INTRODUCTION

Substance abuse has a major impact on individuals, families, and communities as its effects are cumulative, contributing to costly social, physical, and mental health problems. Several factors can enhance the risk for initiating or continuing substance abuse including socioeconomic status, quality of parenting, peer group influence, and biological/ inherent predisposition toward Substance abuse ***(Das JK, Salam RA, Arshad A, Finkelstein Y and Bhutta ZA, 2016).***

Substance abuse represents a condition whereby drug-taking and drug-seeking come to dominate behavior to such a degree that drug use appears to control over behavior that was once influenced by normal environmental reinforces. For many individuals, the pattern of abusive drug use continues despite serious adverse effects and repeated efforts to abstain ***(Yazdani S & Abardeh MH, 2018)***.

Substance abuse is generally classified within three major groupings: (a) depressants, such as alcohol and opioids; (b) stimulants, such as amphetamines and cocaine; and (c) hallucinogens ***(Rech MA, Donahey E, Cappiello Dziedzic JM, Oh L and Greenhalgh E., 2015).***

Detoxification stage is not treatment only preparation for treatment, this stage of detox is designed to remove toxic substances from the body , a stage ranging from 4 days to 15 days depending on the dose used ; the patient is given some

medicines that relieve withdrawal symptoms ***(Suls, J. M., Luger, T., & Martin, R ., 2012).***

Rehabilitation is the process of restoring an individual (such as an alcoholic, substance abuser or drug addict) to a useful and constructive place in society especially through some form of vocational, correctional, or therapeutic measures and reeducation to participation in the activities of a normal life within the limitations of the person's disability ***(Rudnick F, Abraham S, Roe T and David S.,2011).***

It is useful to distinguish among specific procedures or techniques (e.g., individual therapy, family therapy, group therapy, Group Counseling, relapse prevention, and pharmacotherapy) and treatment programs. Most programs use a number of specific procedures and involve several professional disciplines as well as nonprofessionals who have special skills or personal experience with the substance problem being treated. The best treatment programs combine specific procedures and disciplines to meet the needs of the individual patient after a careful assessment ***(Elm JHL, Lewis JP, Walters KL and Self JM., 2016)***

Recovery defined as a person who is no longer self-medicating with alcohol or illicit drugs and who is making a concerted effort to become a productive member of society. This would include the development of effective coping skills and finding pleasure in other activities ***(Bryson, Ethan O and Frost, Elizabeth A. M , 2012)***.

Adjustment is a process that is neither linear nor lockstep, but dynamic. The list of variables that influence this process are numerous and varied. However, an obvious influence on adjustment is a negative change in health status. Intellectually, it is believed that coping strategies contribute to adaptation and may be mediators, but most likely interact with other factors in contributing to adaptation ***(Stanton AL and Revenson TA, 2007)***.

Psychosocial adjustment of the individual and family is a holistic process, in which each domain of life affects the others. Therefore, a change in one domain affects adjustment in another domain ***(Hoyt MA and Stanton AL, 2012)***.

Significance of the Study

Psychosocial adjustment works to reintegrate substance abusers after recovery with the community to become productive and positively influencing individuals. It also helps to reform his thinking and behavioral changes to achieve a healthy life, as well as to teach the patient how to cope with difficult situations that may lead him to think about substance abuse.The rehabilitation phase of treatment must help the individual to stop using a substance, maintain a substance - free of life and achieve productive functioning in the family ,at work and in society . In 2017, substance abuse estimated (5%) of the world population ***(Samhsa(Substance abuse and mental health services administration), 2017).*** And in Egypt according to (**The Fund for fighting and treating addiction**

and administration), in 2017, substance abuse estimated Up to (2.4%) in the age group of 15 to 60 years , and there are some categories spread by substance such as the category of drivers and represent (24%). The cannabis is the most common substance in Egypt among users, where represent (79%) and (51%) of abusers taking tramadol.

AIM OF THE STUDY

- This study aims to assess the psychosocial adjustment for substance abusers during rehabilitation phase of treatment.

Research question:

What are the psychological and social adjustment for substance abusers during rehabilitation phase of treatment?

Chapter 1

SUBSTANCE ABUSE

Substance abuse is a unique psychiatric disorder given that genetic vulnerability can lead to disease only if the substance (licit or illicit) is readily available and used ***(Zuleta-Alarcón A, Coffman JC, Soghomonyan S, Papadimos TJ, Bergese SD, Moran KR., 2017)***. Substance abuse is defined as the overwhelming compulsion to use drugs in spite of the addict experiencing adverse consequences ***(Mohn AR, Yao WD and Caron MG ., 2014)***.

