Substance Abuse and Associated Psychological Factors among Minibus Drivers at Assiut City

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Abstract

Background: Drug abuse in Egypt, is the most dangerous problem threaten the young adults and worry the government. One of the most essential groups for drug abusers are those dealing with the transportation and driving on the road because substance abuse increases the possibility of death after road accidents. **The Aim:** Explore percentage of drug abuse between minibus drivers, investigate psychological aspects of substance abuse among drivers and determine the predicting factors for the risky driving behavior. **Study design:** A descriptive design was used. **Setting:** The study was conducted in Assiut city. **Subjects:** Total coverage of 300 minibus drivers. **Tools:** four tools were used in this study; they are Drug Abuse Screening Test (DAST), Coping style Questionnaire, Depression, Anxiety, and Stress scale (DASS) in addition to socioeconomic scale. **The Results**: The age group ranged 18- 62 years old. 74.7% of studied sample were drug abusers for more than one substance, 58.5% unable to cope with life stressors and 24.6% of them have extremely severe level of depression. There was positive correlation between drug abuse and the socioeconomic level, depression, anxiety and stress and there was a negative correlation between coping and drug abuse. **Conclusion:** About three-quarters of the participated drivers were drug abusers which increase with high socioeconomic level. Substance abuse associated with depression, anxiety, stress, inability to cope with life stressors. **Recommendation:** Health education program about the hazards of drug abuse should be designed for drivers; substance-screening test should be added for all drivers applying driving license.

Keywords: Drug abuse, Psychological aspects & Risk factors

Introduction

Drivers are more exposed to fatigue, sleepiness, and musculoskeletal pains because of longer times of driving which lead to increased risk of driving accidents. Some drivers come to believe that substance use would decrease their fatigue and sleepiness (**Bramness et al., 2012**).

There is an increasing interest in the role of drugs in traffic accidents around the world, as well as how to investigate adequate steps to reduce their frequency **(Avarez et al, 2017)**. The majority of medications that affect the focal sensory system have the potential to impair driving ability. Alcohol, illicit drugs (drugs of abuse: opiates, amphetamines, cocaine, and cannabis), and prescription psychoactive drugs are all potentially dangerous. For a long time, the main emphasis has been on alcohol, with most countries establishing legal limits for blood alcohol consumption while driving. Drugs other than tobacco, on the other hand, have seen a significant rise in use in recent years. **(Huestis, 2015)**.

Many risk factors are associated with substance use, these factors are in the category of childhood maltreatment (violence and neglect) familial drug abuse, and parent-child relationships are only a few of the risk factors linked to family factors. Association with deviant peers, popularity, bullying, and gang affiliation are all social risk factors. Individual risk factors include depression and attention deficit hyperactivity disorder (**Whitesell et al., 2013).**

Egypt is one of the top countries that reported for high frequency of road deaths (**WHO, 2013**). It is reported by The Egyptian Central Agency for Public Mobilization and Statistics that individual behavior is responsible for 60% of road accidents including excessive speed, drivers' poor concentration, wrong passing and the loose of control (**Ali et al., 2014**). It was reported that Arab countries including Egypt have a substantial higher road accident fatality rate than USA and European countries **(Bener et al., 2018).**

It is particularly dangerous to drive when under the influence of psychoactive substances. Specific medications have different effects on the human body based on how they function in the brain. Drivers who have consumed alcohol have a much greater risk of being involved in accidents than those who have not consumed alcohol, and this risk increases exponentially as blood alcohol content rises. Alcohol impairs drivers' judgement and thinking, slowing their responses, upsetting their sense of equilibrium and coordination, and causing vision and hearing damage (blurred and double vision, lack of peripheral vision), focus loss, and drowsiness. (**Brady & Li, 2014)**

Hepatitis B and C, lung carcinoma, liver cirrhosis and primary liver carcinoma, alcohol hallucinosis, and dementia are some of the other adverse effects (**Ali et al., 2014**)

Cocaine or amphetamine-abusing drivers are more likely to be violent and careless, while driving, as cocaine causes an overconfidence that leads to riskier driving at higher speeds. Cocaine may increase the risk of being involved in or responsible for an accident, according to epidemiological studies. When medications wear off, users can become sleepy, which can affect concentration levels, which can be dangerous if the person is driving (**Wilson et al., 2014**).

In addition driving under the effect of illicit drugs like cannabis, opioid, cocaine, and hallucinogens represents major threat to public safety (**Lipari et al., 2016**) as it predisposes to health hazards, not only to the driver but also to the passengers and others on the road (**Alvarez et al., 2015**) .In addition, coping skills are necessary in drug use (**Kiluk & Carroll, 2011 Valentino et al., 2010**).The aim of stress-coping is to preserve physical and psychosocial well-being. Stress-coping skills are important for coping with general life stress (**Wagner et al., 2017**).

In Egypt, drug addiction is seen as one of the most serious issues that people and government officials are concerned about. It influences young people during their productive years and can result in a variety of issues such as social maladaptation, reduced work efficiency, and job loss (**El Akabawi, 2018**). Egyptian Traffic Lows took several steps to screen drugs including cannabis, benzodiazepine, morphine, and tramadol by requiring drivers to provide urine samples (usually 10-50 ml per driver). Urine samples were collected from drivers in plastic containers, transported to the lab in ice boxes, and frozen in (-20oC) before review. To stop dilution, the samples were obtained in front of a guardian. In existence of the drivers, each sample was assigned a unique serial number. At the forensic lab, all samples were tested with a dip stick to identify drug forms.

From promotion to rehabilitation, community health nurses can be found on the front lines delivering guidance and services to clients in different issues, promoting outreach initiatives in the community, serving on treatment and recovery teams, and encountering people as they recover in their communities. Nurses should strive to remain up-to-date in the field of alcohol and drug abuse and related issues because of the crucial role they play in implementing different programmes and services (**Substance Abuse & Mental Health Services Administration, 2017**)

Significance of the study:
Many drivers are regular users of marijuana and tramadol assuming that they reduce fatigue and sleepiness during work (**Abdel Mageid, 2017**) [15]. The majority of Egyptian drivers are of middle or low educational level. Moreover, driving for a long distance with the need to work hard without fatigue and stress to gain more income is the main cause to engage in substance abuse (**Abdel Kareem & Ali, 2018**).

