

## **The Role of Nutritional Status in Recovery of patients with Substance use Disorders**

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### **Abstract**

**Objectives:** The study aims to assess the levels of nutritional status and recovery status for patients with substance use disorders at psychiatric teaching hospitals in Baghdad city and to identify the role of nutritional status in patients' recovery.

**Methodology:** A descriptive correlational design was conducted on a convenient (non-probability) sample of (70) patients with substance use disorder which were selected from the inpatient psychiatric teaching hospitals for the period of (October 15th, 2020 to March 1th, 2021). The self-report questionnaire used as the instrument of the study and constructed through the nutritional assessment scale (MNA) and recovery assessment scale (RSA) was used in this study after modified for the purpose of this study. Data are analyzed through the application of descriptive and inferential statistical data analysis approach by using statistical package for social science program (IBM SPSS) version 24

**Results:** The study found that more than half of addiction patients have malnourished (52.9%), and 40% are at risk of malnutrition. The substance abusers are associated with moderate level of psychological recovery (47.2%). Nutritional status has a high significant role and affect in recovery status among the clients with substance use disorder.

**Conclusions:** the study concluded that nutritional status has a high significant role and affect in recovery status among the clients with substance use disorder as concluded by significant correlation between nutritional status and recovery status.

**Recommendations:** The nutrition education should be to concentrate within substance abuse treatment services, which can improve treatment outcomes and nominate nutritionists to be part of treatment teams in drug abuse units in order to integrate nutrition services in the rehabilitation process

**Keywords:** nutrition, substance use, recovery

## Introduction

Substance use disorder it's a disease that impacts a person's brain and behavior. It results in a lack to monitor the use of a legal or illicit drug or medication. Alcohol, nicotine and marijuana are all considered drugs. Individuals can continue to use the drug when they are addicted; despite the damage it causes (1). Since experiments have shown that drugs and alcohol physically affect the structure of the brain and how the brain functions, it is considered a brain disorder. Drugs and alcohol, in particular, have been shown to alter regions of the brain that can lead to impaired judgment, loss of self-control, failure to control emotions, and lack of motivation, memory, or function of learning (2).

Currently, nearly 5% of the world population is estimated to use drugs once daily, and nearly 0.6% suffers from serious substance use disorder. To date, opioids are the most dangerous type of drug used, and the largest amount of cannabis persists commonly used Substances in the World (3). Substance use disorder happens when the use of alcohol or another drug by a person leads to health problems or issues at work, school, or home. Also called drug abuse (4).

In addition, drug use will affect the nutrition of the consumer and severely impact their dietary habits. This population has a disrupted and dysfunctional lifestyle in general, and money is generally spent on drugs rather than on food. This severely impacts the consumption of food by the consumer, which inevitably contributes to under-nutrition. The type, frequency, and length of the medication used and the prevalence of infectious diseases are other factors influencing the nutritional status of drug users (5). In people with a substance abuse history, nutritional deprivation and resulting malnutrition often occur. According to Somogyi & Kopp researchers, due to a reduction in caloric intake correlated with a reduced appetite, this population also experiences vitamin deficiency and malnutrition (6).

Nutrition is a vital necessity for life and thus has a most important role to play in the promotion of health and in disease prevention. Nutritional intake and its regulation mechanisms are highly dynamic physiological processes (e.g., appetite, satiety) (7). Nutrition is a central support of life, wellbeing and growth Life-throughout cycle of human beings. Adequate food and healthy nourishment are important for Resilience, physical development, mental growth, success and efficiency, Health and well-being at birth, through childhood, youth, adolescent, and through adulthood and old age from the early stages of fetal development. It is a fundamental basis for human and national growth (8).

The researchers explore the possible place and role that a nutritional program can play in helping one's recovery journey. The researchers understand how the lack of diet and nutrition leads to addiction (9). In mental health, the concept of "recovery" has been changed by a re-investigation and contrast of the experiences of practitioners and clients (10). This includes exploring the viewpoints of persons who have been through the method of transitioning from primary diagnosis of substance use disorder, mental disease, or both (comorbidity), to a condition they define as Rehabilitation (11).

Recovery, conceptualized from both the management of symptoms and this user view, can be described as a means of effectively dealing disease through symptom avoidance, decrease or stabilization although at the same time seeking to fulfill personal responsibilities, priorities and hope (12).

Recovery As one develops beyond the catastrophic effects of mental disorder, it is characterized as a complex process of developing new meaning and purpose in life. Instead of being normal with total cessation of symptoms, the focus is on becoming more profound and completely human. A generally accepted operational concept of recovery, however, has not been verified (13).

Promoting the nourishing condition of people with alcohol use disorder and substance use disorder is frequently ignored or just a very little portion of outpatient services' rehabilitation support. This is the condition in many instances, In view of the truth that drug use disorders may Contribution to undernourishment, Metabolic disorders which damage the nutrition (14), Lower and weak mental wellbeing (15) Composition of body (16).