Moreover, Substance abuse problems are complex psychological phenomena with many factors that have been identified as increasing the risk of an individual having a relapse and returning to use after a period of being clean and sober. Some of the key factors associated with a risk of relapse for individuals with a substance abuse disorder include such psychosocial factors as the presence of a supportive family system, the presence of conflict in the family, peers who are drug free, coping skills, interpersonal conflict, and self-esteem ***(Sarvet AL and Hasin D, 2016).***

In addition, Substance abuse may continue for a long period of time or progress to substance dependence**,** a more severe disorder associated with physiological signs of dependence (tolerance or withdrawal syndrome) *or* compulsive use of a substance. Substance abuse involves a person using

alcohol, tobacco, narcotics or other substances despite serious problems that may affect the user physically, mentally or socially ***(Galanter M, Kleber HD, Brady K, editors ., 2014).***

Likewise, Substance abuse is a pattern of recurrent use that leads to damaging consequences. Which may involve failure to meet one's major role responsibilities (e.g., as student, worker, or parent), putting oneself in situations where substance use is physically dangerous (e.g., mixing driving and substance use), encountering repeated problems with the law arising from substance use (e.g., multiple arrests for substance-related behavior), or having recurring social or interpersonal problems because of substance use (e.g., repeatedly getting into fights when drinking). When people repeatedly miss school or work because they are drunk or "sleeping it off," their behavior may fit the definition of substance abuse ***(Mosby's Medical, Nursing & Allied Health Dictionary, 2002).***

Also, Substance abuse represents a condition whereby drug-taking and drug-seeking come to dominate behavior to such a degree that drug use appears to usurp control over behavior that was once influenced by normal environmental reinforces. For many individuals, the pattern of abusive drug use continues despite serious adverse effects and repeated efforts to abstain ***(Yazdani and Abardeh, 2018)***.

Similarly, Substance abuse is a chronic brain disease that is driven by critical elements, genes and environment; neither

can be ignored. Genetic studies have been invaluable in identifying Substance abuse vulnerability loci and genetic variants that are important for understanding the neurobiology of the disease, pointing to potential drug targets, and identifying alleles that may be useful for tailored treatment interventions. Social and environmental elements such as family, peer, community, and social attitudes and beliefs are also important psycho-behavioral domains that contribute to the complexity of addiction ***(Rao S, Rapaka R and Wolfgang S ., 2010).***

Historically, substance abuse has been considered a male problem. Studies from several areas including epidemiology, behavioural pharmacology and neurosciences have taken a male-centric approach when analysing factors and/or treatments that influence drug abuse. This approach has led to a neglect of factors underlying drug abuse in women. Therefore, the extent and effects of drug abuse on women are not fully understood ***(Anker JJ, Carroll ME ., 2011).***

Moreover, Substance abuse is a complex disease influenced by genetic, environmental, developmental, and social factors. Once viewed as a moral weakness in character, substance use disorders are now defined as maladaptive patterns of substance use leading to inability to control use despite significant consequences in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders ***(Sadock BJ and Sadock VA ., 2007).***

Also, Substance abuse is defined as the overwhelming compulsion to use drugs in spite of the addict experiencing adverse consequences. Drugs of abuse that have the ability to cause addiction activate the reward structures in the brain and in the process induce lasting changes in behavior that reflect changes in neuron physiology and biochemistry ***(Mohn AR, Yao WD and Caron MG., 2014)***.

The concept of substance abuse as a chronic illness is redefining the fundamental way view drug abuse and its treatment. Currently, many efforts are directed toward determining how to provide a continuity of treatment and how to measure if treatment systems are successfully addressing substance abuse as a chronic disease ***(Kelly JF and White WL, 2011)***.

Prevalence of Substance abuse

The World Drug Report of 2017, published by the United Nations World Drug Control and Crime Program (***UNWDC***), shows that some 250 million people worldwide, or about (5%), have abused illicit drugs of various kinds. He pointed out that 144 million people are using the bango, 29 million are using Ectasi drugs, 14 million are cocaine users, 13.5 million are opium users and 9 million are heroin users.

In Egypt, ***the Ministry of Social Solidarity*** 2017 said that the rate of substance abuse was about (10%) of the population,

about 9 million people, (72%)of whom were males and (28%) were females.

Etiology

It is a genetic susceptibility that plays a role in the transition from substance use to dependence and from chronic use to addiction. If proximity to addictive agents increases the risk that a health-care provider may abuse them, it makes sense that the drugs typically abused by anesthesia personnel are those commonly found in the operating room environment: fentanyl, sufentanil, midazolam, and propofol. For other reasons and perhaps due to exposure as well, emergency medicine professionals who abuse drugs are more likely to choose the "street" drugs such as cocaine and marijuana, and psychiatrists are more likely to abuse the benzodiazepines and other sedatives ***(Berge KH, Seppala MD and Lanier WL ., 2013)***.

Personality disorders are commonly diagnosed in substance-abusing health-care professionals admitted to inpatient drug/alcohol-treatment facilities. It has been suggested that one source of motivation for the self-administration of drugs of abuse is the self-medication of symptoms associated with comorbid psychiatric disorders ***(Reynaert ML, Marrocco J, Gatta E, Mairesse J, Van Camp G, Fagioli F, Maccari S, Nicoletti F and Morley-Fletcher S ., 2015).***

The observation that individuals with the same personality traits tend to self-administer drugs from the same class, i.e., opioids for anxiety and depression, amphetamines for attention deficit and hyperactivity states. Individuals under evaluation for or treatment for substance abuse should have an evaluation with subsequent management of comorbid psychiatric conditions ***(Smith VI, Cisler ST and Litman RS ., 2017)***.

