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Depression Among Addictive Patients

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ABSTRACT: The present study was conducted to investigate depression among addictive patients and if there is a possible association between general characteristics of participants including demographic variable and depression. The methodology of the present study included case control study design, study sample included 36 addictive patients who received treatment at Governmental Center for Treatment and Rehabilitation of Addiction. Study instrument was a questionnaire constructed for data collection from participants in addition to measuring depression using the Beck Depression Inventory (BDI). Study findings revealed medium to severe depression among addictive group, while control group had no depression. None of the general characteristics of participants showed significant variation between the addictive group and the control group (P>0.05). There was in the present study not found an association between demographical data and depression.

KEYWORD: Depression, Addiction, Beck scale.

I. INTRODUCTION

Depression is a condition or state characterized by low mood and aversion to activity that can affect a person's thoughts, behavior, feelings and sense of well-being[1].

There are many depressive feelings including sadness, anxious, empty, hopeless, worried, helpless, worthless, guilty, irritable, hurt, or restless. Furthermore, depressed people maylose interest in activities that once were pleasurable, loss of appetite or overeating, have problems concentrating, remembering details, or making decisions, and maycontemplate, attempt, or commit suicide. Insomnia, excessive sleeping, fatigue, loss of energy, or aches, pains, or digestive problems may also be present[2].

Depressed mood is not always a psychiatric disorder. It may also be a normal reaction to certain life events, a symptom of some medicalconditions, or a side effect of some drugs or medical treatments. Depressed mood is also a primary or associated feature of certain psychiatric syndromes such as clinical depression[2].

II.   Causes of depression

Life events

Life events and changes that may lead to depressed mood include childbirth, menopause, financial difficulties, job problems, a medical diagnosis (cancer, HIV, etc.), bullying, loss of a loved one, natural disasters, social isolation, relationship troubles,

jealousy, separation, and catastrophic injury. [3,4]

Traumatizing events that took place in childhood can cause depression. Although childhood trauma and particularly child sex abuse is not always a factor of adulthood depression, it may create psychological pathways that can lead to depression. Research has been done in this field to demonstrate the chemical involvements explaining this phenomenon. [5, 6] According to the study of Pillemer et al, one of the risk factors for depression is unequal treatment of parents.[7]

Medical treatments

It has been noted that there are certain medications that have the ability to induce depressed mood in a significant number of patients including interferon therapy for hepatitis C. [8]

Non-psychiatric illnesses

Depressed mood has been shown to be caused by a number of infectious diseases, neurological conditions[9] and physiological problems including hypoandrogenism (in men), Addison's disease, Lyme disease, multiple sclerosis, chronic pain, stroke[10], diabetes[11], cancer, sleep apnea, and disturbed circadian rhythm.[12]

Psychiatric syndromes

A group of psychiatric syndromes are known to attribute to depressed mood as a main symptom and include major depressive disorder (MDD; commonly called major depression or clinical depression) in which a person has at least two weeks of depressed mood or a loss of interest or pleasure in nearly all activities; and dysthymia, a state of chronic depressed mood, the symptoms of which do not meet the severity of a major depressive episode. Another mood disorder, bipolar disorder, features one or more episodes of abnormally elevated mood, cognition and energy levels, but may also involve one or more depressive episodes. [13-15]

ASSESSMENT

Depression or the severity of its symptoms can be measured through certain tools for assessment including the Beck Depression Inventory and Children's Depression Inventory test for depression and/or depressive symptoms. [16]

TREATMENT

In general, depressed mood may not need professional treatment since it may reflect a normal reaction to certain life events, a

symptom of some medical conditions, or a side effect of some drugs or medical treatments. In case there is a prolonged depressed mood, particularly in combination with other symptoms, which may lead to a diagnosis of a psychiatric or medical condition so that patients can benefit from treatment. [17] However, various sub-divisions of depression have different treatment approaches. [18]