Moreover, giving insight into skilled drivers' drug abuse and driving conduct may aid in the creation of preventive health education initiatives for safe driving to minimize the incidence and severity of road traffic accidents, as well as the resulting economic and psychological strain on the community. To the based on the authors' knowledge, only a few studies have looked into the connection between drug abuse and driving behavior in Egypt. Only few studies as study of (**Hammam etal, 2018**) which was conducted at Al Sharqia governorate, Egypt. They reported that the prevalence of drug abuse among minibus driver was 57.7%.

Aim of the study:
the study aimed to explore percentage of drug abuse between minibus drivers, investigate psychological aspects of substance abuse among drivers at Assiut city, and determine the predicting factors for the risky driving behavior.

Research questions:
1. What is the percentage of substance abuse among drivers?
2. Is there relationship between psychological factors and substance abuse among drivers?

Subjects and Methods:

Research design:
Cross-sectional descriptive research design was used in this study.

Setting: The current study was conducted at the main Parks at Assiut city (Nazlet Abdullah park, Al shader park and Al-Azhar park) at Assiut city.

Subjects: Total coverage of 300 minibus drivers who registered at Assiut traffic department were included in this study, in addition they were given an informed oral consent. Assiut city contains nine lines public transportation which included 300 register drivers.

Sampling technique: Snowball technique was used in this study, first, the research team helped by one driver to persuade others drivers to participate in the study, the research team gain his confidence and explain the aim of the study, then he brought his drivers' fellow workers to participate in the research with times and gain their confidence the number of drivers increased to reach the total numbers of the

drivers. This process occurred in each park of the previous setting.

Study tools:

For data collection, four tools were used:

An interview questionnaire: It included three parts: 1st part, personal data such as age, education, marital status, and residence. The 2nd, pattern of drug addiction: such as type of substance, number of times of drug abuse per day, route of administration, duration of abuse, the desired effect &stimulation for abuse and family history of drug abuse. The 3rd part was socioeconomic scale which developed by **El-Gilany et al., 2012**

Scoring system:

El-Gilany scale used to assess sociodemographic characteristics includes seven domain, educational and cultural domain for both (husband & wife), occupation, family, economic, family possessions, home sanitation and health care domain. Scoring system:The socioeconomic status assessed using a scale comprised seven domains with a maximum score of 84 and a higher score indicating better socioeconomic status. Socioeconomic scores were classified into 4 levels, scores <42 (very low), 42< 63 (low), 63< 71.4 (moderate) and71.4-84 (high social level).

Depression, Anxiety and Stress scale 42 (DASS-42): A psychiatric properties scale of 42 items self-report inventory that yields 3 factors: Depression, Anxiety and Stress. This screening and result calculation is for the previous seven days. The DASS scale was developed by **Lovibond & Lovibond, (1995)** measured on points (0-3).

The severity-rating index is calculated by adding the scores for each of the completed questions and then evaluating it such as; level of depression: normal (0-9), mild depression (10-13), moderate (14-20), severe (21-27), extremely severe (+28). Level of anxiety: normal (0-7), mild (8-9), moderate (10-14), severe (15-19), extremely severe (+20). Moreover, normal (0-14), mild (15-18), moderate (19-25), severe (26-33) and extremely severe (+34), these are levels of stress.

Coping style Questionnaire: This scale developed by **Davis et al., 2005** [19] to assess the coping style of the individuals with stressors, it includes 21 items, the score range from (0-21 points). The score above 11 points mean that the person able to cope with life stressors and the score below 11 points mean that the person unable to cope with life stressors.

Drug Abuse Screening Test (DAST): developed by **Skinner, (1982)** to provide a convenient instrument for determining the level of drug abuse problems. It's a self-report scale of 20 items.Each YES answer receives a grade of "1," with the exception of items 4,5 and 7, which receive a grade of "1" for a NO

response. A grade of zero means that there is no evidence of a drug problem. When the DAST grade rises, so does drug problem increases .A maximum grade of 20 will suggest serious issues.

Scoring system:-

None for a score of 0 indicates no substance abuse, low for a score of 1-5, intermediate for a score of 6-10, substantial for a score of 11-15, and severe for a score of 16 or more.

Validity & Reliability of the tools:-

The study tools are validated by a jury of five expertise, three from community health nursing and two from Psychiatric nursing, to assess the content and face validity of the tool for Egyptian culture. The internal consistency of the tool scale was calculated by using Cronbach's Alpha; and it was 0.66 for socioeconomic scale and 0.92 for DAST. While the Cronbach's alpha values for the depressive, anxiety, and stress domains were 0.94, 0.90, and 0.87, respectively, for DASS-42 reliability.

Administrative approval:

To proceed with the study, there was a necessity for the Dean of the Faculty of Nursing at Assiut University and the manager of the Traffic Department to give their official approval.

Pilot study:

At the start of the research, a pilot study was carried out. It took 10% of the total sample (30 drivers) to look into the feasibility of data collection methods, their clarity, and the time it took to fill out the sheets. The pilot study was included in the actual study.

Field work:

The data collection started from February 2019 till the end of April 2019.the research team collected data three days per week through three months .the researchers met the drivers in the three main parks in Assiut city (Nazlet Abdullah park, Al shader park, and Al-Azhar park).Each participant first was greeted and the researchers introduced their selves and explain the purpose of the study. The data collection took about 30-40 minutes for each participant in average 8-9 drivers per day.

Ethical consideration:

The research proposal was approved by the ethical committee in the Faculty of Nursing, Assiut University, Egypt. The nature and purpose of the study were explained. The investigators informed the drivers that there is no risk or cost for participation, and the participation is voluntary. All of the drivers who took part in the study gave their oral consent. Study participants' privacy and confidentiality were considered during collection of the data. Participated drivers had the right to withdraw from the study at any time and without any rationale.

