

## Influence of self-compassion, self-efficacy abstinence and suicidal behavior in clients with Substance Use Disorders

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### Abstract

**Background:** Substance Use Disorder destroys economy, health, relationships and career and has several complications including relapse that often remain untreated. The recent massive increase in drug over dose deaths and suicide from Substance Use Disorder highlights the importance of assessing suicide risk in patients receiving poly or mono substances which remains in limbo. **Aim:** this study aimed to investigate the relation between self-compassion on self-efficacy abstinence and suicidal behavior among patients with Substance Use Disorders. **Design and participants:** A descriptive correlational design was applied in the present study. This study was conducted at out patient's clinic of The Psychiatric and mental health hospital affiliated to ministry of Health and Population (MOHP). The study subject was composed of a convenience sample of 107 clients. **Tools:** three tools were used to collect the data for the study: Self-Compassion Scale (SCS), the suicidal behaviors Questionnaire – Revised (SBQ-R) and Alcohol Abstinence Self-efficacy Scale (AASES). **Method:** The actual study was including interview which lasted between 30 to 45 minutes. Each patient was approached on an individual base and interviewed in privacy by the researcher, signed the informed consent and accomplished the study tools. **Results:** there was a statistical significant negative correlation between self-compassion and suicidal behavior while a statistical significant positive correlation between self-efficacy and self-compassion was found. **Conclusion:** Higher levels of self-compassion and self-efficacy may help buffer risk of active suicide among clients with substance use disorders.

**Key words:** self-compassion, suicidal behavior, self-efficacy abstinence and Substance Use Disorders.

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### Introduction

Substance use disorders (SUD) is a major public health problem in Egypt. Awareness programs for combating and treating addiction in Egypt declare that the alarming statistics of addiction and drug use rates reached 10.4%, (Ministry of Social Solidarity., 2017) which represents double of the global rates, which does not exceed 5% (Elinore F., 2018). According to the DSM-5, substance use disorders are diagnosed by the presence of at least two

of a possible eleven symptoms within a 12-month span. These include the development of tolerance, repeated attempts to abstain or reduce use, withdrawal, social problems linked to use, and craving for the substance (Colledge et al., 2018). SUD results in negative outcomes, such as difficulty meeting responsibilities, health problems, financial costs, and general suffering (Phelps et al., 2018). Moreover, it is also a risk factor for both fatal and nonfatal overdoses, suicide attempts, and death by suicide.

Alongside with this, substance use disorders impacts different aspects of people's biologic, mental and social lives and not only resulted in addiction but negatively affects the substance user's socio-economic status and plays a fundamental role in his/her psyche and emotions (**Akhlaghi et al. , 2017**). The ability to address emotions allows the individual to use proper resistance strategies when exposed to situations where there is a risk of substance abuse and this is play an important role in adapting to life changes and stressful frustrating events (**Fatseas et al. , 2018**)

A critical component in the human capacity to regulate and cope with negative emotions is self-compassion (**Dossing et al., 2015**). It has been defined by Neff (2003) as with three components: (a) self-kindness which is the ability to treat oneself with care and understanding as opposed to being self-judgmental and self-critical; (b) common humanity which refers to the recognition that imperfection and failures are normal and shared aspects of human-beings, as opposed to feeling alone when failing and being imperfect; and (c) mindfulness which involves being aware of and accepting experiences as opposed to over identifying with thoughts and emotions (**Diedrich et al., 2014**) . In addition, it is conceptualized as an adaptive form of self-relation that relating one's stressful experiences to the wider perspective of human experience (**Jones et al., 2015**).

substance use disorders destroys economy, health, relationships and career and has diverse complications including relapse that often remain untreated (**Dolan et al., 2008**).The literature suggests that the interaction between the exposure to high-risk situations, coping skills and self-efficacy underpinnings the process of addiction and relapse (**Hagman et al., 2004**). A cognitive mechanism, is self-

efficacy, which refers to beliefs or judgments of individual about his capabilities to carry out the duties and responsibilities. Sense of self-efficacy is an individual's judgment about their ability to perform an action that can enable people to adopt healthy behaviors and leave harmful ones (**Abdollahi et al., 2014**). It can assist in the prediction of relapse and in designing programs for relapse prevention (**Hagman et al., 2004**). In addition, one of the most important factors that influence the average of relapse is fading self-efficacy in drug addicts (**Dolan et al., 2008**).

