Drug-Related Self-Esteem Scale (DRSES) Development, Validation and Psychometric Properties: Feel your Post Addiction Life

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Abstract

Self-esteem is one of the most important variables and concepts that might have a meaningful influence on Substance users. For this purpose a new valid and reliable

instrument which is determined to evaluate specifically drug related self-esteem has been developed in this study. The study was carried out on the 230 male participants in three successive phases. In Phase I, an item pool was generated. In Phase-II, rigorous Exploratory Factor analysis (EFA) was carried out to test factorial structure of scale and established its reliability. Phase-III established the convergent/discriminant validity of scale.EFA results indicate extracting three factors including Self Competence (α=.82); Self-confidence (α=.81) and Self-Regard (α= .74). The newly developed scale comprised of 17 items and has adequate internal consistency (α=.72).The Drug Related Self Esteem Scale (DRSES) is positively associated with Drug-Related Locus of Control. Whereas, a negative association between DRSES and Depression indicates its divergent validity. Furthermore, the result indicates that substance users having internal locus of control have higher DRSES ($M =$ 66.75, $SD = 13.53$) whereas substance users with drug related external locus of control have higher depression ($M = 23.26$, $SD = 10.56$). Newly developed The Drug-Related Self-Esteem Scale is a valid and reliable tool to measure aspects of self-esteem among substance users. This holds specific relevance and importance in enhancing their personal worth including self-competency, self-regard and self-confidence in getting rid of addiction and act as a fully functioning person in society.

Keywords: Depression; Drug-related Self-esteem; Drug-related Locus of Control; Self-Esteem; Substance Use; Self-competence; Self-confidence; Self-regard

Introduction

This study was primarily designed to meet two major objectives;*first* aimed toconstruct an appropriate scale that systematically measures the drug-related self-esteem of the substance users taking treatment in drug detoxification and rehabilitation centers. *Second,* aimed to establishconvergent/discriminant validity of scale with the help of testing associations between drug related self-esteem, locus of control, and depression. Following paragraphs briefly describe our main study variables:

Self-esteem is person's perception of one's own value. Self-esteem is a widely studied construct that is primarily based upon three presumptions; *first*, conceptualization is that self-esteem is an "outcome" that focuses on the process through which self-esteem can be produced or inhibited (Coopersmith, 1967; Harter, 1993; Peterson & Rollins, 1987).*Second*, is the concept of "self-motive", i.e., the researcher studies the individual's predisposition to behave in a way that increase and maintain positive self-concept (Kaplan,1975a; Tesser, 1988).*Third*, conceptualization of self-esteem is to study as a "buffer" of self which protects the individual from negative and harmful experiences.[2]Past studies suggest that level of self-esteem determines the risky behaviors such as alcohol and drug abuse (Maria, Oscar & Fernando, 2020; Park& Yang, 2017). In the present study, therefore, we are primarily interested in exploring the first conceptualization of self-esteem as it reflects the adaptive function of self-esteem that it can be produced or shaped. This function of self-esteem holds special relevance for drug addicts in the process of rehabilitationfor their decision of treatment and abstinence.

Likewise according to Gecas (1982), self-esteem consists of two main dimensions, competence and worth (Gecas, 1982; Gecas & Schwalbe, 1983). The competency dimension

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refers to individual's tendency to think about themselves as efficacious and capable of doing things in their life. Second dimension of worth (worth related self-esteem) is the tendency of an individual to feel personal value or usability for their life and environment (Burke&Cast, 2002). In present study we mainly focus on both domains related to self-esteem, however, our main emphasis is to construct a scale relying on 'competence' and 'worth' from the personal accounts of drug addicts. We conceptualize it as 'drug-related self-esteem' i.e. perception of personal worth and competence of drug addicts in the process of recovery and rehabilitation. This aims to measure self-evaluation, self-competency, self-regard and self-control of drug addicts during abstinence process. As self-esteem and locus of control plays a protector's role against alcohol, illicit drugs or cannabis use (Park& Yang, 2017; Richardson, Kwon & Ratner, 2013).