Statistical analysis:

The data were tabulated and statistically analyzed using SPSS (Statistical Package for Social Science) version 11.5 to computerize and verify them. Quantitative variables were defined using mean ± standard deviation, while qualitative variables were described using frequency and percentages. Several statistical tests were used to analyze the information gathered. Chi square test for qualitative data between the two groups & independent T-test quantitative data between the two groups

Results:

Table (1): Distribution of the studied sample according to their socio demographic data (n=300)

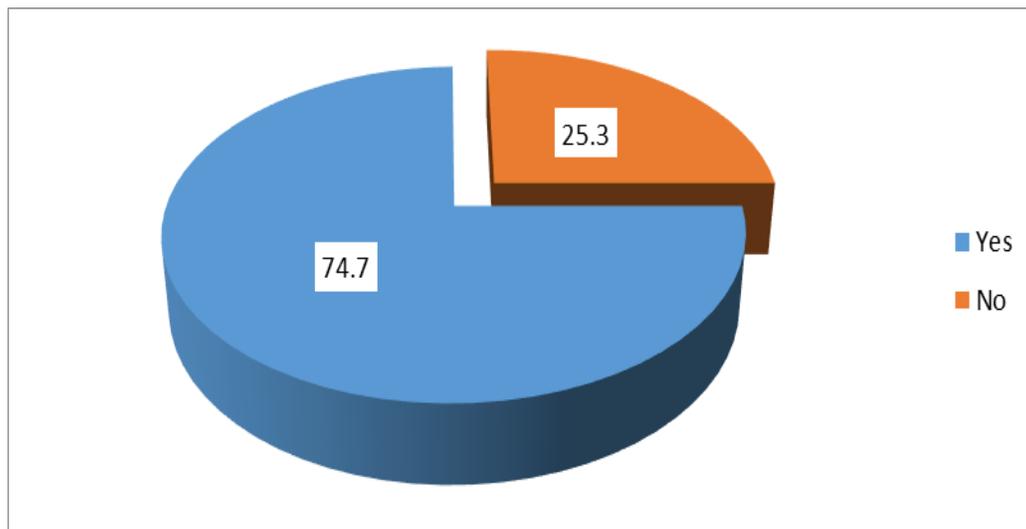| Items	No	%
Age		
< 30 years	107	35.7
30-40 years	105	35.0
> 40 years	88	29.3
Men ±SD(range)	35.4±9.0(18-62)	
Education Level		
Illiterate	39	13.0
Primary	22	7.3
Preparatory	31	10.3
Secondary	147	49.0
University	61	20.3
Marital status		
Single	101	33.7
Married	192	64.0
Divorced	7	2.3
Socio economic Level		
Very low	30	10.0
Low	92	30.7
Moderate	132	44.0
High	46	15.3

Figure (1): Percentage of substance abuse among the studied sample

Table (2): Distribution of the studied sample according to their History of drug abuse (n=224)

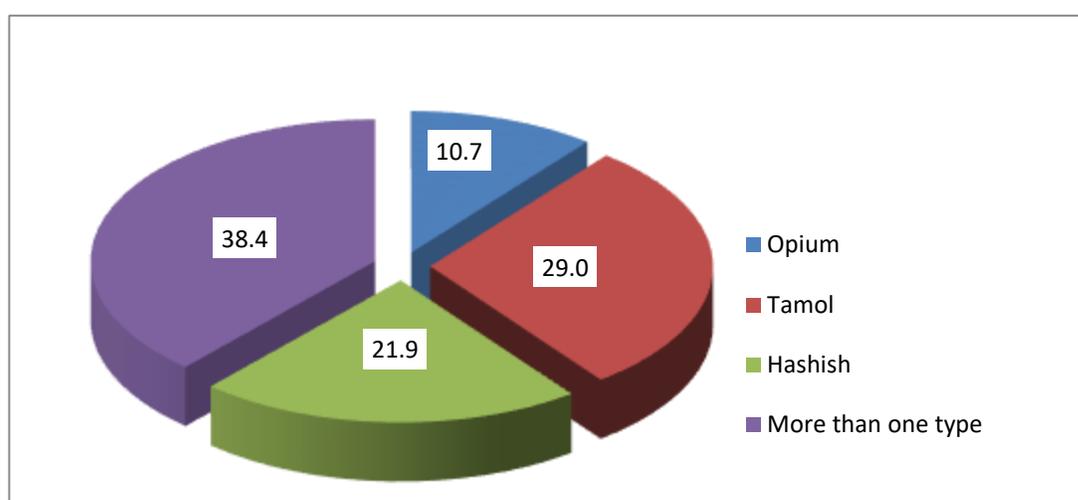| Items	No.	%
Number of times of drug abuse per day		
Less than 3 times per day	178	79.5
3-5 times per day	35	15.6
More than 5 times per day	11	4.9
Route of administration #		
Oral	183	81.7
Inhalation	61	27.2
Injection	43	19.2
Duration of abuse		
Less than one year	76	33.9
From one to two year	90	40.2
More than 2year	58	25.9
Stimulation for abuse #		
Bad friends	21	9.5
As an experiment	26	11.8
To increase strength and activity	103	46.8
To escape from social and financial problems	32	14.5
Weak sexual ability	54	24.5
To relieve chronic pain	20	9.1
The desired effect		
Propagation	35	15.9
Ecstasy	12	5.5
Stimulus	61	27.7
Excitement	29	13.2
Sex	55	25.0
enjoyment	47	21.4
family member who has drug abuse		
Yes	68	22.7
No	232	77.3

 # More than answer

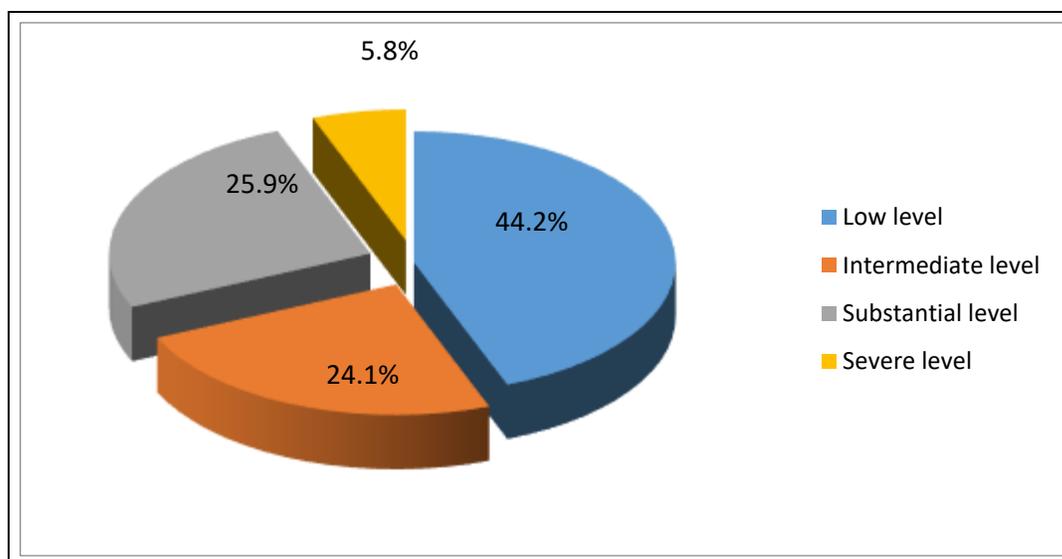**Figure (2): Types of substance abuse among studied sample**

