Substance Use Disorders: Suicide and Self-Harm

Abstract

Aims: To specify the demographic and risk factors and type of the substance use disorders most common with suicidal behaviors and self-harm.

Study design: Observational cross-sectional research.

Place and duration of Study: Neuropsychiatry Department and Psychiatry, Neurology and neurosurgery center, Tanta University, Tanta, Egypt. The study was conducted for duration of 6 months from January 2019 to June 2019.

Methodology: This was enrolled 105 aged 18-50 years to assess the type of substance use disorders most common with suicidal behaviours and self-harm with any duration of illness. Subjects were divided into three equal groups: Group 1 included healthy control subjects with no addiction or psychiatric problems with no history suggestive of any health problems. Group 2 included patients with substance use disorders (addict group). Group 3 included psychiatric patients without substance use disorders. All patients were subjected to addiction severity index, Beck Depression Inventory-II, Hamilton Anxiety Rating Scale, Suicide probability scale, Barratt's impulsiveness scale, Self-Harm diagnosis scale and the positive and negative syndrome scale.

Results: There was a significantly different in the suicide categories among the cases with and without heroin intake (p=0.038). There was a significantly positive correlation among addiction severity index (ASI) and suicide score in the addiction group**.**

Conclusion: The incidence of anxiety and depression among individuals with substance use disorders is notably high, particularly at severe levels. We found also positive correlations between ASI and both suicide and self-harm scores in the addiction group. Depression and anxiety are frequently co-occurring in SUD patients.

Keywords: Substance Use Disorders, Suicide, Self-Harm, Suicidal Behaviors

1. Introduction:

Almost every substance use disorder is related with a higher suicide risk. According to studies, the hazard ratio for cocaine usage is 1.35, for psychostimulants, it is 2.10, for benzodiazepines it is 3.83, for cannabis, it is 3.80, and for sedatives, it is 11.36 [1].

The World Health Organization (WHO) identified a link among suicide and mental problems (namely, alcohol use disorders and depression). Taking this into consideration, several studies have observed that approximately forty percent of individuals in therapy for substance use disorders indicate prior suicide attempts [2].

In terms of the suicide disability-adjusted life years attributed to mental and substance use disorders, alcohol dependency was accountable for 13.2 % of self-harm behaviours, second only to severe depressive disorder [3].

Daily Cannabis usage, particularly during adolescence, was related to a 6-8 % raised risk of suicidal ideation [4].

Suicide is connected with a number of risk factors, as psychiatric diseases, psychological condition, genetics, cultural contexts, and social circumstances; additional risk factors include a history of suicide attempts, alcohol and drug misuse, and genetics [5].

There are several pathways in which cannabis use disorders (CUD) may increase the likelihood of self-injury. For instance, the impaired functioning theory proposes that CUD causes functional impairment, which results in self-harm. According to the disinhibition idea, contends that cannabis intoxication causes disinhibition, that clearly raises the risk of self-harm among users [6].

Study on direct and indirect self-injury recommends that NSSI, SSI (Suicidal self-injury), and substance usage are related to various mental health concern, involving internalizing behaviours (e.g., anxiety symptoms , low self-esteem and depressive symptoms) and externalizing behaviours (e.g., criminal activity and violent behaviour) [7].

This research was intended to specify the demographic and risk factors and type of the substance use disorders most common with suicidal behaviours and self-harm.

2. Material and Methods:

This observational cross-sectional research was enrolled 105 subjects of both genders aged 18-50 years to assess the type of substance use disorders most common with suicidal behaviours and self-harm with any duration of illness. This study was conducted at Neuropsychiatry Department and

Psychiatry, Neurology and neurosurgery center, Tanta University, Tanta, Egypt over 6 months from January 2019 to June 2019.

This research was done after approval from the Ethical Committee Tanta University Hospitals. All participants provided informed written consent.

Patients with medical comorbidity or neurological disorders and patients under 18 or above 50 years old were excluded.

Subjects were classified into three equal groups: Group 1 included healthy control subjects with no addiction or psychiatric problems with no history suggestive of any health problems. Group 2 included patients with substance use disorders (addict group). Group 3 included psychiatric patients without substance use disorders.

