

Treatment Motivation among Patients with Substance Use Disorder and Its Relation with Self-Conscious Emotions and Self-Forgiveness

Asmaa Ragab Mohamed Metwaly⁽¹⁾, Hanaa Hamdy Ali Alzeiny⁽²⁾, Hanem Ahmed AbdElkhalik Ahmed⁽³⁾, and Radwa Ahmed Abdel Razek⁽⁴⁾

⁽¹⁾ Demonstrator at Psychiatric and Mental Health Nursing, Faculty of Nursing - Zagazig University, ⁽²⁾ Professor of Psychiatric and Mental Health Nursing, Faculty of Nursing - Zagazig University, ⁽³⁾ Assistant Professor of Psychiatric and Mental Health Nursing, Faculty of Nursing - Zagazig University, Egypt, and College of nursing, Mohail Aseer - king Khalid University, Saudi Arabian, & ⁽⁴⁾ Lecturer of Psychiatric and Mental Health Nursing, Faculty of Nursing, Zagazig University.

Abstract

Background: Treatment motivation is essential in the recovery process of patients with substance use disorder. Studies indicate that feelings of shame and guilt are among the self-conscious emotions that impact treatment motivation. Individuals with high levels of guilt and shame may find it difficult to forgive themselves, which can make the patients less likely to look for help. **Aim of the study:** Was to assess treatment motivation among patients with substance use disorder and its relation with self-conscious emotions and self-forgiveness. **Subjects and Method; Research design:** Descriptive correlational design was used to conduct this study. **Setting:** The study was conducted at El Azazi hospital for mental health in Abo Hamad City, Alsharkia Governorate, Egypt. **Subjects:** It included 153 patients with substance use disorder. **Tools of data collection:** Four tools were used to collect the data. Interview questionnaire which composed of socio-demographic and clinical data and Severity of substance use disorder, The Circumstances, Motivation, and Readiness (CMR) Scales, Test of Self-Conscious Affect-3 and Heartland Forgiveness Scale. **Results:** The study showed that the majority of studied sample had sever level of substance use disorder. The total mean score of treatment motivation was 76.22 ± 7.45 . The total mean score of self-conscious emotions (shame, guilt and blaming others) was 99.30 ± 12.78 . The total mean score of forgiveness was 59.79 ± 8.27 . There was significant positive correlation between forgiveness and treatment motivation. However, there was a significant negative correlation between forgiveness and self-conscious emotions. **Conclusion:** Patients' motivation for treatment was statistically significant positive predictor for forgiveness. Conversely, self-conscious affect was a statistically significant negative predictor for forgiveness. **Recommendation:** Developing training and educational programs for individuals with substance use disorder to enhance their treatment motivation, self-forgiveness and decrease level of self-conscious emotions.

Key words: Self-Conscious Emotions, Self-Forgiveness, Substance Use Disorder, Treatment Motivation.

Introduction:

Substance use disorder (SUD) is becoming a major public health concern and is a growing problem in the world today⁽¹⁾. According to the World Drug Report 2021, over 270 million individuals globally had engaged in illegal drug use within the past year, with approximately 36 million people experiencing SUD⁽²⁾.

SUD presents a severe crisis in Egypt, causing concern among both society and the government. The United Nations Office on Drugs and Crime estimates that 6-8% of Egyptian adults use cannabis. Egyptians between the ages of 20 and 45 are the most vulnerable, according to the national addiction survey. About 1.4 million people in Cairo were battling

drug addiction, primarily to heroin and/or tramadol, according to a Ministry of Health report on the issue⁽³⁾.

SUD is a cluster of mental, and physical and behavioral symptoms elicited by persistent substance use despite significant associated problems⁽⁴⁾. SUD arises when repeated consumption of alcohol and/or drugs results in substantial clinical and functional impairment, including health issues, disability, and the inability to fulfill important tasks at home, at work, or in school⁽⁵⁾.

The majority of substance use disorder patients do not receive treatment until advanced stages of the disease, despite the fact that there are efficient, evidence-based treatments for SUD⁽⁶⁾.

Studies have indicated that a patient's motivation to receive treatment plays a crucial role in both starting and maintaining their recovery. Motivation to alter substance abuse behavior is essential to the recovery process. It determines effort and adherence to treatment plans and ultimately, long-term behavioral changes⁽⁷⁾.

Motivation for treatment often described as "the likelihood of a person's will to enter, continue and maintain a particular change strategy", and it represents the "desire to change that arises from inside the person and the perceived external pressure to change"⁽⁸⁾. In SUD, treatment motivation is considered a reliable indicator of treatment-seeking behavior and treatment outcomes. Individuals with SUD who lack effective motivation have incomplete treatment and unfavorable outcomes like relapse⁽⁹⁾. Therefore, considering the pervasive effects of SUD on both our society and the lives of individuals, research into the motivation for treatment and potential barriers to that motivation is necessary⁽¹⁰⁾.

Individuals grappling with substance abuse often encounter

a spectrum of emotions that become particularly challenging to navigate and regulate, especially during the early stages of their recovery journey. Among these emotions, shame is noted to have significant detrimental effects on the recovery process. Shame entails a pervasive negative perception of the self. In contrast, guilt pertains to negative evaluations of specific actions⁽¹¹⁾.

Shame and guilt are two uncomfortable emotions that are commonly connected to SUD. Feelings of guilt and shame may impede the recovery process of patients with SUD⁽¹²⁾. Guilt and shame are categorized as self-aware emotions that are felt following a mistake, or failure. The negative evaluation of a particular behavior resulting in a desire to confess, apologize, and make amends is known as guilt. Shame, on the other hand, is associated with a negative self-evaluation and a desire to disappear⁽¹³⁾.

Shame is recognized as a potent negative emotional experience that is linked to the seriousness of substance abuse and the likelihood of relapse. Notably, shame may act as a barrier to engaging in treatment for SUD⁽¹⁴⁾. On the other hand, individuals with a tendency towards guilt-prone personality styles exhibit different outcomes regarding substance use regulation. Such individuals remain fixated on their problematic behaviors. They typically reflect on their mistakes and endeavor to adjust their behavior to prevent repeating them⁽¹⁵⁾.

Prior research suggests that self-conscious emotions like shame and guilt are closely intertwined with substance abuse, forming a cyclical relationship. These emotions, particularly shame, exacerbate substance abuse by fostering feelings of inadequacy among individuals struggling with addiction. However, promisingly, previous studies indicate that self-forgiveness possesses the potential to disrupt this cycle by

alleviating feelings of shame and guilt⁽¹⁶⁾.

Also, research indicates that a significant proportion of individuals undergoing drug addiction treatment struggle to complete rehabilitation programs or experience relapses, frequently as a result of negative emotional impacts like shame, and guilt⁽¹⁷⁾. Given the observed connection between substance abuse, uncomfortable emotions, forgiveness and treatment outcomes emerges as a pertinent factor in addiction and recovery processes, supported by literature demonstrating a strong correlation between forgiveness and emotional stability and mental health⁽¹⁸⁾.