Figure (3): Distribution of studied sample according to level of drug abuse

Table (3): Distribution of the studied sample according to their psychological factors and coping level associated with drug abuse at Assiut city (n=224)

Items	No	%
Depression Level		
Normal	66	29.5
Mild	36	16.1
Moderate	30	13.4
Severe	37	16.5
Extremely severe	55	24.6
Anxiety Level		
Normal	80	35.7
Mild	20	8.9
Moderate	35	15.6
Severe	32	14.3
Extremely severe	57	25.4
Stress Level		
Normal	76	33.9
Mild	35	15.6
Moderate	74	33.0
Severe	35	15.6
Extremely severe	4	1.8
Coping Level		
Unable to Cope with life stressors	131	58.5
able to Cope with life stressors	93	41.5

Table (4): The Relationship between the level of drug abuse and the socio demographic characteristic of the studied

Socio demographic data	The level of drug abuse								P. value
	Low Level(n=99)		Intermediate Level(n=54)		Substantial Level(n=58)		Severe Level(n= 13)		
	No	%	No	%	No	%	No	%	
Age group									
Less than 30 years	43	43.4	17	31.5	14	24.1	3	23.1	
from 30-40 years	30	30.3	19	35.2	21	36.2	8	61.5	0.080
More than 40 years	26	26.3	18	33.3	23	39.7	2	15.4	

Socio demographic data	The level of drug abuse								P. value
	Low Level(n=99)		Intermediate Level(n=54)		Substantial Level(n=58)		Severe Level(n= 13)		
	No	%	No	%	No	%	No	%	
Marital status									
Single	37	37.4	16	29.6	15	25.9	6	46.2	
Married	61	61.6	37	68.5	40	69.0	5	38.5	0.045*
Divorced	1	1.0	1	1.9	3	5.2	2	15.4	
Socio economic Level									
Very low	15	15.2	3	5.6	3	5.2	0	0.0	
Low	44	44.4	15	27.8	13	22.4	1	7.7	0.001**
Moderate	31	31.3	28	51.9	34	58.6	8	61.5	
High	9	9.1	8	14.8	8	13.8	4	30.8	

- *Chi square test for qualitative data between the two groups*
- *Independent T-test quantitative data between the two groups*
- **Significant level at P value < 0.05, **Significant level at P value < 0.01*

Table (5): Relationship between DASS and Coping Scale with participated drivers. n=224

Items	N	Depression	Anxiety	Stress	Coping Scale
		Mean ±SD	Mean ±SD	Mean ±SD	Mean ±SD
Type of substance					
Hashish	49	10.69±6.52	7.82±6.13	14.14±8.8	11.69±3.36
Tramadol	65	17.98±10.51	12.85±7.93	17.58±8.23	11.31±2.76
More than one type	86	21.38±10.87	13.59±9.24	21.97±6.3	11±3.08
Opium	24	18.79±9.14	15.58±7.21	11.63±6.12	9.83±1.99
P. value		**<0.001****	**<0.001****	**<0.001****	**0.082**

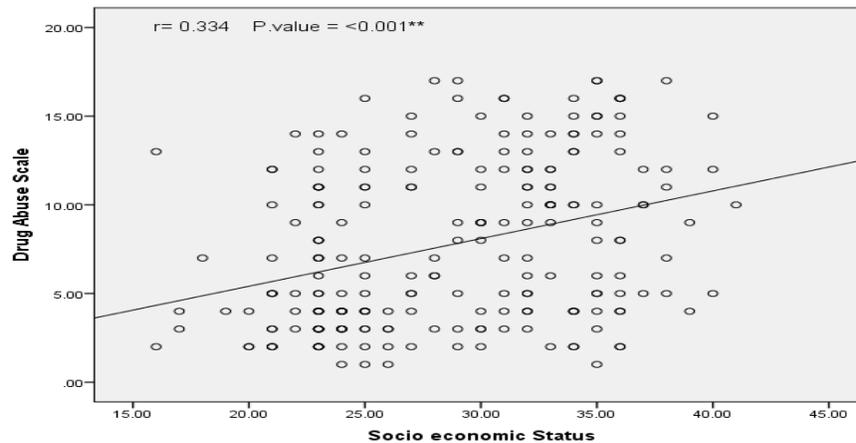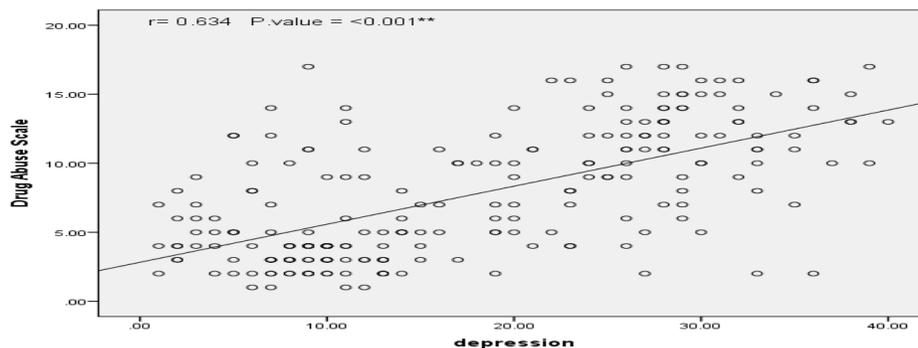**Figure (4):- Correlation Co- efficient between drug abuse with socio economic level**