Psychiatric disorders including substance use disorders (SUDs), are very often involved in suicide attempts, which are thus strongly associated with the burden and over mortality observed in both opiate and cocaine dependence (**Icick et al., 2017**) .Suicidal behavior is a continuum that includes suicidal ideation, planning, attempts and even suicide completion (**Cintas et al., 2017**). Moreover, the recent massive increase in drug over dose deaths and suicide from drug abuse highlights the importance of assessing suicide risk in patients receiving poly or mono substances which remains in limbo (**Esang & Ahmed ., 2018**).

Yet, So far, only a handful of studies have assessed self-compassion consequences on relapse and recovery process which is essential in the science and treatment of addictions. Therefore, further nursing researches in this area are necessary to comprehend how self-compassion influence on self-efficacy abstinence and suicidal behavior in clients with substance use disorders.

### **Aim of the study**

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The aim of the study was to investigate the influence of self-compassion on self-efficacy abstinence

and suicidal behavior among patients with Substance Use Disorders.

### Research question:

What is the influence of self-compassion on self-efficacy abstinence and suicidal behavior among patients with Substance Use Disorder?

### Subjects & method

#### Research design:

A descriptive correlational design was used in the current study.

#### Research setting:

This study was conducted at out patient's clinic of The Psychiatric and mental health hospital affiliated to The General Secretariat of Mental Health. It provides health care services to Gharbya, Menofia, and Kafr Elsheikh governorates.

#### Subjects:

The study subject composed of a convenience sample of 107 clients selected from the previous setting for 6 months period. The sample size was calculated using Epi-Info software statistical package.

#### Inclusion criteria:

Recovered patients during follow up phase

#### Exclusion criteria:

- 1- During detoxification stage
- 2- Comorbid psychiatric disorders

#### Tools of the study:

Three tools were used to collect data for this study.

**Tool I: Self-Compassion Scale (SCS)** It was developed by Kristin Neff (2003) (Neff., 2003). It is used to identify Self-Compassion. The scale composed of 26 items evaluated on five –point likert scale ranging from 1-5. It consists of six subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. To rank a total self-compassion score, reverse score of the negative subscale items which are self-judgment, isolation, and over-identification, then calculate a total mean. The total score range is from 26 to 150 with higher score indicating greater self-compassion.

In addition, Socio-demographic and clinical characteristics Questionnaire schedule: It was built by the researcher after reviewing the related literature. Socio-demographic data includes patient's age, sex, level of education, type of addicted drug, starting date of addiction, frequency of relapse, health status and legal issues related to addiction.

**Tool II: The suicidal behaviors Questionnaire – Revised (SBQ-R)** (Osman et al., 2001). It was developed by Osman et al 2001. It is used to assess suicide risk. It is consisting of four items, each tapping a different dimension of suicidality. SBQ-R item 1 taps into life time suicide ideation and suicide attempts. Item 2 assess the frequency of suicidal ideation over the past twelve months, item 3 taps into the threat of suicidal behavior, and item 4 evaluates self-reported likelihood of suicidal behavior. Items can be gather to obtain an overall metric of suicide risk, with total scores ranging from 3 to 18. Higher scores on the SBQ-R are an indication of greater suicide risk.

**Tool III: Alcohol Abstinence Self-efficacy Scale (AASES)** (DiClemente et al., 1994). It was advanced by DiClemente et al., 1994. It is designed to

assess self-efficacy as it applies to alcohol and drug abstinence. The scale composed of 40 items, 20 items for abstinence Self-efficacy and the others for temptation, which build in four subscales and are rated on a 5-point Likert scale ranging from not at all (0) to extremely (4) with the total scores ranging from 0 to 80, where higher scores indicate higher self-efficacy to abstain from alcohol or drug use. The four subscales are as the following (a) negative affect, (b) social interactions and positive states, (c) physical and other concerns, and (d) withdrawal and urges. Scores are summed separately for temptation and self-efficacy. To obtain a mean overall abstinence Self-efficacy or Temptation score, sum scores from all items and divide by 20.

### Method

1- Official permission to conduct the study was obtained from the responsible authorities.

2- Ethical Considerations:

- Consent was gained from the clients after clarification of the aim of the study.
- Privacy and confidentiality was assured. Clients were reassured that the obtained information is confidential and used only for purpose of the study.
- Clients' rights to withdraw from the study at any phase were respected.