Self-forgiveness can be seen as an emotion regulation mechanism, beginning with the acceptance of responsibility for one's actions, experiencing remorse and guilt, and gradually letting go of self-directed negativity to initiate self-healing⁽¹⁹⁾. Also, self-forgiveness is known as Letting go of negative feelings (like guilt, and shame) that are directed at oneself as a result of doing something that one feels is morally wrong and substituting them with more positive attitudes, feelings, and actions toward oneself⁽²⁰⁾. Additionally, Self-forgiveness includes a number of psychological adjustments that diminish the urge to self-punish and engage in self-destructive behaviors⁽²¹⁾.

Nurses have a pivotal role in delivering education and assistance to individuals with SUD. This involves educating patients about the hazards of substance abuse, alongside highlighting the advantages of seeking treatment. Additionally, nurses offer emotional support and encouragement to those grappling with addiction, aiding them in navigating the obstacles of recovery and maintaining motivation to instigate positive transformations in their lives⁽²²⁾.

As well, nurses fulfill a crucial function in instructing individuals with SUD on methods to alleviate feelings of shame. Education and awareness campaigns are the main tools used to lessen the shame associated with addiction. It is imperative that those who are struggling with addiction understand that substance abuse is a medical condition that can be treated. Seeking treatment is essential, and individuals should not allow the fear of stigma and shame to deter them from seeking assistance⁽²³⁾.

Moreover, nurses hold a significant responsibility in motivating individuals undergoing drug rehabilitation to facilitate the transition towards positive change. Nurses are tasked with assessing patients' capabilities by employing problem-solving techniques and effective coping mechanisms, participating in peer support activities, and actively participate in motivational programs. Furthermore, nurses are responsible for monitoring patients' progress, aiding them in adapting to a drug-free lifestyle, and imparting skills on how to sustain sobriety post-rehabilitation⁽²⁴⁾.

Significance of the study:

Substance abuse is a worldwide issue that negatively affects people's physical and mental health as well as the security, livelihood, and health of nations⁽²⁵⁾. According to the World Health Organization, there are 185 million drug users and 2 billion alcohol users worldwide⁽²⁶⁾. According to the National Addiction Research Study (2018), the prevalence of substance abuse is 33% in Cairo, 22.4% in Upper Egypt, and 9.6% in Delta⁽²⁷⁾.

Although there is a great need for substance abuse treatment, the majority of patients with SUD do not receiving treatment. Unfortunately, the need for treatment and the severity of one's substance abuse is often not enough for individuals to be motivated to enter treatment. Emotions are a fundamental driving force behind human behavior. Unfortunately, there

is still much to learn about the factors that drive substance abusers to seek treatment namely, the motivational powers of shame and guilt ⁽¹⁰⁾. Fortunately, previous studies have indicated that self-forgiveness can be adaptive, as it can lessen the experience of shame and guilt ⁽²⁸⁾. So this study will be conducted to assess treatment motivation among patients with substance use disorder and its relation with self-conscious emotions and self-forgiveness.

Aim of the study:

The aim of the study was to assess treatment motivation among patients with substance use disorder and its relation with self-conscious emotions and self-forgiveness.

Research Questions:

- What is the level of treatment motivation among patients with substance use disorder?
- What are the levels of self-conscious emotions (guilt and shame) among patients with substance use disorder?
- What is the level of self-forgiveness among patients with substance use disorder?
- Is there a relation among treatment motivation, self-conscious emotions (guilt and shame) and self-forgiveness in patients with substance use disorder?

Subjects and Method:

Research design:

A descriptive correlational design was used to conduct this study.

Study setting:

This study was carried out in the detoxification and rehabilitation rooms for people with substance use disorders and addiction outpatient clinics at El-Azazi Hospital for Mental Health in Abo Hamad City, Alsharkia Governorate. There were 211 beds for people with mental health issues and people who struggle with drug abuse.

The addiction outpatient clinic delivers care for patients with substance use disorders every day except Friday from 9:00 a.m. to 1:00 p.m. Furthermore, such patients can receive care from the hotline from 12:00 p.m. to 4:00 p.m. on Sundays, Wednesdays, and Thursdays.

Study subjects:

A Purposive sample of 153 patients with substance use disorders, who met the inclusion criteria.

The association between the self-forgiveness score and the readiness to treatment score for substance abuse was $-0.225^{(10)}$, with a power of test of 80% and a confidence level of 95%. The sample size was calculated to be 153 subjects.

Sample size equation

$$\text{Sample size} = [(Z\alpha + Z\beta)/C]^2 + 3$$

The standard normal deviate for $\alpha = Z_\alpha$

The standard normal deviate for $\beta = Z_\beta$

$$C = 0.5 * \ln[(1+r)/(1-r)]^{(29)}$$

▪ **Inclusion criteria:**

Patients who were diagnosed with substance use disorders only, between the ages of 18 and 60, both males and females, and all educational levels.

▪ **Exclusion criteria:**

Patients with substance induced psychiatric disorders.

Tools for data collection:

To ensure that the study's goals were met, four tools were utilized to gather the required data:

Tool I: Interview questionnaire:
Consisted of two parts:

▪ **Part (1): Socio-demographic and clinical data.**

The researcher developed this section to record the individual traits of the participant sample. It included questions about age, age at onset of addiction, gender, residence, educational level, job, marital status, and income. The clinical data sheet

also included questions about place of treatment, duration of hospitalization, number of admissions to the hospital for addiction treatment, beginning of treatment, and types of substance abuse.

▪ **Part (2): Severity of substance use disorder.**

The severity of use questionnaire was adapted from the DSM-5 criteria to measure the severity or intensity of substance and/or alcohol abuse. It consisted of 11 items or criteria, or symptoms, for substance use disorders. The participants checked all the items that applied. This was on the introductory page of the survey, which ensured that participants met the inclusion criteria for the study⁽¹⁰⁾.

Scoring system:

The DSM-5 categorized substance use disorders into three severity levels: Mild, moderate, and severe, dependent on the number of symptoms fulfilled. In General,

- A mild substance use disorder was indicated by the presence of two or three symptoms.
- A moderate substance use disorder was indicated by the presence of four or five symptoms.
- A severe substance use disorder was indicated by the presence of six or more symptoms⁽³⁰⁾.

Tool II: The Circumstances, Motivation, and Readiness (CMR) Scales:

This scale was developed by **De Leon et al.**⁽³¹⁾. The purpose of the scale was to evaluate treatment readiness and motivation in patients with substance use disorders. It consisted of 18 items divided into three subscales: circumstances, motivation, and treatment readiness. The items in the circumstances subscale referred to external factors that impact decisions to begin or continue treatment (i.e., the first three items) and to discontinue treatment

(i.e., the last three items). The subscale of motivation (five items) referred to a client's internal reasons for change, On the other hand, the subscale of readiness which consisted of seven items, measures the person's perceived need for treatment in order to change.