Figure   **(5):**

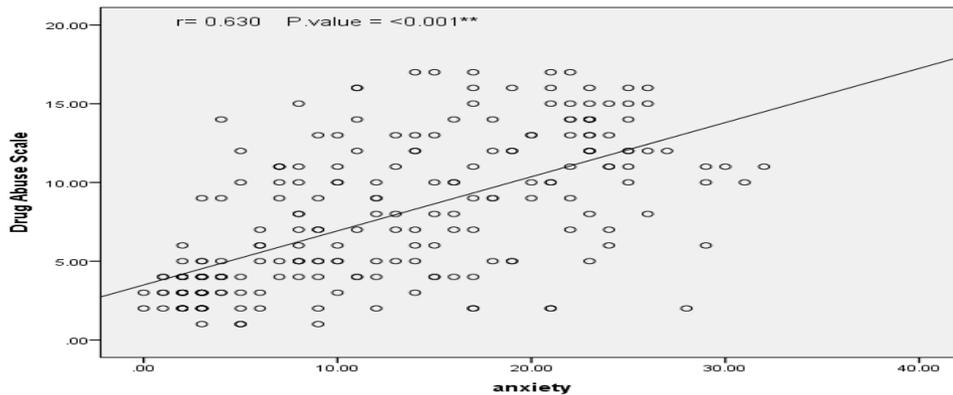**Correlation Co- efficient between drug abuse with depression**

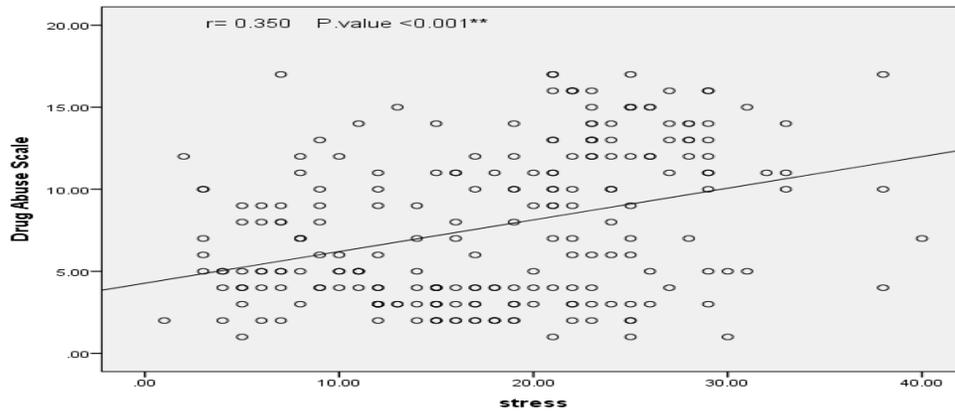**Figure (6): Correlation Co- efficient between drug abuse with anxiety**

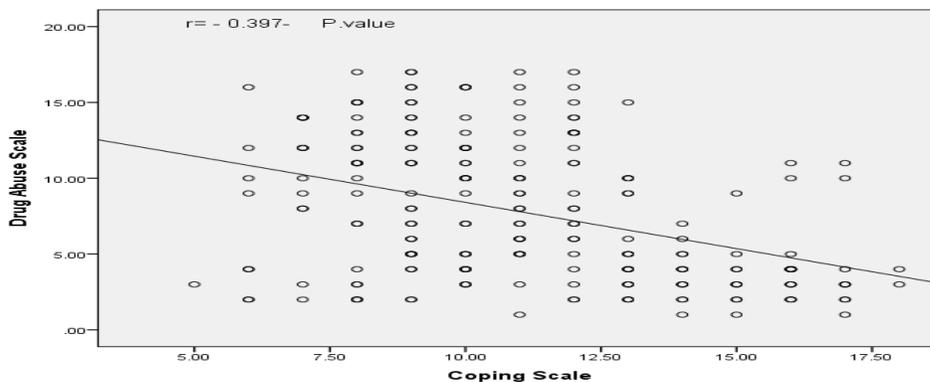**Figure (7):- Correlation Co- Efficient between Drug Abuse with Stress**

Figure (8):- Correlation Co-efficient between drug abuse with coping level

Table (1): Shows that, the mean age group of participated drivers was 35.4±9.0 years, about half, while (49.0%) of them had secondary level of education and 64.0% of them were married and (44.0%) of them had moderate socioeconomic level.

Figure (1): Shows the percentage of substance abuse among the studied drivers, it was found that 74.7% of studied drivers were substance abuser.

Table (2): illustrates that (79.5%) of participated drivers were drug abusers for less than 3times per day. Regarding rout of administration, it was observed that (81.7%) had for less than one year

(33.9) and from one year to two year (40.2%) to increase strength and activity (46.8%) act as a stimulus. Meanwhile, 77.3% of them didn't have any family member either abusers or psychiatric patients.

Figure (2): Illustrates types of substance abuse among studied sample, it demonstrates that Opium was the most substance which used by the participated drivers (38.4%), followed by Tamol (29.0%).

Figure (3): Views distribution of studied sample according to level of drug abuse. It was observed that low level was 44.2%, slightly less than one quarter (24.1%) was intermediate level, while more than one quarter (25.9%) was substantial & only (5.8%) was severe.

Table (3): Demonstrates that (24.6 %) of studied sample had extremely severe level of depression, extremely severe level of anxiety (25.4 %). followed by moderate level of stress (33.0 %). Regarding coping level, (58.5%) of studied sample unable to cope with life stressors.

Table (4): Shows that there was statistically significant relation between the level of drug abuse and the marital status and the socioeconomic level p value =0.001** and no significant relation between the levels of drug abuse with age of the studied sample.

Table (5): Reveals that there was statistically a significant relation between depression, anxiety and stress with type of substance.

Figure (4): Denotes that, there is a statistical significant positive correlation between the socio economic level and drug abuse (p <0.001**, r= 0.334).

Figure (5): Denotes that, there is a statistical significant positive correlation between the level of drug abuse and depression (p <0.001**, r= 0.634)).

Figure (6): Denotes that, there is a statistical significant positive correlation between the level of drug abuse and anxiety (p <0.001** r= 0.630).