Several theories have been proposed to explain the incidence of drug abuse among health-care professionals. Access to highly addictive drugs may be contributory to the development of addiction in those at risk. Despite strict controls and accounting measures, it remains relatively easy to divert controlled substances for personal use. Some have cited the high stress environment in which today's healthcare professionals work as a contributing factor, and others have suggested that exposure to trace quantities to these agents in the workplace sensitizes the reward pathways in the brain and promotes substance abuse ***(Foshee VA, Benefield TS, Puvanesarajah S, Reyes HL, Haberstick BC, Smolen A, Ennett ST and Suchindran C., 2015).***

It is important to note that none of the proposed theories has been able to identify a specific cause, but rather merely suggest factors that may increase the risk of developing addiction among health-care professionals ***(Zuleta-Alarcón et al., 2017)***.

Signs and Symptoms of Substance abuse

Physiological signs and Symptoms of Substance abuse

Nausea, vomiting, and abdominal pain, Liver overexertion or liver failure, Seizures and strokes, Widespread brain damage that can interfere with memory, attention, and decision-making, as well as permanent brain damage, Increases in blood pressure, heart rate, breathing rate, and body temperature ***(*Ethan OB and Elizabeth AMF*, 2012).***

Heart attacks, strokes, and respiratory failure, Hepatitis or AIDS through shared needles, Brain seizures, Reduction of the body's ability to resist and combat infection, Sleeplessness and tremors, Ack of muscular coordination, Sparse, mangled, and incoherent speech, Decreased awareness of touch and pain, Convulsions, Bloodshot eyes, Dry mouth and throat, Decreased appetite; extreme anorexia, Bad breath; hangovers ***(Eisenberg ME, Toumbourou JW, Catalano RF and Hemphill SA., 2014).***

Psychological signs and Symptoms of Substance abuse

Violent, erratic, or paranoid behavior, Hallucinations and "coke bugs" sensation of imaginary, Insects crawling over the skin, Confusion, anxiety and depression, loss of interest in food or sex, A sense of distance and estrangement, Depression, anxiety, Confusion, suspicion, and loss of control ***(Nutt D, King LA, Saulsbury W and Blakemore C., 2007).***

Behavior similar to schizophrenic psychosis, Catatonic syndrome whereby the user becomes mute, lethargic, Disoriented, and makes meaningless repetitive movements, Everyone reacts differently to hallucinogens, there's no way to predict if someone can avoid a "bad trip, Decreased social inhibitions, Paranoia, hallucinations, Impaired judgment, Altered perceptions and emotions, Anxiety, violent behavior, Euphoria ***(van Amsterdam J, Nutt D, Phillips L, van den Brink W ., 2015).***

Diagnosis of substance abuse

A definite diagnosis of Substance abuse should usually be made only if three or more of the following have been present together at some time during the previous year: A strong desire or sense of compulsion to take the substance, Difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use, a physiological withdrawal state) when substance use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms and evidence of tolerance, such that increased doses of the psychoactive substances are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol- and opiate-dependent individuals who may take daily doses sufficient to

incapacitate or kill non tolerant users) ***(Sadock BJ and Sadock VA, 2007).***

Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects and persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm ***(Malenka RC, Nestler EJ, Hyman SE and Holtzman DM., 2015)***.

Classification of drugs of abuse

Drugs of abuse are generally classified within three major groupings: (a) depressants, such as alcohol and opioids; (b) stimulants, such as amphetamines and cocaine; and (c) hallucinogens ***(Rech et al., 2015).***

Depressants

A **depressant** is a drug that slows down or curbs the activity of the central nervous system. It reduces feelings of tension and anxiety, slows movement, and impairs cognitive processes. In high doses, depressants can arrest vital functions and cause death. The most widely used depressant, alcohol, can

cause death when taken in large amounts because of its depressant effects on breathing. Other effects are specific to the particular kind of depressant. For example, some depressants, such as heroin, produce a "rush" of pleasure. ***(American Psychiatric Association, 2013)***.

Alcohol

Alcohol is the most widely abused substance in the United States and worldwide, perhaps because it is so common, or perhaps because it is ingested by drinking rather than by smoking or injection ***(Turan A, You J, Kurz A., 2010).***

Alcohol is classified as a depressant because it has biochemical effects similar to those of a class of antianxiety agents or minor tranquilizers, the *benzodiazepines*, which includes the well-known drugs *diazepam* (Valium) and *chlordiazepoxide* (Librium).We can think of alcohol as an over-the-counter tranquilizer ***(Schoenfeld H, Perke C, Ziemer S, Huebner R, Schink T, Neuner B., 2010; Turan et al., 2010)***.

Barbiturates

About 1% of adult Americans develop a substance abuse or dependence disorder involving the use of barbiturates, sleep medication (hypnotics), or antianxiety agents at some point in their lives. Barbiturates such as *amobarbital*, *pentobarbital*, *phenobarbital*, and *secobarbital* are depressants, or *sedatives.* These drugs have several medical uses, including easing