2.1. All patients were subjected to:

2.1.1. Pre-designed questionnaires:

2.1.1.1. Structure Clinical Interview for DSM5 disorder (SCID-5-CV) Including: Socio-demographic data, present, family, medical history, and current mental state assessment with focus on the substance use history.

2.1.1.2. Addiction Severity Index (McLellan et al., 1992)[8] Arabic version by Qasem et al., 2003 [9]: It collects data on seven functional areas. Each part has questions regarding the frequency, duration, and severity of difficulties across the patient's lifetime and the previous 30 days.

2.1.1.3. Beck Depression Inventory-II (BDI-II) (Appendix the Beck Depression Inventory-Arabic Version (BDI-II) [10, 11]: The self-administered, 21-item questionnaire is rated on a scale of 0 to 3 using a series of four statements grouped in ascending severity concerning a depressive symptom. The BDI-II measures the occurrence and severity of mood symptoms. The measure has two subscales: affective symptoms (8 items) and somatic symptoms (4 items) (13 items).

2.1.1.4. Hamilton Anxiety Rating Scale (Appendix 2) Arabic Version by Fateem [12]: The 14-item scale evaluates psychic anxiety (psychological distress and mental agitation) and somatic anxiety (discomfort and physical tension). Every item is rated on a scale ranging from 0 (not found) to 4 (severe), with a whole score range from 0 to 56, 17 indicates mild severity, 18–24 suggests mild to moderate severity, and 25–30 indicates moderate to severe.

2.1.1.5. Suicide probability scale (SPS) [13] Arabic version by Albehairy [14]: 36 Items scale that describe feelings and behaviours. For a more detailed clinical interpretation, the SPS also provide four subscales: Hostility, suicidal Ideation, Negative Self-Evaluation, and Hopelessness

2.1.1.6. Barratt's impulsiveness scale Arabic version by Ghaffario [15]: The scale was consisted of 30 phrases, which were intended to measure impulsivity among persons under study. The researcher used the Arabic version of the scale, scoring range from mild<70, moderate 70-80, sever >80.

2.1.1.7. Self-Harm diagnosis scale for adolcence and adults: It is 52 items, that explore Physical punishment, Thinking and Affective punishment, self-Neglection, self-Deprivation.

2.1.1.8. The positive and negative syndrome scale. Arabic version by Yehya [16]: The PANSS is a valid and accurate tool for measuring the severity of schizophrenia symptoms. It consists of 30 items spanning three symptom domains: positive symptoms (such as delusions and hallucinations; 7 items), negative symptoms (such as social disengagement, flat affect, and lack of motivation; 7 items), and overall psychopathology (e.g., anxiety, depression; 16 items) [17].

2.1.2. Statistical analysis:

SPSS v27 (IBM, Chicago, IL, USA) was used for statistical analysis. Using the Shapiro-Wilks test and histograms, the normality of the data distribution was determined. The quantitative parametric data were given as mean and standard deviation (SD) and evaluated using the ANOVA (F) test with post hoc comparisons (Tukey). Quantitative non-parametric data were given as the median and interquartile range (IQR), and each group was compared utilizing the Kruskal-Wallis test and the Mann Whitney test. The Chi-square test was utilised to analyse qualitative variables expressed as frequency and percentage (percent). We performed Pearson and Spearman correlations. A two-tailed P value of 0.05 or less was considered statistically significant.

3. Results

Table (1) shows that there was insignificantly different in the age and sex distribution of the cases in the three study groups. The majority of the cases in the psychiatric group (80%) had University or higher level of education as compared with the normal and addict group. There was significant difference among the 3 groups. Marital status was a significantly different among the 3 groups ($p<0.001$). Occupation was considerably different among the 3 groups ($p=0.001$).