For the validation of our proposed new measure of drug related self-esteem, we sought to test its association with depression. Self-esteem and depression are interrelated and have a reciprocal relationship to each other as depression works negatively to decrease self-esteem (Wilson, 2012).While diagnosing the patient with depressive disorder, clinician also observes the poor self-esteem acts as a criterion for depression but theoretically it is not necessary for the person to have poor self-esteem if he or she may have depressive disorder. For example, vulnerability model demonstrates that major effects of substance use are on self-esteem followed by anxiety, depression, aggressiveness and risk taking. A study found that group of participants with alcohol and participants with amphetamine class of drug showed the increased psychosocial influence of drug abuse especially on self-esteem which ultimately lead towards anxiety and depression while group of participants with marijuana had higher impact on anxiety and depression (Hasan, 2019).

Likewise many studies demonstrated the opposite results from previously discussed study. Vulnerability model used to clarify the causal relationship between self-esteem and depression and assumed that low self-esteem causes the vulnerability to depression (Klein, Kotov, and Bufferd, 2011;Park and Yang, 2017). This concept was also empirically studied by many researchers with longitudinal data and cross lagged regression models and proposed that self-esteem negatively predicts the depression (Orth and Robins 2013;Park and Yang, 2017).

For instance, Students with alcohol use disorder who had low self-esteem had also problems of poor mental health, risk behavior proneness and higher level of impulsivity including deliberated self-harm (Gierski, et al, 2020). Likewise, Sowislo& Orth (2012)proposed that treatment plan must focus upon improving self-esteem in order to reduce depression.This willsubsequently improve short term goal achievement as well as will give long term protection from depression for the people at risk (Sowislo & Orth, 2012; Wilson, 2012).There is also a significant positive correlation between overall social functioning which might be less in depression, and total self-esteem among substance users (Elyamany, Mahmood & Wahba, 2020).

On the contrary, Kitinisa (2019) also examined the relationship between self-esteem, depression and substance use disorder and found significant relationship between depression and self-esteem, depression and substance use but found no significant relationship between self-esteem and substance use (Kitinisa, 2019).

While self-concept is the internal force which drives one's behavioral patterns and response towards life events. While locus of control refers to one's perception about control

over life circumstancesand consequences of their decisions (Grantz, 1999; Khan, 2011).

Whilst, substance use commonly termed as addiction is a chronic relapsing disease or

disorder in which an individual compulsively abuses any substance and feels inability to

control overuse. This repetitive and compulsive use is linked with the damages or disruption

in brain reward pathways and brain chemical activities which control behaviors and

emotions. For example, an individual suffering from substance use disorder significantly

feels lack of self-control, attention, reasoning or other cognitive functions and have inability

to control maladaptive behaviors (Ersche et al., 2012).

Current study therefore also aims to investigate this link between drug-related self-

esteem and locus of control both internal and external.Rotter (1966) divided the locus of

control into two domains: internal locus of control and external locus of control. Individual

with the internal locus of control believes that future outcomes are primarily dependent upon

one's own actions, will or initiative, whereas those who have external locus of control

perceive things as going on because of the factors which are not under their control such as

chance, fate, luck, or fortune (Khan, 2011;Rotter, 1966) .A study found that quarter of the

total study sample had low self-esteem and external locus of control while majority of the

substance users had normal self-esteem and had internal locus of control(Haider, et al.,

2020).While low self-esteem or negative self-concept has association with depression,

isolation and low psychologicalwell-beingwhich make it necessary to find out the wellbeing

and recovery solutions to alleviated loneliness among substance users (Isabella et al., 2020).

Nevertheless, it is imperative to establish association between drug-related

self-esteem and drug-related locus of control. As individuals who have stronger drug related

self-esteem coupled with greater drug-related internal locus of control are more likely to take

control on themselves in the process of rehabilitation rather than blaming luck or environmental forces regarding their lack of control over addiction.

The major aim of current study is to construct a valid and reliable scale to systematically measure the drug-related self-esteem for drug addicts in the process of rehabilitation. Indigenous scale is a perquisite as according to United Nations Office on Drugs and Crime (UNODC), Pakistan is a country where more than 800,000 people between the age of 15 and 64 are addicted to use heroin. Moreover, in Pakistan, the total number of drug addicts as per a UN reports is 7.6 million, where 88% are male while the rest 12% are female. The number of these addicts is increasing at the rate of 40,000 per year making Pakistan one of the most drug affected countries in the world. What is most disturbing is the fact that most of these addicts are under the age of 24. The reports and figures presented by the UN about the drug abusers to government entities are in fact 1/3 of the actual number of addicted people (Sana, 2018).