Scoring system:

This scale was an 18-item, self-administered questionnaire. Likert-type responses were included in the instrument, and they were rated on a five-point scale that indicated how much the respondent agree or disagree with each item (1 being strongly disagree and 5 being strongly agree). The scores of the 18 statements were summed up and reversed for four items (4, 5, 6, and 12). Additionally, the possible CMR total score ranges from 0 to 90, where higher scores indicated greater treatment readiness and motivation.

Tool III: Test of Self-Conscious Affect-3 (TOSCA-3) [short version]:

This measurement tool was created by **Tangney et al.**⁽³²⁾ to evaluate shame-proneness and guilt-proneness as individual traits. The shortened TOSCA-3 was a scenario-based self-report questionnaire and covered various situations that may occur in daily life. This scale was comprised of series of 11 scenarios with 3 responses, including shame-proneness (11 items), guilt-proneness (11 items), and blaming others (externalization) (11 items).

Scoring system:

These 11 scenarios had three different reactions (guilt-proneness, shame-proneness, and blaming others) scored separately on a 5-point Likert-type scale from 1 (never) to 5 (always), respectively. The scale scores were calculated by summing the separate reactions to create the composite score for each subscale, and scores range from 11 to 55.

The level of shame self-talk, guilt self-talk, and blaming others was categorized as follows:

- Low: total score: 11-25
- Moderate: Total score: 26-40
- High: Total score: 41-55

Tool IV: Heartland Forgiveness Scale (HFS):

It was created by **Thompson et al.** ⁽³³⁾ to assess a person's dispositional forgiveness toward oneself, other people, and circumstances. It had eighteen items total, separated down into three subscales that measured forgiveness of oneself (items 1-6), forgiveness of others (items 7-12), and forgiveness of situations outside of one's control (items 12-18), such as sickness and natural disasters.

Scoring system:

A five-point Likert scale was used to rate each item, with 1 represented "completely wrong for me" and 5 represented "completely true for me". The nine negatively worded, reverse-scored items (scores for items 2, 4, 6, 7, 9, 11, 13, 15, and 17 are reversed) were added to the items on each scale to determine the overall score and subscale scores. The overall HFS score could have a range of 18 to 90 points.

The level of total HFS was categorized as follows:

- **A score between 18 and 42** represented that the person was usually unforgiving of oneself, other people, and uncontrollable circumstances.
- **A score between 43 and 67** represented that the person was sometimes forgiving and sometimes unforgiving of oneself, other people, or uncontrollable circumstances.
- **A score between 68 and 90** represented that the person was usually forgiving of oneself, other people, and uncontrollable circumstances.

Content validity and reliability:

In order to verify their original validity, tools were translated into

Arabic using both back translation and translation techniques. The tools were revised by five-person panel of experts. The five-person panel of experts included: a professor from Zagazig University's psychiatric medicine department; A psychology professor from Zagazig University's Faculty of Arts, two assistant professors from the department of psychiatric and mental health nursing at Zagazig University, and one assistant professor of community health nursing at Zagazig University. For the purposes of understanding, comprehensiveness, relevance, application, and clarity, they revised the tools. Their recommendations were taken into consideration.

Cronbach's alpha was used to test the reliability of the tools. The values were reported as follows: Severity of substance use disorder (0.729), Circumstances, Motivation and Readiness scale (0.742), Self-conscious affect scale (0.703) and Forgiveness scale (0.795).

Field work:

Following the receipt of the necessary approval to carry out this study, the researcher met with the hospital's manager and head nurses to obtain their consent, and get their cooperation to start gathering data. After that, the researcher conducted interviews with the selected patients, gave a brief introduction, and explained the goals of the study. She then got the selected patients' written consent to take part in the study.

Prior to beginning data collection, the researcher established a trusting relationship with the selected sample. The researcher conducted one-on-one interviews with each patient, carefully explaining each question on the data collection forms to him before selecting the response that best fit his needs. In order to get their participation in completing out the study's instruments, a thorough explanation was provided.

The interview questionnaire sheet was the first tool, and answering the

questions took roughly ten minutes. The Circumstances, Motivation, and Readiness (CMR) Scale was the second tool, and it took roughly five minutes to complete the questions. The third tool was the Test of Self-Conscious Affect-3 (TOSCA-3) scale, which took roughly fifteen minutes to be completed. The Heartland Forgiveness Scale (HFS), which took roughly ten minutes to be completed, was the fourth tool. The duration of the four tools varied, ranging from 35 to 40 minutes, depending on the patient's comprehension level and capacity to respond to every question.

To gather data, the researcher went to El-Azazi Hospital twice a week between 9:30 a.m. and 2:00 p.m. The assessment phase took three months to finish; it began in mid-July 2023 and ended in mid-October 2023.

Pilot study:

A pilot study was carried out on 16 SUD patients, about 10% of the estimated total sample size. The purpose was to measure the accurate time needed to complete the data collection forms, as well as to test the feasibility and clarity of the used tools. The results of the pilot study showed that it took roughly 30 to 40 minutes to complete the tools. The patients who participated in the pilot study were included in the study sample because the data collection form didn't need to be modified.

Administrative and Ethical considerations:

An official permission to conduct this study was obtained by submitting an official letter from the Dean of Zagazig University's Faculty of Nursing to the director of the General Secretariat of Mental Health and Addiction Treatment in Cairo City. Consequently, after applying all necessary procedures and documentation -which took roughly two months- approvals to conduct the study were obtained from the director of the General Secretariat of Mental Health and Addiction Treatment. Subsequently, approval was acquired

from El-Azazi Hospital for Mental Health's hospital director and nursing director. It was confirmed that patients voluntarily participated. The research tools used in the study did not cause any harm, distress, or raise any religious or cultural concerns among the sampled patients.

The study proposal was approved by the Ethical Committee at Zagazig University's Faculty of Nursing with code **M.DZU.NUR/177/11/4/2023**. After clearly explaining the purpose of the study to the patients, a written consent was obtained for their participation. The patients involved in the study were given the choice to refuse participation, and they were also informed of their ability to withdraw at any stage of completing the forms. Furthermore, assurances were provided to the patients that their data would remain confidential and utilized solely for research purposes. Additionally, the anonymity and confidentiality of the participants were safeguarded through the coding of all information.

Statistical analysis:

All data were collected, tabulated and statistically analyzed using SPSS 20.0 for windows (SPSS Inc., Chicago, IL, USA 2011). Quantitative data were expressed as the mean \pm SD and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). ANOVA (One-way analysis of variance) test was used for comparison between more than two different groups of quantitative data which were normally distributed.