Table 1: Comparison of the demographic data in the study groups

Parameters	Normal group (n=35)	Addict group (n=35)	Psychiatric group (n= 35)	*P*-value
Age (years)				0.733 NS
Mean ± SD	33.03 ± 8.26	33.23 ± 9.69	31.83 ± 5.58	
Gender [n (%)]				***P*<0.001 HS**
Male	32 (91.4)	35 (100)	33 (94.3)	
Female	3 (8.6)	0 (0)	2 (5.7)	
Education [n (%)]				***P*<0.001 HS**
Basic education	8 (22.9) a	6 (17.1) a	0 (0) b	
Secondary education	10 (28.6) a	13 (37.1) a	7 (20) b	
University or more	17 (48.5) a	16 (45.8) a	28 (80) b	
Marital status [n (%)]				***P*<0.001 HS**
Divorced	4 (11.4) a	7 (20) a	0 (0) b	
Married	24 (68.6) a	13 (37.1) b	26 (74.3) a	
Single	7 (20) a	15 (42.9) b	9 (25.7) a, b	
Occupation [n (%)]				***P*=0.001 HS**
Working	17 (48.6) a	8 (22.9) b	14 (40) a	
Not-working	18 (51.4) a	27 (77.1) b	21 (60) a	

NS: non-significant at P-value ≥ 0 .05. a, a: similar letters indicate no statistically significant difference between two adjacent groups. a, b: different letters indicate statistically significant difference between two adjacent groups

As shown in table (2), the impulsivity score was considerably increased in both the addiction group and psychiatric group as compared with the normal group. The depression score was significantly increased in both the addiction and psychiatric group than the normal group. The Anxiety Hamilton score was significantly increased in both the addiction and psychiatric group as compared with the normal group. The suicidal score was significantly increased in the addiction group as compared to both psychiatric and the normal group. The mean Self-injury score was significantly increased in both

the addiction and psychiatric group than the normal group (P<0.001). The majority of the cases of normal group was negative for General Psychosis, negative psychosis, and positive psychosis. Regarding Addiction group, 100% of the group was positive for general psychopathology and majority of patients in psychiatric group (97.1%) also positive for general psychosis.

Table 2: Impulsivity, depression, anxiety Hamilton, suicidal attempts, self-injury and psychosis scores.

Parameters	Normal group (n=35)	Addict group (n=35)	Psychiatric group (n= 35)	P-value
Impulsivity score				
Mean ± SD	57.2 ± 10.41 a	75.91 ± 7.14 b	70.14 ± 8.97 b	**P<0.001^{HS}**
Impulsivity categories [n (%)]				**P<0.001^{HS}**
No	19 (54.3) a	0 (0) b	2 (5.7) b	
Mild	14 (40) a	4 (11.4) b	15 (42.9) a	
Moderate	2 (5.7) a	26 (74.3) b	14 (40) c	
Severe	0 (0) a	5 (14.3) b	4 (11.4) b	
Depression score				
Mean ± SD	24.40 ± 8.30 a	37.74 ± 17.74 b	35.49 ± 12.12 b	**P<0.001^{HS}**
Depression categories [n (%)]				**P<0.001^{HS}**
Non-minimal	10 (28.6) a	0 (0) b	3 (8.6) b	
Mild	13 (37.1) a	6 (17.1) a,b	3 (8.6) b	
Moderate	12 (34.4) a	14 (40) a	23 (65.7) b	
Severe	0 (0) a	15 (42.9) b	6 (17.1) c	
Anxiety Hamilton score				
Mean ± SD	11.94 ± 5.10 a	20.97 ± 5.22 b	19.34 ± 6.79 b	**P<0.001^{HS}**
Anxiety categories [n (%)]				
No	20 (57.1) a	2 (5.7) b	4 (11.4) b	**P<0.001^{HS}**
Mild	13 (37.1) a	12 (34.3) a	18 (51.4) a	
Moderate	2 (5.7) a	19 (54.3) b	12 (34.3) b	

