

## Research Article

# Stigma and Psychological Distress among Egyptian Patients with Substance Use Disorders

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## Keywords

• Anxiety; Egypt; Depression; Psychological distress; Self-stigma; Shame; Substance-related disorders

## Abstract

**Introduction:** Although stigma of substance abuse and its impact on psychological health have recently received considerable attention, these problems are under-addressed among Arab patients.

**Aim:** This study aimed to investigate stigma, psychological distress, and their correlates among Egyptian substance users.

**Methods:** This cross-sectional study involved a convenient sample of 149 inpatient substance users (142 males, mean age = 32.5 years, SD = 6.8 years, range: 19-60 years). They completed the Self-Stigma in Alcohol Dependence Scale and the Depression Anxiety Stress Scale-21. Hierarchical multiple regression was conducted to identify correlates of stigma and psychological distress.

**Results:** In adjusted analysis, young age, abuse of alcohol and Bango were significantly associated with stigma. Shame and shorter hospital stays were associated with higher psychological distress, explaining 31% of the variance, and bait along with stereotype agreement explained 36% of the variance in depression scores.

**Discussion:** Younger substance users are more likely to internalize stigma. Meanwhile, the shame component of internalized stigma has the worst effect on psychological health.

**Implications for practice:** The findings necessitate stigma interventions that target shame reduction to enhance the psychological well-being and recovery of substance users.

## ABBREVIATIONS

DASS-21: Depression Anxiety Stress Scale-21; PTSDs: Post-Traumatic Stress Disorders; SSAD: Self-Stigma In Alcohol Dependence Scale; SUDs: Substance Use Disorders

## INTRODUCTION

Abuse of illicit substances is increasing to an extent that some substances strike up to 18.4% of the world's adult population [1]. Abuse of illicit substances is vastly considered a deviant status; people with substance use disorders (SUDs) are surrounded by enormous stigma [2, 3].

Stigma is a social process: the public blame substance users for their problems and stereotype them as weak-willed, reckless, violent, and threatening [4,5]. The public set a status hierarchy, which has drug users at the bottom; they exclude, reject, discriminate against, and unfairly treat substance-using individuals [6,7]. Thus, the label of a "drug user" seriously threatens individuals' survival—being denied basic life opportunities for proper work/income, housing, education,

health care/insurance services, social interactions and networks [5,8]. Substance users might be stigmatized for other attributes such as gender and sexual orientation; however, drug related discrimination is the worst stigma reported by people with multiple stigmata [7].

From the perspective of the stigmatized person, stigma is a self-devaluation process that involves internalization of the public negative attitudes via 4 inter-related stages: 1) awareness of the negative attitudes held by the public toward substance users e.g., they say that drug users are untrustworthy; 2) personal agreement with public opinions e.g., I think that drug users are untrustworthy; 3) self-occurrence and application of stereotypes to self (inpatients who identify with a stigmatized group and view stereotypes as legitimate) e.g., I am untrustworthy because I use drugs; 4) shame and demoralization—flawed self-views cause loss of self-esteem and self-efficacy. The first two stages embrace none self-relevant stigma perceptions (perceived stigma) while the last two stages constitute internalized stigma [3,8]. The extent to which individuals internalize stigma has been associated with factors such as demographic characteristics e.g., age and level

of education [9-11] and the type of the abused substance e.g., heroin is associated with higher stigma — as severer as and less controllable than marijuana [12].

Stigma negatively affects both physical and psychological health. Patients with high stigma are more likely to share used syringes and engage in self-harm and risky behaviors. On the other hand, they are less likely to seek out care (only 25% of all patients) or remain in treatment [3]. Reluctance to use health services is associated with higher stigma perceptions [10], fear of having legal problems, or fear of rejection by care providers [2]. Evidence indicates that substance users are rejected by professionals in treatment facilities [11, 13, 14].

Symptoms of depression and anxiety, herein referred to as psychological distress, are wide-spread among substance users. On one hand, depression, suicidal ideation, anxiety, post-traumatic stress disorders (PTSDs), and social phobia are highly co-morbid with SUDs [15, 16]. It is documented that regular use of high doses of certain substances such as heroin, cannabis, and marijuana is associated with depressive mood [17-19]. On the other hand, these symptoms may stem from the negative consequences of stigma and discrimination (e.g., lack of employment and housing), which represent a frequent source of stress for SUDs patients [2, 11, 20].

