Assiut Scientific Nursing Journal
http://asnj.journals.ekb.eg http://www.arabimpactfactor.com
DOI: 10.21608/asnj.2024.253490.1731 http://olddrji.lbp.world/indexedJournals.aspx
https://vlibrary.emro.who.int/journals/assiut-scientific-nursing-journal

Patterns of Substance Addiction among Male Individuals with Substance Addiction Admitted at Assiut University Hospital

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Abstract:

Background: With developing substance use patterns, in Egypt substance abuse rabidly increased and new substances were added every day. According to the latest data, 5.5% of individuals worldwide, aged 15 to 64, reported using drugs or alcohol at least once in the preceding year. The widespread issue of addiction to substances can devastate the individual's relationships, income, and economy. **This study aimed to:** Identify the patterns of substance addiction among male individuals with substance addiction admitted at Assiut university hospital.**Subjects and methods:** A descriptive research design was used. The study subjects included 62 male individuals with substance addiction**. Setting:** At the inpatient sector of addiction management unit at the Psychiatry, Neurology and Neurosurgery Hospitalat Assiut University.**Purposive sample** was utilized. **Tools:** A Self-administered questionnaire about socio-demographic and clinical characteristics, scale for measuring family socioeconomic status and the addiction severity index (ASI). **Results:** More than half of individuals with addiction use single substance, the most prevalent substance used the opioid (62.9%), followed by tramadol (32.3%), amphetamines (25.8%), cannabinoids (19.0%) and benzodiazepine (4.8%).And more than two thirds of individuals with substance addiction initiating substance due to their peer negative effect. **Conclusions:** The most prevalent substance used opioid and most individuals with substance addiction initiating substance due to their peer negative effect. **Recommendations:** Continuously identifying the new patterns of substance addiction, ways of prevention to substance addiction and appropriate interventions for its treatment.

Keywords: Individuals with substance addiction, Patterns of Substance Addiction & Substance addiction.

Introduction:

Substance addiction is defined as a maladaptive pattern of substance use that occurs at any point throughout the same 12-month period and causes clinically substantial impairment or suffering. Tolerance, withdrawal, and other symptoms are its outward signs **(Volkow & Blanco, 2023).**

Addiction to substances is a serious issue around the world that regularly remains untreated and can have a devastating impact on relationships, employment, the economy and general well-being. In addition to creating habits, drugs can harm the brain. It could impede thinking, which makes it difficult to manage one's behavior and lead to loss of self-control. **(Ahmad et al., 2020)**

Familial, social, and individual risk factors affect substance addiction among adolescents. Other factors include childhood maltreatment, substance abuse by one of the family members, parent–child relationships, depression, and association with deviant peers **(Nawi et al., 2021).**

According to the United Nations Office on Drugs and Crime's World Drug Report 2021, around 275 million people used drugs globally last year, and more than 36 million people experienced substance use disorders **(TSUWA & Aondoaver, 2022).**

Alcohol, caffeine, cannabis (marijuana), hallucinogens like PCP and LSD, hypnotics, sedatives, and anxiolytics (anti-anxiety medications), benzodiazepines and barbiturates, prescription and over-the-counter opioids are some examples of substances that have the potential to cause addiction **(Rassool, 2017).**

All Egyptian governorates were included, with the exception of El-Wadi El-Gedid, in a cross-sectional community-based study that used population samples. cannabis accounted for 77% of all substances consumed. Outside of Upper Egypt, alcohol was the second-most generally used substance (28.6% of total usage), while opiate was the third-most abused substance (23.4% of total use) **(AbddelMoneim et al., 2020).**

Despite research indicating a link between the use of cannabis and certain diseases, the potency of cannabis has increased by up to four times globally over the past 24 years. There are several health and other

negative effects, especially for long-term, regular users **(Gracie & Hancox, 2021)**.

Significance of the study:

Substance addiction has grown to be one of the biggest issues facing Egyptian society, particularly in light of its high prevalence among teenagers. Over nine million Egyptians are thought to suffer from substance addiction, according to statistics. Also, substance of abuse rabidly increased and new substances were added every day **(Rabie et al., 2020).**

Each year, Egyptians who suffer from addiction to substances spend 2.9 billion US dollar which represent economic burden either to individuals, community and economic. The number of persons who are dependent on opiates, cannabis, stimulants similar to amphetamines, or heroin varies widely but is estimated to be between 600,000 and 800,000 **(Nour et al., 2018).**

One of the most lethal diseases in the world, substance addiction has the potential to cause negative effects from continued substance use **(Martini et al., 2022).**

Therefore, this study aimed to identify the new patterns of individuals with substance addiction and the motivating factors of initiating substance use admitted at Assiut University Hospital.