Severe	0 (0) a	2 (5.7) a	1 (2.9) a	
Suicidal attempts score				
Mean ± SD	32.49 ± 8.39 a	73.17 ± 26.87 b	48.94 ± 19.41 c	**P<0.001 HS**
Suicidal categories [n (%)]				
No	20 (57.1) a	2 (5.7) b	4 (11.4) b	**P<0.001 HS**
Mild	8 (22.9) a	3 (8.6) a	5 (14.3) a	
Moderate	7 (20) a	4 (11.4) a	18 (51.4) b	
Severe	0 (0) a	26 (74.3) b	8 (22.9) c	
Self-injury score				
Mean ± SD	25.46 ± 19.53 a	49.71 ± 22.74 b	39.54 ± 18.94 b	**P<0.001 HS**
Self-injury categories [n (%)]				
Mild	30 (85.7) a	14 (40) b	20 (57.1) b	***P*<0.001 HS**
Moderate	5 (14.3) a	21 (60) b	15 (42.9) b	
Positive psychosis score				
Mean ± SD	1.66 ± 1.78 a	6.03 ± 9.30 b	1.86 ± 3.45 a	***P*=0.003 S**
Positive psychosis categories [n (%)]				
No	35 (100) a	29 (82.9) b	33 (94.3) a	***P*<0.001 HS**
Yes	0 (0) a	6 (17.1) b	2 (5.7) a	
Negative psychosis score				
Mean ± SD	2.37 ± 3.84 a	3.77 ± 7.96 b	4.23 ± 8.45 c	0.520 NS
Negative psychosis categories [n (%)]				
No	34 (97.1) a	33 (94.3) a	33 (94.3) a	*P*=0.811 NS
Yes	1 (2.9) a	2 (5.7) a	2 (5.7) a	
General psychopathology score				
Mean ± SD	18.74 ± 13.21 a	52 ± 23.78 b	45.26 ± 20.64 b	***P*<0.001 HS**
General psychopathology categories [n (%)]				
No	22 (62.9) a	0 (0) b	1 (2.9) b	***P*<0.001 HS**

Yes	13 (37.1) a	35 (100) b	34 (97.1) b	

HS: Highly significant at P-value ≤ 0.001. S: significant at P-value ≤ 0.05 NS: non-significant at P-value ≥ 0.05 , a, b, c: similar letters indicate no statistically significant difference between two adjacent groups, a, b, c: different letters indicate statistically significant difference between two adjacent groups.

There was a significantly different in the suicide categories among the cases with and without heroin intake (p=0.038) and insignificantly different in the self-harm categories among the cases with and without heroin intake. There was no significant difference in the suicide categories and self-harm categories between the cases with and without cannabis intake, tramadol intake and opiate intake. Table 3

Table 3: Correlation between heroin intake, cannabis intake, tramadol intake and opiate intake and suicide and self-harm

Parameters	No heroin intake (n=25)	Heroin intake (n=10)	P-value
Suicidal categories [n (%)]			**P= 0.038 S**
No	2 (8)	0 (0)	
Mild	5 (20)	0 (0)	
Moderate	11 (44)	2 (20)	
Severe	7 (28)	8 (80)	
Self-harm [n (%)]			**P= 0.147 NS**
Mild	11 (44)	2 (20)	
Moderate	14 (56)	7 (70)	
Severe	0 (28)	1 (10)	

Parameters	No cannabis intake (n=13)	Cannabis intake (n=22)	*P*-value
Suicidal categories [n (%)]			***P= 0.606 NS***
No	1 (7.7)	1 (4.5)	
Mild	2 (15.4)	3 (13.6)	
Moderate	3 (23.1)	10 (45.5)	
Severe	7 (53.8)	8 (36.4)	
Self-harm [n (%)]			***P= 0.246 NS***
Mild	6 (46.2)	7 (31.8)	

Moderate	6 (46.2)	15 (68.2)	
Severe	1 (7.7)	0 (0)	
Parameters	**No tramadol intake (n=23)**	**Tramadol intake (n=12)**	***P*-value**
Suicidal categories [n (%)]			***P= 0.054*** ^{NS}
No	0 (0)	2 (16.7)	
Mild	5 (21.7)	0 (0)	
Moderate	7 (30.4)	6 (50)	
Severe	11 (47.8)	4 (33.3)	
Self-harm [n (%)]			***P= 0.729*** ^{NS}
Mild	8 (34.8)	5 (41.7)	
Moderate	14 (60.9)	7 (58.3)	
Severe	1 (4.3)	0 (0)	
Parameters	**No opiate intake (n=5)**	**opiate intake (n=30)**	***P*-value**
Suicidal categories [n (%)]			***P= 0.217*** ^{NS}
No	1 (20)	1 (3.3)	
Mild	0 (0)	5 (16.7)	
Moderate	3 (60)	10 (33.3)	
Severe	1 (20)	14 (46.7)	
Self-harm [n (%)]			***P= 0.601*** ^{NS}
Mild	1 (20)	12 (40)	
Moderate	4 (80)	17 (56.7)	
Severe	0 (0)	1 (3)	

