Prevalence of Psychoactive Substance use among Female Students in Ain Shams University

Thesis

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List of Abbreviations

κOR .... kappa Opioid Receptors

AA .... Alcoholic Anonymous

BDNF .... Brain Derived Neurotrophic Factor

CA .... Cocaine Anonymous

CRF .... Corticotrophin-Releasing Factor

DLPFC .... Dorsolateral Prefrontal Cortex

DSM-IV .... Diagnostic and Statistical Manual of Mental Disorders

EMR .... Eastern Mediterranean Region

GHQ .... General Health Questionnaire

GSMHAT .... General Secretariat of Mental Health and Addiction Treatment

HPA .... Hypothalamic–Pituitary–Adrenal

KSA .... Kingdom of Saudi Arabia

MCLP .... Mesocorticolimbic Pathway

NA .... Narcotic Anonymous

NAcc .... Nucleus Accumbens

SUDs .... Substance Use Disorders

VTA .... Ventral Tegmental Area

WHO .... Worldwide public health concern

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Abstract

Introduction: Substance abuse is a serious problem that interferes with an individual's physical and mental health. It also affects the social situation and responsibilities of individuals thus it is the major worldwide public health concern . Drug addiction is considered one of the most distressing problems that worry the Egyptian government, as it deals with young people within the age of work and productivity. Addictions and related misuse of substances are costly, distressing, and challenging problems on personal, clinical, and public health levels . **Aim of the Work :** To find out the prevalence of psychoactive substance use among female students in Ain Shams University **.Subjects :** The plan was worked out to draw a sample of of female students population in Ain Shams University according to statistician that recommended 600 female students in their last year of study as they were considered the most vulnerable groups (from 3 practical and 3 theoretical faculties, 100 from each one), as a representative sample for the female population in the university. **Results** : The sample included 600 female faculty students from Ain Shams university, from 6 faculties, 100 students from each faculty, 3 practical faculties (Medicine, Dentistry and Pharmacy) and 3 theoretical faculties (Commerce, Literature, and Laws) with age range from 22 to 26 years, in their last year of study, the mean age was 24.6 years. The overall prevalence of substance use in our sample was **26.8%.** Illicit drugs **(tranquilizers, hypnotics and stimulants**) were the most common substance used 9.8 %, followed by tobacco smoking 9 % .conclusion : Substance use is a multi-etiological universal phenomenon with significant adverse impacts on public health. Early substance dependence has implications in the future of university students and may result in psychiatric disorders; hence, preventing early substance-related problems will reduce the risk of these problems in later adulthood when the magnitude of life stresses is greater. **Recommendations** : Students using substances should be provided with counseling and assisted with treatment options. A special unit within the university may be tasked with provision of this care, particularly for those who develop substance use disorders.

Providing students at the adolescent stage with sufficient knowledge about drugs and their dangerous effects through the sciences and the religious lessons.

Key words: psychoactive substance, neuropsychiatry, female students.

Introduction

Substance abuse is a serious problem that interferes with an individual's physical and mental health. It also affects the social situation and responsibilities of individuals thus it is the major worldwide public health concern *(WHO, 2010)*. Drug addiction is considered one of the most distressing problems that worry the Egyptian government, as it deals with young people within the age of work and productivity *(El-Sawy et al., 2010)*. Addictions and related misuse of substances are costly, distressing, and challenging problems on personal, clinical, and public health levels *(Weinberg et al., 2014)*.

In the Eastern Mediterranean Region (EMR), drug use disorders is common and accounting for a loss of 4 disability-adjusted life years (DALYs) and 9 deaths per 1000 population, compared with the loss of 2 DALYs and 4 deaths per 1000 population globally *(WHO, 2010)*.

The cost to the community and society of drug abuse is colossal. Drug abuse has a significant impact on healthcare services, public services, and criminal justice system. Drugs that lead to intense intoxication such as alcohol, amphetamines, cocaine, and heroin are associated with huge costs in terms of damage to the user or the general public and property and loss of economic output. *(McDougall and Culyer, 2002)*.

The Diagnostic and Statistical Manual of Mental Disorders (**DSM- 5**) has eliminated the separate categories of substance abuse and substance dependence and replaced them with one unified category called substance use disorders. In addition, the term substance use disorders refers to the use of one or more substances leading to a clinically significant impairment or distress. **The DSM-5, 2013** recognizes ten separate classes of drugs that can lead to substance use disorders. These classes include: alcohol, caffeine, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics, anxiolytics, stimulants, and other or unknown substances.