3- Tools of the study were translated into Arabic language

4- A jury composed of five experts in the psychiatric field assessed the study tools to examine validity of tools.

6- All tools were tested for reliability using Cornbrash's Alpha test and discovered to be ( $\alpha=0.785, 0.64, 0.881$  respectively)

7- A pilot study was carried out on 10% of the patients to verify the clarity and applicability of the study tools and to

determine hurdles that might be faced during data collection. The pilot study was conducted on 5 clients from psychiatric hospital. Those clients excluded from the actual study subjects. After its implementation and according to its results, the necessary modifications were done.

8- The actual study was including interview which lasted between 30 to 45 minutes. Data gathering was completed over a period of 6 months starting from 9-6-2019 to 17-12-2019.

- Each patient was approached on an individual base and interviewed in privacy by the researcher, signed the informed consent and accomplish the study tools.

### Statistical analysis:

The collected data was organized, tabulated, coded and statistically analyzed using the mean, standard deviation standard error, unpaired student t-test, the linear correlation coefficient, Analysis of variance [ANOVA] tests Paired t-test and chi-square by SPSS V19 (Statistical Package for Social Studies) created by IBM, Illinois, Chicago, USA. The level of significance was adopted at  $p<0.05$ .

### Results:

**Table (1)** demonstrates the distribution of the studied subjects related to their socio-demographic and clinical characteristics. It was found that, 40.2 % of clients were in the age group ranging from 30 to less than 40 years with a mean age of  $35.11 \pm 5.269$ . More than half of the studied clients (62.6%) were male compared to 37.4 % female. In relation to religion, more than three quarters of patients (80.4%) were Muslim while 19.6 % of them were Christian. More than half of them (60.7) were divorced while 25.2% were married. As for types of addicted substance, all the clients addicted on cannabis, and tramadol as there were multi use of substances. Regarding starting abuse, most of them reported two

years ago while half of them starting treatment within one year before. Half of them suffering from unstable home atmosphere and exposed to trauma. Considerable percent (74.8%) had Comorbid illness with addiction.

**Table (2)** presented the means and standard deviations of self-compassion subscales. It was observed that Over-identified obtained the highest mean score ( $67.52 \pm 13.879$ ) followed by Isolation, Self-Judgment, Mindfulness, Self-Kindness, and Common Humanity ( $14.67 \pm 3021$ ,  $14.37 \pm 4.757$ ,  $11.81 \pm 3.527$ ,  $10.82 \pm 5.289$ ,  $8.25 \pm 4.318$  respectively). Also, results show that more than half of the subjects (59.8%) gain average level regarding total self-compassion.

**Table (3)** Illustrate distribution of study subjects according to their suicidal behavior levels. It was noted that 46.7% reported above average in relation to life time suicide ideation, followed by half of them gained below average toward frequency of suicidal ideation, and 80.4% of them reported average in respect to threats of suicide attempts while majority of them select low in relation to likelihood of suicide behavior in the future.

**Table (4)** shows Range, mean and standard deviation of total self-efficacy abstinence. The results shows that half of the subjects obtain a weak level regarding total self-efficacy abstinence. As for total self-efficacy confidence and temptation achieve mean score of

$36.57 \pm 3.655$  and  $35 \pm 4.01$ , with a total self-efficacy mean score of  $139.093 \pm 14.328$ .

**Table (5)** reveals correlation between self-compassion, self-efficacy abstinence and suicidal behavior. It was remarked that, there is a statistical significant negative correlation between self-

compassion and suicidal behavior, which confess that with increasing of self-compassion components the suicidal behavior decreased ( $r = -0.602$ ,  $P = <0.001^*$ ). Besides there is a statistical significant positive correlation between self-compassion and self-efficacy abstinence ( $r = 0.700$ ,  $P = <0.001^*$ ).

**Table (6)** Illustrate regression results for suicidal behavior and self-efficacy abstinence based on self-compassion. Regression analysis results show that there is a statistical significant negative correlation between suicidal behavior and self-compassion as the t obtain a score of  $= -7.726$  –  $P = <0.001^*$ . This means that it can predict suicidal behavior significantly. Over and above, results indicate that there is a statistical significant positive correlation between self-efficacy and self-compassion as the t obtain a score of  $= 10.053$ -  $P = <0.001^*$  with  $R^2$  of 49%.