According to a study of Khan et al,[19] it is important to reach an accurate diagnosis of major depressive disorder to initiate the treatment. Furthermore, Craft and Perna[20] reported that moderate levels of physical activity can treat depression by increasing the levels of endorphins and the neurotransmitters serotonin, dopamine, and norepinephrine. Furthermore, it has been indicated that exercise improves the health of individuals while building new relationships with others and bolstering the sense of community that comes with exercising as a group. [21, 22] The authors have also expressed their observations in which group activities can reduce depression by increasing depressed individuals' ability to interact with others. Exercise has also been found to increase individuals' self-

confidence by encouraging social skills that people with depression often lack and interrupts the cycle of isolation from the general population that can further increase depression. Exercise has another advantage in which it fosters non- demanding behaviors while allowing people to socialize and identify themselves as part of the general population. [21, 22]

Depression can also be treated through lifestyle strategies that may improve depressed mood including wake therapy, light therapy, eating a healthy diet, meditation, exercise, and smoking cessation. [23-26]

Social

According to Podgornik, [12] women are generally more likely to have depression which is plausible to due to gender roles and norms associated with those roles. Women are expected and required to care for family and friends, but they lack strong, stable supportive relationships and accordingly they are more susceptible to depressive symptoms.

Addiction

Addiction can be defined as the continued repetition of a behavior despite adverse consequences, or a neurological impairment leading to such behaviors. [28, 29] Addictions are widely classified and can include drug abuse, exercise addiction, food addiction, computer addiction and gambling. Classic characteristics of addiction include impaired control over substances or behavior, preoccupation with substance or behavior, continued use despite consequences, and denial. [30] Habits and patterns associated with addiction are typically characterized by immediate satisfaction (short- term reward), coupled with delayed deleterious effects (long-term costs). [31]

According to Torres and Horowitz, [32] physiological dependence occurs when the body has to adjust to the substance by incorporating the substance into its "normal" functioning. This state creates the conditions of tolerance and withdrawal. Tolerance is the process by which the body continually adapts to the substance and requires increasingly larger amounts to achieve the original effects. Withdrawal refers to physical and psychological symptoms experienced when reducing or discontinuing a substance that the body has become dependent on. Symptoms of withdrawal generally include but are not limited to anxiety, irritability, intense cravings for the substance, nausea, hallucinations, headaches, cold sweats, and tremors.

Rasmieh et al [33] conducted a study to estimate the prevalence of undiagnosed depression among adults with diabetes mellitus in Jordan and to determine the factors that may indicate the presence of depression and to examine the relationship between depression and blood sugar control among Jordanian subjects with diabetes. Study findings showed that about 20% of participants had depression according to the questionnaire used in the study (PHQ-8) scores. Results also indicated that females are more likely to develop depression than males and low-educated people versus educated people. Being on insulin treatment also has a significant association with depression. Not following eating plans as recommended by dietitians, lacking self-monitoring blood glucose and increased barriers to adherence scale scores were also associated with depression among the subjects with diabetes.

Another study was conducted by Kamel et al[34] within the context that numerous stroke patients will be cared for at home, primarily by their relatives. According to the viewing points of researchers, it is considered that providing care to a family member with a chronic disabling disease is both emotionally and physically distressing for the care givers. Accordingly, researchers aimed to investigate the relationship between patients' characteristics, duration of caregiving, daily caregiving time, caregiver's characteristics, caregiver depression and burden in caregivers of patients with stroke. Study findings pointed to having high scores for depression and burden indices among caregivers. Furthermore, results showed that caregivers' health, receiving professional home health care and caregivers' burden to be related to caregiver depression.

In Jordan, as in other developing countries, and because of the lack of specialized long- term stroke healthcare services, home care of the patient with stroke is more likely to be carried out by family members, who are often not well-prepared to handle such issue.[35] It is worth mentioning that it is considered a moral obligation for families as caregivers to provide care for a relative with a disability. Accordingly, institutionalizing a patient with stroke is an unacceptable option for families and is considered a social stigma in the Arab context. [36, 37]

Shunnaq[38] conducted a study to investigate the nature and prevalence of mental disorders among people who applied for recruitment in the military forces of Jordan. Data showed that 620 subjects (4.6%) satisfied the DSM-

IV clinical version criteria for mental disorders. There were more males. Personality disorders were seen in 2.4% of all subjects with mental disorders. Psychosocial impairment was found in approximately one third of the subjects with mental disorders. Major depressive disorder was seen in only 0.02% subjects. Takentogether, personality disorders were the most commonly seen of mental conditions in people wanting to join military. It was common presentation among males.

