Dubai Medical College

Epidemiological study of suicidal ideation and suicidal behavior among patients with substance use disorders in a rehabilitation and treatment center for addiction in Dubai

Written by:

Ahmad Muneer

Service Manager addiction, Maudsley Health/Al Amal Psychiatric Hospital Bachelor in Nursing, Diploma in critical care, International Certified Addiction Professional Counselor, Clinical Diploma in Applied Psychological Skills and Competencies in Mental Health and addiction.

Supervised by:

Dr Sahar Helmi Abdel Maqsoud

Associate Professor of Community Medicine PhD Epidemiology, Alexandria University, Egypt Dubai Medical College, UAE

Dr Wael Fouad

FRCPsych, MRCPsych, MSc, MBChB Consultant Psychiatrist and Director of NMU at Erada centre Honorary Assistant professor- Dubai Medical College

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Abstract

Background: Suicide is considered a severe global phenomenon as near to 800,000 people die annually due to suicidal behaviors. Suicide is accountable for 1.4% of deaths worldwide. It was the 18th most common cause of death in 2016 alone, causing one death every 40 seconds. 79% of deaths due to suicide happen in low to middle-income families (WHO, 2018). Suicide is a major public health problem among patients with substance use disorder; however, suicides are preventable with timely, evidence-based and mostly cost-effective interventions even among drug abusers. To our knowledge, few researches studied the prevalence of suicidal ideations / behaviors among patients with substance use disorder in the Middle East and in the UAE, therefore, implications of the current research will be fundamental to address suicide behaviors and its causes among drug abusers. By expanding our understanding to the relationship between substance use disorder, risk factors and suicidality, the capacity of health care providers for better care and management could be improved.

Aim: To describe epidemiological pattern of suicidal ideation and behaviors among selected sample of patients with substance use disorder in a specialized center for treatment and rehabilitation for addiction in Dubai.

Methods: An observational cross-sectional study design was used to collect data between 6th of May 2021 till 15th August 2021, from all patients with substance use disorder, who were seen on working days and who were attending outpatient clinics for the purpose of new admission and follow up, using a structured face to face interview questionnaire.

Findings: the current study revealed an association between depression and the risk of suicide. The highest percentage (92.9%) of SUD patients who had a positive risk for suicide was found among those who had severe depression, followed by those who had moderately severe depression (61.5%). Additionally, this work reported the most common risk factors as reported by the participants were the presence of legal problems, presence of major financial problems, recent death of family member or close friend followed by exposure to domestic/ family violence (63.7%, 50%,41.2% and 38.2% respectively)

Conclusion: suicide remains a public health priority, is a leading cause of death of young adults despite global reductions. However, according to the current study finding the suicidal risks remains–extraordinarily higher among patients with substance use disorder, which requires improvement in the risk assessment, by adapting standardized evidence-based intervention like; universal intervention, brief psychological intervention, attempted suicidal short intervention program (ASSIP), computerized adaptive testing (CAT) and rapidly acting biological agent. This may hold the best hope for improvement in the future.

Keywords:substance abuse; suicide attempt; suicidal ideation; suicide risk

1.0: Introduction

This introduction will provide background knowledge regarding suicidal ideation and suicidal behavior among patients with substance use disorders. It aims to justify the relevance of the topic and its importance within clinical practice.

1.1: Suicidal ideation and suicidal behavior

Suicide is a complex, multifaceted phenomenon, compounded by interactions among numerous factors and risks like environmental conditions, socio-cultural, stressful events, personal and familial histories, as well as neurobiology vulnerability. Suicidal ideations, suicidal attempts and suicide plans are three important concepts that should be defined when researchers study the epidemiology of suicide. The World Health Organization (WHO) defined suicide as "the act of killing oneself intentionally, initiated and performed by the individual concerned in full awareness or expectation of its lethal outcome" (Emro.who.int., 2020). Suicidal ideation is defined as "thoughts of engaging in behavior deliberate to end one's life" (Nock et al, 2008), while suicide attempts are defined as "engagement in potentially selfinjurious behavior with at least some intent to die" (Huang et al., 2020). Suicide plans are a severe form of suicidal ideation in which a method or scenario for attempting suicide is identified (Ojagbemi et al., 2013). The prevalence of these three concepts was reported in a cross-national prevalence and risk factors for suicidal ideation plans and attempts research that was conducted across 17 countries to project the lifetime prevalence of suicidal behaviors. Suicidal ideation was reported at 9.2% (standard error, 0.1), suicidal plan at 3.1% (standard error, 0.1), and suicidal attempt at 2.7% (standard error, 0.1) (Matthew et al., 2008). Moreover, studies of the adolescent suicidal behaviors in 32 low- and middle-income countries reported a 12-month prevalence of suicidal ideation for females of 16.2%, and of 12.2% for males. For

suicidal ideation with plan, the pooled 12-month prevalence for females was 8.3% and for males it was 5.8% (McKinnon, 2016).

1.2: Epidemiology

Suicide is considered a severe global phenomenon as nearly 800,000 people die annually due to suicidal behaviors. Suicide is accountable for 1.4% of deaths worldwide. It was the 18th most common cause of death in 2016 alone, which meant that one person dies every 40 seconds. 79% of deaths due to suicide happen in low to middle-income families (WHO, 2018). Suicide was the tenth leading cause of death overall in the United States of America during 2018, claiming the lives of over 48,000 people (National Institute of Mental Health 2020). Furthermore, according to the World Health Organization (WHO), the age-standardized suicide rate; all ages (per 100,000) estimated suicidal rate in the United Arab Emirates was 2.7/100000 (0.8 for females versus 3.5 for males) (WHO, 2018). Moreover, globally, suicidal behaviors are considered the second leading reason for death for the age group 15-29-years old (WHO 2020). There is growing data to suggest that for each adult who dies due to suicide, there are around more than 20 others who have attempted suicide. Furthermore, a recent publication exploring the epidemiological status of suicide in the Middle East and North Africa countries (MENA) from 1990 to 2017 reported that The United Arab Emirates and Afghanistan have the highest percentage of total suicides DALY attributable to risk factors of alcohol and drug use by (Amini et al, 2021).

Additionally, concerning gender differences between suicidal behaviors, researchers report a gender variance in suicidality. The prevalence of suicide attempts is higher in females that makes them three times more likely to attempt suicide than males. Yet, males are two to four times more probable to die because of suicide (Vijayakumar, 2015). Moreover, males tend to attempt suicide with more lethal methods, for example, firearms, hanging, and asphyxiation,

whereas females are more likely to overdose on medications or drugs (Callanan and Davis, 2012). These differences were addressed in a previous study on suicide and gender (Gold, 2006), which reported various protective factors against suicide in females. That includes a tendency to seek help more in females when they are depressed, a lower intensity of suicidal ideation when attempting suicide, and a lower prevalence of substance use disorders. Furthermore, females have a lower tendency to use highly lethal methods in suicide attempts. Additionally, two research publications investigated the suicidal rates in Dubai; the first study aimed to investigate total and gender related suicide rates in a Dubai population, extract socio and demographic characteristics of suicide objects from 2003 to 2009 by (Kanita Dervic et al,2012). It revealed that "the suicide rate among the UAE citizens (0.9/100,000) was seven times less than the percentage among the expats (6.3/100,000). Moreover, the suicide percentage in males was more than three times the percentage in females. Approximately, the bulk of suicide victims were male, older than 30 years. (Kanita Dervic et al.2012), While the second study between 1992 and 2000 indicated no significant differentiation between Muslims and non-Muslims in the population.(Koronfel 2002) The majority of suicides occurred between the ages of 21 and 40. The most common method of suicide was hanging, whereas among expatriates, the most common method of suicide was jumping from a height or self-poisoning. The same study showed an annual rate of suicide of 6.2/100 000. Of this figure, 27% tested positive for alcohol, with no significant difference among Muslims and non-Muslims .(Koronfel 2002)

Furthermore, substance use disorder is an international severe health disorder, that is currently a significant burden for individuals, families, and populations. According to the World Drugs in the UNODC2017 report, there are more than 29.5 million people left with harmful effects from drug use disorders and SUD, with over 190,900 deaths in 2015. Additionally, the WHO

2015 report estimated that dangerous alcohol use causes 3.3 million deaths each year, accounting for 25% of deaths in the age group 20 to 39 years.

Finally, a survey was conducted by the Substance Abuse and Mental Health Services Administration in 2015 and which found that 9.8 million individuals \geq 18 years old extremely considered suicide in the past 12 months, with 1.4 million attempts of nonlethal suicide (Piscopo et al,2015). Moreover, substance use independently expands the risk of suicidal behavior (Bohnert KM, Ilgen MA, Louzon S, et al,2017). Acute and chronic drug abuse could impair judgement, impair impulse control, and interrupt neurotransmitter pathways, leading to suicidal tendencies through disinhibition (Pompili et al 2010).

1.3: The theoretical basis of the suicide phenomenon

The theoretical basis of the suicide phenomenon was developed to examine the underlying complex multifactorial roots related to suicide behaviors which can provide a more in-depth understanding. The leading three theories of suicide are social theories, psychological theories, and biological factors:

- I- **The social theory** was developed by sociologist Emile Durkheim (1987), to explain patterns of suicide. He highlights that the force which determines suicide is not psychological but social, as he divides the social theories into four categories: the egoistic, the altruistic, the fatalistic, and the anomic, according to different types of interaction between the person and his society.
- II- On the other hand, psychological theories psychodynamic models which propose that suicide is initiated by unconscious drives and manifested by hostile aggression turned inward "retroflexed rage" (Rado S, 1951). Furthermore, according to these theories, three motivations are incorporated into suicidal behaviors: a wish to kill, particularly to kill loved ones; a wish to be killed, accompanied by guilt feelings

related to having murderous desires; and a desire to die (Menninger WW, 2007). However, the **cognitive models** have multiple proposals as following:

- Beck and colleagues hypothesized that suicidal individuals have dysfunctional attitudes and cognitive distortions self-schemas that contain certain negative beliefs. Moreover, the suicidal persons misinterpret their situation negatively. Consequently, looking at the only possible solution is suicidal behavior (Beck AT, et al 2006).
- Orbach focused on the associations of pain and suicide behavior, as he proposed that dissociative tendencies to relative insensitivity to physical pain, which is triggered by certain stressful circumstances, and that once these tendencies are developed, they become an integral part of suicidal behavior (Orbach I, 1994).
- Marsha Linehan proposed that the suicidal persons have skill deficits in two core capacities: the self-regulation impulse and the self-destructive emotions which are considered to be effectual in interpersonal interactions (Linehan MM,1993)
- Mark and Williams present the suicidal act as a cry of pain where suicidal behavior is triggered to escape from confrontation and fear motivated but rather to escape the trap (Mark J,et al 2004).
- III- Psychological and interpersonal model: Joiner (2006) developed an "Interpersonal-Psychological" theory. According to the theory, there are three essential components in every suicide attempt, which are an acquired ability to enact lethal self-injury, habituation to pain, and individual necessity familiarizes to physical pain and the fear of death. The second component is a sense of being distressing to significant others. Finally, the absence of a feel of belonging or relationship with a valued relationship or a group are the symptoms related to the above. Psychosocial model by Shneidman,1998 proposed the presence of three

factors: pain, press, and perturbation, and discussed the interaction between those elements. Moving forward to the **Stress-Diathesis Model**, this model proposes that there is a genetic susceptibility, called diathesis, between persons which predisposes individual to develop suicide which is triggered by stress. However, recently the term "diathesis" has been extended to incorporate cognitive and social tendencies which make a person vulnerable to a condition such as depression. (Dwivedi Y,2012)

1.4: Risk factors and alarming sign in clinical practice for suicide

Numerous different factors contribute to somebody attempting suicide, though, most people at risk tend to share specific characteristics. WHO reported that the relation between suicide and mental disorders (in particular, alcohol use disorders and depression) is well recognized in developed countries. Many suicides occur impulsively at moments of crisis with a interruption in the ability to cope with stressors of life, such as financial problems, marital or relationship break-up or chronic pain and disease (WH0, 2020). The key risk factors for suicide according to a study in youth population can be associated with being the sufferer of violence at school, sexual abuse, running away from home, hopelessness, depressive symptoms, history of physical abuse, self-harm, alcohol use, and a mental health problem. Moreover, additional factors in females are found to be physical abuse, eating disorders, dating violence victimization, recognizing oneself as overweight and psychosocial stressors (Taliaferro and Muehlenkamp, 2014). On the other hand, risk factors like depression, mood disorders, hopelessness, post-traumatic stress disorder, reduced pain sensitivity, fearlessness, physical access to lethal means, and low social support might predict suicidal behavior in the general adult population (Klonsky, 2014).

Furthermore, we can identify an alarming sign in clinical practice for suicidal behavior which must be considered as alarming for clinicians. This mainly includes the following: social isolation, withdrawal from personal networks interactions with partners and friends, fluctuations in energy levels, general well-being and health, family, or work-related issues, extremes of moods emotions fluctuations, and deep emotional decline (Theobald and Cooper, 2011).

Finally, as per the Substance Abuse and Mental Health Services Administration, the most shared warning signs for suicide incorporate the following: Expressing a feeling of being trapped, acting anxious or agitated, irresponsible behaviour, isolation from friends and family, avoiding public situations, aborting hobbies or other sources of enjoyment, heavy drug and alcohol use, severe irritability, hopelessness, unexpected deterioration in work or academic performance and expressing a desire for death (Store.samhsa.gov. 2020).