It also occurred to our research interests and professional experience in the field of addiction treatment that self-esteem and self-control are two dominant personal attributes in managing control over drug abuse. Literature as well suggests that low self-esteem and less self-control are the major contributing factors among drug addicts in predicting depression and related mental health issues which subsequently affects decision making, future goal orientations, and overall adjustment of the person using or abusing substance. Although there are a number of established scales measuring self-esteem including; Self-Esteem Scale of Rosenberg (1965), Self-Esteem Scale of Janis and Field (1984), and Heatherton and Polivy's State Self-Esteem Scale (Heatherton & Polivy, 1991; Richardson, et al., 2013; Rosenberg,

1965).However, these may not specifically assess unique aspects of one's self-esteem specifically in the context of relapse of drug addiction.

Hence, Martiny and Rubin (2016) pointed out the need for specific collective state self-esteem scale to measure the self-esteem related to specific social identity. They also explained that many tests of self-esteem are insensitive to measure this notion as they use measures of global personal trait self-esteem rather than specific collective state self-esteem (Martiny & Rubin, 2016).

Thus, we are particularly interested in constructing a scale that can assess the changes in perception of self-regard, self-appreciation, confidence, and self-competency of drug addicts in the process of rehabilitation. This would be an effective tool in designing and restructuring rehabilitation and treatment strategies according to the special needs of addicts aiming to reduce relapse. While there is an extensive body of literature on self-esteem and drug use, there is limited research on how drug use impacts self-esteem, which is a significant gap in the available literature. Furthermore, studies on the interplay between self-esteem and drug use and temporal relationship between self-esteem and substance use are limited. Given the importance of self-esteem in substance use prevention and treatment, it is essential to have reliable and valid measures of drug-related self-esteem. A drug-related self-esteem scale can help researchers and clinicians assess the impact of individual's self-esteem in reducing signs of substance use. Moreover it will facilitate themin designing interventions aiming to enhance self-esteem among people with substance abuse so that they can minimize risks to developing relapse. This scale can also be used to evaluate the effectiveness of interventions aimed at improving self-esteem and reducing drug use. Overall, creating a drug-related self-esteem scale will help to fill a gap in the research and improve our understanding of the

relationship between self-esteem and addiction.So the construction of indigenous scale for Drug-related self-esteemis a dire need for further investigation of these variables.

The following hypotheses were formulated in the present study.

H1: There will be negative relationship between drug-related self-esteem and depression.

H2: There will be positive relationship between drug-related internal locus of control and depression.

H3: There would be negative relationship between drug related external locus of control and depression.

H4: There will be negative relationship between drug-related self-esteem and drug related internal and external locus of control.

Thus, we are particularly interested in constructing a scale which can assesses the changes in perception of self-regard, self-appreciation, confidence, and self-competency of drug addicts in the process of rehabilitation. This would be an effective tool in designing and restructuring rehabilitation and treatment strategies according to the special needs of addicts in order to minimize relapse. We carried out this research in three main phases

- The first phase comprised of item generation and creating an item pool for drug related self-esteem scale.

- The *second phase* comprised of establishing a factorial structure and testing the reliability of newly developed scale.

- The *third phase* comprised of testing the discriminant validity while testing the associations between of newly developeddrug related self-esteem scale, depression and locus of control.

Method

Sample

Current study focused on perspective and feelings of substance users about their post addiction life. The substance users, admitted at the rehabilitation centers and in the process of abstinence were part of the study. Sample comprised of 230 male substance users. Their age ranged from 15 to 45 years. In Pakistan, drug treatment services are highly deficient, providing treatment for almost 30,000 individuals and are male-oriented. This lack of female friendly services make families reluctant to access drug rehabilitation centers for treatment of female substance users (Ashraf, 2016). There is very limited number to females seeking services in a rehabilitation, besides these women and their families are least willing to disclose information due to social stigma. Therefore, due to a limited number of Females in rehabilitation centers, female inpatients with only comorbid psychiatric illness and consent issues, only male participants were obtained for data collection.Sample comprised of male poly drug abusers with heroin addiction as a main drug of choice while other drugs were used to enhance the desired effects of heroin. Participants were randomly selected. Each participant who was voluntarily willing to participate in the study was given the detailed information about the study which includes purpose, confidentiality of the information as well as the further usage of the given information.