### **Objectives of the Study**

To assess the levels of nutritional status and recovery status for patients with substance use disorders at psychiatric teaching hospitals in Baghdad city and to identify the role of nutritional status in patents' recovery

### **Methodology**

A descriptive correlational design was conducted on clients with substance use disorders in Baghdad city for the period of (October 15th, 2020 to March 1th, 2021). In order to meet the previously mentioned goals, an assessment approach is used.

The ethical consideration of research is achieved by obtaining the agreement from the Ethical Committee for Research at College of Nursing, University of Baghdad Finally; the informed content was obtained from the clients to participate in this study before collecting the data and filling the questionnaire.

For the purpose of administrative and arrangements issues for conducting the research, the permission was asked from the Council of Nursing College/ University of Baghdad for this study then obtained approval from the Ministry of Planning/ Central statistical organization, and also permission was obtained from the Ministry of Health including Baghdad Teaching Hospital and Ibn Rushed Training Hospital for Psychiatry.

The setting of the study includes inpatient wards of two teaching hospitals in Baghdad, which were Baghdad Teaching Hospital, the psychiatric unit and Ibn Rushed Training Hospital for Psychiatry.

The sample of the study includes non-probability (Convenient) sample of 70 patients with substance use disorder were selected from the inpatient psychiatric teaching hospitals, the sample was distributed as (20) subject selected from Baghdad Teaching Hospital, and (50) subject selected from Ibn Rushed Training Hospital

The questionnaire of the study is designed by researcher which consists of two parts; the first contains mini nutritional assessment scale (MNA). And second part contains the Recovery Assessment Scale (RAS)

The data was gathered throughout utilization of self-report questionnaire as mean for data collection and through self-report with patient's abuser, after agreeing to answer the questionnaire and participate in the analysis, the questionnaire was circulated.

The statistical studies were carried out using IBM SPSS Statistics version 24.0, a statistical kit for social science. To achieve the study's goals, data processing was used in conjunction with descriptive and inferential statistical approaches.

## Results

**Table (1): Assessment of Nutritional Status among Clients with Substance Use Disorder**

Nutritional status	F	%	M	SD
Malnourished	37	52.9	16.151	6.041
At risk of malnutrition	28	40		
Normal nutritional status	5	7.1		
<i>Total</i>	<i>70</i>	<i>100</i>		

f: Frequency, %: Percentage M: Mean for total score, SD: Standard Deviation for total score

Malnourished= < 17, at risk of malnutrition= 17 – 23.5, Normal status= 24 -30

**Table (2): Overall Assessment of Psychological Recovery among Clients with Substance Use Disorder**

Recovery	F	%	M	SD
Low	8	11.4	82.30	23.238
Moderate	33	47.2		
High	29	41.4		
<i>Total</i>	<i>70</i>	<i>100</i>		

f: Frequency, %: Percentage, M: Mean for total score, SD: Standard Deviation for total score

Low= 24 – 56, Moderate= 57 – 88, High= 89 – 120

**Table (3): Simple Linear Regression for Assessment the Role of Nutritional Status in Recovery of Clients with Substance Use Disorder (N=70)**

RAS	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
MNA					
Nutritional Status	2.488	.359	.644	6.940	.001

Dependent variable: Recovery, RAS: Recovery Assessment Scale, MNA: Mini Nutritional Assessment

**Table (4): Correlation between Nutritional Status and Psychological Recovery among Clients with Substance Use Disorder (N=70)**

Correlation		Nutritional status	Recovery status
Nutritional status	Pearson Correlation	1.00	0.644**
	p-value	--	0.001
Recovery status	Pearson Correlation	0.644**	1.00
	p-value	0.001	--

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Discussion

The analysis of findings in table (1) shows that more than half of the clients are malnourished (52.9%), and 40% of them are at risk of malnutrition according to the score of Mini Nutritional Assessment Scale in which the mean of total score is refers to (16.151). These results are consistent with the study of (Santolaria-Fernández et al., 2017) in Spain those have studied "**Nutritional assessment of drug addicts**" Their results suggest that opioid users without organic pathology were malnourished: 92.4 percent weighed less than the population's average weight, and 55.7 percent had lost more than 5% of their body weight. The researcher apply with this result because Many addicts ignore nutrition and are only concerned with drugs, and money is typically spent on drugs rather than food(17). The researcher examines the role of diet and nutritional deficiencies in addiction, and indicates that long-term drug and alcohol addiction has negative psychological, health, and physiological implications for individuals. Determine that many opioid users suffer from malnutrition and acute organic disease as a result of their addiction. This leads to a significant worsening in the nutritional status of addicts. Such findings provide that the most of patient's addiction have risk for malnutrition.

A detailed review of the nutritional problems that people who use drugs or are in care for addiction face is discussed. Chronic drug abuse influences a person's nutritional status and body structure by lowering intake, nutrient absorption, and hormone dysregulation, which changes satiety and food intake processes (5).