The student "t" test was used for comparison of means of two independent groups of quantitative data which were normally distributed. Pearson correlation coefficient was calculated to assess relationship between study variables, (+) sign indicated direct correlation & (-) sign indicated inverse correlation. Multiple linear regression (step-wise) was also used to predict factors which affect Severity, total motivation, Self-

conscious affect and forgiveness scores. Cronbach alpha coefficient was calculated to assess the reliability of the scales through their internal consistency. P-value < 0.05 was considered statistically significant, p-value < 0.001 was considered highly statistically significant, and p-value \geq 0.05 was considered statistically non-significant.

Results:

Table (1): Socio-demographic characteristics of studied sample (n=153) clarified that, 62.1 of studied sample were 30 -< 45 years old with mean \pm SD 33.61 \pm 7.51, and about three-fifths (59.5%) had started abusing substances when they were younger than 20 years old. Concerning gender, all of studied patients were male (100%). Nearly half (51.6%, 51.6, and 49.7%) of studied patients were from rural areas, married, and had secondary education respectively. Also the same table showed that, 72.5% of studied sample were manual workers. Concerning income, about two-thirds (65.4%) of the patients had insufficient income.

Table (2) and figure (1): Clinical characteristics of studied patients (n=153) showed that, 78.4% of studied patients were from inpatient unit, and 71.7% of the patients stayed in the hospital less than 30 days with mean \pm SD = 20.98 \pm 17.95. As well, 77.1% of studied sample admitted to hospital for addiction treatment less than 3 times. In addition, most of studied patients (86.9%) started treatment less than 5 years. Furthermore, three-fifths (60.10 %) of the sample had abused heroin.

Figure (2): Severity of substance use disorder of studied patients demonstrated that, 78.4% of the sample had severe level of substance use disorder. Meanwhile, 21.6% had moderate level of substance use disorder with mean \pm SD =17.43 \pm 1.49.

Table (3): Total mean scores of the treatment motivation and its domains & Self-conscious emotions and its domains & forgiveness and its

domains of studied patients revealed that, the highest mean score was readiness to enter treatment (31.32 \pm 3.25), followed by motivation (23.18 \pm 2.69), and the least mean score was circumstances (21.71 \pm 3.70). The total mean score was =76.22 \pm 7.45. Also, the same table found that, the highest mean score was guilt self-talk (44.22 \pm 6.61) followed by shame self-talk (31.28 \pm 7.05) and the least mean score was blaming others (23.79 \pm 7.52). The total mean score was = 99.30 \pm 12.78. Additionally, the highest mean score was forgiveness of situations (20.68 \pm 3.88) followed by forgiveness of others (20.56 \pm 4.36), and the least mean score was forgiveness of self (18.54 \pm 3.46). The total mean score was = 59.79 \pm 8.27.

Figure (3): Total scores of self-conscious affect domains of studied patients indicated that, about three-quarters (72.5%) of the sample had high level of guilt self-talk and 68.6% had moderate level of shame self-talk. While, 60.8% of the studied sample had low level of blaming others.

Figures (4, 5): Correlation matrix between total scores of treatment motivation, self-conscious emotions and forgiveness demonstrated that there was statistically significant positive correlation between patients' circumstances, motivation and readiness for treatment and forgiveness (r= 0 .192 & p= 0 .017). However, there was a statistically significant negative correlation between self-conscious affect and forgiveness (r= - 0.184 & p= 0 .023).

Table (4): Best fitting multiple linear regression for predicting factors which affect total circumstance, motivation and readiness score among studied patients showed that, duration of hospitalization and beginning of treatment were highly statistically significant positive predictors for total circumstance, motivation and readiness score.

Table (5): Best fitting multiple linear regression for predicting factors which affect self-conscious emotions score among studied patients clarified that, severity of substance use disorder was statistically significant negative predictor for self-conscious emotions.

Table (6): Best fitting multiple linear regression for predicting factors which affect forgiveness among studied patients revealed that residence, total circumstance, motivation and readiness were statistically significant positive predictor for forgiveness score. Conversely, self-conscious emotions were a statistically significant negative predictor for forgiveness.

Discussion:

Regarding sociodemographic data, the present study's findings showed that slightly more than three-fifths of studied sample were between the ages of 30 and less than 45, with a mean score was 33.61 ± 7.51 and about three-quarters were manual workers. Almost half of the patients in the study were from rural areas, married, and had completed secondary school. This could be because people in this age group had handled with a lot of stressors, like obtaining a career, the financial independence, worrying about the future, and feeling hopeless. As a result, abuse drugs or other substances were an effort to lessen the effects of stress.

These findings were in agreement with the **AbdelMoneim et al.** ⁽²⁷⁾ study which revealed that three-fifths of manual workers had a higher prevalence of substance abuse, two-thirds were from rural areas, nearly half were in secondary-technical schools, and roughly three-fifths were married. Also, a study conducted by **Abdelmouttelb et al.** ⁽²⁶⁾ in Cairo, which clarified that over two fifths of the patients were in the 25–34 age range with a mean age of 33.74 ± 8.36 years, the majority of the studied

sample lived in rural areas, and were handicraft work.

The present study results demonstrated that all of the sample were male, and about two-thirds had insufficient income. About three-fifths of the sample began addiction before the age of twenty. One possible explanation for the study's male preponderance could be the stigma that society attaches to drug addicts, particularly if they are women because Egyptian culture does not accept women who are addicted to drugs. Therefore, in order to hide their addiction and the shame and consequences that come with it, women prefer to receive treatment at private clinics.

These results were supported by a study conducted by **Elyamany et al.** ⁽³⁴⁾ in Egypt which discovered that males made up the largest percentage of the studied substance abusers, approximately half of the sample did not have a sufficient monthly income, and over two-thirds of the sample started abusing substances at a younger age than twenty. However, these findings were incongruent with study at Cairo's El-Abbasia Psychiatric Hospital by **Abdelmouttelb et al.** ⁽²⁶⁾ which indicated that slightly more than half of the sample had enough income.

Regarding the clinical characteristics of the sample, the current findings indicated that, more than three-quarters of sample were from inpatient units and slightly less than three-quarters stayed in the hospital for less than 30 days, with a mean score was 20.98 ± 17.95 days. Most of the sample began treatment for less than 5 years and more than three-fourths admitted to the hospital for addiction treatment fewer than three times. Three-fifths of the sample had abused heroin. This might be interpreted by number of factors, such as the fact that heroin produces quick and intense euphoria. Also, heroin can be smoked, snorted, or injected, and its effects are felt almost instantly,

making it appealing to addicts who seek immediate relief.

This result was consistent with the results of the study in Abo Hamad City, Sharqia Governorate by **Atia and Ahmed** ⁽³⁵⁾ which found that the mean score for the duration of hospitalization per day was 22.5 ± 26 days.