**Table (7)** reveals relation between self - compassion, total self -efficacy abstinence and socio-demographic and clinical characteristics. It was observed that male have high total score for self – compassion and self-efficacy more than female ( $70.478 \pm 13.861$ ,  $142.284 \pm 14.422$  respectively). Regarding to age, the age more than 30 obtain a high level of self-compassion as it denoted by a mean score of  $73.535 \pm 12.048$ . In relation to starting treatment, it was noted that those who joining treatment before two years age have high levels of self – compassion and self – efficacy ( $76.200 \pm 2.950$ ,  $147.800 \pm 5.848$  respectively). Of notes, the results declare that high level of self-compassion and self – efficacy with those with third time of relapse ( $77.300 \pm 7.349$ ,  $146.300 \pm 7.439$  respectively). Aside from, the results exhibit increasing self-compassion and self – efficacy levels in those with Legal issues ( $77.000 \pm 4.991$ ,  $150.667 \pm 7.024$  respectively).

**Table (1) Distribution of the studied subjects in relation to socio-demographic and clinical characteristics.**

Demographic and clinical characteristics	Studied subjects Total (N=107)	
	N	%
<b>Age</b>		
20-	31	29.0
30-	43	40.2
40+	33	30.8
Range	28-43	
Mean $\pm$ SD	35.11 $\pm$ 5.269	
<b>Sex</b>		
Male	67	62.6
Female	40	37.4
<b>Religion</b>		
Muslim	86	80.4
Christian	21	19.6
<b>Marital status</b>		
Single	10	9.3
Married	27	25.2
Widowed	5	4.7
Divorced	65	60.7
<b>Type of addicted substances</b>		
Alcohol	71	66.4
Heroin	15	14.0
cannabis	107	100.0
Tramadol	100	93.5
Cocaine	6	5.6
<b>Starting of abuse</b>		
6 months	7	6.5
One year	9	8.4
Two years	91	85.0
<b>Starting treatment</b>		
6 months	44	41.1
One year	58	54.2
Two years	5	4.7
<b>Home atmosphere</b>		
Yes	48	44.9
No	59	55.1
<b>Trauma exposure</b>		
Yes	60	56.1
No	47	43.9
<b>Relapse frequency</b>		
1	45	42.1
2	52	48.6
3	10	9.3
<b>Comorbid illness</b>		
Yes	27	25.2
No	80	74.8
<b>Legal issues</b>		
Yes	12	11.2
No	95	88.8

Table (2) Range, mean and standard deviation of self-compassion subscales.

Self-compassion Subscales	Percentage of study subjects according to their level of Self-compassion N=107						Range and Mean score	
	weak		Average		High		Range	Mean $\pm$ SD
	N	%	N	%	N	%		
Self-Kindness	73	68.2%	22	20.6%	12	11.2%	5-25.	10.82 $\pm$ 5.289
Self-Judgment	49	45.8%	30	28.0%	28	26.2%	5-24.	14.37 $\pm$ 4.757
Common Humanity	74	69.2%	24	22.4%	9	8.4%	4-20.	8.25 $\pm$ 4.318
Isolation	5	4.7%	27	25.2%	75	70.1%	4-20.	14.67 $\pm$ 3021
Mindfulness	78	72.9%	27	25.2%	2	1.9%	4-20.	11.81 $\pm$ 3.527
Over-identified	17	15.9%	73	68.2%	17	15.9%	33-90	67.52 $\pm$ 13.879
Total Self-compassion	43	40.2%	64	59.8%	0	0.0%	43935	6.36 $\pm$ 2485

Table (3) Distribution of study subjects according to their suicidal behavior levels.

Suicide Items		Suicidal behavior levels					Percent of agreement	Chi-square	
		Low	Below Average	Average	Above Average	High		X <sup>2</sup>	P-value
suicide (1) Life time suicide ideation	N	0	48	5	50	4	29.67 %	74.12 1	<0.001*
	%	0.0%	44.9 %	4.7%	46.7%	3.7%			
suicide (2) Assess frequency of suicidal ideation	N	0	54	4	47	2	28.04 %	85.33 6	<0.001*
	%	0.0%	50.5 %	3.7%	43.9%	1.9%			
Suicide(3) Assess threats of suicide attempts	N	0	7	86	13	1	46.50 %	177.6 73	<0.001*
	%	0.0%	6.5 %	80.4%	12.1%	0.9%			
suicide (4) Evaluate self-reported of likelihood of suicide behavior in the future	N	93	7	3	2	2	6.07 %	300.2 43	<0.001*
	%	86.9%	6.5 %	2.8%	1.9%	1.9%			