1.5: Suicide and Drug addiction:

Substance abuse is significantly linked to an increase in the risk of suicide —the highest risk of suicide is amongst people with alcohol use disorders, followed by people who abuse opiates (Esang, 2018). Moreover, alcohol intoxication involved in deaths by suicide is around 22 %; however, the percentage of suicide deaths with other substance were: opiates 20 %, marijuana 10.2 %, cocaine 4.6 % and amphetamines 3.4 % (CDC, 2014). Furthermore, People with substance use disorders have more significant risk of suicide that is 10–14 times greater than that of the general population (Esan and Ahmed, 2018). Recent systematic review investigated the associations amongst substance use suicidal behavior and ideation in low and middle-income countries, which established a consistent positive association throughout all substances (i.e. tobacco, alcohol , cannabis, illicit drugs, non-medical use of prescription drugs) (Breet et al, 2018). Other recent research exploring suicide risk and personality traits among Egyptian

patients with substance use disorders revealed that patients with SUDs had a greater suicide risk (Shahin et al., 2018). Additionally, the lifetime suicide attempts prevalence among patients with alcohol use disorder and bipolar disorder were reported between 21% and 42%. Likewise, about 30-40 % of suicide attempts are associated with acute alcohol intoxication (Cherpitel et al., 2004).

Furthermore, a recent study published online by JAMA Network Open on June 22, 2021 and which was conducted by investigators at the National Institute on Drug Abuse (NIDA), this study was based on data analysis from survey of more than 280,000 aged from 18-35 and presented the association with increased risks of thoughts of suicide (suicidal ideation), suicide plan, and suicide attempt among cannabis (marijuana) users (Han et al, 2021). Those risks were more for women than for men, and these associations persisted irrespective of whether somebody was also suffering from depression. Moreover, the prevalence of suicidal ideation or reporting a suicide plan was 3% of individuals who did not use cannabis and without depression, which increased according to cannabis use to be as following; those with nondaily cannabis use near 7%, individuals with daily cannabis use approximately 9% and individuals with a cannabis use disorder near to14%.

Furthermore, the prevalence of suicidal ideation or reporting a suicide plan among individuals with depression, was 35% without cannabis use. However, individuals with depression and cannabis use reported as following; nondaily cannabis use 44%, of those who used cannabis daily 53%, and those who had a cannabis use disorder 50%. Additionally, the researchers found that women with cannabis use were might Increase the probability to have suicidal ideation or report a suicide plan / attempt than men with the equivalent levels of cannabis use.

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1.6 Suicide methods,

An international suicide pattern analysis that is derived from the WHO database reports a variation in the suicide methods used in different countries. The most common methods were hanging, poisoning, firearm and jumping from a height (Ajdacic-Gross , 2008). On the other hand, the most predominant suicide method among SUD was suicide using knife (52.33%), using drug (16.5%), pieces of glass (14.3%), hanging (9.53%), and using a weapon (7.15%)

(Bakhshani, 2010). Finally, Wilcox and colleagues in 2004 to compared risk for suicide in individuals with alcohol abuse, opioid abuse, injection use, and poly-substance use with risk for suicide between individuals in the general population. This research found that people with substance use in each of these groups were at nine times greater risk for suicide (Wilcox et al,2004). Four mechanisms responsible for alcohol's capability to intensify the risk of suicidal behavior were identified, and which includes alcohol's ability to amplify the psychological distress, violence, push suicidal ideation into action through suicide-specific alcohol expectancies, and compress cognition, which worsens the personal coping strategies (Hufford, 2001). On the other hand, Individuals with opiate use disorders are additionally at a higher risk of suicide attempt; it is reported that 17 % to 47 % of this population to have had a suicide attempt during their lifetime (Darke et al, 2005).

1.7 Suicidal behavior among substance users' literature review.

This section aims to provide a comprehensive summary of the literature that studies the relationship between suicidal ideation and suicidal behavior among patients with substance use disorders. There is a growing body of evidence supporting the relationship between substance use disorders as major risk factor for suicide behaviors. However, less is known about specific risk factors for suicidal ideation and suicidal behavior in people with substance use disorders. Many authors have investigated suicidal behavior among patients with substance use disorders. A cross-sectional study was conducted that included a nationwide inpatient sample of 466,244 adolescents in patients with psychiatric illnesses. Researchers subgrouped the study sample into non-suicidal (N = 283,790) and suicidal (N = 182,454) cohorts (Basith et al 2021). The researchers used a logistic regression model with a P-value < 0.01 to evaluate the association between demographic characteristics and comorbid SUD in the suicidal group. Furthermore, they report that females had higher likelihoods of suicidal behaviors with an odds ratio (OR 1.45; 95% CI 1.431-1.470) and adolescents in patients with comorbid alcohol use disorders were at 18% greater odds of hospitalization for suicidal behaviors (OR 1.18; CI: 1.142-1.209) compared to another SUD. However, cannabis was the most prevalent substance among suicidal inpatients with a statistically non-significant association with suicide. Furthermore, the Previously mentioned study was a recent and important study, and the results of the research can be generalized for inpatients, because of the appropriate sample size, which is considered representative. However, we believe that there are challenges in this study, as the studied sample was of adolescents in patients diagnosed with mental illness, which could include accompanying factors and comorbidities that could limit the research findings related to suicidal behavior among substance users.

Additionally, a recent finding by Han et al 2021 reported an increase of 40% to 60% in suicidal ideation, plan, and attempt over increases attributed to cannabis use and MDE (3,4-methylenedioxymethamphetamine) from 2008 to 2019 (Han et al 2021). Furthermore, the authors report a past-year suicidal ideation rate of 12.4 [Standard Error 0.3] among adults aged 18 to 23, a suicidal plan rate of 3.9 [SE0.2], and a suicidal attempt rate of 2.0 [SE 0.1] among the same age groups. The authors also indicate for this survey study that the risks of suicidal ideation, plan, and attempt in both young adult men and women is correlated with daily cannabis use, and even nondaily cannabis use. We believe that the research outputs show important results and study the phenomenon of association between substances and suicidal behaviors, thoughts, and plans. However, the study relied on information collected using a questionnaire that is self-reported, which can result in underestimating the intensity of ideas and plans regarding the phenomenon as well as One of the most important challenges is that understanding the questions of the questionnaire differs among the participants, which constitutes a real challenge.

Another research article published by the Journal of Clinical Psychiatry, by Gorgulu 2020 studied 257 participants who completed the socio-demographic form as well as data regarding substance use and suicide attempt, using the logistic regression analysis to investigate the predictive variable of suicide attempts. The analysis suggests that having family members with substance users, having friends with substance use behavior in childhood of adolescent period, poly-substance use and aggression are the greatest predictors of the suicide attempts. However, the auther report the correlation among polysubstance use and violence in suicide attempts as not statistically significant (Journal of Clinical Psychiatry, 2020).

However, we note that the target population was only males in this study. Therefore, there is a difficulty in studying the factors correlated with the difference in gender, which can affect the

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statistical analysis, as there is a difference in the severity of behaviors and thoughts associated with gender differences, but this does not contradict the fact that the findings reported by the researcher in this study are important, as they proposed a predictive risk factors as well as proposed family system as a protective factors.

Moving forward, there is a research study entitled "Substance use disorders and risk of suicide in a general US population" that explores these risk factors in the target group among those enrolled in the therapeutic program treated for drug use disorders. The research study was designed using a case-control analysis using electronic medical records (EMR) from eight incorporated Mental Health Research Network with a sample size of 2674 from both genders between 2000 and 2013 by (Little, et al 2020). The main outcome of the research was the associated suicide mortality risk which increased with all categories of substance use disorders; for patients with multiple alcohols, drug, and tobacco use disorders. Adjusted odds ratios were reported to be 11.2 (CI 8.0, 15.6). This proposes that substance use disorders across all categories were connected with an increased relative risk of suicide for both genders. We noted that the target population in the study was limited to people who have health insurance and did not include people in the general population who are not covered by health insurance. And a number of other issues were reported by the researchers as limitations in the study, but this study is unique as it investigates the relationship between phenomena of substance abuse and suicidal behaviors in the community, which has not been studied extensively.

In addition, according to the results of the previous research study, it is possible to move to discuss another similar study in Denmark, a Danish national record-linkage study which explores if substance use disorders are a main risk factor for suicide, using a cohort study evaluated suicide among individuals treated for drug use disorders from national registers with

a sample size of 27,942 individuals engaging in rehabilitation. The main outcome was the standard mortality ratio for people with drug use disorder without a history of psychiatric care was 7.13 (95% CI: 5.81, 8.44), and for individuals with drug use disorder and co-morbid mental health problems history; the standard mortality ratio was 13.48 (95% CI: 9.75, 17.22), and for people with psychiatric history only 13.61 (95% CI: 6.72, 20.50) which means that the risk of suicide is increased among people with drug use disorders co-morbid mental health problems (Hesse, et al, 2020). In this study, the researcher used the available data from national registers, which represents its most important limitation as the researcher loses the advantage of defining and designing the type of data required for the study.

Another recent study investigated suicidal ideation and suicide attempts among substance abusers (Islam, M. and Borak, Z., 2020). The study sample included 100 participants with substance use disorder (70 males and 30 females). The data was analyzed using two analytical statistics: the independent sample t-test and one-way ANOVA, and the main result was reported by the investigators: That males had higher suicidal ideation than females and described a significant difference among the substance abuser's suicidal ideation and suicide attempts, like yaba (a substance which is a combination of methamphetamine and caffeine) It was associated with increased suicidal ideation and more suicide attempts than other substance abusers.

In addition to that, other researchers investigated the prevalence of suicidal behaviors (ideations and attempts) among substance users in Brazilians. The authors analyzed data from The Second Brazilian National Alcohol and Drug Survey as it is a cross-sectional survey that used a multistage cluster design with a sample size of 4,607 participants aged 14 or older. The main finding regarding the prevalence of suicidal ideation and attempts was reported to be

significantly associated positively with a substance used as follows: - among alcohol use the prevalence was reported to be 20.8 and 12.4%, cannabis users the prevalence was reported to be 31.5 and 16.5% and among cocaine users, the prevalence was reported to be 40.0 and 20.8%. (Abdalla et al 2019)

Moving forward to explore the findings in other cross-sectional study published during 2017, which investigated the prevalence of suicidal ideation/plans in the last 12 months in a sample size of 511 male and female users of illicit drugs enrolled in drug treatment and prevention facilities in Catalonia (Spain) during spring 2012 to examine the relations between suicidal ideation/plans and various factors. In this study, the authors used the Poisson regression analysis. Main findings reported the suicidal ideation/plans to be 30.8% in males and 38.8% in females, with no significant differences in prevalence ratio by age or gender. Additionally, the authors reported that illegal/marginal income generation activities were associated with suicidal ideation/plans with male prevalence ratio = 1.5; female prevalence ratio = 1.1. Moreover, the males who trafficked were more likely to develop suicidal ideation/plans by prevalence ratio = 1.3. However, custodial history was positive for females with a prevalence ratio of 1.8 and, on the contrary, for men, the result was negative with a prevalence ratio of 0.7 (Arribas-Ibar et al., 2017).

A previous study by Dragisic et al, 2015, explored the factors that impact the probability of suicidal behavior. Authors involved in survey 200 respondents with heroin addicts on the substitution program; half of the research participants experienced suicidal behaviors, and the other half did not report any suicidal behaviors. Data collection included a questionnaire alongside socio-demographic, addiction data and hereditary, legal problems and then the Minnesota Multiphasic Personality Inventory-2. Moreover, statistically significant results were

reported as different compared to the personality structure, especially marked in hypersensitive structures, in relation to the length of addictive experience and period of intravenous heroin use, as well as in relation to the presence of comorbid psychotic disorders, suicidal behavior and substance abuse in the family.

Furthermore, there is accumulating evidence from a previous research study that points to findings that show that the prevalence of suicidal behavior was lower among the general population than in the population with substance use disorders. This study evaluates the prevalence of suicidal behavior in Kosovo among males with substance use disorders with a sample size of 209 participants aged from15 to 52 years old. The findings reported by the authors in this study propose that drugs exposure might increase the susceptibility to suicidal behaviour, irrespective of drug abuse type (Vehbiu & Bodinaku., 2014). Additionally, there are unique research outputs that were previously published in 2010, which studied the relationship between depression and poor impulse control from one side, and its relationship in predicting suicide ideation/suicide plans or attempts. Those findings reported that suicide ideation. As an alternative, disorders characterized by severe anxiety/agitation and poor impulse control (for example, conduct disorder, substance use disorders) predict which suicide ideates who go on to decide or attempt (Nock, M., Hwang, I., Sampson, N. and Kessler, R., 2010).

However, another study by (Nock, M, et al 2008) reported that fatal Suicide prevalent is more among males while suicidal behaviors are more prevalent between females, these findings led us to other early studies that found females more likely than males to report suicidal ideation, as report thoughts of death (females 50% vs. males 31%), report wish to die (females 39% vs.

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males 21%), males thoughts of committing suicide (females 47% vs. males 33%). Moreover, 63% of females and 47% of males reported at least one of these suicidal thoughts or behaviors (Cottler, et al 2005).