As Well, these study findings were in line with study by **Shahin et al.** ⁽³⁶⁾ which revealed that the majority of the sample had one to two psychiatric hospital admissions, and more than half of the patients were heroin dependent. Similarly, **Abdelmouttelb et al.** ⁽²⁶⁾ in their study in Cairo, which discovered that heroin abuse was the most prevalent abused substance among the addicts, and more than half of them had the first hospitalized admission. However, these results were inconsistent with Egyptian study by **Gemeay et al.** ⁽³⁷⁾ which demonstrated that tramadol was the first line of substance abuse among patients.

Concerning the severity of substance use disorder level among the studied patients, the present study results showed that the majority of sample had sever level of substance use disorder. This might be attributed to the addictive nature of certain substances such as opioids (heroin) which have a strong impact on the brain's reward system, which causes strong cravings and a compulsive drive to continue using the substance. In addition, the cycle of addiction frequently causes problems for a person's relationships, career, and physical and mental well-being. This finding was in agreement with **Slezakova** ⁽¹⁰⁾ which revealed that the majority of the sample had a severe level of substance use disorders.

Concerning treatment motivation, one of the imperative aim of the current study findings that, the highest mean score was readiness to enter treatment (31.32 ± 3.25), followed by motivation (23.18 ± 2.69), and the least mean

score was Circumstances (21.71 ± 3.70). The total mean score was 76.22 ± 7.45 . This might be due to several factors that include overspending on substances, legal consequences, feeling of burden on family, and stigma associated with addicts, all of these factors motivate patients to seek treatment. Also, recognizing the possible long-term consequences about the hazards associated with continued use can encourage addicts to engage in treatment.

These findings were consistent with study conducted by **Melnick et al.** ⁽³⁸⁾ in New York which found that the average mean score of motivation and readiness (MR) was 49.12 ± 8.12 . Also, a study conducted by **Tabrizi** ⁽³⁹⁾ in the United States revealed that the highest mean score was client readiness to enter treatment (30.53 ± 4.49), followed by the scores for motivation (22.45 ± 2.94), and the least mean score was circumstance score (21.19 ± 3.54), and the client overall scores was 74.16 ± 8.99 .

Additionally, these results were supported by study conducted by **Delić et al.** ⁽⁴⁰⁾ in Slovenia, which demonstrated that the mean score of readiness was 31.23, the mean score of motivation scale was 22.54, the mean score of circumstances was 21.46, and total mean score was 75.23. Furthermore, the study of **Razali** ⁽⁴¹⁾ in Malaysia, clarified that the highest mean score was readiness to enter treatment (26.83 ± 3.11), followed by motivation (20.85 ± 3.00), and the least mean score was circumstances (19.75 ± 3.56). The total mean score was 67.43 ± 7.40 .

Regarding self-conscious emotions, the findings of the current study revealed that three-quarters of the sample had a high level of guilt self-talk with Mean \pm S.D = 44.22 ± 6.61 , This might be attributed to the fact that a large number of the patients in the study may feel guilty for the actions they have taken while under the

influence of substances such as lying, stealing, neglecting responsibilities, or engaging in illegal activities.

The findings of this study were congruent with a previous study by **Grynberg et al.** ⁽⁴²⁾ which demonstrated that compared to those who did not use drugs, patients with SUD reported a higher level of guilt. Also, **Patock-Peckham et al.** ⁽⁴³⁾ who conducted a study in United States, which clarified that mean score of guilt was 62.514 ± 7.901 . Furthermore, a Jordanian study conducted by **Al-Ziadat** ⁽²⁸⁾ which discovered that drug abusers in Jordan experience a high level of guilt.

The present study findings clarified that, about two-thirds of the sample had moderate level of shame self-talk with a Mean \pm S.D= 31.28 ± 7.05 . This might be owing to a number of reasons, including the fact that the patients in the study might internalize negative beliefs about themselves, leading to feelings of unworthiness, failure, and self-blame, also the stigma that society attaches to substance usage. Patients who experienced this social judgment may feel alone and misinterpreted. Furthermore, many SUD patients could experience shame if they have made repeated attempts to stop using drugs or alcohol but were unsuccessful.

This study result was in the same line with **Reamillo** ⁽⁴⁴⁾ in Philippines study which found that the patients with SUD had a mean score of 38.16 (SD=4.54) for the TOSCA-3 shame subscale and about three-fifths of them had moderate level of shame. On the contrary, **Luoma et al.** ⁽⁴⁵⁾ in United State concluded that most of patients with substance use problems had an elevated degree of shame.

According to the present study findings, about three-fifths of the sample had low level of blaming others with a Mean \pm S.D = 23.79 ± 7.52 . This might be interpreted by the fact that some of the patients in this study

sometimes blamed others as a defense mechanism to avoid taking accountability for their actions. Additionally, low level of blaming others might be caused by the support of participants' families to recover which in turn, might motivate them to repair cohesion within their families and then reduce blaming others. This result was to some extent in agreement with **Kushnir et al.** ⁽⁴⁶⁾ study in Canada, which clarified that the mean score of blaming others was 26.18.

Regarding forgiveness, the present study found that, the highest mean score was forgiveness of situations (20.68 ± 3.88) followed by forgiveness of others (20.56 ± 4.36), and the least mean score was forgiveness of self (18.54 ± 3.46), and the total mean score of forgiveness was 59.79 ± 8.27 . This might be due to studied patients might utilize forgiveness as a coping strategy to deal with the guilt and shame connected to their actions and behaviors. In addition, during therapy, studied patients might have learned to reframe their perceptions of past hurts or conflicts, which resulted in a more forgiving outlook. This cognitive reappraisal can help them release negative emotions and proceed forward in a more positive and productive manner.

The findings of the present study were in harmony with **Ellingwood et al.** ⁽⁴⁷⁾ study in USA and revealed that the highest mean score was forgiveness of situations (30.93 ± 5.65) followed by forgiveness of others (30.80 ± 5.86). Also, Indian study conducted by **Davis and Thangal** ⁽²¹⁾ revealed that mean score of self-forgiveness was 26.05.

Moreover, these results were congruent with **Vatansever and Ozgur-Ilhan** ⁽¹²⁾ who found in their Turkish study that the highest mean score was forgiveness of situations (28.58 ± 7.72) followed by forgiveness of others (28.20 ± 9.51), and the least mean score was forgiveness of self

(25.65±5.97). Additionally, this study was consistent with study conducted by **Arslan and Coşkun** ⁽⁴⁸⁾ in Turkey, which showed that the mean score of self-forgiveness was 26.44 ± 5.04

The primary aim of the current research was to determine the relationship between treatment motivation, self-conscious emotions and self-forgiveness among patients with substance use disorder. **Firstly**, there was a statistically significant positive correlation between patient's treatment motivation and forgiveness and. This could be explained by the fact that a patient's willingness to participate in treatment is significantly influenced by their capacity for forgiveness. As forgiveness can result in improved psychological resilience and emotional well-being, which in turn can increase a patient's motivation to engage in treatment. Additionally, it makes a person more adaptable, encouraging them to engage in activities like seeking and receiving treatment that promote rather than hinder health ⁽⁴⁹⁾.