Table (4) Range, mean and standard deviation of Total self-efficacy abstinence.

self-efficacy abstinence Subscales	Percentage of study subjects according to their level of Total self-efficacy N=107						Range	Score
	weak		Average		High			
self-efficacy temptation:	N	%	N	%	N	%		Mean ± SD
Negative Affect	19	17.8%	84	78.5%	4	3.7%	4-17.	11.30±2.303
Social/Positive	73	68.2%	34	31.8%	0	0.0%	5-13.	8.470±1.884
Physical and Other Concerns	105	98.1%	2	1.9%	0	0.0%	2-11.	6.72±1.681
Cravings and Urges	78	72.9%	29	27.1%	0	0.0%	6-12.	8.28±1.630
Total self-efficacy temptation	94	87.9%	13	12.1%	0	0.0%	19-44.	35±4.01
self-efficacy Confidence:								
Negative Affect	107	100.0%	0	0.0%	0	0.0%	0-9	5.30±2.061
Social/Positive	62	57.9%	45	42.1%	0	0.0%	5-14.	9.16±1.943
Physical and Other Concerns	3	2.8%	103	96.3%	1	.9%	8-15.	12±1.281
Cravings and Urges	34	31.8%	73	68.2%	0	0.0%	7-13.	10.11±1.327
Total self-efficacy Confidence	85	79.4%	22	20.6%	0	0.0%	27-47.	36.57±3.655
Total self-efficacy Abstinence	57	53.3%	50	46.7%	0	0.0%	99-165	139.093±14.328

Table (5): Correlation between Self-compassion, self-efficacy abstinence and suicidal behavior and among studied subjects.

Correlations	r	Total suicidal behavior	Total self-efficacy abstinence
Total Self-compassion	P-value	-0.602 <0.001*	0.700 <0.001*

Table (6): Regression Results for suicidal behavior and self-efficacy abstinence based on Self-Compassion.

Dependent variables	Independent variables	Unstandardized Coefficients		Standardized Coefficients Beta	t	P-value	R <sup>2</sup>
		B	Std. Error				
Total suicidal behavior	(Constant)	13.633	0.962		14.179	<0.001*	36.20%
	Total Self-compassion	-0.108	0.014	-0.602	-7.726	<0.001*	
Total self-efficacy abstinence	(Constant)	21.339	1.387		15.385	<0.001*	49%
	Total Self-compassion	0.202	0.020	0.700	10.053	<0.001*	

**Table (7) Relation between self – compassion, total self -efficacy abstinence and socio-demographic and clinical characteristics.**