Chronic stress leads to depletion of internal resources, inability to predict or regulate one's emotions, and development of feelings of shame [21] (the deepest component of stigma). Most SUDs patients inhibit negative emotions, which in turn stimulates frequent rumination and intrusions i.e., the thought process spins repeatedly around defeating self-views, which further impedes the ability of problem solving and goal achievement [22, 23]. As a result, people develop a sense of powerlessness, low self-esteem and self-efficacy, poor social functioning, poor quality of life, distress, and depressive symptoms [24].

Fear of acquiring the official label (by contacting mental health services) drives SUDs patients to keep away from treatment settings and to manage their emotional problems on their own [14]. Nonetheless, SUDs patients have limited ability to manage negative emotions, and they tend to use illicit drugs to remedy their symptoms of depression and anxiety [25]. Nevertheless, intoxication worsens the depressive symptoms, and persons get into a vicious circle of chronicity where they continue to re-use illicit substances to heal their endless misery. Therefore, psychological distress leads to continued abuse, treatment failure, and relapse [26,27].

## Aim

This study aimed to examine self-stigma, psychological distress, and their correlates among Egyptian substance users. This study contributes to the literature since, to date, there is neither measures nor published studies of self-stigma of abuse of illicit substances and related psychological distress among Arabs.

## Hypotheses

Taking the above theoretical background in mind, this study hypothesized that perceived and internalized stigmas would be strongly associated with psychological distress. Additionally, it

was expected to find a strong association between self-stigma and abuse of certain substances as well as sociodemographic variables. Likewise, it was expected that chronicity of SUDs, frequent relapse, cannabis and heroin use, and sociodemographic variables would be associated with higher psychological distress scores.

## MATERIALS AND METHODS

### Study design, participants, and procedure

This cross-sectional study was conducted at a government psychiatric hospital in Alexandria between January 2014 and May 2015. Patients were eligible if they were literate, free from severe mental (e.g., schizophrenia, major depression, and bipolar disorder), and willing to sign an informed consent. Records were checked to identify eligible participants. For all interested participants, the study details were explained, anonymity was ensured, and informed consent was obtained. Of inpatients ( $N=420$ ), 51.2% were eligible to participate; however, only 35.5% took part in the study. This study included a convenient sample of 149 detoxified SUDs inpatients. Because of lack of a private place, questionnaires were handed to participants either in the lounge or the visit room. The researcher was available for any clarifications. The study was approved by the University of Alexandria Committee for Research Ethics (July 2011).

### Measurements

**Self-Stigma in Alcohol Dependence Scale (SSAD):** The SSAD was used to measure stigma. It consists of 4 subscales which operationalize stages of internalizing stigma indicated beforehand (awareness, agreement, self-occurrence, and shame). Each subscale has 16 items. All items convey negative views of SUDs patients e.g. unreliable, dirty, and less intelligent. Responses were on a 5-point scale (1=*strongly disagree* and 5=*strongly agree*). Higher scores indicate higher stigma. The internal consistency of subscales of the original SSAD was high (Alpha coefficients ranged between 0.86 and 0.93) [28]. The SSAD was translated into Arabic. Because population of the current study used alcohol and other drugs, the scale was modified by substituting 'alcohol dependence' with 'substance dependence'. Alpha coefficients for the SSAD subscales in this study were adequate (.81, .86, .83, .84).

### The Depression Anxiety Stress Scale-21 (DASS-21)

The DASS-21 has 21 items in 3 subscales of 7 items each. They assess depressive symptoms (e.g., feeling down-hearted and blue), anxiety symptoms (e.g., feeling close to panic), and general stress symptoms (e.g., having a tendency to over-react to situations). Responses were on a 4-point scale (0= *did not apply to me at all* and 3= *applied to me most of the time*). Higher scores indicate more psychological distress (Lovibond & Lovibond, 1995) [29]. The reliability of the Arabic DASS-21 and its subscales was adequate (coefficient alpha=.88, .81, .76, and .67) respectively [30, 31].