Aim of the Study

The aim of this study was to:

Identify the patterns of substance addiction among male individuals with substance addiction admitted at Assiut university hospital.

The study achieved these objectives:

1. Identify the new patterns of substance addiction among male individuals with substance addiction admitted at Assiut university hospital.
2. Assess the risk factors of initiating substance use among male individuals with substance addiction admitted at Assiut university hospital.

Research question:

1. What are the new patterns of substance addiction among individuals with substance addiction?
2. What are the risk factors of initiating substance use among individuals with substance addiction?

Subjects and Methods:

Technical Design:

Research Design:

The research employed quantitative a descriptive design.

Setting:

The study was conducted at the inpatient unit of addiction treatment. at the Psychiatry, Neurology and Neurosurgery Hospital at Assiut University.

Subjects and Sample size:

A purposeful sample was utilized, consisting of 62 individuals with substance addiction based on the sample size that Open Epi Info version (3) determined according to the prevalence of addict in the study conducted by **(AbddelMoneim et al., 2020)** using confidence level 90% and confidence limit 5%.

Inclusion criteria:

- Patients diagnosed with substance addiction according to Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5).
- Male patients 18 years and older.
- Addict for any substance either single substance or poly substance.

Exclusion criteria:-

- Patients with cognitive impairment due to any cause e.g. (Alzheimer disease, mild cognitive impairment)
- Patients with organic brain disorder e.g. (Delirium, dementia and amnesia).
- Co-morbid psychiatric disorders.

Study Tools:

Tool (1): A self-Administered Questionnaire about Socio-demographic and Clinical Characteristics:

It is developed by researcher in an Arabic language to assess socio-demographic and clinical characteristics. This tool divided into two parts

Part (1): Socio-demographic characteristics:

This data included age, place of residence, occupation, marital status and level of education.

Part (2): Clinical characteristics:

This included the following data: Diagnosis (single substance or poly substance use), type of substance uses which included (cannabinoids, tramadol, opioids, amphetamines, and benzodiazepine), methods of substance use (oral, inhalation, and injection), age of starting substance abuse, duration of substance uses (less than one year or more than one year), and motivating factors of initiating substance.

Tool (2): Family socioeconomic status scale:

This scale has been developed by **Sawsan and AF(1983)** in an English language and updated by **El-Gilany, et al (2012)** in an Arabic language,Pearson correlation coefficient was used to examine the correlation between different dimensions of the scale as well as inter-and intra-observer reliability. Within each domain, the test-retest and inter-rater correlation coefficients ranged from 0.84 to 1.00.

The scale includes 7 domains:

- Education and culture
- Occupation
- Family
- Family possessions
- Economics
- Home sanitation
- Healthcare access

The socioeconomic status categories on this scale have a total score of 84. are classified as follows:

- <42 = very low level of socioeconomic status.
- 42 - <63= low level of socioeconomic status.
- 63 - <71.4= middle level of socioeconomic status.
- 71.4:84= high level of socioeconomic status.

Tool (3): The Addiction Severity Index (ASI):

It was developed **by McLellan, et al (1980)**. The Arabic version was used **(Qasem, et al, 2003).**This is designed to provide important information about aspects of the life of patients that may contribute to their substance-abuse problems. This tool is an interview process that assesses history, frequency, and consequences of alcohol and drug use. The Addiction Severity Index (ASI) provides a general overview of substance-abuse problems rather than a focus on one area. The ASI is designed to evaluate patients' recent, past 30 days, and lifetime functional status in the different domains. It includes 200 statements on 7 domains as following:

- Medical status
- Employment and support
- Drug use
- Alcohol use
- Legal status
- Family and social status
- Psychiatric status

ASI questions are scored on a 0-1 scale, with yes equaling 1 point and no equaling 0 point. The severity ratings are based on scale of 0 to 9. Original scoring is reclassified as follows:

0 to 1→no problem for each problem.
2 to 5→mild to moderate problems for each problem.
6 to 9→severe problems for each problem.