Finally, the prevalence of suicidal attempts or behaviors is documented in the general population. On the other hand, inadequate study exploring about this association between the different population based migrants, however, these phenomena were addressed in recent research by (Salama et al 2020) as the authors inspected the relationship of affective symptoms and suicidal ideation with migrants binge drinking, lifetime cannabis use, and daily smoking among migrants from Russian, Somali, and Kurds in comparison to the general population. Using cross-sectional data, the researchers implemented multivariate logistic regression analyses and reported suicidal ideation associated among Kurds with binge drinking (OR 2.4 95% CI1.3–4.3), and among Russians with lifetime cannabis use (OR 5.5, 95% CI 1.9–15.6). These results highlight the difference in the comorbidity of substance use, suicidal ideation, and affective symptoms between the different population based migrants.

This research study was conducted to investigate the prevalence of suicidal thoughts/behaviours among patients with substance use disorder and to explore risk factors that may contribute to suicidality problems among drug users. Further research is required to expand our knowledge and understanding of the unique associations between different forms of suicidal behavior among substance users.

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2.8: Aim, objectives and Research Questions

1. Aim of the study

To describe epidemiological pattern of suicidal ideation and behaviors among selected sample of patients with substance use disorder in a specialized center for treatment and rehabilitation for addiction in Dubai

2. Objectives

- I. To assess the prevalence of suicidal ideation among a selected sample of patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction in Dubai.
- II. To assess the prevalence of suicidal behaviors among a selected sample of patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction in Dubai.
- III. To investigate factors associated with suicidal ideation and behavior among the same target group in Dubai.

3. Research Questions

- I. What is the prevalence of suicidal ideation among a selected sample of patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction in Dubai?
- II. What is the prevalence of suicidal behaviors among a selected sample of patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction in Dubai?
- III. What are the risk factors of suicidal ideation and behaviors among selected sample of patients with substance use disorder in the same specialized center?

Chapter 2: Methodology

2.1 Study design and setting:

An observational cross-sectional study design used to collect data from all patients with substance use disorder who has been seen on all working days of the week and who was attending outpatient clinics for the purpose of new admission and follow up in Erada Center for Treatment and Rehabilitation in Dubai.

2.2 Target population:

Any patient aged 18 years old and above was included in the current study after his/her approval. Inclusion criteria: Both genders above 18 years old, all socioeconomic and educational levels and patients who fulfilled the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV) criteria for substance use disorders with or without a history of suicidal or deliberate self-harm behavior and the diagnosis were confirmed by one consultant of addiction psychiatry. Exclusion criteria: Patients with acute psychiatric condition; patients with a psychotic comorbidity, dementia and delirium, any patient who does not understand English or Arabic languages and inpatients

2.3 Data collection and Study tool:

A consent forms was distributed in both Arabic and English languages before the start of the interview and a detailed explanation of the purpose of the study was provided. Patient privacy and confidentiality maintained, and patients had the opportunity to ask for any clarification or help from the researcher. After obtaining the consent from the patients, a structured face to face interview questionnaire (English and Arabic versions were available) was conducted in order to collect the needed data from all the patients and data entry done using monkey survey. For cultural sensitivity, a female data collector was chosen from nursing staff of Erada center and she has been introduced to the objectives of the study then a training session on how to use the tool in order to enable her to collect data from female patients.

Tool of the study is consisting of Questionnaire of a total of 48 questions distributed among 5 sections (based on the extensive literature review ((Taliaferro and Muehlenkamp, 2014), (Klonsky, 2014), (Theobald and Cooper, 2011)and (Store.samhsa.gov. 2020)):

1. **Sociodemographic characteristics section**: which is composed of 14 questions including general sociodemographic questions about the gender, age, marital status, level of education, occupation, residency, nationality, smoking status, income and religion.

2. Suicide Screening section (ASQ Screening Tool): (Nimh.nih.gov. 2020)

The Ask Suicide-Screening Questions (ASQ) is a brief psychometrically validated tool for use among both youth and adults (Horowitz, L,2020). This tool developed by the National Institute of Mental Health (NIMH) in 2008, furthermore, this tool was approve by The Joint Commission for all ages. Additionally, The Ask Suicide-Screening Questions consists of four yes/no questions which screen the participation as the following:

Question number 1 screens for the past few weeks, regarding the participants wish to be dead, question number 2 is asking the participants about feeling that himself or his family would be better off if he were dead. Question number 3 is: in the past week, has the participant been having thoughts about killing himself. Lastly, question number 4 screens if the participant ever tried to kill himself. If the participant answers Yes to any of the previous, will be asked Question number 5: "Are you having thoughts of killing yourself right now?"

This screening tool takes less than 2 minutes to screen, however, **If a patient in the suicide screening tool section answers "Yes" to any of questions 1 through 4, or refuses to answer, they are considered a positive screen.** Ask question number 5 to assess acuity: "Yes" to question number 5 will be considered as acute positive screen (imminent risk identified); in this case the patient requires a safety/ full mental health evaluation and the patient cannot leave until evaluated for safety and he will be reported to the triage nurse in the outpatient clinic in Erada Center for Treatment and Rehabilitation in Dubai for extensive mental health evaluation.

Alert physician or clinician responsible for patient's care. If the patient answer "No" to question number 5; so this is a non-acute positive screen (potential risk identified).

- **3.** Depression screening tool (validated international tool) section (Kurt Kroenke, 2001): The main variable outcome of this study is depression. Screening for depression will be done using The Patient Health Questionnaire (PHQ-9) which is a self-administered diagnostic instrument for common mental disorders. The PHQ-9; however, is the depression module, which has 9 questions, and 4 options for each as "0" (not at all), "1" (several days),"2" (more than half of the days), and "3" (nearly every day). As a severity measure, the PHQ-9 score can range from 1 to 4 for minimal depression , 5 to 9 mild depression , 10 to 14 for moderate depression ,15 to 19 moderately severe depression, and 20 to 27 for severe depression.
- 4. Substance use profile composed of 6 questions: including screening regarding the first substance abused, exposure age, cause of abuse, frequency of use, route of administration and current abused drugs like the following substances: Amphetamine ,Methamphetamine, Opiates, Benzodiazepine, Pregabalin, Tramadol and Cannabis.

5. Risk Factors of Suicide section:

We conducted an extensive literature review which enables us to identify the specific characteristics that most people at risk tend to share concerning suicide. First we look at the main risk factors for suicide according to a study in youth population with a risk for suicide by (Taliaferro LA, Muehlenkamp JJ,2014). Instead, we looked into the main risk factors according to a study in general adult population, the risk factors may predict suicidal attempts (Klonsky ED, 2014). Additionally, we identify an alarming sign in clinical practice for suicidal behavior (Theobald T, Cooper C,2011) (Store.samhsa.gov. 2020)

The Risk Factors of Suicide section composed of 14 questions asking about shared risk factors that include: academic failure, aggressive tendencies or history of violent behavior ,bullying, victimization, family conflict , legal problem, history of trauma or abuse ,hopelessness,

impulsivity, low self-esteem ,mental illness ,peer rejection , physical illness or chronic pain, social withdrawal , relational , social, work or financial losses and previous suicide attempt(s), family history of suicide is included, and if the patient has access to lethal weapon.

The Validation of the above tool has been performed through conducting pilot study which was done before the start of the actual research addressing 10 patients and few ambiguous words were corrected in order to remove any misunderstanding. Senior psychiatrist in the field of addiction reviewed the tool as to complete validation process.

2.4 Sampling sample size and Analysis

All patients meeting the inclusion criteria and signing the consent forms between 6th of May 2021 till 15th August 2021. were included in this study. Inclusion criteria: Both genders above 18 years old, all socioeconomic and educational levels and patients who fulfilled the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV) criteria for substance use disorders with or without a history of suicidal or deliberate self-harm behavior and the diagnosis were confirmed by one consultant of addiction medicine. Exclusion criteria: Patients with acute psychiatric condition; patients with a psychotic comorbidity, dementia and delirium, any patient who does not understand English or Arabic languages and inpatients will be excluded from the current research. The number of patient included in the study that meeting the inclusion criteria during the study period is 103 patients. Morover, a descriptive statistical analysis will be performed using SPSS version 27. The chi-square test, student t-test.

2.5 Limitation of the study

The most important limitation of the current study was its cross-sectional design which will not investigate temporal association between substance used disorder and suicidal ideation and behavior, so this study will not prove causal relationship. The second important limitation is its conduction in only Erada Center for Treatment and Rehabilitation in Dubai which could impact the generalizability of results. Also sample size of this study is inadequate, and therefore the results of this study cannot be generalized.

2.6 Ethical consideration

Research participants will be offered full consent prior to the study. Privacy and confidentiality of patients will be preserved with anonyms participation. Researcher will avoid any exaggeration and false information about the objectives of the research. Researchers will avoid the use of offensive or discriminatory language. There will be no invasive technique or collection of blood samples. Researcher will give priority for safety consideration. Any risky patient; detected while conducting the current research, was referred to specialist to assess him / her and to start safety plan as early as possible. Additionally, Patient requires a brief suicide safety assessment to determine if a full mental health evaluation is needed. Patient cannot leave until evaluated for safety. Alert physician or clinician responsible for patient's care.

2.7 Pilot study

The questionnaire was piloted with a number of employees of health care providers who supposed to participated in the data collection as well as interviews were conducted with ten patients using the questionnaire in outpatient clinics to explore the effectiveness of the questionnaire and if there were incomplete or unclear questions. moreover, to explore if the electronic questionnaire was working and collecting data correctly

This opportunity was used to train the researcher as well as staffs on data collection and develop interview skills. Additionally, a pre-training was conducted by researcher for each participant in collecting data and on safety consideration for any positive of suicidal risk with clear action plan, however, those observations were extracted and collected was used in modifying the research questionnaire

A number of questions have been modified by adding extra options Which the researcher considered necessary to collect patient data and to make the questionnaire more accurate. Moreover, it was noted that the electronic version does not allow writing texts in some of the questions that need and which have been modified to ensure that the data is collected in an accurate and comprehensive manner. The pilot revealed that the interview schedule was broad enough to allow for the researcher to explore in depth with participants their experiences. however, the pilot also emphasized that the agreed method of participant enrollment criterion operated well.

2.8: Literature review Search strategy

This literature review will provide an overview of the current evidence base in relation to suicidal ideation and suicidal behavior between patients with substance use disorders. The evaluation will demonstrate how the research question and objectives have been developed in order to address gaps within the present evidence base.

Search strategy

The initial focus of the literature review was to identify papers directly related to suicidal ideation and suicidal behavior between patients with substance use disorders. However, a limited aggregate of literature was discovered that directly addressed the research question. The literature exploration was therefore broadened to include theses that emerged from these initial papers. few researches studied the incidence of suicidal ideations / behaviors among patients with substance use disorder in the Middle East and in the UAE

Database searches were repeated at monthly intervals during the project to monitor for newly published studies. Table 9.1 details the key terms used and data bases searched. The keywords and phrases were used in different combinations. Inclusion criteria for the selection are detailed below in table 9.2. The literature search was originally limited to papers published within the last 10 years. This was later extended to 15 years in order to include a number of key papers. All literature recognized were then investigated to assess their relevance to the research question.

Keywords, phrases			
suicidal ideation and suicidal behavior,			
Epidemiology of suicidal ideation and			
suicidal behavior, The theoretical basis of			
suicide phenomenon, Risk factors for suicide			
and alarming sign in clinical practice,			
Suicide and Drug addiction			
suicidal among substance use disorder			

Table 9.1 to show databases and key search terms used

Table 9.2 to show research literature inclusion criteria

Inclusion criteria

The selected articles were:

- Published within the last 15 years
- Published in English language
- Published in peer-reviewed journals
- All study designs were considered

Chapter 3: Data Analysis, Discussion of Results and Conclusion

3.1 Results of the study

- I. Prevalence pf suicidal ideations and behavior among the studied participants
- II. Socio demographic characteristics of the study sample
- III. Pattern of addiction among patients with substance use disorder
- IV. Possible risk factors associated with suicidal ideations and behavior

Section I: Prevalence of suicidal ideations and behavior among patients with substance use disorder

Table 1 illustrates the prevalence of suicidal ideation and suicidal behavior among the study sample. according to ASQ screening tool, questions 1,2,3 and 5 address suicidal ideation while question 4 address suicidal behavior.

Concerning the prevalence of suicidal ideation, table 1 reveals that in the past few weeks about 31% of the patients with substance use disorder wished they were dead (Q1), nearly 25% reported that they felt that their family would be better off if they were dead (Q2), and 12.6% of patients with SUD had thoughts about killing themselves In the past week (Q3). Only 4.9% of the patients reported that they have thoughts of killing themselves right now (Q5). Regarding the prevalence of suicidal behavior, about one quarter (25.2%) of patient with SUD in the current study reported that they tried to kill themselves (Q4)

Suicide Ideations& Behavior	Reported		Not reported		Total	
	Ν	(%)	N	(%)	N	(%)
1-In the past few weeks, have						
you wished you were dead?	32	31.1	71	68.9	103	100
(Ideation)						
2-In the past few weeks, have						
you felt that you or your family	26	25.2	77	74.8	103	100
would be better off if you were	20					
dead? (Ideation)						
3-In the past week, have you						
been having thoughts about	13	12.6	90	87.4	103	100
killing yourself? (Ideation)						
5.Are you having thoughts of						
killing yourself right now	5	4.9	98	95.1	103	100
(Ideation)						
4.Have you ever tried to kill	26	25.2	77	74.8	103	100
yourself? (Behavior)	20	23.2	,,,	/ 4.0	105	100

Table (1): Prevalence of suicidal ideation and suicidal behaviors among selected patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction; Dubai 2021 (according to ASQ screening tool)

Figure 1 illustrates that more than half of the participants (55.3%) don't have any suicidal risk while 39.8% of the patients with SUD were found to have positive screening for suicidal risk and only 4.9% of the study sample have acute positive screen for suicidal risk.