There was a significantly positive correlation among ASI and suicide score in the addiction group ($p < 0.001$). Figure 1

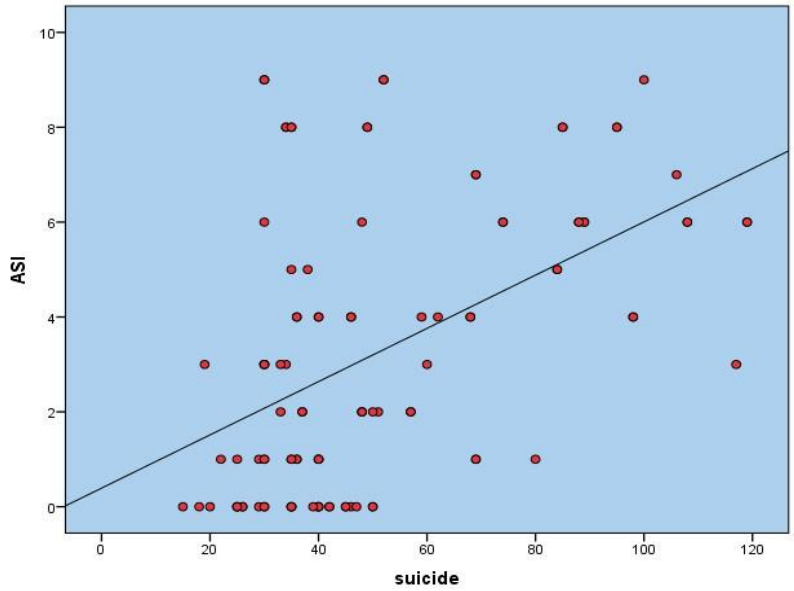

Figure 1: Correlation between Addiction severity Index and suicide in the addiction group

ASI: addiction severity index

There was a significantly positive correlation between ASI and self-harm score in the addiction group. Figure 2

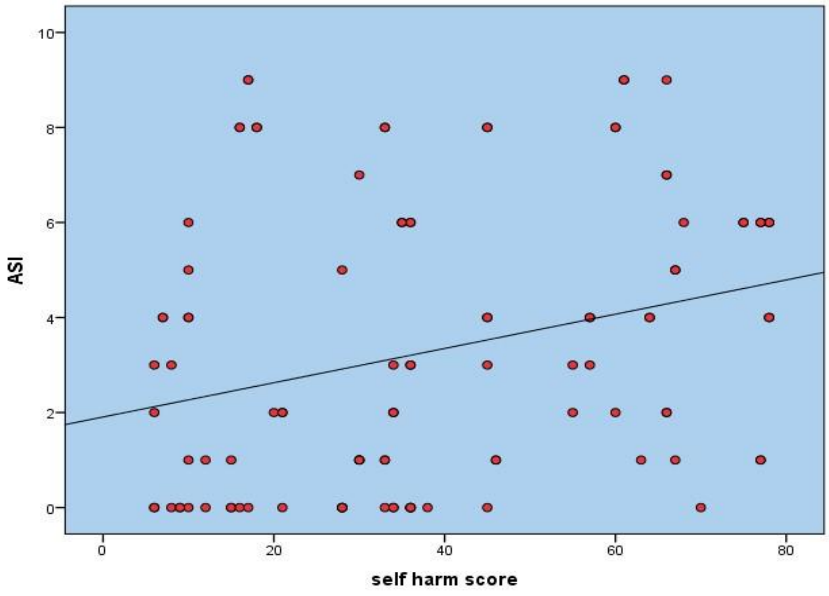

Figure 2: Correlation between Addiction severity Index and self-harm score in the addiction group

ASI: addiction severity index

There was a considerably positive correlation among ASI with anxiety, depression, suicide, positive psychosis, and general psychopathology. There was a considerably positive correlation among depression with anxiety, suicide, self-injury, and general psychopathology. Table 4