Demographic data		Total Self-compassion		ANOVA or T-test	Total self-efficacy abstinence		ANOVA or T-test
		Mean	± SD		Mean± SD		
Sex	Male	70.478	± 13.861	2.951 <sup>T</sup>	142.284 ± 14.422	3.099 <sup>T</sup>	
	Female	62.575	± 12.582	<b>P 0.004*</b>	133.750 ± 12.620	<b>P 0.002*</b>	
Age	20-	65.387	± 13.099	8.318 <sup>F</sup>	137.516 ± 13.170	3.856 <sup>F</sup>	
	30-	73.535	± 12.048	<b>P 0.000*</b>	137.516 ± 13.330	<b>P 0.024*</b>	
	40+	61.697	± 14.097		137.516 ± 15.405		
Religion	Muslim	67.035	± 14.264	-0.735 <sup>T</sup>	138.721 ± 14.850	-0.542 <sup>T</sup>	
	Christian	69.524	± 12.287	<b>P 0.464</b>	140.619 ± 12.163	<b>P 0.589</b>	
	Single	76.500	± 5.798		146.000 ± 7.817		
Marital status	Married	75.926	± 10.455	11.464 <sup>F</sup>	146.593 ± 11.800	7.974 <sup>F</sup>	
	Widowed	76.400	± 1.673	<b>P 0.000*</b>	149.200 ± 3.701	<b>P &lt;0.001*</b>	
	Divorced	61.969	± 13.779		134.138 ± 14.489		
starting of abuse	6 months	55.000	± 0.000		127.000 ± 3.916	3.168 <sup>F</sup>	
	One year	74.889	± 4.567	4.395 <sup>F</sup>	143.889 ± 8.462	<b>P 0.046*</b>	
	Two years	67.758	± 14.399	<b>P 0.015*</b>	139.549 ± 14.851		
starting treatment	6 months	73.386	± 11.815		145.295 ± 13.469	10.992 <sup>F</sup>	
	One year	62.328	± 13.845	10.590 <sup>F</sup>	133.638 ± 13.263	<b>P &lt;0.001*</b>	
	Two years	76.200	± 2.950	<b>P 0.000*</b>	147.800 ± 5.848		
home atmosphere trauma exposure	Yes	68.979	± 14.839	0.978 <sup>T</sup>	140.625 ± 14.852	0.997 <sup>T</sup>	
	No	66.339	± 13.055	<b>P 0.330</b>	137.847 ± 13.891	<b>P 0.321</b>	
Relapse frequency	Yes	68.450	± 14.765	0.779 <sup>T</sup>	139.833 ± 16.119	0.602 <sup>T</sup>	
	No	66.340	± 12.716	<b>P 0.438</b>	138.149 ± 11.757	<b>P 0.549</b>	
	1	69.311	± 13.608		141.711 ± 14.592	3.907 <sup>F</sup>	
Comorbid illness	2	64.096	± 14.055	4.754 <sup>F</sup>	135.442 ± 14.263	<b>P 0.023*</b>	
	3	77.300	± 7.349	<b>P 0.011*</b>	146.300 ± 7.439		
Legal issues	Yes	78.593	± 7.051	5.390 <sup>T</sup>	148.296 ± 8.686	4.144 <sup>T</sup>	
	No	63.788	± 13.642	<b>P 0.000*</b>	135.988 ± 14.558	<b>P &lt;0.001*</b>	
	Yes	77.000	± 4.991	2.576 <sup>T</sup>	150.667 ± 7.024	5.200 <sup>T</sup>	
	No	66.326	± 14.191	<b>P 0.011*</b>	137.632 ± 14.370	<b>P &lt;0.001*</b>	

## Discussion

Recently, self-compassion has been considered as a crucial predictor of mental health. Self-compassion is a normal form of self-acceptance that represents the acceptance level of undesirable aspects of ourselves and our lives (Basharpoor et al., 2016). The findings of the present study revealed that more than half of the subjects obtained average level of self-compassion. In the same line a study by

Hofmann et al, and Mac Beth et al (2011,2012), found that self-compassion is cross-sectionally correlating with more positive emotions, less negative emotions, and less severity in depressive symptoms in healthy and clinical samples (Hofmann et al., 2011, MacBeth et al., 2012).

Moreover, Allen and Leary (2010) conclude that a self-compassionate attitude promotes a way of coping with negative events that is primarily

characterized by functional non avoiding coping tactics, such as positive cognitive reframing or problem solving (Allen & Leary., 2010). Also, Ehret et al., 2015 revealed that major depressive disorder participants showed lower levels of self-compassion (Ehret et al., 2015). All of these finding could be explained by the following firstly, the self-compassion is a process of adaptation and mental flexibility (Ehret et al., 2018), secondly a person with self-compassion components is capable of having kindness and gentleness attitude toward itself even in the face of failures and mishaps; such an individual understands that all people may experience failure and affliction finally, self-compassion assist in facing suffering, inadequacy, or failure instead of humiliating or blaming by self-criticism.

On the contrary, few studies published to date reveal a negative association between self-compassion and alcohol and substance use disorders (Gila et al., 2019). For example, in an investigation of the correlation between self-compassion and alcohol use among 77 participants in Australia, Brooks et al. found that initially, participants recorded significantly lower than the general population on the positive subscales of self-compassion, self-kindness, common humanity, and mindfulness, and significantly higher on the negative subscales of over-identification, isolation, and self-judgment (Brooks et al., 2012).

The term suicidal behavior is used to indicate a range of behaviors that include ideation of suicide, planning for suicide, attempting suicide, and completed suicide (Cho et al., 2020). The results of the current study revealed that 80.4% reported average in relation to threats of suicide attempts. In the same line, the findings of studies by Icick et al and Miller et al (2017, 1999) found that the levels of exposure to addictive substances were

associated with suicidal attempts in the male subsample (Icick et al., 2017, Miller et al., 1991) and some evidence suggests that substance abuse is related to suicidal behavior (Pages et al., 1997). Moreover, in another study by Wilcox et al (2004), reported that substance use disorder patients' are more likely to die by suicide (Wilcox et al., 2004).