NB According to ASQ screening tool, patients with SUD who participate in this study were categorized into 3 groups based on their suicidal risk :

- 1. Negative screened category (any patient answers No for all ASQ questions 1 through 4)
- 2. Positive screened category (any patient answers "Yes" to any of questions 1 through 4, or refuses to answer.
- 3. Acute positive screen category IF patient answers Yes" to question #5 (imminent risk identified)

Figure (1): Prevalence of Suicide risk categories among the chosen sample in specialized center for Treatment and Rehabilitation for addiction; Dubai 2021 (according to ASQ screening tool)



Section II: Sociodemographic characteristics of the participants

Table 2 describes Sociodemographic characteristics of the selected participants in the current study. More than Half of the patients (52.4%) were inpatient. Regarding age, about 31% of the patients were 25 to less than 30 years old while 27% were less than 25 years old. The mean age of participating individuals was found to be 29.3 (Mean \pm SD =29.3 \pm 7.6). With regards to gender, majority (92.2%) of the patients were male.

Considering educational level, about 56% of the sample completed secondary education while 1.9% were found to be illiterate or read and write. Most of the participants live in Dubai (46.6%) while one quarter were living in Sharjah (25.2%). Regarding Marital status, more than two third of the participants were single (67%). Majority of the sample (97.1%) were Muslims. Concerning occupation, most of the participants in the current study (71.8%) were unemployed while 15.5% were employed and only 7.8% were student. About 94% of the participants were emirate (UAE nationality)

Among the respondents to the question to the income, about 70% of the participants reported they don't have income while 13.6% reported they have monthly income more than15000 dirhams. Majority of the patient (91.3%) reported that they live with their own family. Concerning type of accommodation; 82.5% of the patients live in villa.

Regarding smoking status majority of the participance (82.5%) were cigarette smokers. While (35.9%) found to smoke other tobacco products and 17.5% were shish smoker.
Socio-demographic variable	Ν	(%)
Patient type		
a) Inpatient	54	52.4
b) Follow-up	42	40.8
c) New assessment	7	6.8
Total	103	100
Age (Years):		
a) < 25 Years	28	27.2
b) 25-30 Years	32	31.1
c) 30-35 Years	24	23.3
d) >35 Years	19	18.4
total	103	100
Mean ±SD	29.3±7.6	
Range	18 -55	
Sex		
a) Male	95	92.2
b) Female	8	7.8
Total	103	100
Education level		
a. Illiterate/read and write	2	1.9
b. Primary education	26	25.3
c. Secondary education	58	56.3
d. University graduate degree	17	16.5
Total	103	100
Residency		
a Dubai	48	46.6
b. Shariah	26	25.2
c. Abu Dhabi	12	11.7
d. Others	17	13.5
Total	103	100
Marital status		
a. Single	69	67
b. married	22	21.4
c. separated	12	11.6
Total	103	100
Religion		
a. Muslim	100	97.1
b. Others	3	2.9
Total	103	100

Table (2): Socio-demographic characteristics of selected patients with substance use disorders in a rehabilitation and treatment center for addiction; Dubai 2021

Occupation		
a. Unemployed	74	71.8
b. Employed	16	15.5
c. Student	8	7.8
d. others	5	4.9
Total	103	100
Nationality		
a. UAE	97	94.2
b. expat	6	5.8
Total	103	100
Income in dirhams \Month		
a) No income	72	69.9
b) < 5000	9	8.7
c) 5000 -15000	8	7.8
d) >15000	14	13.6
Total	103	100
I live		
a. with my family	94	91.3
b. alone	7	6.8
c. in a shared apartment/room	2	1.9
Total	103	100
Where do you live		
a. villa	85	82.5
b. flat	15	14.6
c. others	3	2.9
Total	103	100
Smoking status*		
a. I smoke cigarette	85	82.5
b. I smoke other tobacco products	37	35.9
c. I smoke shisha	18	17.5
d. I do not smoke at all	4	3.9

*Total is not 103 because of multiple responses

Table 3 represent Sociodemographic characteristics of patients with SUD, by Suicide risk categories (according to ASQ screening tool). With regards to age, it was found that 47.4% of those above 35 years had positive suicide risk compared to 37.5% of those who were in the age category 30 years to 35 years old and this difference was not statistically significant (p>0.05). The present study revealed that 45.3% of males were positive for suicide risk compared to 37.5% of females and this difference was not statistically significant (p>0.05).

About 48 % of those who completed secondary education were positive for suicide risk compared of 29.4% who completed university education and the difference was not statistically significant (p>0.05). Percentage of patients with positive suicide risk was found to be 45.5% among married and 44.9% among singles and this difference was not statistically significant (p>0.05).

Regarding occupation, about 56% of employed patients had positive suicide risk compared to 43 % among unemployed patients while 37.5% of students in the current study were positive for suicide risk however this difference was not statistically significant (p>0.05). Concerning income of patients; it was found that 51.4% of participants in the present work who reported that they do not have any income were positive for suicide risk compared to 50% of patients who reported that they had income more than 15000 dirhams while fourth of those who had income between 5000 and 15000 dirhams belong to the positive suicide risk and this difference was statistically significant ($\chi 2 = 9.995$, p= 0.019). About 56% of patients who live without their families had positive suicide risk compared to nearly 44% of patients who live with their families and this difference was not statistically significant (p>0.05).

Table (3) Sociodemographic characteristics of among selected patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction, by Suicide risk categories (according to ASQ screening tool), Dubai 2021

Socio	-Demographic variable	Positive /Acute Suicide Risk		Nega Suicio	Negative / Suicide Risk		Total		р
		Ν	%	Ν	%	Ν	%		
Age									
a) b) c) d)	< 25 Years 25-30 Years 30-35 Years >35 Years	13 15 9 9	46.4 46.9 37.5 47.4	15 17 15 10	53.6 53.1 62.5 57	28 32 24 19	100 100 100 100	0.65	0.884
	Total	46	44.7	57	55.3	103			
Sex									
a)	Male	43	45.3	52	54.7	95	100	0.18	0.671
b)	Female	3	37.5	5	62.5	8	100	0.10	0.071
	Total	46	44.7	57	55.3	103			
Educa a)	tion level Primary education	13	46.4	15	53.6	28	100		
b)	Secondary education University	28	48.3	30	51.7	58	100	1.94	0.4
	graduate degree	5	29.4	12	70.6	17	100		
	Total	46	44.7	57	55.3	103			
M	1								
	n status Singlo	21	44.0	20	55 1	60	100		
$\begin{vmatrix} a \\ b \end{vmatrix}$	married	10	44.9 45 5	12	54.5	22	100	0.05	0.975
	separated	5	417	7	583	12	100		
0)	Total	46	44.7	57	55.3	103	100		
Occup	ation								
	Unemployed	32	43.2	42	56.8	74	100		
b)	Employed	9	56.3	7	43.8	16	100	1 1 4	0.769
c)	Student	3	37.5	5	62	8	100	1.14	0.768
d)	others	2	40	3	60	5	100		
	Total	46	44.7	57	55.3	103			

Income in dirhams a) No income b) < 5000 c) 5000 -15000 d) >15000 Total	37 0 2 7 46	51.4 0 25 50 44.7	35 9 6 7 57	48.6 100 75 50 55.3	72 9 8 14 103	100 100 100 100	9.995	0.019**
I live								
a) with my	41	43.6	53	56.4	94	100	.474	0.491
b) without my	5	55.6	4	44.4	9	100		
Total	46	44.7	57	55.3	103			

** Statistically significant (p ≤ 0.05)

Section III: Pattern of addiction among patients with substance use disorder

Table 4 describes the pattern of addiction among patients with substance use disorder. Regarding the age of first substance exposure the study revealed that the mean age was 16.4 years old (mean \pm SD=16.4 \pm 3.7). The most common causes of the use of the first substance as reported by the participants in the present work were; teenagers curiosity, followed by presence of an addicted person in the family or friends and joy seeking (67%, 28.2% and 21.4 respectively)

Concerning the substance currently used as reported by patients in our study, nearly half (50.5%) reported the use of Methamphetamine, about 48% of the participants use opioid and 45.6% use amphetamine. Cannabis and alcohol were used by small percentage of patients in the current study (15.5% and 9.7% respectively)

Most (68.9%) of the patients with SUD in this study used injection as route of administration. More than third (34%) of patients take drug orally while both smoking and sniffing were used equally as a route of drug administration by our participants in the current research (19.4 % for each one)

Table (4): Characteristics of addiction profile among the among selected patients with substance use disorder in specialized center for Treatment and Rehabilitation for addiction in the present study, Dubai 2021

Addiction profile variables	Yes No		0	
	Ν	(%)	Ν	(%)
Substance currently used: *				
a) Methamphetamine	52	50.5	51	49.5
b) Opioid	50	48.5	53	51.5
c) Amphetamine	47	45.6	56	54.4
d) Pregabalin	35	34.0	68	66.0
e) Benzodiazepine	18	17.5	85	82.5
f) Cannabis	16	15.5	87	84,5
g) Alcohol	10	9.7	93	90.3
h) Other	8	8.24	92	94.76
,	-		-	
Route of administration: *				
a) Injection	71	68.9	32	31.1
b) Oral	35	34.0	68	66.0
c) Sniff (via nose)	20	19.4	83	80.6
d) Smoke (like cigarette)	20	19.4	83	80.6
Causes of the use of first drug: *				
a) Teenager curiosity	69	67	34	33
b) Presence of an addicted			-	
person in the family or	29	28.2	74	71.8
Friends	_			
c) Jov-seeking	22	21.4	81	78.6
d) Psychological disorder	11	10.7	92	89.3
<i>z, j z = z = z = z = z = z = z = z = z =</i>			-	
e) Lack of knowledge about	9	8.7	94	91.3
complications of drugs				
f) Low self-confidence	9	8.7	94	91.3
g) Having free time	9	8.7	94	91.3
h) Parents' divorce	7	6.8	96	93.2
i) Disability in resolving	7	6.8	96	93.2
routine problems				
j) To eliminate shyness	5	4.9	98	95.1
k) Having strict parents	5	4.9	98	95.1
1) Positive attitude toward	3	2.9	100	97.1
drug abuse	-			
m) Low cost of drugs	3	2.9	100	97.1

*Total is not 103 because of multiple responses

Figure2 illustrate the frequency of drug used in the present study. About less than three quarter (74%) of the sample reported using the drug more than once daily while 12% of the patients used the drug once Daily. On the other hand, only 7% of participants reported using the drug once weekly. Those patients who reported the use of the drug once or twice monthly constitute 7%

Figure2: Frequency of the used drug among patients with SUD in specialized center for Treatment and Rehabilitation for addiction; Dubai 2021



Table 5 represent profile of addiction of patients with SUD, by Suicide risk categories (according to ASQ screening tool). More than half of patients who are currently using methamphetamine and amphetamine (51.9% and 51.1%) had positive suicide risk compared to half of patients who reported using alcohol and opioids (50% for each). About 38% of patients who are using cannabis currently were positive for suicide risk. However, the difference was not statistically significant for all types of substance used by patients in this study (p>0.05).

About half of patients (50.7%) who reported using the drug parenterally had positive risk for suicide compared to 45.7% of those who used the drug orally and the difference was not statistically significant for all routes of administration mentioned by patients in this work(p>0.05). It was found that 46% of patients who are using the drug more than once daily had positive suicide risk compared to nearly 42% of those who used the drug only once daily however the difference was not statistically significant (p>0.05).