The present study finding was conformed to the finding of a study conducted by **See Mey et al.** ⁽⁵⁰⁾ in Malaysia, which revealed a positive relationship between treatment motivation and forgiveness. Incongruent with the previous result of **Slezakova** ⁽¹⁰⁾ who found that self-forgiveness was not positively and significantly related to motivation for treatment or readiness for treatment, and demonstrated that one reason for the non-significant relationship found between self-forgiveness and motivation and readiness for treatment might be that self-forgiveness can lead to a continuation of a negative behavior rather than motivating change ⁽⁵¹⁾.

Secondly, there was a statistically significant negative correlation between patient's self-conscious affect and forgiveness. This outcome clarified that patients with high levels of self-conscious emotions found it difficult to forgive self and others. This

might be explained by the fact that people with high levels of self-conscious affect tend to concentrate more on their own negative emotions. This preoccupation with self leads to rumination and feelings of resentment, which in turn hinder the forgiveness process.

This finding was in harmony with **Vatansever and Ozgur-Ilhan** ⁽¹²⁾ study in Turkey, which revealed that self-forgiveness, was negatively correlated with self-conscious affect (both shame and guilt) in the alcohol-dependent individuals. Similarly, **Al-Ziadat** ⁽²⁸⁾ found that there was a statistically significant negative correlation between self-forgiveness and self-conscious emotions.

Finally, in multivariate analysis, the present study results demonstrated that self-conscious emotions were statistically significant negative predictors for severity of substance abuse. Also, severity of substance use disorder was statistically significant negative predictor for Self-conscious affect. This means the higher the self-conscious emotions score of patients, the less severity of substance abuse they suffered, and the higher their severity of substance abuse score, the less self-conscious emotions they experienced.

Conversely, these findings were in disagreement with a study carried out by **Aurora et al.** ⁽⁵²⁾ which indicated that self-conscious emotions (guilt and shame) predicted subsequent substance use, and that substance use also predicted both subsequent shame and guilt.

The present study findings found that beginning of treatment and duration of hospitalization was highly statistically significant positive predictors for total treatment motivation score. This indicated the early treatment and the longer stay in the hospitable, increase patient's motivation for treatment. This was supported by **Melnick et al.** ⁽³⁷⁾ who

reported that patients with longer treatment history expressed higher level of motivation for treatment.

These results were in harmony with the study of **Slezakova** ⁽¹⁰⁾ which concluded that the longer time one spent abstinent or in recovery; the higher was one's motivation for substance abuse treatment. Thus, the more time one had abstained from using substances, the higher the motivation for treatment. Also, a study by **Ghosh et al.** ⁽⁵³⁾ in India revealed that duration of hospitalization positively affects motivation for treatment. This indicates that treatment as an inpatient, even for a short while, improves the motivation level of patients with alcohol dependence syndrome.

The present study found that total treatment motivation were statistically significant positive predictors for forgiveness. Conversely, Self-conscious affect was a statistically significant negative predictor for forgiveness. This indicated that the higher treatment motivation score of patients, the more forgiveness they experienced. Also, the higher the self-conscious emotions score of patients, the less forgiveness they experienced.

The findings of the present study were in the same line with **See Mey et al.** ⁽⁴⁹⁾ study in Malaysia which revealed that forgiveness was positively associated with treatment motivation. Also, **Vatanever and Ozgur-Ilhan** ⁽¹²⁾ study in Turkey indicated that self-conscious affect (shame and guilt) were a significant negative predictor for forgiveness in the alcohol-dependent individuals. Additionally, a study performed by **Al-Ziadat** ⁽²⁸⁾ in Jordan showed that shame and guilt was negative predictor for forgiveness.

Conclusion:

Based on the results of this study, it can be concluded that the majority of sample had sever level of substance abuse, slightly more than three quarters of the sample were motivated

to seek treatment, about three-quarters of the sample had a high level of guilt self-talk and about two-thirds had a moderate level of shame self-talk, and most of the sample sometimes forgiving of oneself, others and uncontrollable situations. Additionally, there was statistically significant positive correlation between patients' motivation for treatment and forgiveness. On the other hand, forgiveness was statistically significantly negatively correlated with self-conscious emotions. Furthermore, self-conscious emotions were a statistically significant negative predictor for forgiveness. Conversely, Patients' treatment motivation was statistically significant positive predictor for forgiveness.

Recommendations:

Based on the results of this research, the following recommendations are suggested:

- Providing acceptance and commitment therapy (ACT) in group-based interventions aimed at lowering a level of shame, which improves treatment attendance at the follow-up.
- Providing psychoeducation on the benefits of forgiveness, both for mental health and overall well-being.
- Employ motivational interviewing techniques to help patients explore their ambivalence about treatment and to guide the patients toward making positive changes. This approach focuses on finding the patient's intrinsic motivation and working with them to develop a plan for change.
- Further research: It is recommended to repeat the current study using a larger, representative probability sample size in various Egyptian governorates in order to increase the generalizability of the findings.

Table 1: Frequency distribution of socio-demographic characteristics of studied patients (n=153)

| Socio-demographic characteristics | NO. | % |
|--|-------------------|----------|
| Age per years | | |
| 18 -<30 | 48 | 31.4 |
| 30 -< 45 | 95 | 62.1 |
| ≥45 | 10 | 6.5 |
| Mean± SD | 33.61±7.51 | |
| Age at onset of addiction | | |
| Less than 20 years | 91 | 59.5 |
| 20-30 | 44 | 28.8 |
| >30-40 | 16 | 10.5 |
| >40 years | 2 | 1.3 |
| Gender | | |
| Male | 153 | 100.0 |
| Female | 0 | 0.0 |
| Residence | | |
| Urban | 74 | 48.4 |
| Rural | 79 | 51.6 |
| Education level | | |
| Illiterate | 15 | 9.8 |
| Basic education | 41 | 26.8 |
| Secondary education | 76 | 49.7 |
| University education | 21 | 13.7 |
| Job | | |
| Not work | 13 | 8.5 |
| Manual worker | 111 | 72.5 |
| Employer | 29 | 19.0 |
| Marital status | | |
| Married | 79 | 51.6 |
| Divorced | 14 | 9.2 |
| Widow | 2 | 1.3 |
| Single | 58 | 37.9 |
| Income | | |
| Sufficient | 53 | 34.6 |
| Insufficient | 100 | 65.4 |