III.   STUDY OBJECTIVES

The main objectives of the present study are to investigate the depression status among patients with addiction who are treated in the Governmental Center for Treatment and Rehabilitation of Addiction, and to investigate the association between depression and generalcharacteristics of participants including age, educational level and monthly income.

METHODS AND SUBJECTS

Study design: A case-control study.

Study setting: Governmental Center forTreatment and Rehabilitation of Addiction.
Study sample: there are 36 patients withaddiction and 21 control participants.
Data collection. The questionnaire included three parts, the first part included demographical data such as age, sex, marital status, monthly income,..etc, while the second part dealt with the addiction state and the related factors of significance. These factorsincluded, but not restricted, several variables associated with depression. The patients' levelof depression was measured using Beck Depression Inventory (BDI). It is a 21-questionmultiple-choice self-report inventory, and is currently used in numerous clinical settings,including drug and alcohol rehabilitation centers. A score for each participant to determine the depression level was with BDI scored as:
- No depression (0-9)
- Simple depression (10-15)
- Medium depression (16-23)
- Severe depression (24-36)

After the study had been approved by scientificand ethical committees at Jordan University of science and Technology (JUST) (ethical clearance no, 4/2013), formal letters were issued from JUST to the management of policeto facilitate the researcher's task in data collection. After the approval of management and gaining the access for the researcher, the researcher visited the Governmental Center forTreatment and Rehabilitation of Addiction. The researcher met the responsible staff and explained them the study objectives. Then, the researcher was allowed to meet patients and explained them the study objectives and the questionnaire parts and how to fill them. All patients involved were informed that this was ascientific study, and their participation isvoluntary and will not affect them by any way as well as they have the right to withdraw fromthe study. Within the study time frame, there were 36 patients who agreed to participate in the present study.

Statistical analysis: data were analyzed using SPSS version 20. Data were represented as frequencies, percentages and significance. Relationship between variables wasdetermined depending on Chi-Square and T Test. Significant relations were considered at alpha level $\leq$ 0.05.

Inclusion/Exclusion Criteria
Inclusion criteria

patients should be addictives (generaladdictive patients).
- patients should be able to sign consentform.
- patient should be > 18 years old.

Exclusion criteria

- patients are not addictives.
- patients cannot sign a consent form.
- patient< 18 years old.

IV.   RESULTS

General characteristics of participants

As it can be seen in table 1, the study included 21 participants in control group, and

36 patients with addiction. The general characteristics of control and patients did not show any significant variations ($P > 0.05$). Age was given in various intervals. About 48% of participants in control group was the age interval (18-24 years), whereas about 58% of patients were in the same age interval. In the age interval (24-30 years), there was 25% of addicted persons.

Regarding educational level, it wasinterestingly shown that participants in control

group were mostly with bachelor degree (61.9%), whereas about 19% of participantswere postgraduates and the same percentage of participants had secondary or less qualifications. On the other hand, about 72%of addicted patients secondary or less, about 11% with diploma and about 17% with bachelor degree.

Regarding social status, control participants were almost within the similar ratios since about 48% were married while about 52% were single. Addicted patients tend to be almost single (about 83%), married (about 14%), and others (2.8%).

About 48% of participants in control group reported that their monthly income was less than 400 Jordanian Diner, about 24% reported their monthly income to be within 400-800 Jordanian Diner, and about 29% reported more than 800 Jordanian Diner monthly income. Themajority of addicted patients, about 83%, reported their monthly income to be less than 400 Jordanian diner, about 8% reported their monthly income between 400-800 Jordanian Diner, and 8% reported it to be more than 800 Jordanian Diner.