Addiction profile variables	Positive /Acute Suicide Risk		Negative / Suicide Risk		Total	χ2	р
	Ν	(%)	Ν	(%)			
Substance currently used:*							
a) Methamphetamine	27	51.9	25	48.1	52	2.241	0.134
b) Opioid	25	50	25	50	50	1.121	0.290
c) Amphetamine	24	51.1	23	48.9	47	1.434	0.231
d) Pregabalin	16	45.7	19	54.3	35	0.024	0.877
e) Benzodiazepine	9	50	9	50	18	0.252	0.616
f) Cannabis	6	37.5	10	62.5	16	0.393	0.531
g) Alcohol	5	50	5	50	10	0.128	0.721
h) Other	4	50	4	50	8	0.100	0.752
Route of administration: *							
a) Injection	36	50.7	35	49.3	71	3.378	0.066
b) Oral	16	45.7	19	54.3	35	0.024	0.877
c) Sniff (via nose)	7	35	13	65	20	0.937	0.333
d) Smoke (like							
cigarette)	7	35	13	56	20	0.937	0.333
Frequency of the drug used							
currently:							
a) Once / day	5	41.7	7	58.3	12		
b) >once /day	35	46.1	41	53.9	76	0.113	0.990
c) Once / week	3	42.9	4	47.1	7		
d) 1-2 times/month	3	42.9	4	57.1	7		
Total	47		56		103		

Table (5):- Distribution of Suicide risk categories (according to ASQ screening tool) by Characteristics of addiction profile among participants in the present study;

*Total is not 103 because of multiple responses

Section IV: Possible risk factors associated with suicidal ideations and behavior among patient with SUD

Table 6: illustrates risk factors associated with suicidal ideation and behavior among the patient with SUD. The most common risk factors as reported by the participances were; presence of legal problem, presence of major financial problem, recent death of family member or close friend followed by exposure to domestic/ family violence (63.7%, 50%,41.2% and 38.2% respectively)

Risk factors of Suicidal ideations and behavior	Y	les	No/I	do not now	Total		
	Ν	%	N	%	N	%	
1- Legal problem led to prison	65	63.7	37	36.3	102	100	
2- Suffer from major financial problem	51	50	51	50	102	100	
3- Recent death of a family member or a close friend	42	41.2	60	58.8	102	100	
4- Exposure to domestic/family violence	39	38.2	63	61.8	102	100	
5- Recent breakup in Family relationship	36	35.3	66	64.7	102	100	
6- Recent breakup in emotional relationship	36	35.3	66	64.7	102	100	
7- Previous attempt of suicide	26	25.2	77	74.8	103	100	
8- Currently on treatment plan for any mental / psychiatric disorder	24	23.3	79	76.7	103	100	
9- Exposure to bullying at school/ home/work	23	22.5	79	77.5	102	100	
10- Family history of psychiatric problem***	18	17.6	78	76.5	102	100	
11- Access to guns or other firearms in the home	10	9.8	92	90.2	102	100	
12-Family history of suicide***	8	7.8	91	89.2	102	100	
13-Presence of medical condition:							
a) Hepatitis B/C	9	8.9	94	91.3	103	100	
b) Hypertension	7	6.8	96	97.1	103	100	
c) Diabetes	3	2.9	100	97.1	103	100	
d) Ischemic Heart Disease	1	1	102	99	103	100	
e) Chronic Kidney Diseases	1	1	102	99	103	100	
f) other	13	13					
Total	21						

Table (6): Risk factors associated with suicidal ideation and behavior as reported by participants in the present study; Dubai 2021

*** (I do not know) is applied only for risk factors number 10 and 12

Number who answers in risk factor 10 " I do not know" = 3 Number who answers in risk factor 12 " I do not know" = 6

Table 7 : represent Distribution of Suicide risk categories (according to ASQ screening tool) by reported risk factors of suicidal ideations and behavior among participants in the present study

The highest percentage of patients with positive suicide risk were found among those who reported the following risk factors; family history of suicide (75.0%), exposure to domestic/family violence (66.7%), exposure to bullying at school/ home/work (65.0%), recent breakup in family relationship (63.9%), presence of major financial problem (58.8%) and recent breakup in emotional relationship (55.6%).

The difference between patient with positive suicide risk and patients with negative suicide risk regarding risk factors of suicidal ideation and behaviour in the present study was found to be statistically significate for the following risk factors : Exposure to domestic/family violence, Exposure to bullying at school/ home/work, recent breakup in Family relationship and presence of major financial problem (($\chi 2=11.864$, P=0.001), ($\chi 2=4.855$, P=0.028), ($\chi 2=7.934$, P=0.005), and ($\chi 2=7.761$, P=0.005) respectively).

Table (7): Distribution of Suicide risk categories (according to ASQ screening tool) by reported risk factors of suicidal ideations and behavior among participants in the present study; Dubai 2021

Posi		tive	Negative /			
Risk factors of suicidal	/Acute		Suicide Risk			
ideations and behavior	Suicid	e Risk	~ ~ ~ ~ ~ ~ ~ ~		χ2	р
	N	%	Ν	%		
Family history of suicide						
a) Yes	6	75.0	2	25.0		
b) No	38	41.8	53	58.2	3.863	0.145
c) Refused to answer	2	66.7	1	33.3		
Total	46	45.1	56	54.9		
A family history of						
psychiatric problem						
a) Yes	8	44.4	10	55.6	1 202	0.540
b) No	34	43.6	44	56.4	1.202	0.548
c) Refused to answer	4	66.7	2	33.3		
Total	46	45.1	56	54.9		
Currently on treatment plan						
for any mental / psychiatric						
disorder					0.017	0.905
a) Yes	11	45.8	13	54.2	0.017	0.895
b) No	35	44.3	44	55.7		
Total	46	44.7	57	55.3		
Presence of chronic medical						
condition						
c) Yes	9	52.9	8	47.1	0.565	0.452
d) No	37	43	49	57		
Total	46	44.7	57	55.3		
Exposed to domestic/family						
violence						
a) Yes	26	66.7	13	33.3	11.864	0.001**
b) No	20	31.7	43	68.3		
Total	46	45.1	56	54.9		
Exposed to bullying at						
school/ home/work						
a) Yes	15	65.2	8	34.8	4.855	0.028**
b) No	31	39.2	48	60.8		
Total	46	45.1	56	54.9		
Access to guns or other						
firearms in the home						
a) Yes	4	40	6	60	0.116	0.733
b) No	42	45.7	50	54.3		
Total	45	45.1	56	54.9		
Recent breakup in Family						
relationship						0.007/.
a) Yes	23	63.9	13	36.1	7.934	0.005**
b) No	23	34.8	43	65.2		
Total	46	45.1	56	54.9		

Recent breakup in emotional						
relationship						
a) Yes	20	55.6	16	44.4	2.457	0.117
b) No	26	39.4	40	60.6		
Total	46	45.1	56	54.9		
Presence of major financial						
problem						
a) Yes	30	58.8	21	41.2	7.761	0.005**
b) No	16	31.4	35	68.6		
Total	46	45.1	56	54.9		
Recent death of a family						
member or a close friend						
a) Yes	17	40.5	25	59.5	0.616	0.433
b) No	28	48.3	31	51.7		
Total	46	45.1	56	54.9		
legal problem leads to prison						
a) Yes	31	47.7	34	52.3	0 407	0.495
b) No	15	40.5	22	59.9	0.48/	0.485
Total	46	45.1	56	54.9		

** Statistically significant (p ≤ 0.05)

Table 8 represents Distribution of Suicide risk categories (according to ASQ screening tool) by depression severity categories (according to PHQ-9 questionnaire) among participants in the present study. The current work revealed an association between depression and risk of suicide. The highest percentage (92.9%) of SUD patients who had positive risk for suicide was found among those who had severe depression followed by those who had moderately severe depression (61.5%).The lowest percentage of SUD patients who had positive risk of suicide was found among patients without depression (16.7%) ; there was highly statistically significant difference between severity of depression and presence of risk of suicide (χ 2=22.928, p=0.000).

Table (8): Distribution of Suicide risk categories (according to ASQ screening tool) by depression severity categories (according to PHQ-9 questionnaire) among participants in the present study; Dubai 2021

Scoring of Patient Health Questionnaire (PHQ-9)	Positive /Acute Suicide Risk		Negative / Suicide Risk		Negative / Suicide Risk		Total	χ2	р
	Ν	(%)	Ν	(%)					
No depression	1	16.7	5	83.3	6				
Minimal depression	3	18.8	13	81.2	16				
Mild depression	10	32.3	21	67.7	31				
Moderate depression	11	47.8	12	52.2	23				
Moderately severe						22.928	0.000**		
depression	8	61.5	5	38.5	13				
Severe depression	13	92.9	1	7.1	14				
Total	46	44.7	57	55.3	103				

** Statistically significant ($p \le 0.05$)

Discussion

Prevalence of Suicidal ideation and suicidal behavior:

The prevalence of suicidal attempts (behavior) in the present study was asked in the following structure "have you ever tried to kill yourself? "this was found to be 25%, a higher prevalence (39%) was reported in a cross-sectional study of suicide attempts among 149 patients with substance use disorder in Spain 2019. (López-Goñi, Fernández-Montalvo, Arteaga and Haro, 2019) The difference in figures between the two studies is due to the difference in the characteristics of the target population, as in Spain study researchers measured suicidal attempts among suicidal ideators while we assessed the prevalence of suicidal attempts among SUD patients regardless of the presence of suicidal ideators. Measuring the prevalence of suicide attempts (behavior) among extremely high-risk groups could be an interpretation of the higher prevalence reported by lopez et al (López-Goñi, Fernández-Montalvo, Arteaga and Haro, 2019).

In comparable to other study in Brazil, prevalence of suicidal attempt was found to be 32.6% among 123 records of drug abused patients as the study was retrospective and descriptive targeting medical records of SUD patients with or without psychiatric comorbidity. The difference between the two prevalence rates could be explained by the deference in the inclusion criteria of both studies as in the present work we excluded patients with psychiatric comorbidity. It is well documented that psychiatric comorbidity may increase suicide attempts and / or risk (Bertolote and Fleischmann, 2015) and (Arsenault-Lapierre, Kim and Turecki, 2004).

The present study revealed that the prevalence of suicidal behavior (attempts) is found to be 25%. A higher figure was reported in the following studies that were conducted among patients with substance use problems in Brazil, 43.9% (Abdalla et al., 2019), Ethiopia 41.4% (Legas et al., 2020), Germany 41% (Schneider et al.,2009) and Sweden 33.3% (Rossow, Romelsjo, and Leifman, 1999). On the other hand, the current finding in our study was also higher when compared with other studies such as New Zealand 16.2% (Beautrais et al 1999) and 16% Norway by Bakken. and Vaglum 2007. Comparisons between the previously mentioned figures should be taken with caution due to differences in methodology, including sample size, methods of data collection, and sampling technique.

Concerning suicidal ideation, in the present work we report the prevalence of suicidal ideation during the last few weeks. About 31% of the patients with substance use disorder wished they were dead, nearly 25% reported that they felt that their family would be better off if they were dead, and 12.6% of patients with SUD had thoughts about killing themselves in the past week, only 4.9 % of the patients reported that they have thoughts of killing themselves right now. The present study revealed that 45.3% of males were positive for suicide risk compared to 37.5% of females, and this difference was not statistically significant (p>0.05). a higher prevalence were reported in Bakken,2007 analyses study were found that more likely the females to report thinking about death than men (50% vs. 31%), feeling like they wanted to die (39% vs. 21%), and thinking about committing suicide (47% vs. 33%). (Bakken and Vaglum ., 2007), it was noted that thoughts of committing suicide were found to be higher in prevalence as reported by Bakken and Vaglum 2005 ((47% among males m vs. 33% among females) than in the present work (12.6%). This deference could be explained by the following; larger sample size constituted of 990 drug users in USA study viruses 103 patients in the present work, higher proportion of females in USA study 32% compared to 8% in the present work, difference in the characteristics in both study as patients in USA study has significant criminal justice histories with no exsolution criteria of psychiatric comorbidity. Moreover, the USA study investigated the lifetime prevalence of suicidal thought was assessed in USA study while we assessed the suicide thought prevalence's in the last two weeks only.

Comparable to other study conducted by Al-Sharqi et al 2012 which investigated suicidal behavior, suicidal and self-directed injurious among sample of 736 patients diagnosed with alcohol or drug abuse disorder, this study was conducted at Al-Amal mental health hospitals in Saudi Arabia (Qureshi Naseem, Sherra, Al-Habeeb and Sharqi, 2012). Comparison with present study should be taken with caution due to differences in the methodology, sampling size and used tool. However, we were able to compare these findings with the following finding: Any suicidal and self-injury behavior, wish to be dead and Suicidal thoughts ((13%), (37%) and (10.9%) respectively) (Qureshi Naseem, Sherra, Al-Habeeb and Sharqi, 2012). which were reported in current study as following; Any suicidal and self-injury behavior (25.2%), Wish to be dead (31.1%) and Suicidal thoughts (12.6%). We can observe an increase in the in the number of patients reporting suicidal and self-injury behavior approximately by one-fold in the present study compared to Al-Sharqi et al 2012. Conversely, the rest of the founding; Wish to be dead and Suicidal thoughts were This finding was relatively consistent with our study findings. The difference in the sociodemographic, study time duration, in addition, there

is a clear difference in the substance type used by patients between the two studies, which might explain the difference between the two studies.

Additionally, with regard to comparing our results with research studies in the United Arab Emirates or Dubai. Unfortunately, there is a lack of available research in this regard that examines the field of substances use disorder in general or in the field of suicidal thoughts and behaviors in patients diagnosed with substances use disorder or dependence syndrome we were able to obtain two research studies in this regard; The first study by Al-Maskari et al., 2011,that examined The prevalence of suicidal behavior and depression among male workers in the UAE which revealed the prevalence of suicidal thoughts and attempted suicide were (2.5% 8/265). If we want to compare with the current study, it will be a challenging comparison related to the great difference between the two studies regarding methodology and target population. However, we can observe that our study has a higher figure if we compare the suicidal behavior

25%, Wish to be dead (31.1 %) and the suicidal thoughts (12.6%). With only 2.5% in Al-Maskari et al., 2011. The difference in figures between the two studies might be related to a difference in target population. Where the previous mentioned study was cross-sectional study and conducted in Al Ain city labor camps with no SUD comorbidity, on the other hand current study exploring suicidal ideation, suicidal behaviour and risk factors association among patient with SUD which can be explaining this variation between two study However, we need indepth researche. To explore this phenomenon within the general population and specific population at risk.

As for the second study conducted by Dervic et al., 2012 to investigate suicidal rates in Dubai among the national and expatriate populations the researchers analyzed. Suicide rates by looking to available Registered in Dubai from 2003 to 2009 this study reported the suicide rate among nationals (0.9/100,000 population) and suicide rate among expatriates (6.3/100,000 population). However, It is difficult for us to compare these results with our current study, because Dervic et al., 2012 study was investigating suicide rates among a group of people with previous suicidal thoughts and behaviors and there is a large difference in methodological and research objectives, and the important thing is that these numbers show that the rate of emergence of suicidal thoughts and behaviors in groups of people at risk like SUD may be greater than in the general population (Dervic et al., 2011).

