of substance use in this study was less than or equal eighteen years old that represents 61.1% of the studied patients.

From the researcher point of view, these results might be due to curiosity, imitate friends, &accepting friends offer were considered the main causes of initiating substance use. Moreover,

adolescents at this age try to search for a sense of self and personal identity, through an intense exploration of personal values, beliefs, and goals. Thus, started out trying drugs through curiosity after listening to their teen's friend or somebody else describes the way the substance get them feel of being high .so, curious teens often select to experiment these drugs

Results of the current study are in the line with other study that is performed by **Kumar etal. (2013)**that entitled with "profile of substance use among patients attending de-addiction centers in coastal city of southern India" reveals that the age of lesser or eighteen year old age for was the age of substance use initiation.

This study revealed that, the majority of the patients in studied subjects were consumed opioids substances (table3). Also, it was observed from the patients' hospital records that tramadol & heroin were the most used substance via this classification.

From the researcher point of view, results of this study may be due to Egyptian adolescences alleged o use these substances for the treatment of premature ejaculation, for the extension of orgasm, and intensification of sexual pleasure. Also, it was used as painkiller so many craft workers alleged these substances to tolerate the hardship of this work, feeling of happiness and comfort.

The results of this study were compatible with the study performed by **Bassiony, Salah El- Deen, Yousef, Raya, Abdel-Ghani,and El-Gohari, Atwa(2015),**that reported Egyptian youths with SUD revealed a higher percentage of tramadol use that reached 83 % .

Alongside with opioids substances type, the majority of the patients (93.3%). In studied subjects were consumed cannabis substances that include hashish, and marijuana.

This result could attribute to the low price of cannabis compared to other drugs. Also, drug dealers are promoting that cannabis is not an addict substances at all. Furthermore, in recent times, hashish consumption has been promoted indirectly by first class stars of drama series and films, as well as some popular singers as a substance that gives a feeling of excessive happiness, shows the extent of manhood of the star and as an expression of maturity.

The finding of the current study congruent with the Weed Index 2018 report, which reveals Egypt, came fifth ranked in the consumption of cannabis worldwide **(ABCD agency, 2018).**

Concerning the correlation between craving level and substance that patients consumed it, there was a significant difference between craving level and opioids, cannabis, and alcohol substances that patients used it.

From the researcher point of view, these results might be due to, the majority of the study group (table 2) were consumed these substances classes. Also, it was observed from the patients' hospital records that tramadol & heroin were the more reason for seeking treatments among this classification (opioids substance). However, many patients also reported that they basically consume cannabis substances (Hashish) &alcohol substances side by side with tramadol or heroin.

In the present study there was statistically significance between age &somatization symptom of addict patients. From the researcher point of view, the results of this study may be due to ;67.8% of the patients who attended the rehabilitation centers were aged 18—35, the majority of the patients experience withdrawal symptoms due to consumption of the alleged substances. This result is in line with some empirical studies that performed by **Maremmani, Pani, Pacini, Bizzarri, Trogu, Gerra, Perugi ,and Dell'Osso(2010)** that entitled with "Subtyping patients with heroin addiction at treatment entry.

Conclusion:

There are distress in the three indices of the psychological symptoms among the studied subjects; Positive symptom index, Positive symptom distress index, and Global severity index. In addition to, there is more than half (62.2%) of the studied subjects had a high level of craving.

Recommendation:

▪ **In the light of the findings of the present study, the following *are* recommended:** Assessment of level of craving, and psychological symptoms should be incorporated into routine clinical assessment of the patients with addiction and in designing rehabilitation programs grounded on individual requirements.

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