Reliability: Internal consistency reliability of the ASI was examined using Cronbach's alpha coefficients, which ranged from 0.64 to 0.77 across different domains**(Mohamed et al., 2017).**

Validity: Three of the seven ASI composite scores were tested for and found to have moderate concurrent validity: Alcohol (r = .31 to .36), drug (r = .46), and psychiatric (r = .53 to .66). Composite scores inter item correlations were .70 or greater in each domains except for employment (.50) and family (.52).**McLellan et al., (1980)**concluded that ASI is reliable and valid assessment tool.

Procedures:

Administrative phase:

- Approval of the study by the dean of faculty of Nursing and the head of Neurology and Psychiatric department at Assiut University hospital for data collection and conducting the research.

Preparatory phase:

- Preparing the tools (A self-administered questionnaire about socio-demographic and clinical characteristics, scale for measuring family socioeconomic status, and addiction severity index).
- A pilot study involving ten patients was conducted to evaluate the applicability and clarity of the tools, there was no modification, so this sample included in the study sample.
- Patients interviewed at the beginning to verify the study protocol and take informed consent.

Application phase:

- Individuals with substance addiction who were stable, not aggressive and cooperative assessed for socio-demographic characteristics, clinical characteristics, family socioeconomic status and addiction severity at separate area of addiction management for recreational activities and related interventions. The duration of interview of the researcher and individuals with substance addiction was about one hour.
- The researcher started the study from the 1st of January 2022 to the end of June 2022.

Ethical considerations

The study was approved by ethical and scientific committee of the nursing faculty Assiut University. The ethical code (343) on December 26/2021. Informed consent was obtained from all participants, assuring them of the confidentiality and anonymity of their data. Participants had the right to refuse participation or withdraw from the study at any time.

Statistical Analysis:

The SPSS 26 Statistical Soft Ware Package was used for data entry and statistical analysis. Qualitative data were described in the form of numbers and percentages; $\chi 2$ test or Fisher's exact test was used to test to compare between categorical variables, as appropriate. Quantitative data were described as mean and standard deviation; independent t test was used for comparison between two groups. The P – Value was considered statistically significant if it was < 0.05.

Results:

Table (1): Frequency distribution of individuals with substance addiction according to their socio-demographic characteristics

Socio-demographic characteristics	No. 62	%
Age: (Mean ± SD)	**29.62±8.20**	
< 30	37	**59.7**
30- 40	16	25.8
> 40	9	14.5
Residence:		
Rural	21	33.9
Urban	41	**66.1**
Levels of education:		
Read and write	23	37.1
Secondary school	31	**50.0**
University	8	12.9
Marital status:		
Single	26	41.9
Married	36	**58.1**
Occupation:		
Non skilled workers	51	**82.3**
Employee	11	17.7