Table 4: Correlation between different parameters in the study

		Addiction severity Index	Depression	Anxiety	Suicide	Self-injury	Positive psychosis	Negative psychosis	General psychosis
ASI	r		0.404	0.288	0.489	0.276	0.325	0.161	0.458
	p		<0.001*	0.003*	<0.001*	0.004*	0.001*	0.100	<0.001*
Depression	r	0.404		0.570	0.566	0.540	0.071	0.168	0.221
	p	<0.001*		<0.001*	<0.001*	<0.001*	0.470	0.087	0.023*
anxiety	r	0.288	0.570		0.630	0.611	0.150	0.244	0.381
	p	0.003*	<0.001*		<0.001*	<0.001*	0.126	0.012*	<0.001*
suicide	r	0.489	0.566	0.630		0.623	0.292	0.151	0.375
	p	<0.001*	<0.001*	<0.001*		<0.001*	0.003*	0.125	<0.001*
Self-injury	r	0.276	0.540	0.611	0.623		0.220	0.164	0.242
	p	0.004	<0.001*	<0.001*	<0.001*		0.024*	0.094	0.013*
positive psychosis	r	0.325	0.071	0.150	0.292	0.220		-0.095	0.318
	p	0.001*	0.470	0.126	0.003*	0.024*		0.333	0.001*
negative psychosis	r	0.161	0.168	0.244	0.151	0.164	-0.095		0.202
	p	0.100	0.087	0.012*	0.125	0.094	0.333		0.039*
general psychosis	r	0.458	0.221	0.381	0.375	0.242	0.318	0.202	
	p	<0.001*	0.023*	<0.001*	<0.001*	0.013*	0.001*	0.039*	

r: Spearman correlation coefficient, *: Significant at *P*-value < 0.05

4. Discussion

Suicide is an increasing national and international health concern. According to the WHO, there are over 8 lakh suicide fatalities annually, or one death every 40 seconds. In 2016, suicides accounted for more than 40 million disability-adjusted life years.[18].

Regarding the sociodemographic characteristics among the studied groups, we found that there was not significantly different in the age and sex distribution of the cases in the three study groups.

The majority of the cases in the psychiatric group had University or higher level of education as compared with the normal and addict group. There was a significant variation among the three groups.

According to marital status there was a significantly different among the three groups. Most of the cases in the addiction group were unemployed with significantly different among the three groups.

An Egyptian study by Shahin et al., 2018 [19] studied risk of suicide and its correlations in a 40 substance users and forty controls. And found that the cases' age was 29.09±6.92 years and that of the control group was 28.00±6.71 years. 36 (90%) cases were male in the patient group, vs. 33 (82.5%) males in the control group. With insignificant changes as regard age and sex. Also, they found that there were not significantly differences among patients and control groups as regard marital status, occupation, and educational level. The majority of both groups were Secondary educational level and skilled occupation.

However, the study by Mohamed et al., 2020 [20] enrolled 100 SUD cases and 50 controls. Their average age was 28.1 years. Several cases were married (62%) while 38% were singles. several cases were graduates of either secondary school or its equivalent (67%) or held a university degree (23%).

Our results also showed that the mean impulsivity score was significantly increased in both the addiction group and psychiatric group as compared with the normal group.

In accordance with our findings Shahin et al., 2018 [19] reported that the impulsivity trait as calculated utilizing BIS, the mean and SD for cases was 73.20+10.80, whereas that for the control group was 64.73+10.39. There was a significantly different among the two groups.

The present study revealed that the depression score was significantly increased in both the addiction and psychiatric group as compared with the normal group.

In accordance with our findings, Mohamed et al., 2020 [20] proved that according to Hamilton Depression Rating scale results, 72% of the research sample was reported to possess severe depression in comparison to 6% of the control group. It is noteworthy that just 7% of the SUD group did not exhibit depressed symptoms, compared to 64% of the control group.

We also found that the mean Anxiety Hamilton score was significantly increased in both the addiction group and psychiatric group as compared with the normal group.

Also, our results were supported by Hodgson et al., 2016 [21] who found that more than two thirds of drug addict people had a severe level of anxiety, while most drug non-addict people had a mild level of anxiety.

Our results also showed that the mean suicidal score was significantly increased in the addiction group than the psychiatric group and the normal group. Also, the mean suicidal score was significantly increased in the psychiatric group than the normal group.

We also found that the mean self-injury score was significantly increased in both the addiction and psychiatric group as compared with the normal group.