Data Collection and Method

First phase of the current study was to generate item pool. For item generation, focused semi structured interviews were conducted with substance users (n=5) in the process of rehabilitation and relevant practitioners (n=3) in the field. These interviews focused around asking significant aspects of self-esteem unique to drugs control in treatment of substance users. These helpedin differentiating between generalized conception of self-esteem (for example Rosenberg Self-Esteem Scale) and drug related self-esteem. Consequently, 45 items were generated to measure drug related self-esteem. Each item was rated on seven point rating scale ranging from 1 (Strongly Disagree) to 7 (Strongly agree). This scale was administered to the sample of 20 inpatient substance users for pilot testing to identify any confusion, difficulty or redundancy on items generated. Afterwards, final 30 items scale was then administered on the substance users admitted in the rehabilitation Centre.

The cross-sectional study design was used. A permission was obtained from the institutional ethics review committee. The researcher, after taking formal permission from the administration of the selected drug rehabilitation centers of twin cities. Najjat Trust, Hosla Medical Centre, Wapsi drug treatment center, Islamic medical center and Umeed e nau drug treatment center was approached to collect data. Each participant who was voluntarily willing to participate in the study was given the detailed information about the study which includes purpose, confidentiality of the information as well as the further usage of the given information. Instructions were given to the participants and asked them to give response to the presented instruments while keeping in mind the life after drugs and feelings and thinking about themselves after drug addiction. Other selected instruments were also administered on the research participants which included Beck Depression Inventory (BDI) and Drug Related

Locus of Control (DRLOC) scale.Beck Depression Inventory (BDI) was developed by Beck

to assess the severity level of depression with the help of 21 self-rated items. Each item

consists of four statements with increasing intensity which assigned values from 0 to 3. While

Drug related locus of control Scale was developed by Hall (2001). DRLOC is a 15 items

measure developed to investigate one's drug related self-control in a variety of situations.

Each item consists of two statements and the participant has to select only one choice for

each item. According to guidelines of manual, 22 will be the maximum score for drug-related

internal locus of control while above 22 will be the score for drug-related external locus of

control (Hall, 2001).

Results and Discussion

Exploratory Factor Analysis: Drug-Related Self-Esteem Scale (DRSES)

30 selected items were subjected to factor analysis to generate the representative

factor structure of drug-related self-esteem among drug addicts. After preliminary checks 12

items identified as worse offenders were removed from further analysis. Afterwards, 17

remaining items were factor analyzed using Principle Axis Factoring with direct oblimin

(Oblique) rotation as we presumed factors to be correlated. Kaiser-Meyer-Olkin (KMO)

measure for sample adequacy value of 0.81 indicates sample adequacy for factor analysis.

Bartlett's test of sphericity was also significant ($\chi^2(136) = 1595.10$, $p < .000$). The minimum

criteria for item loading was fixed at>.30. Scree plot suggested 3 factors.All 17 items met the

model fit criteria on EFA. Factor 1 explained 24.80% of variance, Factor 2 has an Eigen

value of 3.16 and explains 18.60% of variance and Factor 3 has an Eigen value of 2.33 and

explains 13.69% of variance. All three factors comprise of 17 items and explained 57.10% variance in total. These factors are described below:

*Factor I-Self-Competency:*First factorcomprises of 8 items that explained 24.80% of total variance. An example item includes"*I am worried about my bad impression which I have after drug abuse*" the "میں منشیات کے استعمال کے بعد اپنے برے تاثر سے پریشان ہوں ۔ (ر)" was the highest loading item in first factor which was also reverse scored item. "*I am still competent in doing things as before my drug abuse.*" "میں اب بھی اپنے منشیات کے استعمال سے پہلےکی طرح مہارت سےکام کرنے کے قابل ہوں" was also the highest factor loading item. All items of the first factor were consistent in explaining concept of self-competency or feeling of being capable of doing things. Therefore, we labeled it as "Self-Competence".

*Factor II-Self-Confidence:*The second factor comprises of four items explaining 18.60% variance. "I feel de-motivated when others stigmatize me as an addict" جب " (ر) "دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں" and "I cannot take decisions firmly about my life."میں اپنی زندگی کے بارے میں مضبوطی سے فیصلے نہیں کر سکتا ہوں" (ر)" are two examples of highest loading items on second factor. These items suggest having poor self-confidence while dealing with daily life challenges after drug addiction. Therefore, we labeled this factor as "Self Confidence".