Chi square test *t: independent t-test*

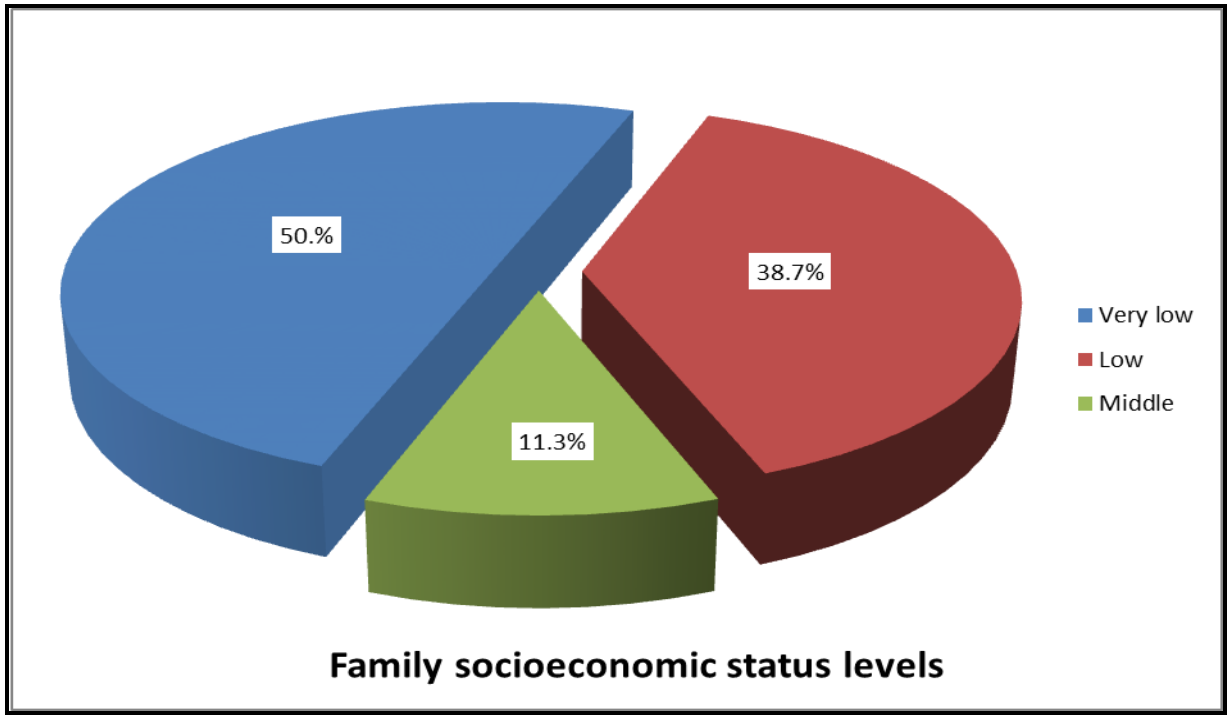

Figure (1): Frequency distribution of individuals with substance addiction according to their socioeconomic status levels.

Table (2): Frequency distribution of individuals with substance addiction according to their clinical characteristics.

Clinical characteristics	No. 62	%
Diagnosis:		
Single substance	36	**58.1**
Poly substance	26	41.9
P value	0.253	
#Types of substance use:		
Cannabinoids	18	19.0
Opioids	39	**62.9**
Tramadol`	20	32.3
Amphetamines	16	25.8
Benzodiazepine	3	4.8
P value	**<0.001***	
#Methods of substance use:		
Oral	28	45.2
Inhalation	47	**75.8**
Injection	9	14.5
P value	**<0.001***	
Age of starting abuse (in years): (Mean±SD)	**22.50±6.17**	
< 20	23	37.1
20- 30	32	**51.6**
> 30	7	11.3
P value	**<0.001***	
Duration of abuse:		
Less than one year	23	37.1
More than one year	39	**62.9**
P value	**<0.001***	

*#More than answer Chi square test * statistically significant difference (p<0.05)*