Accordingly to our findings Gupta et al., 2019 [22] concluded that in the substance-using community, suicide ideation and self-harm attempts are substantially more prevalent than in the overall population.

In the current study we found that the majority of the cases of normal group was negative for general psychosis, negative psychosis, and positive psychosis.

This was consistent with the research by Brunette et al., 2018 [23] who reported Lifetime drug use disorders were associated with male gender, White race, higher levels of excitement (hyperactivity, mood lability, impulsivity, aggressiveness, and uncooperativeness), psychotic and depressive symptoms, less cognitive impairment, and greater felt stigma.

Regarding correlation between substances intake and suicide and self-harm, we found that in the Heroin intake group there was a significantly different in the suicide categories among the cases with and without heroin intake. However, there was insignificantly different in the self-harm categories among the cases with and without heroin intake. Also, there was no significant difference in the suicide categories and self-harm categories between the cases with and without cannabis, tramadol or opiate intakes.

The study by Guvendeger et al., 2017 [24] reported that the risk of self-injury was 1.49 times greater for cannabis users and 0.61 times lower for heroin users.

While the study by El-Hamrawy et al., 2021 [25] reported that as regard Suicidal scale: 31 cases (25.8%) of the study population (SUD patients) revealed SIP (suicidal ideation and planning) most of them (80%) with severe tendencies. There was significantly different among the three groups regarding the number of cases indicating SIP. In the cannabis group, only one case (3.3%) indicated SIP, and 16 cases (40%) in the poly-substances group. When the cannabis group was excluded,

there was still a significantly different among the other three groups regarding the number of participants appearing SIP.

Our results showed that there was a significantly positive correlation among ASI and both suicide and self-harm scores in the addiction group.

We also reported that there was a significantly positive correlation among ASI with Depression, anxiety, suicide, positive psychosis and general psychopathology. There was a significantly positive correlation among depression with anxiety, suicide, self-injury, and general psychopathology.

There was a significantly positive correlation between anxiety with suicide, positive psychosis and general psychosis. There was a significantly positive correlation among suicidal attempts with self-injury positive psychosis and general psychopathology.

Consistent with our finding sMohamed et al., 2020 [20] found that Drug Use Disorder Identification Test is significantly positive correlated with anxiety ($r = 0.256$ and $p = 0.010$) and depression ($r = 0.330$ and $p = 0.001$). Also, it was discovered that anxiety and depression are significantly positive correlated with each other ($r = 0.630$ and $p = 0.001$). The socio-economic status is non-significantly correlated with Drug Use Disorder Identification Test scores ($r = 0.070$ and $p = 0.487$), anxiety ($r = 0.008$ and $p = 0.935$), and depression ($r = 0.048$ and $p = 0.638$).

However, Breet et al., 2018a [26] reported that self-injury not to die was significantly related to acute use of substances, while Suicidal to die was insignificantly related to acute use of substances.

This study's association between anxiety and depression can be explained by the direct causation model, according to which one condition causes or lowers the threshold for the manifestation of the other disorder [27]. According to the shared aetiology hypothesis, also known as the correlated liabilities model, a common set of risk factors leads to the development of depression and anxiety [28].

Our findings are comparable to those of a prior study conducted by Grant et al., 2016 [29] who observed that anxiety is significantly positively correlated with depression,

Limitations: The sample size was restricted, and hence the results cannot be generalized. The study did not address the family characteristics or economic level of subjects and their effect on self-harm or suicide behaviours

Conclusions:

Substance use problems are a substantial public health concern among adolescents, and it is more prevalent in Not-working males in Egyptian population. The frequency of anxiety and depression among individuals with substance use disorders is notably high, particularly at severe levels. We found also positive correlations between ASI and both suicide and self-harm scores in the addiction group. Depression and anxiety are commonly present together in the cases with SUDs.

Authors' contributions:

Hossam ElDen Fathalla Alsawy designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Nahla Abdalla El Morsy and Wessam Abd Al Salam Ghareb managed the analyses of the study. Gamal Taha Shama managed the literature searches. All authors read and approved the final manuscript.

Consent:

All authors declare that 'written informed consent was obtained from the patient for publication of this case report and accompanying images.

Ethical approval:

This research was done after approval from the Ethical Committee Tanta University Hospitals.

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