### Sociodemographics and clinical characteristics

This comprised 14 questions about gender, age, education, employment and housing status, substances used, long-life duration of use; along with relapse which was indirectly assessed

through the number of previous quitting trials and hospital admissions; an open-ended question was used to assess previous relapse factors (Table 1).

### Statistical analysis

All analyses were performed using IBM SPSS version 22. Continuous variables were checked for normality of distribution, and Log10 function was used to transform skewed variables—all variables except self-occurrence, shame, and stress. Then, mean items scores of the SSAD were calculated; a one sample t-test was conducted on the scores to evaluate whether their differences from a 'neutral score= 3' on the SSAD were significant. Pearson correlation coefficients assessed the

association of stigma with disease chronicity, abused substances, and the demographic characteristics. Pearson correlation coefficients also assessed the association of psychological distress, depression, anxiety, and stress with stigma, chronicity, relapse, and the demographic characteristics. After assumptions testing, eight hierarchical multiple regression models adjusted for age and gender were conducted to predict stereotype awareness, agreement, self-occurrence, shame, psychological distress, depression, anxiety, and stress—the models included only outcomes with significant correlations in crude analysis (Tables 2,3). This was because variables were entered simultaneously in the models, and it was possible that the co-existence of many independent variables can reduce the predictive capability of independent variables that are highly correlated (on their own) with outcomes in a linear regression.

### RESULTS

The sample comprised 149 participants (142 males, mean age= 32.5 years, SD= 6.8 years, range: 19-60 years). Half the participants were single (49.7%), 76.5% had high school or less, 26.2% were unemployed, 29.5% had insufficient income, and 81.9% were staying with their families. Participants varied in their disease chronicity, previous hospital admission and quitting history; a range of abused substances and relapse factors was reported (Table 1).

A relatively small number of the participants had moderate to severe depression, anxiety, and stress (N=35)23.5%, (N=49)33%, and (N=3) 2% of the sample respectively—their scores were above the cut-off points of subscales of the DASS-21 indicated in a former study (14, 10, and 19) Table 2 shows means, standard deviations, and correlations of the study variables. The mean item scores (supplement) of the SSAD awareness and agreement were 4.01 (SD= 0.54) and 3.85 (SD= 0.63)—which significantly corresponded to the "agree" response (*p values*= 0.000). Mean while, the mean item scores of the SSAD self-occurrence and shame were (significantly below 3)2.75 (SD= 0.69) and 2.56 (SD= 0.73) respectively, (*p values*= 0.000).

As shown in Table 2, no associations were revealed between any of the stigma constructs and the sociodemographic characteristics except for age; however, stigma was correlated with use of alcohol and Bango, the number of abused drugs, disease chronicity, and the number of hospital admissions. Both psychological distress and depression were positively correlated with stereotype self-occurrence and shame, and negatively correlated with chronicity, length of hospital stay, and cannabis use. No significant correlations were found between psychological distress or any of its dimensions with education, marital status, and income (data not shown); stress was negatively correlated with the employment status ( $r = -0.189$ ), and positively correlated with the housing status ( $r = 0.186$ ), *p values*<0.05.

To test the hypotheses of this study, hierarchical multiple adjusted for age and gender were conducted to examine whether use of alcohol and Bango, the number of abused drugs, disease chronicity, and numbers of hospital admissions are associated with stigma. Age and gender in the first step explained 0.2%, 0.2%, 4.6%, and 4.4% of the variances in stereotype awareness, agreement, self-occurrence, and shame, respectively. Age had a

Table 1: Participants' sociodemographic characteristics, abused drug, and relapse factors N (%).