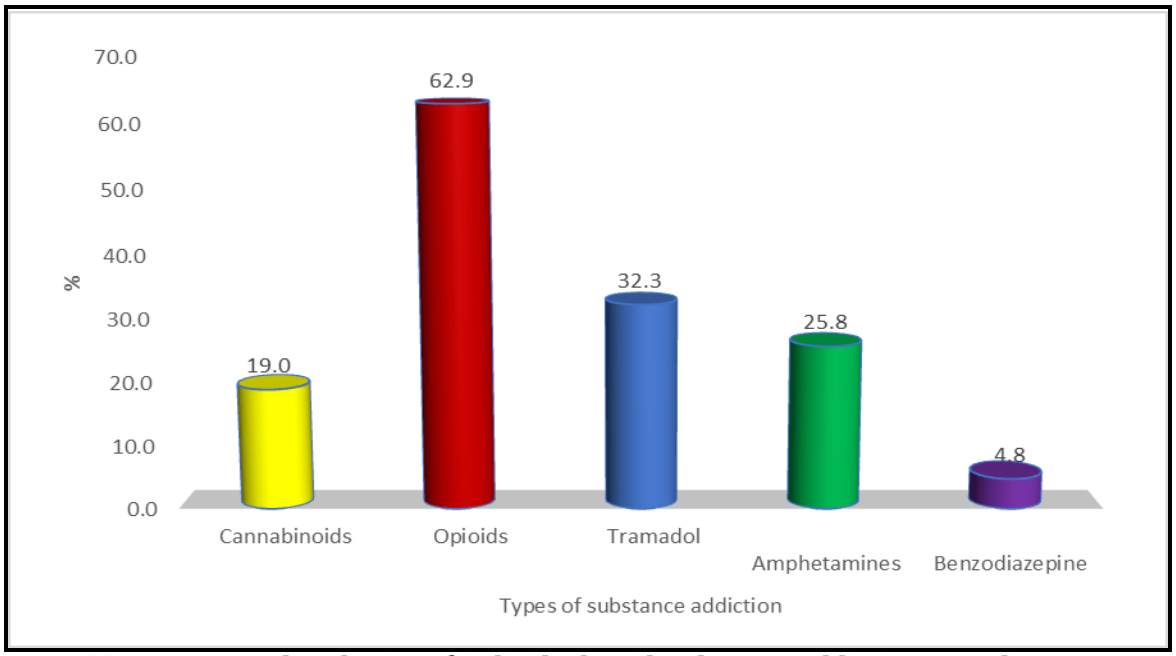

Figure (2): Frequency distribution of individuals with substance addiction according to types of substance addiction.

Table (3): Frequency distribution of individuals with substance addiction according to their motivating factors of initiating substance use.

#Motivating factors of initiating substance use	Individuals with substance addiction no. 62	
	No.	%
Peer effect	**48**	**77.4**
Curiosity	25	40.3
Escape from life stressors	12	19.4
Increase strength and energy	4	6.5
Improve sexual ability	1	1.6
Relieve chronic pain	1	1.6

#More than one answer

Table (4): Frequency distribution of individuals with substance addiction according to their addiction severity domains.

Addiction severity domains	Individuals with substance addiction No. 62	
	No.	%
Medical status		
No problems	39	**62.9**
Mild to moderate problems	20	32.3
Severe problems	3	4.8
P value	**<0.001***	
Employment status		
No problems	11	17.8
Mild to moderate problems	26	**41.9**
Severe problems	25	40.3
P value	**0.033**	
Alcohol abuse		
No problems	60	**96.9**
Mild to moderate problems	2	3.1
Severe problems	0	0.0
P value	**<0.001***	
Drug abuse		
No problems	3	4.8
Mild to moderate problems	25	40.3
Severe problems	34	**54.9**
P value	**<0.001***	
Legal status		
No problems	52	**83.9**
Mild to moderate problems	7	11.3
Severe problems	3	4.8
P value	**<0.001***	
Family and social status		
No problems	18	29
Mild to moderate problems	27	**43.5**
Severe problems	17	27.4
P value	0.230	
Psychiatric status		
No problems	21	33.9
Mild to moderate problems	16	25.8
Severe problems	25	**40.3**
P value	0.373	

Chi square test ** statistically significant difference (p<0.05)*

Table (4): Frequency distribution of individuals with substance addiction according to their family history of substance abuse.

Family history of substance abuse		Individuals with substance addiction n= 62	
		No.	%
Yes	First degree relatives	8	12.9
	Second degree relatives	5	8.0
Total		13	20.9
No		49	**79.1**

Table (6): The relationship between mean age of individuals with substance addiction starting substance abuse and their types of substance uses.

Types of substances uses	Age of starting abuse (in years)		t value	P. value
	Mean±SD	Range		
Cannabinoids	17.25±3.86	15-23	1.13	0.351
Opioids	**24.05±6.17**	15-38		
Tramadol	22.83±7.7	15-33		
Amphetamines	22.25±5.12	15-27		
Poly substance	21.96±6.12	12-37		

t: independent t-test ** Statistically significant difference (p<0.05)*

Table (7): Relationship between family socioeconomic status levels and types of substance use among individuals with substance addiction.

Types of substances	Family socioeconomic status levels						X2	P. value
	Very low (N=31)		Low (N=24)		Middle (N=7)			
	No	%	No	%	No	%		
Cannabinoids	2	6.5	1	4.2	1	14.3	8.33	0.401
Opioids	7	22.6	12	**50.0**	3	**42.9**		
Tramadol	4	12.9	2	8.3	0	0.0		
Amphetamines	3	9.7	0	0.0	1	14.3		
Poly substance	15	**48.4**	9	37.5	2	28.6		

χ^2: Chi square test ***P. value:*** *Statistically significant difference (p<0.05)*

As regard socio-demographic characteristics of all individuals, their mean age was 29.62 years, 66.1% of them lived in urban area, 50.0% at secondary school level of education, 82.3% were non skilled workers and 58.1% of them were married as shown in **table (1)**.

Figure (1): Illustrates family socioeconomic status, it reveals that; 50.0% from individuals with addiction had very low level of socioeconomic status, 38.7% of them had low level of family socioeconomic status, and only 11.3% of them had middle level of family socioeconomic status.