Figure (7): Denotes that, there is a statistical significant positive correlation between the level of drug abuse and stress (p <0.001**, r= 0.350).

Figure (8): Denotes that, there is a statistical significant negative correlation between the level of coping and drug abuse (p <0.001**, r= -0.397).

Discussion:

Illicit drugs use is becoming a worldwide prominent public health problem. A total of 246 million people aged between 15 and 64 years worldwide are reported as illicit drug users in 2013. In Egypt, drug abuse becomes an alarming problem in the last years that continues to cause national and societal concern **(UNODC, 2015)**

The present study aimed to explore percentage of drug abuse between minibus drivers, investigate psychological aspects of substance abuse among drivers and determine the predicting factors for the risky driving behavior.

The present study results revealed that three-quarters of the participated drivers are drug abusers. Around two-thirds of the age group (30-40) years showed the highest percentage of sever level of drug abuse. This is a terrible sign because this age group is the most energetic and creative age group in the community. This result was in agreement with **Hamdi et al., 2016** who revealed that the adult age group ≥ 20 years old had a high percentage of drug abuse in a community survey among Egyptians from 8 governorates. Moreover, a study was done in America at (2013) found that high age of drug abuse about (30%) in young adults **(Johnston et al., 2016) Hamdi et al. 2016** have reported that the incidence of substance abuse is different up to 3-fold among governorates. **Yunusa et al., 2017** revealed that the age range of 25-34 years of the commercial bus drivers are more subjected to drug abuse. young age of illicit drug abuse related to bad friends, as an experiment when the age increased above 20 years old the person take drugs to increase strength and to escape from the daily living burdens **(Makanjuola A.B, 2017)**.

The results are incomparable to those reported by **Abdel Mageid, (2017)** to (427) drivers admitted to Alexandria Main University Hospital after road traffic accidents, they revealed that the highest age group was (35-45) years old, this difference may be due to wide variation and large number of drivers used in this study.

In the present findings most of studied sample with secondary education, married. That congruent with the findings of **Aglan & Adawi, 2016 & Hamdi et al., 2016** which reported that most of the studied drivers (96.2%) have intermediate and low education. That relatively agreement with a study of **Aina, et al., 2017** which demonstrated most of their drivers had primary education, For those who are married, almost all had a relatively stable relationship with their spouse.

The study of **Elgalad et al., 2018** showed that most of studied sample of drivers (90.2%) have intermediate and low education that agreed with our results.

In Egypt, many drivers are regular users of marijuana and tramadol assuming that they reduce fatigue and sleepiness during work **(Abdel Mageid, 2017).** Giving insight on substance abuse and driving behavior among professional drivers could help in setting the pillars for development of preventive health education programs for safe driving to reduce the frequency and severity of road traffic accidents and its economic and psychological burden on the

community. Up to authors, knowledge there are limited number of researches studied the association between substance abuse and driving behavior in Egypt. That congruent with our study which showed that nearly one fourth of the studied sample abuse tramadol and more than one substance to increase strength and activity and act as stimulus to work.

The study of **El galad, et al., 2018** found that nearly fourth of studied drivers were substance abuser, tramadol and THC were the most abused substance while there were no other types of drugs. Also, the study of **Abdel Kareem & Ali, 2018** which conducted in Minia Governorate showed that Tramadol the common drug of abuse among drivers than THC then morphine and finally benzodiazepine.

This may be attributed to wide spread of tramadol that is marketed with many brand names all over the world **(Wolfe et al., 2009)** Moreover, it is easily gained with cheaper price than cannabis. It has been recorded that tramadol has become the preferred entertaining drug in Egypt, replacing cannabis and hashish **(The Economist, 2015)**. Tramadol is a central analgesic that is used to relieve moderate and severe pain. It is metabolized to desmetramadol, which is an extra powerful opioid **(Raffa et al., 2012)** [33]. In contrast to opioids, tramadol has lower risk to give rise to drug abuse and dependence **(Ferrari et al., 2014)**. Our findings corroborates those of **Yunusa et al., 2017** who reported that the commercial bus drivers subjected to drug abuse with low-price and easily obtained to them such as tramadol. In (2013), it has been reported that the young adults (aged 18-25 years old) have the upper most rate of tramadol abuse for non-medical purposes **(Babalonis et al., 2013).**

The present results are at variance to **Aglan & Adawi, 2016** who reported that cannabinoid is the commonest addicted substance among drivers followed by tramadol. They attributed that to the widespread of Hashish in Egypt. Furthermore, they reported that the commonness of substance abuse such as alcohols, cocaine and marijuana differs among countries and even among continents. **Assari et al., 2014** recorded that opioids are the most frequently abused drug among the Iranian drivers followed by cannabis.

Our study revealed that the combination of tramadol and cannabis has higher percentage than other combinations. It has been reported that Injury Severity Score (ISS) was significantly higher with consumption of both cannabis and tramadol, due to their synergistic effect, which alter the brain functions and inconsequence increase the risk of the road accidents A previous research on trauma Egyptian patients found that the prevalence of the road accidents increased with tramadol overdose **(Abdel Mageid, 2017).**

Socioeconomic status lies Avery serious role in the problem of substance abuse as persons in sub socioeconomic standard risk for the dilemma of substance abuse and may be risk factors for both men and women **(Schoenborn & Adams, 2005)**.That in contrast with the present study, in which nearly half of drivers were in the middle and low social class. **Wohlfarth & Vanden, 2008** agreed with the current study results and revealed that different dimensions of socioeconomic standard components effect on human beings and may result in social withdrawal and loss of social support that may be risk for substance abuse and the lowest social class level the more risk for drug abuse, the last part contradict with our results.

The study of **Patrick et al., 2012** showed that the highest social class the more risk for substance abuse than others in middle and low social class and that due to sedentary life style, boredom, poor parenteral control, bad friends and curiosity. That agree with our study results in which increase the socioeconomic class level leads to increase the risk of substance abuse.

Reversely, with our results on exploring the other determinants of the risky driving behavior among the studied participants through multiple regression models, from the back ground variables only income was inversely correlated with errors, previous literatures stated that low socioeconomic status is associated with higher risk of substance abuse and road traffic accidents. Also, drivers with low income usually in need to earn more money so they are in hurry to make more trips in short time and in consequence commit errors **(Jafarpour & Rahimi-Movaghar, 2014)**.