| Variables   | Total (N=149)<br>N (%) |
|---|------------------------|
| 1. Gender   |                        |
| Males   | 142 (95.3)             |
| Females   | 7 (4.7)                |
| 2. Education‡                                     |                        |
| High school or less                               | 114 (76.5)             |
| Some college degree                               | 35 (23.5)              |
| 3. Marital status‡                                |                        |
| Single  | 74 (49.7)              |
| Married   | 55 (36.9)              |
| Divorced/widow                                    | 20 (13.5)              |
| 4. Employment                                     |                        |
| Employed  | 110 (73.8)             |
| Unemployed  | 39 (26.2)              |
| 5. Income†  |                        |
| Not enough  | 44 (29.5)              |
| Enough  | 97 (65.1)              |
| More than enough                                  | 7 (4.7)                |
| 6. Housing status‡                                |                        |
| With family                                       | 122 (81.9)             |
| Alone   | 18 (12.1)              |
| With relatives§                                   | 9 (6)                  |
| 7. Abused drugs#                                  |                        |
| Cannabis  | 112 (75.2)             |
| Bango   | 40 (26.8)              |
| Heroin  | 120 (80.5)             |
| Synthetic drugs                                   | 118 (79.2)             |
| Alcohol   | 62 (41.6)              |
| Other drugs                                       | 31 (20.8)              |
| 8. Relapse factors#                               |                        |
| Withdrawal symptoms                               | 26 (17.8)              |
| Stressors (e.g., financial problems, being fired) | 69 (47.3)              |
| Social problems (e.g., divorce)                   | 48 (32.9)              |
| Drug using friends                                | 35 (24)                |
| Craving   | 36 (24.7)              |
| Loneliness  | 16 (11)                |
| Money availability                                | 17 (11.6)              |
| Sexual pleasure                                   | 15 (10.3)              |
| Residence (e.g., dealers in neighborhood)         | 16 (11)                |
| Others ¶  | 53 (36.3)              |

‡ one observations missing, † two observations missing  
 § e.g., second order family members  
 # Total is more than 100% since more than 1 substance or factor were endorsed by a single participant  
 ¶ e.g., losing hope in their recovery, selling drugs themselves, to get physical energy, and be sociable.

Table 2: Mean, standard deviation and correlations between stigma, psychological distress, and the predictor variables.

| Variables                          | 1       | 2       | 3      | 4       | 5      | 6     | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15  |
|------------------------------------|---------|---------|--------|---------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| 1. Psychological distress          | --      |         |        |         |        |       |        |        |        |        |        |        |        |        |     |
| 2. Depression                      | .802**  | --      |        |         |        |       |        |        |        |        |        |        |        |        |     |
| 3. Anxiety                         | .807**  | .473**  | --     |         |        |       |        |        |        |        |        |        |        |        |     |
| 4. Stress¶                         | .825**  | .573**  | .636** | --      |        |       |        |        |        |        |        |        |        |        |     |
| 5. SSAD Awareness                  | -.007   | .086    | -.017  | -.060   | --     |       |        |        |        |        |        |        |        |        |     |
| 6. SSAD Agreement                  | .143    | .183*   | .096   | .131    | .459** | --    |        |        |        |        |        |        |        |        |     |
| 7. SSAD Self-occurrence¶           | .417**  | .445**  | .322** | .385**  | .018   | .114  | --     |        |        |        |        |        |        |        |     |
| 8. SSAD Shame¶                     | .462**  | .482**  | .347** | .385**  | -.025  | .027  | .735** | --     |        |        |        |        |        |        |     |
| 9. Age (years)                     | -.127   | -.117   | -.065  | -.116   | .021   | -.029 | -.176* | -.128  | --     |        |        |        |        |        |     |
| 10. Chronicity (years)             | -.196*  | -.224** | -.086  | -.214** | .090   | -.040 | -.202* | -.173* | .613** | --     |        |        |        |        |     |
| 11. No of quitting trials          | -.063   | -.105   | .000   | -.017   | .059   | .062  | .016   | .078   | .214** | .331** | --     |        |        |        |     |
| 12. No of hospital admissions      | .123    | .078    | .120   | .155    | .068   | -.027 | .157   | .241** | .136   | .256** | .459** | --     |        |        |     |
| 13. Length of hospital stay (days) | -.265** | -.325** | -.074  | -.090   | -.066  | -.032 | .017   | -.116  | .059   | .119   | .127   | .018   | --     |        |     |
| 14. No of abused drugs             | -.183*  | -.145   | -.146  | -.131   | .187*  | .105  | -.056  | -.009  | .100   | .309*  | .282** | .222** | .218** | --     |     |
| 15. No of relapse factors          | -.016   | .043    | -.033  | -.029   | .134   | .083  | .042   | .119   | -.023  | .163*  | .087   | .207*  | .003   | .288** | --  |
| M                                  | 27      | 9.2     | 7.8    | 10      | 64.3   | 61.7  | 43.9   | 40.8   | 32.5   | 14.9   | 14.2   | 4.1    | 37.1   | 3.2    | 2.2 |
| SD                                 | 13      | 5.4     | 5.6    | 4.2     | 8.4    | 10.1  | 11     | 11.8   | 6.8    | 9      | 21     | 5      | 49.2   | 1.6    | 1.2 |