About 76% of participants in control group and 75% of addicted patients live in the city, about 24% of control group participants and 8% of addicted patients live in village. About 14% of addicted patients living in camp.

When addicted patients were asked aboutthe duration of intake of drugs and addicted materials, about 69% of patients reported less than 5 years, whereas about 31% reported more than 5 years duration (table 1).

Table 1: General characteristics of participants

Variable	Control group		Addicted group		P value
	Frequency(N)	Percentage(%)	Frequency(N)	Percentage(%)	
Age (Years)					0.673
- 18-24	11	52.38	22	61.11	
- 24-30	3	14.29	9	25	
- 30-36	3	14.29	2	5.56	
- >36	4	19.04	3	8.33	
Educational level					0.635
Secondary orless	4	19.05	26	72.2	
Diploma					
Bachelor degree			4	11.1	
Graduatedstudies	13	61.9	6	16.7	
	4	19.05	-	-	

Social status					0.439
Married	10	47.62	5	13.9	
Single	11	52.38	30	83.3	
Others	-		1	2.8	
Monthly income (JD)					0.238
- < 400					
- 400-800	10	47.62	30	83.4	
- > 800	5	23.81	3	8.3	
	6	28.57	3	8.3	
Living place					0.724
- City	16	76.20	27	75	
- Village	5	23.80	3	8.3	
- Badia	-	-	1	2.8	
- Camp	-	-	5	13.9	
Smoking					-
- Yes	2	9.5	36	100	
- No	19	91.5	-	-	
Drug intake					-
- **Yes**	-	-	36	100	
- **No**	21	100	-	-	
Drug intake time (years)					-
- **≤ 5**					
- **> 5**	-	-	25	69.4	
	-	-	11	30.6	

V.   RESULTS OF DEPRESSION

Depression scale and degree in study groups
As indicated in tables 2, scale depression was measured among study groups according to theBDI. The mean score for the control group was9.1$\pm$8.83, which suggested no depression. Onthe other hand, the mean scale depression among addictive group was 22.25$\pm$12.95 which pointed to medium depression accordingto the same scale. This difference in depression level among study groups is statistically significant (p=0.012).

   Considering the degree of depression, the majority of cases in control group (about 62% of the participants) had no depression. In the addicted group, about 77% of cases hadmedium to severe depression. The variation in depression degree among study groups was statistically significant (p=0.042).

Table 2: Depression scale and degree in study groups

Variable	Control group	Addictive group	P value
Depression scale (M+ SD)	9.1+8.83	22.25+12.95	0.012
Depression degree (N, %)			0.042
- No	13 (61.91%)	8 (22.2%)	
- Simple	4 (19.05)	2 (5.6%)	
- Medium	2 (9.52)	8 (22.2%)	
- Severe	2 (9.52)	18 (50%)	

VI.   DISCUSSION

The data of the present study did not show any significant statistical variations regarding general characteristics of participants includingthese characteristics included age, educational level, social status, monthly income, living place, and smoking. Actually, these data are quite interesting since committing addiction cannot be predicted according to these factors.

From this study, it is highly plausible to think of other factors which may characterize theJordanian population.

Generally speaking, the present study did not show that the control group had depression. The average BDI score for the control group was about 9 which means no depression. Therewas found a positive relationship between depression according to the BDI and addiction (p=0.012). These findings are in line with recent findings published by Jaddou et al. [39] The present study also shows that about 72%of the addicted patients had medium to severe depression, while the majority of the individuals in the control group had no depression. The variation in depression degree was statistically significant (p=0.042). These findings are logic and are in line with findings of Jaddou et al. [39]

   Depression studies in Riyadh pointed tovarying degrees and causes. Rasmiehet al [33] reported depression among diabetic patients.Another study by Kamel et al [34]also pointed tohigh depression level among caregivers for stroke patients.

VII.   CONCLUSIONS

The results of the present study showed medium to severe depression among addictive patients. There was no association between demographical data and depression.

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