The study findings demonstrated that half of the studied sample have low level of abuse followed by the substantial level. These results are inconsistent with many studies as **(Makanjuola et al., 2007; Calafat, 2009; & Omolase et al., 2011)** found the prevalence of abuse among the studied drivers, were "heavy" users then were "moderate" users and lastly were occasional or "mild" users.

Stress is the silent killer or the psychological pressure caused by difficulties in life. It is also seen as hardship, constraining influence, pressure force, system of forces applied to a body stressful situations are based on individual appraisal and interpretations, **Mamman, 2009**.

As regard the ability of the person to cope with life stressors, the present study revealed that above half of studied drivers unable to cope with life stressors, one third had moderate level of stress. That congruent with the study of **Hasking, 2018** which found a significant positive connection between drug abuse and the level of coping, in contrast with the study of **Sun, et al., 2011** showed a negative connection.

Also, the study of **Hassanbeigi et al., 2013** supported the present study which showed that when the level of coping decreased lead to substance abuse and relapse. The findings of the study showed that first, the various psychosocial stressors in addict drivers was statistically high. Second, the addict drivers less use of Problem-Focused Coping Methods (active coping, planning, suppression of competing activities, restraint coping and seeking of instrumental social support), while they made significantly more use of Less Useful Coping Strategies (focus on and venting of emotions, behavioral disengagement and mental disengagement). The drug addicts' scores were high it wasn't statistically significant.

Most of the time it is reported that depression is comorbidity with substance abuse and as underdiagnosed, most of patients go untreated that play a major role in the prognosis of substance use disorder and the relapse has been found to be greater in patients who have a comorbid depression. **(Ringen et al., 2008).**

The present study demonstrated that one quarter of studied sample at normal level of depression and equally have extremely severe depression. That consistent with the study of **Pradhan, 2012** which showed that all studied subjects had mild to moderate depression and had severe depression were substance abusers.

As regarding the level of anxiety of the studied sample, the current findings stated that one quarter of drivers had normal level of anxiety and one quarter have extremely severe anxiety, and there was a strong positive correlation between substance abuse and anxiety level. These results consistent with to what reported in the study of **Magee et al., 2010** who found that the studied sample engaged in illicit drug use in the year prior to the interview met criteria for social phobia, agoraphobia, generalized anxiety disorders, separation anxiety, and for obsessive compulsive disorders.

Conclusion:

The study concluded that, about three-quarters of studied subjects were substance abusers. Tramadol and more than one substance were the commonly abused drugs and abuse associated with depression, anxiety, stress, inability to cope with life stressors and increase with high socioeconomic level.

Recommendation:

The study recommend that, substance screening tests should be applied to all forms of basic screening applying for license, depression, anxiety and stress have to be detected and managed accordingly, and health education program about the hazards of drug abuse should be designed for all minibus drivers

References:-

- **Abdel Kareem R & Ali D (2018):** Prevalence of drug abuse among drivers in minia governorate, egypt j. Forensic Sci. Appli. Toxicol, Vol 18 (3), September 2018 1997, 54:313-321. 2005; 50:660-666. 61(8):807–816.10.1001/archpsyc.61.8.807 [PubMed: 15289279].

- **Abdel Mageid R (2017):** Estimation of The Prevalence of Tramadol and Cannabis Abuse among Drivers Involved in Road Traffic Accidents Admitted to Alexandria main University Hospital: a Prospective Study. International Journal of Contemporary Medical Research; 4(4):848-52.

- **Aglan, M. & Adawi A. (2016):** Incidence of Substance Abuse among Cab-drivers Involved in Non-Fatal Accidents. Trends in Medical Research, 11 (1): 20-27.

- **Aina O.F, & Olorunshola D.A. (2017):** Alcohol and substance use portrayals in Nigerian Video Tapes. An analysis of 479 films and implication for public Drug Education. International quarterly of Community Health Education 2017; 28(1): 63-71.

- **Ali E, El-BadawySh & Shawaly El (2014):** Young Drivers Behavior and Its Influence on Traffic Accidents. Journal of Traffic and Logistics Engineering; 2(1):45-51.

- **Alvarez FJ, Gonzalez-Luque JC & SeguiGomez M (2015):** Drugs, Substance Use Disorder and Driving: Intervention of Health Professionals in the Treatment of Addictions. Adicciones; 27:161-7.

- **Assari S, Yarmohmmadi Vase lM, Tavakoli M, Sehat M, Jafari F, & Narenjiha H, (2014):** Inconsistent condomuseamong Iranian male drug injectors. Front Psychiatry (2014) 4:181.doi:10.3389/fpsyt.2013.00181.

- **Babalonis, S., Lofwall, M.R., Nuzzo, P.A., Siegel, A.J. & Walsh, S.L. (2013):** Abuse Liability and Reinforcing Efficacy of Oral Tramadol in Humans. Drug Alcohol Depend Behaviors, 24, 6, 769 779, 129(1-2): 116–124.

- **Bener A, Özkan T & Lajunen T (2018):** The Driver Behavior Questionnaire in Arab Gulf Countries: Qatar and United Arab Emirates. Accident Analysis &Prevention; 40(4):1411-7.

- **Brady JE & Li G (2014):** Trends in Alcohol and Other Drugs Detected in Fatally Injured Drivers in the United States, 1999–2010. Am J Epidemiol. January 2014: kwt327. doi:10.1093/aje/kwt327.

- **Bramness JG, Skurtveit S, Morland J, & Engeland A (2012):** An increased risk of motor

vehicle accidents after prescription of methadone. Addiction. 2012; 107:967–72.

- **Calafat A, Blay N, Juan M, Adrover D, Bellis MA, & Hughes K, (2009):** Traffic Risk Behaviors at Nightlife: Drinking, Taking Drugs, Driving, and Use of Public Transport by Young People. Traffic Inj Prev. 2009; 10(2): 162±169. https://doi.org/10.1080/15389580802597054 PMID: 19333829.

- **Davis Robinis, & Makay (2005):** Coping style Questionnare, Cabzr center, Permanent medical and Healthy Behavior, Santa Clara, California.