A 2007 National Survey report stated that 8.5% of Egyptians - or six million people - are addicted to drugs, the majority of them are between 15 and 25 years old and those the addicts are considered criminals rather than patients in need for treatment *(Sorour et al., 2014).*

In Kingdom of Saudi Arabia (KSA), Egypt and Jordan, prevalence estimates of alcohol use disorders (12-month prevalence) among females older than 15 years old was zero, while among males older than 15 years old was **0.44** in Egypt, **0.38** in KSA and **0.32** in Jordan. On the other hand, prevalence estimates of drug use disorders were **1.3, 0.63,** and **0.01** among males in Egypt, Jordan and KSA respectively. Drug use disorders were reported among females in Egypt and Jordan but not in KSA *(WHO, 2010)*.

Since 2007 to 2014, the Unit of Research in the General Secretariat of Mental Health and Addiction Treatment (GSMHAT), Ministry Of Health, Egypt, has been conducting a survey to study the substance abuse problem in the whole Egyptian governorates. A total number of **106480** Adult Egyptians were included in the survey. About one fifth **(19.1%)** of the Egyptians are dealing with substance(s) with different levels of use and abuse (excluding tobacco smoking). The group of young adults was the most represented age group among substance users (6.6% of the sample was aged between 16 and 25 years), i.e. the most vulnerable age group due to the characteristic problems of late adolescence/young adulthood and the peer influence and pressure, in addition to family history of substance use. Young adults aged **(16-25)** showed **15%** percentage of substance use among their age group *(National Survey of Substance Abuse in Egypt, 2015).*

Other sporadic research was conducted to study the epidemiology of the Addiction problem. In a study which was published in 2003, the percentage of female secondary school students who smoked cigarettes was **2.5%,** and those who used illicit drugs **3.9%.** While only **0.7%** of the sample declared the use of cannabinoids, **15.9%** reported alcohol use. Illicit drugs were usually taken by young females to overcome stress. Meanwhile, cannabinoids and

alcohol were used for recreational purposes. Moreover, the main reason to stop illicit drugs was fear of dependence, to stop cannabinoids was fear of harmful effect and to stop alcohol was the religious factor *(Sadek et al., 2002).*

The finding that the females from Cairo are more commonly suffering from Substance use than the other regions of Egypt, may be explained in a cultural context by the openness of the female social life in Cairo, which implies more stresses on the females living there, and also makes it easy for them to reach the drug dealer areas. This is in concordance with an American research postulating that the differences in Substance abuse, especially Cannabis between males and females, are decreasing markedly (34) *(Greenfield & O'Leary's, 1999).*

Higher levels of freedom of expression that women experience in Cairo may also enhance the willingness to disclose such a problem to the research team, in contrast to the shame and stigma a woman in rural area would encounter if she discloses a similar problem. Another major concern is the rise in tobacco use by young school girls, because those who start as children find it hardest to quit (35) *(Hamdi et al, 2013 (b)).*

AIM OF THE WORK

To find out the prevalence of psychoactive substance use among female students in Ain Shams University.

Chapter (1): Substance Use Disorders

Substance use disorders occur when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. According to the DSM-5, a diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological criteria *(Salwan and Katz, 2014)*.

Substance abuse:

According to the WHO (2010), "Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Psychoactive substance use can lead to dependence syndrome - a cluster of behavioral, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state" *(WHO, 2010)*.

Drug Misuse:

The term **misuse** in refers to the illegal or illicit **drug** taking or alcohol consumption which leads a person to experience social, psychological, physical or legal problems related to intoxication or regular excessive consumption and/or dependence *(AMA, 2016)*.

Substance dependence:

It is also known as drug dependence is an adaptive state that develops from repeated drug administration, and which results in withdrawal upon cessation of drug use. A *drug addiction*, a distinct concept from substance dependence, is defined as compulsive, out-of-control drug use, despite negative consequences *(American Medical Association, 2016)*.

The previous edition of the *Diagnostic and Statistical Manual of Mental Disorders* (**DSM-IV**) divided substance-related disorders into two categories: *substance abuse* and *substance dependence*. There were a number of problems with this system: the dividing line between *abuse* and *dependence* was not clear; **substance dependence** was often confused with **physical dependence**; and the term **abuse** has pejorative connotations. Published in May 2013, the **DSM-5** replaces these with a single term: **substance use disorder**. There are two major changes to the diagnostic