Finally, the results of the current work confirm findings from a recent systematic review. The first study by Breet, Goldstone and Bantjes, 2018, conducted a systematic review which included 108 studies investigating the relationship between substance use and suicidal ideation and behaviour in low- and middle-income countries. Most of the included studies (n = 78) focused on alcohol and tobacco, while only n-19 included studies investigated illicit drugs and prescription medication abuse. On the other hand remarkable were the lack of studies on substances such as methampheta and methcathinone (Breet, Goldstone and Bantjes, 2018). However, the mentioned systematic review revealed a positive consistent association between the presences of suicidal ideation and behavior among patients identified with substance use, this positive association remained across all substance, (Breet, Goldstone and Bantjes, 2018).

The second study conducted a meta-analysis, included 43 studies which explored the risk of suicidal ideation, suicide attempt, and suicide death among people with substance use disorder (n=870967 participants). were reported a significant association between suicidal ideation, suicide attempt and suicide death ((OR 2.04 (95% CI: 1.59, 2.50; I2 1/4 88.8%, 16 studies) , OR 2.49 (95% CI: 2.00, 2.98; I2 1/4 94.3%, 24 studies) and OR 1.49 (95% CI: 0.97, 2.00; I2 1/4 82.7%, 7 studies) respectively) (Poorolajal, Haghtalab, Farhadi and Darvishi, 2015).

Factors Associated with Suicidal Ideation and Suicidal Behaviors

i. factors related to Sociodemographic characteristics

Concerning sociodemographic characteristics, the current study revealed the mean age of participants was 29.3 (Mean \pm SD =29.3 \pm 7.6), (range 18 -55). With regards to gender, the majority (92.2%) of the patients were male. Regarding education about 56% of the sample completed secondary education. Regarding marital status, more than two thirds of the participants were single (67%). About occupation, most of the participants (71.8%) were unemployed, while 15.5% were employed and only 7.8% were students. Approximately 70% of the participants reported that they don't have income. However ,13.6% reported having a monthly income of more than15000 dirhams. The majority of the patients (91.3%) reported that they live with their family. Concerning smoking status, the majority of the participants (82.5%) were cigarette smokers. While (35.9%) found to smoke other tobacco products, 17.5% were shish a smokers.

Comparing Sociodemographic profile in the current study was nearly consistent with other study reported by Al-Sharqi et al 2012, who address suicide among patient with SUD, most

of respondents were male with mean age of the 32.3 ± 9.2 (range 16–60) years. The majority were Saudis (97.4%), unemployed (66.2%), illiterate (25.3%), single (59%), living in families (58.2%), and reported middle income (49.3%). Other study by Hallgren et al., 2017 revealed Participants were mainly male (70%) and unmarried (82%). unemployed (75.7%), Homeless (30%)and Receiving welfare (70%),(Hallgren et al., 2017). However,It is difficult for us to compare these results with our current study related to heterogeneity in previous two studies as first study conducted in Saudi Arabia, while the second work USA. Conversely, with current study we can find similarities in some Sociodemographic profile in the previous mentioned study in terms of; education, occupation, age group, and income levels. The similarity in the findings could be explained by a direct impact of substances abused on Different aspects of patients' lives, such as loss of productivity, loss of income, low educational level, not being married, and failure to complete the stages of education. This can explain the similarity with the current study. We believe that further research study is needed to explore other aspects of the effects and to study the characteristics of protective factors, risk factors and degrees of association.

concerning the smoking status in current work majority of the participance (82.5%) were cigarette smokers. While (35.9%) found to smoke other tobacco products, 17.5% were shisha smokers. These results are consistent with the results of Al-Sharqi et al 2012 work as they revealed that most of the respondents (98.2%) were smokers (Qureshi Naseem, Sherra, Al-Habeeb and Sharqi, 2012).

Concerning sociodemographic characteristics associated with positive suicide risk the current study revealed; (45.3%) of males, (48 %) of those who completed secondary education , (45.5%) of married were positive for suicide risk. while (56%) of employed patients had positive suicide risk, on other hand positive for suicide risk . More than half of those who reported that they do not have any income were positive for suicide risk, about 56% of patients who live without their families had positive suicide risk.in comparison to other retrospective and descriptive study conducted by Cantão and Botti in 2016, distribution of sociodemographic variables and suicidal behavior show; male (74.80%), single (45.53%), with elementary or middle school (73.98%), had children (56.91%), aged 15 to 45 years (74.80%) and unemployed (52.03%) with suicidal behavior. The reported higher figures in this study (Cantão and Botti in 2016) can be explained by to differences in the methodology and sample size and tool of data collection. Another cross-sectional study design which conducted in Spanish reveled male suicidal ideation (77.8%), suicidal ideation among Single were (52%) (López-Goñi, Fernández-Montalvo, Arteaga and Haro, 2019). It is difficult to compare the

current study with the previously mentioned study due to the significant difference in the characteristics of the sample, which also studies suicidal behaviors between patients with SUD who present with suicidal ideation .

In comparable to other study by Al-Sharqi et al 2012 as they reported nearly similarity risk factors associated with Increasing the vulnerable to suicidal behavior and self-injurious behavior if participants were; younger and, single and, had a low income, unmarried and lived in joint families .In spite of the difference in methodology in Al-Sharqi et al 2012 study as they linked these factors with suicidal behaviors only, without any link with ideation (Qureshi Naseem, Sherra, Al-Habeeb and Sharqi, 2012).

Enhance understanding the socio-economic factors of suicidal behaviour might help policy makers to develop interventions across community. it was very difficult in the current work to find any enlightenment of why suicide was higher among certain sociodemographic factors because of the small sample size

ii. <u>Risk Factors Associated with Suicidal</u>

Concerning the risk factor, the present study revealed the most common factors associated with suicidal ideation and suicidal behaviors as reported by the participants were (63.7%) presence of legal problem, (50%) presence of major financial problem, (41.2%) recent death of family member or close friend followed by (38.2%) exposure to domestic/ family violence.

A near finding were reported by Cantão and Botti, 2016 that the majority of dependents had psychiatric family history (73.17%), Family conflict of patients (48.78%), had criminal history conduct (27.64%), end of romantic relationships and death of family members (9.76%),

loss of parental figures in childhood (4.07%) and patient with SUD reported psychological trauma (5.69%). Comparisons between the previous factors and the current study show a similarity between these factors, with a difference in the figure, despite the large difference in methodology, sample size, and methods of data collection as well as Sociodemographic characteristics. (Cantão and Botti, 2016).

The present study revealed an association between depression and the risk of suicide. The highest percentage (92.9%) of SUD patients who had a positive risk for suicide was found among those who had severe depression, followed by those who had moderately severe depression (61.5%). The lowest percentage of SUD patients who had positive risk of suicide

was found among patients without depression (16.7%); These results are consistent with the results of other studies; Cantão and Botti, 2016 work was reported to have similarity relation. Another study by Al-Sharqi et al 2012, revealed that the presence of depression increased the risk probability of suicidal behavior 64 times more. Moreover, a study by (López-Goñi, Fernández-Montalvo, Arteaga and Haro, 2019) reported statistically significant ($\chi 2=4.8$, p= 0.029) relation between depression and presences of suicidal ideation or behavior as this study reported the positive suicide ideation were found to be (71%) among patent with SUD who had severe depression. on the other hand, reported suicide attempt by (86%) among patent with SUD who had severe depression.finally, several previous studies like; (Hallgren et al., 2017), (Carmel et al., 2016), (Dervic et al., 2011), (Bakken and Vaglum, 2007) and (Preuss et al., 2004), those researches investigate various factors associated with suicide Risk/ attempters among SUD patient, has revealed greater suicidality risk among individuals with co-occurring depression and other mental health problems among patient with substance-using disorder. these finding between the relation between depression and suicidal ideation and behavior might be related to patients with depression experience changes in, cognition, emotion, motivation, behavior and physical function which coude attreputed patient at highest risk of attempting suicide during depressive attacks (Diagnostic and Statistical Manual of Mental Disorders: DSM-5 (5th edition), 2014).

Concerning the substances currently used as reported by patients in our study, the majority of the respondents were Polysubstance abusers, nearly half (50.5%) reported the use of Methamphetamine, about 48% of the participants used opioids and 45.6% used amphetamine. Cannabis and alcohol were used by a small percentage of patients in the current study (15.5% and 9.7% respectively). The majority of the participants were with multiple addictive substances, including amphetamines (39.5%), alcohol (19.7%), heroin (17.4%), cannabis (16.3%), however, differences in figures reported between the two study can be related to consistency changing in the patterns of substance abused which can be impacted by several variables like; Religion, Availability of these substances, different demographics and ethnic differences. in addition to the laws regulating drugs each country. In this worke we acknowledge the necessity to study this phenomenon further to identify the influencing factors which can be used to develop a model to predict those changes in patterns of substance abuse that could cast a positive transformation on the future of rehabilitation and prevention. The difference in figures between the two studies is due to a difference in the characteristics of the target population.

3.3 Study Conclusions and Recommendations

3.3.1 Conclusion

- 1. The findings of this study revealed important epidemiological information for the developing of effective suicide prevention program amongst substance users. It was found that the risk of suicidal ideation and suicidal behavior were 44.7% among patients with SUD who participated in the current work.
- 2. We highlight the profile of patients who reported suicidal ideation and suicidal behavior as revealed that (45.3%) of males were positive for suicide risk compared to (37.5%) of females, 48 % of those who completed secondary education were positive for suicide risk compared to (29.4%) who completed university education, and the Percentage of patients with a positive suicide risk was found to be (45.5%)among married and (44.9%) among singles. About (56%) of employed patients had a positive suicide risk compared to (43 %) of unemployed patients. Meanwhile (37.5%) of students in the current study were positive for suicide risk. (51.4%) of participants in the present work who reported that they do not have any income were positive for suicide risk compared to (50%)of patients who reported that they had income more than 15000 dirhams, while a fourth of those who had income between 5000 and 15000 dirhams belong to the positive suicide risk ,and about 56% of patients who live without their families had positive suicide risk compared to nearly 44% of patients who live with their families.
- 3. In regard to the substances profile of patients with SUD, current work revealed that more than half of patients who are currently using methamphetamine and amphetamine (51.9% and 51.1%) had a positive suicide risk compared to half of patients who reported using alcohol and opioids (50% for each).

- 4. Additionally, this work reported the most common risk factors for suicide as reported by the participances were presence of legal problem, presence of major financial problem, recent death of family member or close friend followed by exposure to domestic/ family violence (63.7%, 50%,41.2% and 38.2% respectively)
- 5. Finally, the current study revealed an association between depression and the risk of suicide. The highest percentage (92.9%) of SUD patients who had a positive risk for suicide was found among those who had severe depression, followed by those who had moderately severe depression (61.5%). The lowest percentage of SUD patients who had a positive risk of suicide was found among patients without depression (16.7%).

3.3.2Recommendations

Recommendations targeting health care specialized in treatment and rehabilitation of patients with Substance abuse disorders:

To develop standardized screening programs for depression and suicide among patients with substance abuse disorder, and intensive preventive; therapeutic and psychiatric intervention targeting patients with identified risk

Recommendations targeting Research institutions and agencies:

Further researchs that targeting epidemiology of suicide and its risk factors among patients with substance abuse disorder should be conducted in different areas in UAE (both quantitative and qualitative research)

Recommendations targeting Community and Families:

There is a crucial need for intensive and effective drug abuse prevention programs including suicide awareness that target the entire community including schools and universities, as well as early detection then early referral for treatment and rehabilitation. Concerning the family, raising awareness of families about suicide problem and its contributing familial related factors that may lead to uprise of the incidence of suicide among drug addicts. Furthermore, strengthening the role decision-makers and leaders who have influence in society and who are considered partners in developing and promoting preventive strategies within the community.

3.4: Relevance to clinical practice

To our knowledge, few researches studied the prevalence of suicidal ideations / behaviors among patients with substance use disorder in the Middle East and in the UAE, therefore, implications of the current research will be fundamental to address suicide and its causes among drug abusers. This shall be a cornerstone in attempting prevention strategies for the problem.

The findings of this research emphasize a number of significant implications in behavioral health care practice. Most importantly health professionals must ensure patients are given the opportunity to express their concerns regarding patients with substance use disorders rehabilitation program. Gaining an understanding of the unique issues faced by each individual will enable health professionals to effectively tailor support and advice in order to help patients overcome these obstacles.

As per The Commission on Accreditation of Rehabilitation Facilities (CARF) in 2021 standard manuals as well as the Joint Commission International standard, that Each health care provider in rehabilitation centers must systematically assess the risks of each patient regarding the risk of self-harm, others or suicide. Reliable psychological scales must be adopted to assess behaviors, thoughts, and risks of suicide. Moreover, clears recommendations for Written policies and procedures must be adopted in each health care facility (behavioral health care) that indicate assessment mechanisms, time, frequency, and procedures to be followed to provide the necessary medical care to protect the patient.

the necessary skills must be developed within medical staff to identify the warning signs of the suicide risk, the assessment methods and the necessary procedures to protect the safety of

patients. It is considered one of the responsibilities of the institution. However, the development of these skills is not enough, so the health system must ensure the development of mechanisms to maintain staff's competencies periodically and systematically.