- **El galad GM, Amro A. Abddayed, Mai A. AbdElaziz & Somia H El said (2018):** Detection of drug abuse among drivers in Fayoum City-Egypt. Ain Shams Journal of Forensic Medicine and clinical Toxicology. 31:94-99.

- **El-Akabawi AS, (2018):** Drug abuse in the Arab world: a country profile Egypt. In: Okasha A, Maj M, (eds) Images in psychiatry: an Arab perspective, WPA series, Scientific Book House for Publishing & Distributing, Cairo, Egypt, pp.143-150.

- **El-Gilany A, El-Wehady A, & El-Wasify M (2012):** Updating and validation of the socioeconomic status scale for health research in Egypt. East Mediterr Health J 18(9).

- **Ferrari, A., Tiraferri, I., Palazzoli, F. & Licata, M. (2014):** Tramadol Abuse in a Binge Pattern in a Young Depressed Woman. Eur Addict Res, 20:82–86.

- **Hamdi, E., Sabry, N., Sedrak, A. & Khowailed, A.N.L. (2016):** Sociodemographic Indicators for Substance Use and Abuse in Egypt. J Addiction Prevention, 4:1-8.

- **Hammam RAM , Zalat MM , Abdelsalam & Mesallam DIA (2018):** SUBSTANCE ABUSE AND DRIVING BEHAVIOR AMONG PROFESSIONAL MINIBUS DRIVERS AT ZAGAZIG CITY, SHARQIA GOVERNORATE, EGYPT, Egyptian Journal of Occupational Medicine, 2018; 42 (3) : 365-382.

- **HassanbeigiA, JafarAskari, Dordanehhassanbeigi, Zahra pourmovahed: (2013):** The relationship between stress and addiction, Procedia, Social and behavioral science 84(2013) 1333-1340.

- **HuestisMA (2015):** Deterring driving under the influence of cannabis. Addiction; 110:1697±1698.https://doi.org/10.1111/add.13041 PMID: 26264558.

- **Jafarpour S & Rahimi-Movaghar V (2014):** Determinants of Risky Driving Behavior: a Narrative Review. Medical journal of the Islamic Republic of Iran; 28:142.

- **Johnston, L.; O'Malley, P.; Miech, R.A.; Bachman, J.G. & Schulenberg, J.E. (2016):** Monitoring the Future national survey results on drug use, (1975- 2015): Overview, key findings on adolescent drug use. Ann Arbor: Institute for Social Research, the University of Michigan 2016; 1-11.

- **Lipari RN, Hughes A & Bose J (2016):** Driving Under the Influence of Alcohol and Illicit Drugs. In: The CBHSQ Report. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); Available https://www.ncbi.nlm.nih.gov/books/ NBK424784/ [accessed 25 July 2017].

- **Lovibond SH & lovibond PF, (1995):** Manual for the depression Anxiety stress scales (2nd. Ed.) Sydney: psychology foundation. (www.psy.unsw.edu.au/dass.)

- **Magee WJ, Eaton WW, Wittchen HU, McGonagle KA, & Kessler RC. (2010):** Agoraphobia, simple phobia, and social phobia in the national comorbidity survey. Archives of General Psychiatry 2010; 53(2):159– 168. [PubMed: 8629891].

- **Makanjuola AB, Oyeleke AS & Akande TM. (2007):** Psychoactive substance use among long distance vehicle driver in Ilorin. Nigerian Journal of Psychiatry. 2007a; 5 (1): 14-18.

- **Omolase CO, Afolabi OT, Omolase BO & Ihemedu CO. (2011):** Drink-driving among commercial drivers in a Nigerian community. Middle East Journal of Psychiatry and Alzheimer's. 2011; 2: 15-19.

- **Patrick Megan E Wightman Robert F Schoenis John E, & Schulenberge, (2012):** sSocioeconomic status and substance use Among young Adults: Acomparison Across, construct, and Drugs

- **Pradhan SN, Adhikary SR, & Sharma SC. (2012):** A prospective study of comorbidity of alcohol and depression. Kathmandu Univ Med J. 2012; 6(23):340-345.

- **Raffa. R.B., Buschmann, H., Christoph, T., Eichenbaum, G., Englberger, W., & Flores, C.M. (2012):** Mechanistic and functional differentiation of tapentadol and tramadol. Expert OpinPharmacother. 13 (10): 1437–49.

- **Skinner, H.A. (1982):** The Drug Abuse Screening Test. Addictive Behaviors, 7(4), 363–371.

- **Substance Abuse & Mental Health Services Administration (2017):** Key substance use and mental health indicators in the United States: Results from the 2016 National Survey on Drug Use and Health (HHS Publication No. SMA 17-5044, NSDUH Series H-52). Rockville, MD:

Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved fromhttps://www.samhsa.gov/data

- **Sun, J., Stewart, D., & Shum, D. (2011):** Mediating effect of coping, personal belief, and social support on the relationship among stress, depression, and smoking behavior in University students. Health Education, 111(2), 133-146.

- **The Economist (2015):** Drug abuse in Egypt - A pill for work and play. www.economist.com/news/middle-east-and-africa/21648690-painkiller-becomes-egyptsavourite-recreational-drug-pill-work-and-play

- **WhitesellM, Bachand A, Peel J & Brown M (2013):** Familial, Social, and Individual Factors Contributing to Risk for Adolescent Substance Use, Journal of Addiction Volume 2013, Article ID 579310,9pageshttp://dx.doi.org/10.1155/2013/579310.

- **Wilson FA, Stimpson JP & Pagán JA (2014):** Fatal crashes from drivers testing positive for drugs in the U.S., 1993-2010. Public Health Rep Wash DC 1974. 2014; 129 (4):342-350.

- **Wolfe, S.M.; Sasich, L.D.; Hope, R.E.; Knapp, D.E. & Shubin, S. (2009):** Drugs for pain and arthritis. In, Worst bills, best bills. Avenue of the Americas, New York, NY 2009.

- **World Health Organization (WHO) (2013):** Global Status Report on Road Safety". Geneva: World Health Organization.

- **Yunusa U, Bello UL, Idris M, Haddad MM & Adamu D (2017):** Determinants of Substance Abuse among Commercial Bus Drivers in Kano Metropolis, Kano State, Nigeria. American Journal of Nursing; 6(2):125-30.