According to clinical characteristics, it was found that; 58.1% of individuals addict one substance. While 75.8% of them inhales the substance. The mean age of starting addiction was 22.50, and 62.9**%** of them used substance for more than one year with statistically significant difference (**<0.001*)** shown in **table (2).**

Figure (2): Demonstrates types of substance, it was noticed that; the most prevalent used substance was the opioid (62.9%), followed by tramadol (32.3%), amphetamines (25.8%), cannabinoids (19.0%) and 4.8% used benzodiazepine.

Table (3): The most common motivation of initiating substance use among individuals with substance addiction is the negative peer effect (77.4%), followed by curiosity (40.3%), escape from life stressors (19.4%), increase strength and energy (6.5%), improve sexual ability (1.6%) and relieve chronic pain (1.6%).

Regarding to Addiction severity index subscales, it was noticed a statistically significant difference in medical status, employment, alcohol and legal status. 32.3 % of individuals with substance addiction had mild to moderate medical problem, 4.8 % of them had severe medical problem. 41.9% of them had mild to moderate in employment problems. While; 3.1% of them had mild to moderate alcohol problems.

Moreover, 54.9% of them had severe problems in drug abuse, 83.9% of them had no legal Problems, 43.5% of them had mild to moderate in family and social status and 40.3% of them had severe problems in psychiatric status as presented in **table (4)**.

Table (5): Show family history of substance abuse among individuals with substance addiction, it was found that; 79.1% of them hadn't family history of their substance abuse and 20.9% had positive family history of substance abuse among them. In addition; 12.9% of them had first degree relatives who were substance abusers.

Table (6): Clarifies that, there is no statistically significant difference of age of starting substance abuse and types of substance use, the mean age of starting opioid abuse was 24.05±6.17 years.

There is no statistically significant difference between family socioeconomic status levels and types of substance use, 50.0% from opioid users were at low level of family socioeconomic status, 42.9% of them were at middle family socioeconomic status level, and 48.4% of poly substance were at very low family socioeconomic status level as revealed in **table (7).**

Discussion:

Addiction to drugs and alcohol is becoming more prevalent worldwide, and this is leading to a rise in mortality and morbidity rates **(Onaolapo et al., 2022).** There is a growing prevalence of substance use addiction in Egypt, accompanied by changes in substance use patterns **(AbddelMoneim et al., 2020).** Thus, the present study aimed to identify the new patterns of substance addiction among male individuals with substance addiction admitted at Assiut university hospital. The study included individuals who admitted at Assiut University Hospital.

The current study revealed that most individuals with addiction typically used one substance. Similarly, **López et al. (2021)** reported that about two-thirds of all participants in their study used a single type of substance.In contrast, **Abdd elMoeim et al. (2020)** in their study, found that more than one half of addicts abused one substance, whereas less than one half abused many substances.

As regard types of substance used, opioids have become the most utilized substance, followed by tramadol, cannabinoids, amphetamines, and benzodiazepines, this may be explained by opioids ability to cause pleasure and relieve pain through neurological pathways, additionally, they exhibit a strong, compulsive urge to consume even when it is not necessary for medical purposes. This finding in contrast to the finding of **Aly et al., (2020)** who found that the incidence of tramadol use was more than one third of young people and adolescents who entered the emergency room at the poison control center. This variation could be related to the sample of the present study was hospital-based study, while the sample of **Aly et al, (2020)** from the emergency room.

Additionally, many individuals with substance addiction utilized substances mainly by inhalation. This approach was widely used since it was simple, had fewer hazards, more effective and available to those who were individuals with substance addiction .In contrast; **(Kun et al., 2019)** indicated that over one half of individuals in studied group used injectable substance**.**

The current study also showed that individuals with substance addiction started using substance in late adolescence and early adulthood, usually between the ages of 20 and 30. This may be explained by the numerous physical, psychological, emotional, and social stressors encountered during this stage and also might related to negative peer effect (Daga et al., 2019). These results are consistent with those of **Mohamed et al., (2015)** they showed that first used substance or alcohol among most of their participants were between the ages of 21 and 32**.**

Regarding the duration of abuse, the current study found that the majority of individuals had taken substances for longer than a year. This might be attributed to individuals of substance addiction becoming dependents on substance and through taking it they achieve the desired effects. The results of **(McHugh et al., 2017)** show that over two thirds of the experimental and control groups used drugs for less than a year, which is in contrast to the current study.