Additionally, A mechanism must be developed to monitor the procedures in terms of the evaluations followed and their effectiveness in determining the risks and the most dangerous categories, evaluating the response of the treatment team and the effectiveness of precautionary measures and medical interventions (key performance indicators)

However, in this research study we cannot determine that substance use disorders caused the increased suicidality but we observed, these associations which demand further research, especially given the great burden of suicidal behaviors. Moreover, as we better understand the relationship between suicidal ideation and suicidal behavior among patients with substance use disorders in a rehabilitation health care provider This study shall be a cornerstone in attempting better understanding the connection which can lead to adapting more effective strategies and additional extra layer in prevention strategies addressing this problem.

Finally, in this study we aknolage the requires improvement in the risk assessment, by adapting standardized evidence-based intervention like;; universal intervention, brief psychological intervention, attempted suicidal short intervention program (ASSIP) (Gysin-Maillart et al., 2016), computerized adaptive testing (CAT) (Gibbons et al., 2017), and rapidly acting biological agent. may hold the greatest hope for improvement in the futur

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Chapter 4: Personal reflection

Starting this research project has been an interesting eventually satisfying experience. The researcher has undergone a phase of revolutionary self-development by enhanced the existing skills and developing an new skills which can maximizing the researcher ability.

4.1: Time management skills

An effective time management skill were essential for any project. The researcher was aware of the threat posed by a lot of challenging factors in time management skills and the fact that action plane needed development. Comprehensive analysis revealed that the main threats to timely completion of the project involved the researcher's tendency to procrastinate and difficulty in organization numerous tasks at once. Use of a project GANTT chart proved to be a useful tool in helping to overcome these barriers. It allowed the researcher to track his progress on a weekly basis which acted as useful means of motivation to keep to the schedule and avoid delay. By highlighting the scale of the research projects and the lots different responsibilities that needed to be accomplished in parallel it emphasized to the researcher the need to undertake several activities at once for example applying for ethical approval at the same time as writing the literature review. Furthermore, The plan was updated according to the developments to meet the new requirements for research to obtain approvals from the Dubai Health Authority, which was an additional challenge, especially in terms of time, as I, the researcher, needed enough time to collect samples. Such has been the value for developing the researcher skills in Time management, researcher will plan to progress this over in future research projects weather in academic or clinical practice.

4.2: Communication Negotiation skills

Communication and negotiation skills are an essential element for successful completion of this research project. For example, the researcher had to develop his communication skills needed in the data collection and negotiate with the line manager of the team to obtain approval. In parallel, I needed to negotiate with the staff to train them to collect required data using the questionnaire for the study and to develop their communication skills, and I needed to follow up closely, especially that communicating with patients who suffer from dependence requires multiple skills.

4.3: Presentation skills

Starting the research projects has provided numerous prospects for the investigator to develop his current presentation skills. Although already an experienced public speaker the research has provided the researchers with opportunity to present to a variety of different formats audiences. For example, presenting to the research ethics committee required the researcher to confidently offer a rationalization and justification of his research project to a panel of research experts as I needed three approvals from three different committees. This eventually proved to be a worthwhile experience which implanted confidence in the researcher of his capability to clearly and knowledgably speak his ideas and also effectively deal with panel of research experts. Additionally, presenting the final research to colleagues in poster format has meant the researcher has had to developed These new skills in presenting successfully the information in a visual format. These new skills will be precious in his future role.

4.4: Managing role conflict

Being a clinician by background who was known to several of the participants in a clinical capacity led to a sense of role conflict for the researcher. Despite making it clear at the outset of the interview that he was here in a research capacity and would be unable to answer any questions of a clinical nature a number of participants asked the researcher questions related to their clinical condition related to substance use disorders. In addition, during the course of the interview a number of participants made statements related to their substance use disorders or other families conflicts which the researcher felt challenging. The researcher referred these issues back to the usual clinical team.

he was also concerned that this may negatively influence patients' perceptions of him since particularly since he may become their usual clinician on return to practice. Debriefing with a clinical mentor following the interviews helped the researcher to process and acknowledge the boundaries of the researcher role.

Ongoing development and learning will be required for the researcher to actually develop his ability in the role of researcher – practitioner. On which can maximizing his opportunities to engage in research-based activities.

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Appendices



Committee at DMC of publications and oral presentations that might be achieved as a result of this

research project. Let us know of any intended changes to the submitted protocol before implementation.

Sincerely,

Dr. Hafez Ahmed,

PhD, MSc, MB BCh, Dip-RCPath (London, Chemical Pathology),

HEA Member (UK), PG-Cert (HED., Kingston University, UK).

Professor of Biochemistry,

Director of Research Ethics Committee,

DMC, Dubai, UAE.

Appendix	2: Erada ethical approval		
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GOTE	ECTR-MED-GL-21032021-004	2021-03-21	
	Subject: Letter of Approval t	o Conduct a Study	
	Dear Medical Education and Research Department (M	ERD),	
	Please note that Ahmad Muneer Naser, DMC Student	ID number: AMN20190301, is	
	conducting a research titled: Epidemiological study of	suicidal ideation and suicidal behavior	
	among patients with substance use disorders in a reha	bilitation and treatment center for	
	addiction in Dubai. for their Master's Degree in Addict	on Science in Erada Center for	
	Treatment and Rehab in Dubai, and we approve of this	research pending DHA approval.	
4			
T	H	T	
	Sincerely,		
	Prof. Hamdy Moselhy		
	Medical Director – Erada Center for treatment a	nd rehab in Dubai	
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	DR. HAMDY		
- 2	Consultant Psychiatry		
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Appendix 3: DHA/ Dubai Scientific Research Ethics Committee ethical approval



DUBAI SCIENTIFIC RESEARCH ETHICS COMMITTEE APPROVAL LETTER



From :	Dubai Scientific Research Ethics Committee (DSREC) Dubai Health Authority	Date :	06 MAY 2021
To :	Mr. Ahmad Muneer Naser, Student, Dubai Medical College	Def	DCDEC CD 05 /2021 02
Study Site	ERADA Center, Dubai	Ker:	DSREC-5K-05/2021_03

Subject: Approval for the research proposal, <u>"Epidemiological study of suicidal ideation and</u> suicidal behavior among patients with substance use disorders in a rehabilitation and treatment center for addiction in Dubai"

Dear Student Researcher,

Thank you for submitting the above mentioned research proposal to Dubai Scientific Research Ethics Committee, DHA. The Dubai Scientific Research Ethics Committee has been organized and operates in accordance with the ICH/GCP and the committee is registered with the Office for Human Research Protection (OHRP).

Your request was discussed with Dubai Scientific Research Ethics Committee. We are pleased to advice you that the committee has granted ethical approval for the above-mentioned study to be conducted at above mentioned site. However, please approach the Medical Director of the Hospitals to secure permission to review any hospital records and to carry out your study in the hospital.

Please note that it is DSREC's policy that the principal investigator should report to the committee of the following:

- 1. Anything which might warrant review of ethical approval of the project in the specified format, including:
 - any serious or unexpected adverse events and
- unforeseen events that might affect continued ethical acceptability of the project
- 2. Any proposed changes to the research protocol or study team or to the conduct of research
- 3. Any new information that may affect adversely the safety of the subjects
- 4. If the project is discontinued before the expected date of completion (reason to be specified)
- 5. Annual report to DSREC about the progress of the study 6. A final report of the finding on completion of the study

The DSREC approval validity for the study expires on <u>06 MAY 2022</u> and continuing approval of the research will be subject to the principal investigator submitting an annual report. If you wish to continue, please submit an application for renewal together with the Annual Study site progress report <u>no later than 30 days</u> prior to the expiry date.



DSREC@dha.gov.ae

Appendix 4: Consent Arabic Version

كلية دبي الطبية ومركز إرادة في دبي، دبي، الإمارات العربية المتحدة

نموذج الموافقة

العنوان :- دراسة وبانية للتفكير في الانتحار والسلوك الانتحاري بين المرضى الذين يعانون من اضطرابات تعاطى المخدرات في مركز لإعادة التاهيل والعلاج للإدمان في دبي

> الباحث: أحمد منير ناصر الموقع: مركز إرادة في دبي، الإمارات العربية المتحدة

نموذج الموافقة

سيتم إجراء هذه الدراسة في مركز إر ادة في دبي، و أنت مدعو للمشاركة في هذا البحث إذا كنت قد استوفيت المتطلبات الرئيسية في المعايير المرفقة، أو لا هو فنتك العمرية (فوق 18 عامًا) ، وان يكون تم تشخيصك بإضطر اب تعاطى المخدرات. بالإضافة إلى ذلك، تم تصميم هذه الدراسة لجمع البيانات من جميع المرضى الذين ير اجعون العيادات الخارجية لغرض التقييم الجديد أو المتابعة في مركز إر ادة في دبي. وبالمثل، يُتوقع منك إجراء مقابلة مع الباحث والتي ستستغرق ما يقرب من 20 إلى 30 دقيقة، وتشمل هذه المقابلة استبيلًا منظمًا وجها أوجه (ستتوفر النسختان الإنجليزية والعربية) من أجل جمع البيانات المطلوب. و تتكون أداة قسم تنظمًا وجها أوجه (ستتوفر النسختان الإنجليزية والعربية) من أجل جمع البيانات المطلوب. و تتكون أداة و الديمو غزافي، قسم أداة فحص الأفكار الانتحارية، قسم أداة فحص الاكتاب، قسم تقييم المواد المخدرة، و و الديمو غزافي، قسم أداة فحص الأفكار الانتحارية، قسم أداة فحص الاكتاب، قسم تقييم المواد المخدرة، و و الديمو غزافي، قسم أداة فحص الأفكار الانتحارية، قسم أداة فحص الاكتاب، قسم تقييم المواد المخدرة، و و الديمو غزافي، قسم أداة فحص الأفكار الانتحارية، قسم أداة فحص الاكتاب، قسم تقييم المواد المخدرة، و و السلوك الانتحارية بين المرضى الذين يعانون من اضطر اب تعاطى المخدرات. ومن خلال المشاركة في أن أذكر أنه غير معلوب تسجيل المكان و أي بيانات خاصة على أدر منع المعلومات التي يتم جمعها عن كل مشارك خلال مسار البحث ستبقى سرية تمامًا و سيتم تخزين جميع المعلومات التي يتم جمعها عن كل مشارك خلال مسار البحث ستبقى سرية تمامًا و ميتم تخزين جميع المعلومات التي يتم جميع عن كل مشارك خلال مسار البحث ستبقى سرية تمامًا و من يتم معها له و أن يتم حمي المنورات على أجمع المعلومات التي يتم جمعها مشغرة وسيم تخزين الأعمال الورقية بشكل أمن في مكتب مقال و لن نشر اسم المشارك على أي منيشر من مشرو أن من منذر من منظر و من معلوب تمريكم.

توقيع الموافقة

لقد قرأت هذا النموذج وتم شرح الدراسة البحثية لي و لقد أتيحت لي الفرصة لطرح الأسنلة وتم الرد على أسئلتي .إذا كانت لدي أسئلة إضافية، فقد تم إخباري بمن يجب الاتصال .أوافق على التطوع للمشاركة في الدراسة البحثية الموضحة أعلاه وسوف أتلقى نسخة من نموذج الموافقة هذا

وقيع المشارك بالتاريخ :

توقيع الباحث بالاسم والتاريخ

Appendix 5: Consent English Version

Dubai Medical College and Erada Center in Dubai, Dubai, UAE CONSENT FORM

 TITLE: Epidemiological study of suicidal ideation and suicidal behavior among patients

 with substance use disorders in a rehabilitation and treatment center for addiction in Dubai

 INVESTIGATORS: Ahmad Muneer Naser
 SITE(S): Erada Center in Dubai, UAE

CONSENT FORM

This study will be conducted at Erada Center in Dubai, and you are invited to participate in this research if you met the main requirement in the enclosing criteria first one being your appropriate age group (above 18), and that you would have been diagnosed with substance/ drug dependence. Additionally, this study is designed to collect data from all patients who are attending outpatient clinics for the purpose of new admission or follow up at Erada Center in Dubai. Likewise, you will be expected to have interview with the researcher which will be approximately for 20 to 30 minutes long, this interview includes a structured face to face questionnaire (English and Arabic versions will be available) will be conducted in order to collect the needed data. Also, the Tool of the study is consisting of a Questionnaire of a total of 48 questions distributed among 5 sections as following: Sociodemographic section, Suicide Screening tool section, Depression screening tool section, Substance profile section, and Risk Factors of Suicide.

We are conducting this study within Erada Center in Dubai to assess the prevalence and to investigate the factors of suicidal ideation and suicidal behaviors among patients with substance use disorder. However, by taking part in the study you will help us assess to early detect and prevent the problem among drug addicts. Finally, I would like to confirm that data collection will be anonymous and that all the information which is collected about each participant during the course of the research will be kept strictly confidential. All information will be stored on encrypted computers and paperwork will be stored securely in locked offices. WE WILL NOT place your name on any future publications.

Signature of Consent

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree volunteer to participate in the research study described above and will receive a copy of this consent form.