Table 2: Frequency distribution of clinical characteristics of studied patients (n=153)

| Clinical characteristics | NO. | % |
|---|--------------------|------|
| Place of treatment | | |
| Outpatient | 33 | 21.6 |
| In-patient | 120 | 78.4 |
| Duration of hospitalization per days (n=120) | | |
| <30 days | 86 | 71.7 |
| 30-60 days | 34 | 28.3 |
| Mean± SD | 20.98±17.95 | |
| Number of admissions to hospital for addiction treatment | | |
| <3 | 118 | 77.1 |
| ≥3 | 35 | 22.9 |
| Beginning of treatment (years) | | |
| <5years | 133 | 86.9 |
| ≥5 years | 20 | 13.1 |

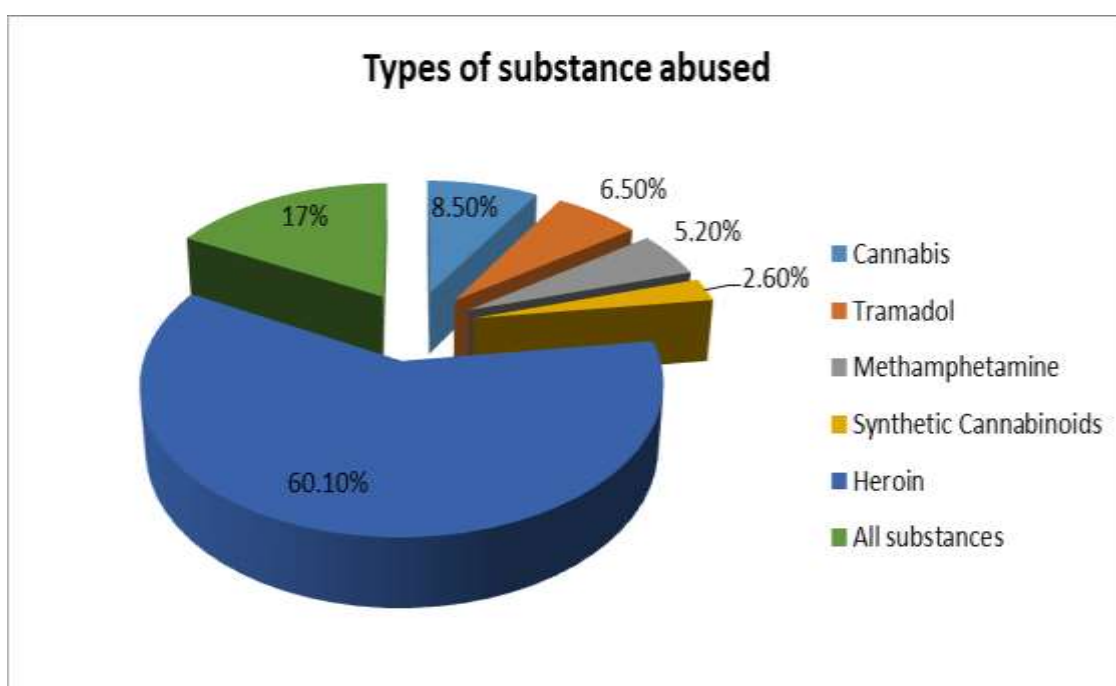


Figure 1: Percent of types of substance abused among the studied patients (n=153)

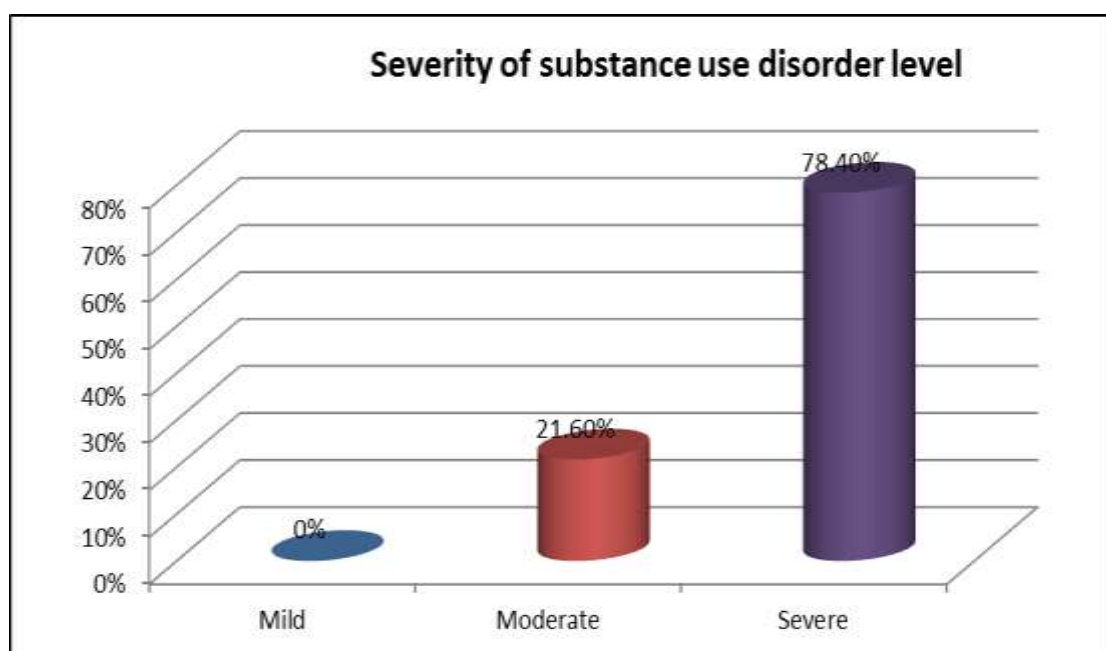


Figure 2: Percent of severity of substance use disorder level among the studied patients (no=153)

Table 3: Total mean scores of the treatment motivation and its domains & Self-conscious emotions and its domains & forgiveness and its domains of Studied Patients (n=153)

| Item | Mean± SD |
|---------------------------|--------------------|
| Circumstances | 21.71±3.70 |
| Motivation | 23.18±2.69 |
| Readiness | 31.32±3.25 |
| Total | 76.22±7.45 |
| Sham self- talk | 31.28±7.05 |
| Guilt self- talk | 44.22±6.61 |
| Blaming others | 23.79±7.52 |
| Total | 99.30±12.78 |
| Forgiveness of self | 18.54± 3.46 |
| Forgiveness of others | 20.56± 4.36 |
| Forgiveness of situations | 20.68± 3.88 |
| Total | 59.79± 8.27 |