The present study revealed that; the mean age of starting opioid abuse was 24.05 years. This finding is consistent with the finding of **AbddelMoneim et al. (2020)** who reported that; the mean age of starting tramadol and opiate was 25.71±6.8 years.

Furthermore, in the present study a significant number of individuals of substance addiction accused peer pressure of their substance abuse. These results are similar to finding of **Sayed et al., (2020)** who reported that; peer pressure influenced over one half of both experimental and control groups.

According to the results of the current study, half of the individuals with substance addiction had very low socioeconomic status levels; this can be explained to the most of participants were manual workers with irregular salaries. This result is consistent with **Bond et al., (2019)**who found more than half of addiction sufferers are low-income. On the other hand, **Mohamed et al., (2015)**, observed conflicting findings, with 28% of their research participants having high socioeconomic status, 24% having low

socioeconomic status, and 43% having middle socioeconomic status.

The current findings show that the majority of participants had no family history of substance addiction. This could explain that substance abuse hadn't genetic cause except alcohol, and most of study sample weren't alcoholic. Also, the findings conducted by **AbddelMoneim et al., (2020)**, they discovered that more than one half of drug abusers had no family history of substance addiction, less than one half of them had a positive family history.

Regarding addiction severity index, in the present study most of participants had severe problems in drug abuse and psychiatric status and had mild to moderate problems in family and social status. However, the study conducted by **Stathopoulou et al., (2021)**, investigated if, through a series of cross-sectional analyses, the severity of addiction among individuals with opioid use disorders significantly predicted addiction-related concerns in the areas of the psychiatric status, medical status, employment/support status, legal status, and family/social status. They found that the baseline addiction severity significantly predicted of both psychiatric status and medical status domains.

The variations of the findings of the present study and other studies might be related to number of samples, whether the study carried on hospital, school, or the emergency room and prevalence of new substances.

This study has a limitation due to the relatively small number of individuals with addiction admitted during the research period, Furthermore, the researcher faced challenges in managing the behaviors of individuals with substance addiction, resulting in extended time spent on their assessment.

Conclusions:

This study concluded that; most individuals with addiction used single substance, the most prevalent substance used was opioid, followed by tramadol, amphetamines, cannabinoids, and benzodiazepine and most individuals with substance addiction initiating substance due to their negative peer effect.

Recommendations:

Continuous identifying to new patterns of substance addiction, future research about ways to prevent using substance before it occurs, risk factors and appropriate interventions and programs approach for the treatment of substance addiction.

References:

- **AbddelMoneim, W., Abdellah, N. Z., Fawzy, M., & Mohammed, S. (2020):** Assessment of Addicted Cases Admitted to Addiction Management Unit of Neurology and Psychiatry Hospital at Assiut University. Zagazig Journal of Forensic Medicine, 18(1), Pp 108-125.
- **Ahmad, N., Shah, K., Sakari, N., Yusoff, S., & Suhaimi, I. (2020):** The Relationship Between Self Efficacy, Emotional Intelligence, and Social Support of Drug Addict On Relapse. Solid State Technology, 63(5), Pp1688-1697.
- **Aly, S., Omran, A., Gaulier, J.-M., & Allorge, D. (2020):** Substance abuse among children. Archives de Pédiatrie, 27(8), Pp480-484.
- **Bond, K., Yoon, I., Houang, S., Downing, M., Grov, C., & Hirshfield, S. (2019):** Transactional sex, substance use, and sexual risk: comparing pay direction for an internet-based US sample of men who have sex with men. Sexuality Research and Social Policy, 16, 255-267.
- **Daga, M., Kumar, L., & Shukla, J. (2019):** Central nervous system depressants: overdose and management. Princ Pract Crit Care Toxicol,Pp77.
- **El-Gilany, A., El-Wehady, A., & El-Wasify, M. (2012):** Updating and validation of the socioeconomic status scale for health research in Egypt. Eastern Mediterranean health journal, 18(9).
- **Gracie, K., & Hancox, R. (2021):** Cannabis use disorder and the lungs. Addiction, 116(1), Pp182-190.
- **Kun, B., Urbán, R., Paksi, B., Griffiths, M., Richman, M., & Demetrovics, Z. (2019).** The effects of trait emotional intelligence on adolescent substance use: Findings from a Hungarian representative survey. Frontiers in psychiatry, 10, 367.
- **López, G., Orchowski, L., Reddy, M., Nargiso, J., & Johnson, J. E. (2021):** A review of research-supported group treatments for drug use disorders. Substance Abuse Treatment, Prevention, and Policy, 16(1), Pp1-21.
- **Martini, F., Fregna, L., Bosia, M., Perrozzi, G., & Cavallaro, R. (2022):** Substance-related disorders. In Fundamentals of Psychiatry for HealthCare Professionals (pp. 263-295). Cham Springer International Publishing.
- **McHugh, R., Votaw, V., Bogunovic, O., Karakula, S., Griffin, M., & Weiss, R. (2017):** Anxiety sensitivity and nonmedical benzodiazepine use among adults with opioid use disorder. Addictive Behaviors, 65, 283-288.
- **McLellan, A., Luborsky, L., Woody, G., & O'BRIEN, C. (1980):** An improved diagnostic evaluation instrument for substance abuse patients: The Addiction Severity Index. The Journal of nervous and mental disease, 168(1), Pp26-33.
- **Mohamed, M., Marican, S., Othman, M., Thurairajasingam, S., & Ali, N. (2017):** Validation of addiction severity index Bahasa