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Signature of Subject with Date:

Signature of the interviewer with name and date

Appendix 6: English version Questionnaire

Dubai Medical College

Erada Center

2020/2021 Epidemiological study of suicidal ideation and suicidal behavior among patients with substance use disorders in a rehabilitation and treatment center for addiction in Dubai

Section I : Socio-Demographics Section:

- 1. Patient type: a) new assessment b)follow-up
- 2. Age: (years)
- 3. Sex: a) Male b) female
- Education level: a) Illiterate/read and write b) Primary education c) Secondary education d) University graduate degree e) Postgraduate degree
- 5. Residency: a) Dubai b) Sharjah c) Ajman d) Fujairah e) Ras al khimah f) Abu dhabi g) Umm al Ouwain
- 6. Marital status: a) Single b) married c) separated d) widowed
- 7. Do you have children? a) Yes b) No
- 8. Religion: a) Muslim b) Christian c) Hinduism d) Other
- 9. Occupation: a) Employee b) Unemployed c) Student d) Retired e) Professional f) others
- 10. Nationality: a) UAE b) GCC d) expat- Arab e) expat-non-Arab
- 11. Income in dirhams: a) < 5000 b) 5000 -10000 c) 10000 15000 d) >15000
- 12. I live: a) alone b) with my family c) in a shared apartment/room
- 13. Where do you live : a) flat b)villa c) University hostel d) room e) others
- 14. Smoking status: a) I smoke shisha b) I smoke cigarette c) I smoke other tobacco products d) I do not smoke at all

Section II : Suicide Screening section

- 15. In the past few weeks, have you wished you were dead?_a) Yes b) No
- 16. In the past few weeks, have you felt that you or your family would be better off if you were dead? a) Yes b) No
- 17. In the past week, have you been having thoughts about killing yourself? a) Yes b)No
- 18. Have you ever tried to kill yourself? a) Yes b) No
 - If yes, please describe:

When_?

19. Are you having thoughts of killing yourself right now? a) Yes b)No

If yes, please describe:

Section III: Patient Health Questionnaire (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several	More than half	Nearly
		days	of the days	everyday
20. Little interest or pleasure in doing things				
21. Feeling down, depressed, or hopeless				
22. Trouble falling or staying asleep, or sleeping too much				
23. Feeling tired or having little energy				
24. Poor appetite or overeating				
25. Feeling bad about yourself or that you are a failure or have let yourself or your family down				
26. Trouble concentrating on things, such as reading the newspaper or watching television				
27. Moving or speaking so slowly that other people could have noticed. Or the opposite being so restless that you have been moving around a lot more than usual				
28. Thoughts that you would be better off dead, or of hurting yourself				

Section IV: Substance profile section

29. What is the name of the drug/substance you used for the 1st time?

30. What was your age when you started?

- 31. Why did you start using drugs? * a) Teenagers curiosity b) Joy-seeking c) Psychological disorder d) Lack of knowledge about complications of drugs e) Positive attitude toward drug abuse f) Low self-confidence g) To eliminate shyness h) Parents' divorce i) Having strict parents j)Disability in resolving routine problems k) Presence of an addicted person in the family or Friends who facilitate access to drugs 1) Low cost of drugs m) Having free time n)Others (Please write down) :
- 32. What drug / substance do you use currently?*
 - A)Amphetamine b)Alcohol (Alkhamr or Alkmour) c)Opioids d)Cocaine e)Cannabis f)Others (please write down):.....
- 33. How often do you use drugs or substance? a) Once / day b) More than once/day c) Once / week d) Several times/ weeks e) Others (please write down):.....
- 34. How do you use the drug? * a) Sniff (via nose) b) Smoke (like cigarette) c) Oral d)Injection e) Others (please write down)

Section V: Risk factors

- 35. Do you have a family history of suicide? a) Yes b) No c)I do not know
- 36. Do you have a family history of psychiatric problem? a) Yes b) No c)I do not know
- Are you currently on treatment plan for any mental / psychiatric disorder? a) Yes b)No If yes, please mention name of the disease.....
- 38. Do you have:*a) Diabetes b) Hypertension c) Ischemic Heart Disease d) Chronic Kidney Diseases e) Cancer f) Hepatitis B/C g) HIV/AIDS h) Others (please write down)
- 39. Have you ever been exposed to domestic/family violence? a) Yes b) No
- 40. Have you ever been exposed to bullying at school/ home/work? a) Yes b) No
- 41. Do you have access to guns or other firearms in the home? a) Yes b) No
- 42. Do you have a recent breakup in emotional relationship: a) Yes b) No
- 43. Do you have a Recent breakup in Family relationship a) Yes b) No
- 44. Do you suffer from major financial problem? a) Yes b) No
- 45. Did you have recent death of a family member a) Yes \qquad b) No \qquad
- 46. Did you have recent death close friend? a) Yes b No
- 47. Do you have any legal problem lead you to prison? a) Yes **b**) No

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Appendix 7: Arabic Version Questionnaire

كلية دبي الطبية

مركز إرادة

2020/2021

دراسة وبائية للتفكير في الانتحار والسلوك الانتحاري بين المرضى الذين يعانون من اضطرابات تعاطي

المخدرات في مركز لإعادة التأهيل والعلاج للإدمان في دبي

قسم العوامل الاجتماعية والديمو غرافية:

- ie وع المريض؟ أ) التقييم الجديد ب) المتابعة
 - 2. العمر: (سنوات)
 - الجنس: أ) ذكر ب) أنثى
- 4. المستوى التعليمي: أ) أمي / يقرأ ويكتب ب) التعليم الابتداني ج) التعليم الثانوي د) خريج جامعي هـ) درجة الدراسات العليا
 - الإقامة: أ) دبي ب) الشارقة ج) عجمان د) الفجيرة هـ) رأس الخيمة و) أبو ظبي ز) أم القيوين
 - الحالة الاجتماعية: أ) أعزب ب) متزوج ج) منفصل د) أرمل
 - هل لديك أطفال؟ أ) نعم ب) لا
 - الديانة: أ) مسلم ب) مسيحي ج) الهندوسية د) أخرى
 - المهنة: أ) موظف ب) عاطل ج) طالب د) متقاعد هـ) محترف (مهني) و) آخرين
- 10. الجنسية: أ) الإمارات العربية المتحدة. ب) دول مجلس التعاون الخليجي ج) الوافدين العرب د) الوافدين غير العرب
 - 11. .الدخل بالدر هم: أ) <5000 ب) 5000-10001 ج) 15000-0001 د) >15000
 - 12. أنا أعيش: أ) بمفردي ب) مع عائلتي ج) في شقة / غرفة مشتركة
 - 13. أين تسكن: أ) شقة ب) فيلا ج) سكن جامعي د) غرفة هـ) أخرى
 - 14. حالة التدخين: أ) أنا أدخن الشيشة ب) أدخن السجائر ج) أدخن منتجات التبغ الأخرى د) لا أدخن على الإطلاق

أداة كشف خطر الانتحار

- 15. في الأسابيع القليلة الماضية، هل تمنيت لو كنت ميتا؟ اـنعم بــلا
- 16. في الأسابيع القليلة الماضية، هل شعرت أنت أو عائلتك أنه سيكون الحال أفضل لو كنت ميتا؟ ا-نعم ب-لا
 - 17. في الأسبوع الماضي، هل ساورتك أفكار حول قتل نفسك؟ ا-نعم ب-لا
 - 18. هل حاولت ابدأ في أي وقت أن تقتل نفسك؟ اخعم ب-لا

إذا كان الجواب نعم، فاوصف ذلك

متى....

(خلال الأسبوعين الماضيين، أم مرة عقيت من أى من المشاكل التلية (ضع علامة "√ " للإشارة الجوابك)

Г

نفريبا هل يوم	اكتر من تصف الأيام	عده ايام	ولامزه	
				20. قلة الاهتمام أو قلة الاستمتاع بممارسة دالقرار دأي عمل
				21. المتعور بالحرن أو صيق الصدر أو الياس
				22. صعوبة في النوم أو نوم متقطع أو النوم أكثر من المعتاد
				23. الشعور بالتعب أو بامتلاك القليل جداً من الطاقة
				24. قلة الشهية أو الزيادة في تناول الطعام عن المعتّاد
				25. الشعور بعدم الرضا عن النفس أو الشعور باتك قد أخذلت نفسك أو عانلتك
				26. صعوبة في التركيز مثلاً أثناء قراءة الصحيفة أو مشاهدة
				27. بطء في الحركة أو بطء في التحدث عما هو معتاد لدرجة ملحوظة من الأخرين
				28. راودتك أفكار بأنه من الأفضل لو آنت ميتا او أفكار بأن تقوم بايذاء النفس

قسم خصانص المواد المخدرة

29. ما هو اسم الدواء / المادة المخدرة التي استخدمتها للمرة الأولى؟.....

31. لماذا بدأت في تعاطي المخدرات؟ * أ) فضول المر اهقين ب) البحث عن السعادة ج) الاضطراب النفسي د) نقص الوعى بمضاعفات المخدرات هـ) الموقف الإيجابي تجاه تعاطي المخدرات و) تدني الثقة بالنفس ز) للقضاء على الخجل ح) طلاق الوالدين ج) وجود أبوين صارمين ي) الفضل في حل المشكلات الروتينية ك) وجود شخص مدمن في الأسرة أو الأصدقاء الذين يسهلون الوصول إلى المخدرات ل) انخفاض تكلفة المخدرات م) توفر وقت فراغ ن) أسباب اخرى (يرجى الكتابة).....

- 32. ما العقار / المادة المخدرة التي تستخدمها حاليًا؟ * أ) الكريستال (الأمفيتامين) ب) الخمرة (الكحول) ج) المهيروين، القرد أو مورفين (المواد الأفيونية) د) الكوكايين هـ) الحشيش، السبيس (القنب) و) مواد أخرى (برجى تدوينها :
 - 33. كم مرة تستخدم المغدرات أو المواد؟ أ) مرة / يوم ب) أكثر من مرة / يوم ج) مرة / أسبوع د) عدة مرات / أسابيع هم) أخرى (يرجى تدوينها........)
- 34. كيف تستخدم المخدرات؟ * أ) شم (عن طريق الأنف) ب) دخان (مثل السجائر) ج) عن طريق الفم د) حقن هـ) أخرى (يرجى الكتابة........)

عوامل الخطر

35. هل أقدم أحد افراد اسرتك على الانتحار؟ أ) نعم ب) لا ج) لا أعرف

36. هل يعاني أي فرد من اسرتك من مشكلة نفسية؟ أ) نعم ب) لا ج) لا أعرف

- 37. . هل أنت حاليا على خطة علاج لأي اضطراب عقلي / نفسي؟ أ) نعم ب) لا في حال الإجابة بنعم ، يرجى ذكر اسم المرض.....
- 38. . هل لديك: * أ) مرض السكري ب) ارتفاع ضغط الدم ج) امراض القلب د) أمراض الكلى المزمنة هـ) السرطان و) التهاب الكبد ب / ج ج) فيروس نقص المناعة البشرية / الإيدز ج) أخرى (يرجى تدوينها)
 - 39. هل سبق لك أن تعرضت للعنف المنزلي / الأسري؟ أ) نعم ب) لا
 - 40. . هل سبق لك أن تعرضت للتنمر في المدرسة / المنزل / العمل؟ أ) نعم ب) لا
 - 41. هل بقدرك الوصول إلى البنادق أو غير ها من الأسلحة النارية في المنزل؟ أ) نعم ب) لا
 - 42. هل حصل انفصال في العلاقة الأسرية مؤخرًا: أ) نعم ب) لا.
 - 43. هل حصل انفصال في العلاقة العاطفية: أ) نعم ب) لا.
 - 44. هل تعاني من أزمة مالية كبيرة؟ أ) نعم ب) لا
 - 45. هل توفى أحد أفراد أسرتك مؤخرًا ؟ أ) نعم ب) لا
 - 46. هل توفى صديقك المقرب مؤخرًا؟ أ) نعم ب) لا
 - .47 هل لديك أي مشكلة قانونية كانت سببا في دخولك السجن؟؟ أ) نعم ب) لا
- 48. ماهى المشكلة القانونية المذكورة في س 47 : 1) ليس لدى مشاكل قانونية ب) السرقة ج) ايذاء النفس د)ايذاء احد افراد الاسرة ه) التعاطى و) تغيب عن فحص دورى ز)الاتجار بالمخدرات ح) أخرى يرجى الكتابة...........)

Glossary of Abbreviations

Term	Definition	
Suicide	Death caused by self-directed injurious behavior with any intent to die as a result of the behavior.2	
Suicide attempt	A nonfatal self-directed potentially injurious behavior with any intent to die as a result of the behavior. A suicide attempt may or may not result in injury.2	
Suicidal self-directed violence	Behavior that is self-directed and deliberately results in injury or the potential for injury to oneself. There is evidence, whether implicit or explicit, of suicidal intent. This encompasses suicide deaths and suicide attempts.2	
Other suicidal behavior and preparatory acts	Acts or preparation toward making a suicide attempt, but before potential for harm has begun. This can include anything beyond a verbalization or thought, such as assembling a method (e.g., buying a gun, collecting pills) or preparing for one's death by suicide (e.g., writing a suicide note, giving things away).2,3 Referred to as "aborted suicide attempt" by the American Psychiatric Association.4	
Suicidal ideation	Passive thoughts about wanting to be dead or active thoughts about killing oneself, not accompanied by preparatory behavior.	
Self-harm	An act with nonfatal outcome, in which an individual deliberately initiates a nonhabitual behavior that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realizing changes which the subject desired via the actual or expected physical consequences.	
Suicidal behavior	Includes suicide, suicide attempts, other suicidal behavior, and preparatory acts	
Substance use disorder (SUD)	is defined as a chronic, relapsing disorder characterized by compulsive drug seeking and use despite adverse consequences.† It is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and self-control. Those changes may last a long time after a person has stopped taking drugs 2	

From: 1-(Screening for Suicide Risk in Adolescents, Adults, and Older Adults in Primary Care:

Recommendations Erom the U.S. Preventive Services Task Force, 2014)

2- (Drug Misuse and Addiction | National Institute on Drug Abuse, 2021)