SSAD = Self-Stigma in Alcohol Dependence Scale; ¶ = variables not transformed; M = mean; SD = standard deviation.

\* $p \leq .05$ , \*\* $p < .01$

N.B. Seven observations in total were missing (DASS-21 and SSAD), and complete case analysis was conducted. So, N for subscales of the DASS-21 and SSAD ranged between 147 and 149.

significant contribution to the variance in self-occurrence and shame ( $\beta = -0.206$  and  $-0.186$ ,  $p$  values  $< 0.05$ ) (data not shown). Regression adjusted for age and gender is shown in Table 3. In the second step, alcohol consumption was significantly associated with stereotype awareness ( $\beta = 0.223$ ,  $p < 0.05$ ) whereas use of Bango was significantly associated with stereotype agreement ( $\beta = 0.258$ ,  $p < 0.01$ ).

Adjusted hierarchical multiple regression was conducted

to examine the association of stigma, relapse variables, and the length of hospital stay with psychological distress, depression, anxiety, and stress. Age and gender in the first step explained 4.9%, 4.3%, 2.4%, and 6.9% of the variance in psychological distress, depression, anxiety and stress, respectively. Gender had the highest contribution ( $\beta = 0.220$ , 0.214, 0.188, and 0.268) (data not shown). In the second step, shame and the length of hospital were significantly associated with psychological distress  $\Delta F(6,140) = 11.5$ ,  $p < 0.000$ ,  $\Delta R^2 = 0.31$ . Meanwhile,

stereotypes agreement, shame, and the length of hospital stay were significantly associated with depression  $\Delta F(6,140) = 14.5, p < 0.000, \Delta R^2 = 0.36$ . Both shame and relapse out of loneliness were significantly associated with anxiety  $\Delta F(3,143) = 10.1, p < 0.000, \Delta R^2 = 0.17$  whereas stereotypes self-occurrence and shame were significantly associated with stress  $\Delta F(4,142) = 10, p < 0.000, \Delta R^2 = 0.20$ . Examination of individual predictors indicated that shame had the highest contribution in all models ( $\beta = 0.374, 0.359, 0.243, \text{ and } 0.274$ , respectively).

**DISCUSSION**

To the present moment, this is the first study that assessed stigma and psychological distress and their associated factors among Arab SUDs patients. The participants endorsed high perceived stigma and to a lesser extent internalized stigma, and both stigma constructs were weakly related, which is consistent

with earlier studies. Contrary to expectations, in adjusted analysis only age and consumption of alcohol and Bango contributed to stigma. In addition, shame was strongly associated with psychological distress while among disease chronicity, abused substances, relapse, sociodemographic characteristics, only short hospital stay was significantly associated with distress and depressive symptoms.

Although several studies addressed the relationship between stigma and sociodemographic characteristics, results are inconsistent. For instance, stigma was associated with high levels of education in Vietnamese drug users who received methadone maintenance treatment. On the contrary, it was associated with low levels of education in American alcohol users. In this study, young age was associated with both stereotypes self-occurrence and shame, which is in accord with an evidence denoting high prevalence of negative attitudes among younger age groups that

Table 3: Age and gender adjusted hierarchical multiple regression predicting stigma variables, overall psychological distress, depression, anxiety, and stress.