A narrative analysis looked at the correlation between substance abuse and diet, including evidence of malnutrition and the effect on metabolism and appetite control. The biopsychology of addiction and appetite was also considered in order to better understand the role of diet in SUD. The majority of studies show that people with alcohol use disorder (AUD) and substance use disorder (DUD) are malnourished (18)

It has been known out of table (2) the clients with substance use are showing moderate level of psychological recovery as seen with high percentage (47.2%) and 41.4% of them are showing high recovery. These findings are in contrast with the result of (Flinn, S. R. (2004), which found that a significant number of people with psychological conditions were living happy lives and had recovered from the devastating effects of mental illness(19). Also agree with the findings of Cale et al., (2015) who found that all subscales were moderately associated(12). The findings could explained as most addiction patients resort to recovery because drug abuse exhausts them psychologically and physically, and negatively affects

their work, their families and their lives in general, so they resort to recovery from these substances

The analysis in table (3) indicates that nutritional status among clients with substance use disorder has high effect on their recovery status as evidence by high significant at  $p\text{-value} = .001$  respectively. These results are consistent with the study of Szydlowski & Amato (2017) in USA who those studied "**Nutrition in Addiction Treatment** " whose findings indicate that systematic incorporation of nutritional support can help people recover from addiction (17). According to the researcher, good nutrition strengthens the immune system and enhances cognitive awareness and concentration, allowing people to heal from addiction and other mental illnesses with the best possible support, Attention to healthy food strengthens the body and provides it with energy, as well as prevents many diseases. Such findings provide that the nutritional status among clients with substance use disorder has high effect on their recovery status;

Study of Wiss (2013) who has studied "**Nutrition in Addiction Treatment** " in California State University in this study examined the attitudes, values, and habits of US veterans in the areas of diet, fitness, and self-care (Weight Management Program). The research confirms that self-efficacy is a useful indicator of positive change attitudes using anonymous surveys. The research presented supports the need for more nutrition services for people who have a history of opioid abuse or alcoholism( 20).

The finding in table (4) was found that nutritional status has a high significant role in recovery status among the clients with substance use disorder as presented by high significant correlation at  $p\text{-value} = .001$ . The researcher considers how food and nutrition deprivation leads to addiction, as well as the possible position and role of a food program in promoting one's recovery journey. Meat, diet, and exercise seem to be one of the most important national and global issues in health care. These are used to increase population wellbeing, disease recovery, obesity, type 2 diabetes, liver disease, cardiovascular disease, and a variety of other problems. Such findings provide that the role of nutritional status high relationship in recovery or treatment and enhance outcomes from addiction;

The use and extent of nutrition services in substance abuse treatment programs were described using a descriptive, single, cross-sectional survey of registered dietitians with clinical nutrition program management responsibility ( $n=152$ ). There were found to be positive correlations between nutrition services provided, especially nutrition education services, and outcome measures from substance abuse treatment programs. The findings back

up the idea that nutrition education is an important part of substance abuse recovery services and can improve treatment outcomes (19).

Proper nutrition, with a focus on nutrients impacted by substance use, will improve the quality and speed of physical rehabilitation, allowing patients to perform more effectively during care. Enhanced nutritional status can help to minimize addiction for drugs and alcohol, in addition to making treatment more successful. This decrease in cravings could help you avoid relapsing. Focusing on the prevention and treatment of eating disorders linked to drug abuse may also aid in rehabilitation. In the detoxifying, rehabilitation, and after-care of drug abusers, it occurs that nutritional status and nutritional consequences related to substance abuse are significant. Nutritionists must be part of medical teams in order to incorporate nutrition services into all stages of rehabilitation( 21) .

Study of Jeynes & Gibson, (2017) the study came to a conclusion Poor nutritional status has a negative effect on the physical and mental health of people with AUD and DUD, making it more difficult for them to avoid drugs of violence and regain their health. This study leads to a deeper understanding of diet therapies that can help people recover from drug use disorders(18).

Miller (2010) it has been discovered that group nutrition education courses are an important way of getting nutrition knowledge to alcoholics in care ,nutrition and exercise therapy, greatly improve the chances of addiction rehabilitation. Grant et al., (2004) the role of nutritional knowledge in substance abuse care, as well as its connection to treatment outcomes, should be investigated further. These studies are consistent with result in table (4) that nutritional status has a high significant role in recovery form addiction(2)

## **Conclusions**

- (1) The study concluded that nutritional status has a high significant role and affect in recovery status among the clients with substance use disorder
- (2) The study found that more than half of addiction patients have malnourished (52.9%), and 40% of them are at risk of malnutrition.

## **Recommendations**

- (1) The nutrition education should be to concentrate within substance abuse treatment services, which can improve treatment outcomes.
- (2) The Ministry of Health should nominate nutritionists to be part of treatment teams in drug abuse units in order to integrate nutrition services in the rehabilitation process



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