Collectively, substance use disorders confer a risk of suicide that is 10–14 times greater than that of the general population; deaths related to substance use are highest among persons with opiates abuse (Esang & Ahmed ., 2018). In this respect, the presented study revealed that 46.7% of the study subjects reported above average life time suicide ideation. In accordance with this results, a findings of a study illustrate that individuals with marijuana and cocaine use disorders were 2.38 and 3.15 life time suicide attempts (Prince., 2018 ).

These findings and be explained by provision of some risk factors such as: personality traits (impulsivity, aggressively, despair, and pessimism), childhood abuse, loss of income, personal and family breakdowns, among others. Furthermore, some mental disorders increase suicidal behavior in substance use disorder patients, among those mental disorders are included: depression, bipolar disorder, post-traumatic stress disorder and borderline personality disorder (BPD).

In a study by Abdollahi et al (2014), it found that 45 % have low self-efficacy and 25 % have moderate self-efficacy (Abdollahi et al., 2014). This comes in accordance with the results of the current study in which there was 53.3% of the study subjects obtained weak level regarding total self-efficacy abstinence and the rest had average self-efficacy abstinence. Moreover these findings are to some extent consistent with the findings of

a study conducted by **Majer et al (2016)**, which revealed that low levels of abstinence self-efficacy predicted increased substance use at two years among participants (**Majer et al., 2016**). Contrary to drinking frequency, the expected value of self-efficacy at discharge on drinking quantity at 5-year tracking failed to be assured by simple mediation and serial multiple mediation analyses (**Müller et al., 2019**).

It is worth noting that the results of the current study exhibit that the clients reported low levels self-efficacy mean score in the first and second time for relapse. This result may be attributed to the hypotheses that the self-efficacy manifested to have its strongest effects on relapse in the first several months post treatment (**Hagman et al., 2004**). In addition, a study have display that self-efficacy is a predictor of treatment outcome (**Abdollahi et al., 2014**). This become consistent with the findings of the present study which reported high levels of mean score in those clients whose starting treatment with two years ago while the lower levels associated with the first time of relapse . On the opposite direction with the present study results', some author found that higher self-efficacy predicted less drug use only after 3 months but not after 6 months (**Dolan et al., 2008**).

A notable finding in the current study that there was a statistical significant negative correlation between self-compassion and suicidal behavior, which confess that with increasing of self-compassion components the suicidal behavior decreased ( $r = -0.602$ ,  $P = <0.001$ ). This coincides with results of a study conducted by **Phelps et al (2018)**, which indicate that substance use disorder risk is inversely related to self-compassion, such that individuals low in self-compassion may have a higher substance use disorder risk (**Phelps et al.,**

**2018**). On top of that, **Rabon et al results' (2017)** supported the held study findings', which display that there was significant indirect effect of self-compassion on suicidal behavior; as greater levels of self-compassion were accompanied with more wellness behaviors and, in turn, to reduced engagement in suicidal behavior (**Rabon et al., 2017**).

Emerging results of the present study demonstrate that regression analysis results show that there was a statistical significant negative correlation between suicidal behavior and self-compassion as the "t" obtain a score of  $-7.726$ . This means that it can predict suicidal behavior significantly. This remains roughly in line with another study reporting that regression analysis results was significant among self-compassion dimensions. This means that it can foretell suicide ideation significantly (**Basharpoor et al., 2016**).

## Conclusion

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Higher levels of self-compassion and self-efficacy may help buffer risk of active suicide among clients with substance use disorders.

## Recommendation

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**Based on the results of the current study the following recommendation was suggested:**

1- Future research should focus on determining risk factors of both suicide risk and addiction that are associated with short, intermediate, longer-term and lifetime risks.

2- Developing a compassion training program to help addicted clients to deal with their daily life events easily and in satisfactory way.

3- Collaboration between substance use treatment providers, other health care

practitioners, family members, and community resources is imperative to the successful treatment and rehabilitation of patients with substance use disorders

### Conflict of interest

There were no conflicts of interest.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article

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