| Criterion              | Predictors <sup>a</sup>   | r       | β        | Adjusted R <sup>2</sup> | R <sup>2</sup> change <sup>a</sup> | F Change | SE    | 95% CI for p  |
|------------------------|---------------------------|---------|----------|-------------------------|------------------------------------|----------|-------|---------------|
| SSAD Awareness         |                           |         |          | .045                    | .075                               | 3.864*   | .061  |               |
|                        | Alcohol                   | .249**  | .223*    |                         |                                    |          |       | .000, .056    |
|                        | Bango                     | .216**  | .149     |                         |                                    |          |       | -.008, .050   |
| SSAD Agreement         | No of abused drugs        | .187*   | -.065    |                         |                                    |          |       | -.079, .046   |
|                        |                           |         |          | .048                    | .065                               | 10.165** | .081  |               |
|                        | Bango                     | .251**  | .258**   |                         |                                    |          |       | .018, .079    |
| SSAD Self-occurrence   |                           |         |          | .039                    | .012                               | 1.846    | 10.79 |               |
|                        | Chronicity                | -.202*  | -.133    |                         |                                    |          |       | -.399, .074   |
| SSAD Shame             |                           |         |          | .061                    | .042                               | 3.310*   | 11.32 |               |
|                        | Chronicity                | -.173*  | -.180    |                         |                                    |          |       | -.482, .015   |
| Psychological distress | No of hospital admissions | .241**  | .152     |                         |                                    |          |       | -.020, .735   |
|                        |                           |         |          | .34                     | .31                                | 11.5***  | .21   |               |
|                        | Chronicity                | -.196*  | .139     |                         |                                    |          |       | -.268, -.055  |
|                        | Number of abused drugs    | -.183*  | -.189    |                         |                                    |          |       | -.060, .340   |
|                        | Cannabis                  | -.177*  | .09      |                         |                                    |          |       | -.07, .176    |
|                        | Length of hospital stay   | -.265** | -.186**  |                         |                                    |          |       | -.243, -.036  |
| Depression             | SSAD self-occurrence      | .417**  | .183     |                         |                                    |          |       | 0, .009       |
|                        | SSAD Shame                | .462**  | .374***  |                         |                                    |          |       | .004, .012    |
|                        |                           |         |          | .39                     | .36                                | 14.5***  | .25   |               |
|                        | Chronicity                | -.224*  | .028     |                         |                                    |          |       | -.191, .26    |
|                        | Cannabis                  | -.177*  | -.045    |                         |                                    |          |       | -.130, .065   |
|                        | Length of hospital stay   | -.325** | -.259*** |                         |                                    |          |       | -.36, -.118   |
| Anxiety                | SSAD Agreement            | .183*   | .156*    |                         |                                    |          |       | .096, 1.073   |
|                        | SSAD self-occurrence      | .445**  | .175     |                         |                                    |          |       | -.001, .01    |
|                        | SSAD Shame                | .482**  | .359***  |                         |                                    |          |       | .004, .015    |
|                        |                           |         |          | .18                     | .17                                | 10.1***  | .3    |               |
|                        | Relapse out of loneliness | .178*   | .152*    |                         |                                    |          |       | .003, .325    |
| Stress                 | SSAD self-occurrence      | .322**  | .157     |                         |                                    |          |       | -.002, .011   |
|                        | SSAD Shame                | .347**  | .243*    |                         |                                    |          |       | .001, .013    |
|                        |                           |         |          | .25                     | .20                                | 10***    | 3.5   |               |
| Stress                 | Chronicity                | -.214** | .013     |                         |                                    |          |       | -3.029, 3.438 |
|                        | Job                       | -.189*  | -.046    |                         |                                    |          |       | -1.825, .979  |
|                        | SSAD self-occurrence      | .385**  | .213*    |                         |                                    |          |       | .002, .157    |
|                        | SSAD Shame                | .385**  | .274*    |                         |                                    |          |       | .023, .170    |

SSAD = Self-Stigma in Alcohol Dependence Scale; r = Pearson's correlation; β = Beta standardized coefficients; SE = Standard error; 95% CI = 95% Confidence interval for β

<sup>a</sup> Parameters adjusted for age and gender

\*p < .05, \*\*p < .01, \*\*\*p < .001



decrease with increasing age. This finding entails that younger drug users are in a greater need for self-concept enhancement treatments since the damages that stigma can cause to mental health can contribute to their continued abuse and relapse.