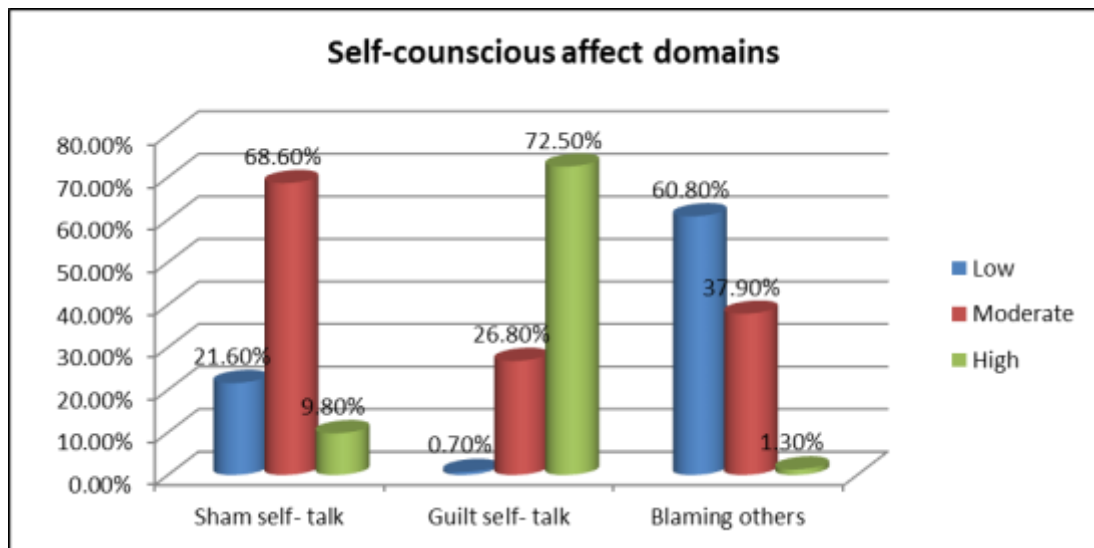


Figure 3: Total scores of self-conscious affect domains of Studied Patients (n=153)

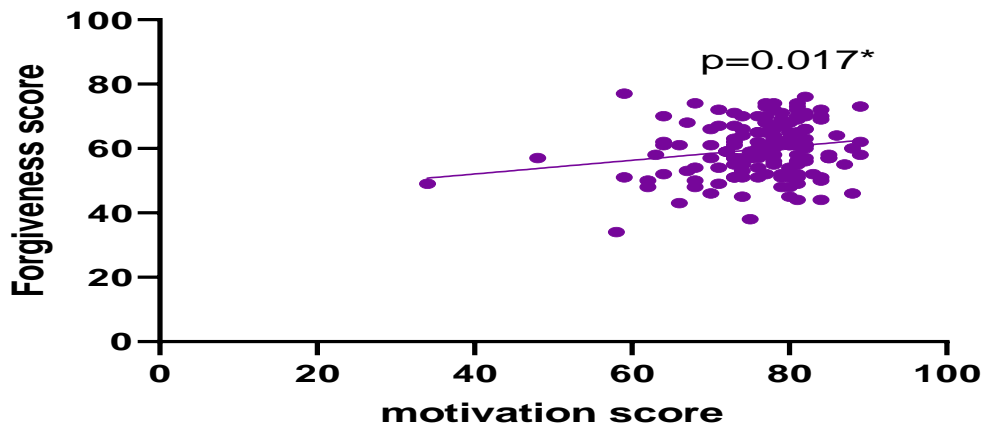


Figure 4: Scatter dot graph showing significant positive correlation between forgiveness and motivation scores

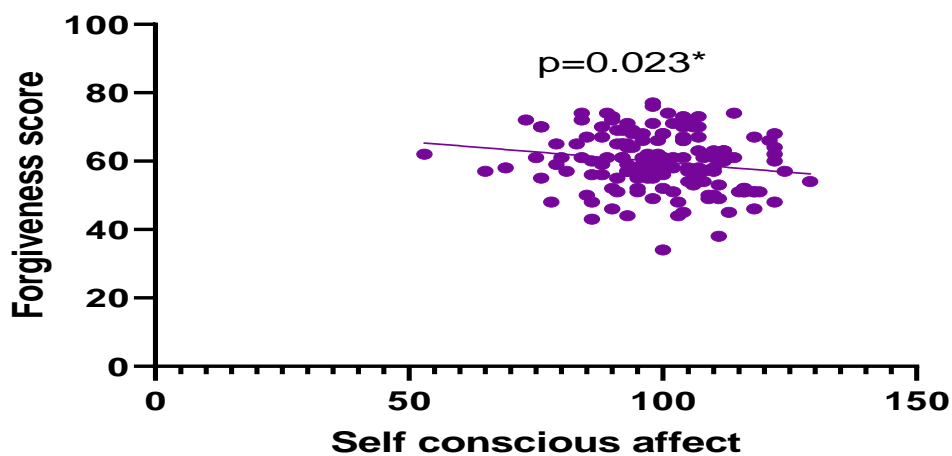


Figure 5: Scatter dot graph showing significant negative correlation between forgiveness and self-conscious affect scores

Table 4: Best Fitting Multiple Linear Regression Model for predicting factors which affect Total Circumstance, Motivation and Readiness score among studied patients (n=153)

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | 95.0% Confidence Interval for B | |
|-----------------------------|-----------------------------|------------|---------------------------|--------|----------|---------------------------------|-------------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| (Constant) | 72.103 | 1.242 | | 58.038 | .000 | 69.643 | 74.564 |
| Duration of hospitalization | .108 | .040 | .239 | 2.732 | <0.001** | .030 | .187 |
| Beginning of treatment | .051 | .019 | .236 | 2.698 | <0.001** | .013 | .088 |

** : statistically highly significant (p<0.001) R-square=0.106 ANOVA: F= 6.956 P<0.001

Table 5: Best Fitting Multiple Linear Regression Model for predicting factors which affect Self-conscious affect score among studied patients (n=153)

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | 95.0% Confidence Interval for B | |
|--|-----------------------------|------------|---------------------------|--------|--------|---------------------------------|-------------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| (Constant) | 133.109 | 3.619 | | 9.774 | .000 | 106.139 | 160.079 |
| Severity of substance use disorder score | -.878 | .82 | -.216 | -2.403 | 0.018* | -3.426 | -.330 |

: statistically significant (p<0.05) R-square=0.047 ANOVA: F= 5.775 P=0.018

Table 6: Best Fitting Multiple Linear Regression Model for predicting factors which affect Forgiveness score among studied patients (n=153)

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | 95.0% Confidence Interval for B | |
|--|-----------------------------|------------|---------------------------|--------|--------|---------------------------------|-------------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| (Constant) | 49.058 | 8.689 | | 5.646 | .000 | 31.848 | 66.268 |
| Residence Total Circumstance, motivation and readiness | 3.789 | 1.466 | .227 | 2.584 | 0.011* | .885 | 6.693 |
| Self-conscious affect | -.119 | .055 | -.189 | -2.148 | 0.034* | -.228 | -.009 |

*: statistically significant (p<0.05). R-square=0.112 ANOVA: F= 4.893 P<0.001

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