Melayu version (ASI-5-BM). MOJ Addiction Medicine & Therapy, 4(2), Pp243-247.

- **Mohamed, N., El Hamrawy, L., Shalaby, A., El Bahy, M., & Abd Allah, M. (2015):** An epidemiological study of tramadol HCl dependence in an outpatient addiction clinic at Heliopolis Psychiatric Hospital. Menoufia Medical Journal, 28(2), Pp591.
- **Nawi, A., Ismail, R., Ibrahim, F., Hassan, M., Manaf, M., Amit, N., Ibrahim, N., & Shafurdin, N. (2021):** Risk and protective factors of drug abuse among adolescents: a systematic review. BMC public health, 21(1), Pp1-15.
- **Nour, S., Soliman, E., Al-Humaidi, S., & Abou-Rayan, M. (2018):** Importance of Education and Nutrition Intervention on Drug Addiction Recovery. Alexandria Science Exchange Journal, 39(OCTOBER-DECEMBER), Pp 676-685.
- **Onaolapo, O., Olofinnade, A., Ojo, F., Adeleye, O., Falade, J., & Onaolapo, A. (2022):** Substance use and substance use disorders in Africa: An epidemiological approach to the review of existing literature. World journal of psychiatry, 12(10), 1268.
- **Qasem, T., Beshry, Z., Omar, A., & Abdel Mawgoud, M. (2003):** Profiles of neuropsychological dysfunction in chronic heroine users. MD degree thesis, faculty of Medicine, Ain Shams University, Cairo, Egypt.
- **Rabie, M., Shaker, N., Gaber, E., El-Habiby, M., Ismail, D., El-Gaafary, M., Lotfy, A., Sabry, N., Khafagy, W., & Muscat, R. (2020):** Prevalence updates of substance use among Egyptian adolescents. Middle East current psychiatry, 27, Pp1-8.
- **Rassool, G. H. (2017):** Alcohol and drug misuse: A guide for health and social care professionals. Routledge.
- **Sawsan I, & AF, E. (1983:** Determining simple parameters for social classifications for health research.
- **Sayed, S., Ahmad, H., Sayied, N., El-Aziz, A., & Mohamed, A. (2020):** Effect of psycho-educational program on depression among drug addict patients at Assiut University Hospital. Assiut Scientific Nursing Journal, 8(20), Pp45-55.
- **Stathopoulou, G., Gold, A., Hoyt, D., Milligan, M., Hearon, B., & Otto, M. (2021):** Does anxiety sensitivity predict addiction severity in opioid use disorder? Addictive Behaviors, 112, Pp106644.
- **TSUWA, J., & Aondoaver, U. (2022):** Drug Abuse and the Challenge of Human Security. Journal of Public Policy & Development Studies, 1(1).
- **Volkow, N., & Blanco, C. (2023):** Substance use disorders: a comprehensive update of classification, epidemiology, neurobiology, clinical aspects, treatment and prevention. World Psychiatry, 22(2), Pp203-229.