The current findings indicate that use of Bango and alcohol predicted higher perceived stigma; participants of this study, however, were multiple drug users. Research documents severe cognitive and behavioral impairments (e.g., hallucination) with the use of Bango[32], which participants could have personally endured or witnessed among their peers. Furthermore, the stigma perceptions held by the participants could be a mere reflection of the negative attitudes that the general Egyptian public hold about alcohol and other substances prohibited by Islam [33, 34]. The common slang “Khamorgy” is used to humiliate an alcohol drinker.

The poor association observed between perceived and internalized stigma supports claims of a former developmental study that both constructs are distinct. Other factors (e.g., experiences of rejection) may play roles in the self-devaluation process.

The current results indicate that both perceived and internalized stigma can have a detrimental effect on psychological health. Although stigma perceptions are not self-relevant, stereotypes agreement was significantly associated with depressive symptoms. Moreover, internalized stigma (specifically, shame) was a meaningful construct that contributed to psychological distress, depression, anxiety, and stress symptoms. These results are congruent with reports from earlier studies that also included experiences of rejection as a dimension of self-stigma [35]. Accordingly, the present study suggests that the role of stigma triggering negative self-feelings such as shame can be the most destructive aspect of stigma, regardless of encountering rejection. Therefore, shame should be the target of interventions that aim to restructure resiliency and combat effects of internalized stigma on mental well-being in this disadvantaged population.

Contrary to expectations, chronicity of SUDs, larger numbers of used substances, use of heroin and cannabis (known to induce depressive symptoms) could not predict psychological distress. The literature highlights a dose-related effect of heroin, cannabis, and marijuana on mental health in regular users. However, the present study did not examine routes of administration, doses, and frequencies of substance use while participants reported all the drugs that they used in their lifetime—they possibly shifted between many substances and eventually were dependent on one or two drugs. Besides, most participants used several substances simultaneously, which probably weakened the estimated associations between distress outcomes and use of specific single substances.

Shorter hospital stay, indicative of recent hospital admission, was significantly associated with higher psychological distress and depressive symptoms; most participants reported receiving a dose on the day of admission or the day before. This finding lends further support to the contribution of current and recent substance use to psychological distress and depressive symptoms—which is in line with outcomes of similar studies that

recorded an association of depression with fewer total days of treatment and active drug use.

Among all relapse factors, only loneliness was significantly associated with anxiety symptoms. The reason why loneliness was associated with anxiety is unclear. Loneliness was fairly reported while social problems and stressors were highly stated as relapse factors. Meanwhile, most participants (as usual in Egypt) were staying with their families, and stress symptoms were associated with the housing status—these results might suggest that participants felt unsupported and/or lonely though staying with their families. Evidence denotes a need for acceptance among anxious people who also feel lonely [36,37], which highlights a likelihood that anxious participants could have encountered rejection within their close social networks. This claim draws support from the strong association between family functioning and psychological distress among SUDs patients. Future studies should address the effect of social support and rejection on the mental health of SUDs victims.

## LIMITATIONS

This study has several weaknesses, which must be acknowledged. It is likely that the less noted prevalence on depression, anxiety, and stress symptoms in the current study stems from inability of a considerable items of the DASS-21 to differentiate between patients with high and low distress. More, generalizability of the findings is limited since participants were not representative of the Egyptian SUDs population: under-educated, low-income, multiple-substance users, prominently men recruited from a government hospital. Besides, data were prone to self-report bias, and the sample was relatively small because of logistic reasons. Additionally, the scale that measured stigma (SSAD) ignores experiences of rejection and stigma coping, which indicates underestimation of stigma in this study.

## CONCLUSION

The study at hand suggests that stigma (the shame component) has the highest contribution to psychological distress, depression, anxiety, and stress. Findings necessitate the use of special shame management interventions to improve psychological health, especially among young users of illicit drugs. This study suggests a need to investigate experiences of rejection, social support, and quality of life in larger samples to broaden understanding of stigma and its effect on psychological well-being among Egyptian SUDs patient.

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