*Factor III. Self-Regard:*The third factor of the scale comprised of 5 items and explained 13.69% of total variance. Example item include *"I am not as intelligent as before drug abuse.*"میں منشیات کے استعمال سے پہلے کی طرح ذہین انساننہیں رہا" "Thecontent of these items indicate the critical explanation and evaluation of one's self after drug addiction that is why we labeled this factor as "Self Regard."

Items	Total items(α = .72)	Factor Loadings		
F1. Self-Competence (α = .82)		FI	FII	FIII

1	Q3. In spite of drug use, I am still fulfilling my responsibilities as a family member. منشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں۔	.66	
2	Q7. I am failure in the process of recovery from addiction. (R) میں نشے سے نجات کی جنگ میں ناکام ہوں۔	-.66	
3	Q8. I cannot handle challenges coming from my society. (R) میں اپنے معاشرے سے آنے والے چیلنجوں سے نہیں نمٹ سکتا۔	-.70	
4	Q9. I recovered a lot from darkness of addiction to lightening of respectful recovery. میں نشے کی تاریکی سے باعزت صحت یابی کی روشنی تک بہت کچھ ٹھیک کر چکا ہوں۔	.38	
5	Q13. I am still an expert in my profession.-میں اب بھی اپنے پیشے میں ماہر ہوں۔	.52	
6	Q14. I am still competent in doing things as before my drug abuse. میں اب بھی اپنے منشیات کے استعمال سے پہلے کی طرح مہارت سے کام کرنے کے قابل ہوں۔	.78	
7	Q15. I am worried about my bad impression which I have after drug abuse. (R) میں منشیات کے استعمال کے بعد اپنے برے تاثر سے پریشان ہوں۔	-.82	
8	P29. I believe upon my self-control against drug abuse. میں منشیات کے استعمال کے خلاف اپنے نفس پر قابو پانے پر یقین رکھتا ہوں۔	.50	
	F2. Self Confidence (α = .80)		
9	Q17. I cannot take decisions firmly about my life.(R) میں اپنی زندگی کے بارے میں مضبوطی سے فیصلے نہیں کر سکتا ہوں۔	.77	
10	Q21. My siblings are more attractive as compared to me. (R) میرے بہن بھائی اور رشتہ دار میرے مقابلے میں زیادہ پرکشش ہیں۔	.66	
11	Q23. I feel I could not get over my drug abuse. (R) مجھے لگتا ہے کہ میں اپنے منشیات کے استعمال پر قابو نہیں پا سکا۔	.65	
12	Q25. I feel de-motivated when others stigmatize me as an addict. (R) جب دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں۔	.84	
	F3. Self-Regard(α = .74)		
13	Q5. I am not as intelligent as before drug abuse. میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا۔	**-.32**	**.73**
14	Q6. I disrespect myself the way I am. (R)میں اپنے آپ کی عزتنہیں کرتا ہوں جیسا کہ میں ہوں۔	**-.35**	**.58**

15	Q16. I am worried about looking as an addict. (R) میں خود کو ایک منشیات کے عادی کے طور پر دیکھنے سے پریشان ہوں۔	-.73
16	Q18. I am unhappy with my physical appearance after drug abuse. (R) میں منشیات کے استعمال کے بعد اپنی جسمانی شکل سے ناخوش ہوں۔	-.64
17	Q28. I think I cannot get complete recovery. (R) میں بحالی کے اپنے مقرر کردہ اہداف حاصل نہیں کر سکتا۔	-.51

Note: The double loaded item values are denoted in bold in the table

Table 1.Exploratory Factor Analysis: Factor Loadings of Drug-Related Self-esteem Scale.

Table 2. Descriptive Statistics Discriminant, and Convergent Validity of Drug-Related Self-Esteem Scale (N=230).

Scale	1	M (SD)	2	3	4	5	6	7	8
1 Drug-Related Self-Esteem Scale	.72	58.67(12.44)	.75***	.51***	.47***	-.17**	-.75***	-.69***	-.10
2 Self-Competency Subscale	.82	30.24(9.10)	-	.09	-.06	-.18**	-.64***	-.54***	-.12
3 Self-Confidence Subscale	.80	11.77(5.22)		-	.09	-.09	-.32***	-.61***	-.07
4 Self Regard Subscale	.74	16.30(6.40)			-	-.02	-.34***	-.42***	-.04
5 Beck Depression Inventory	.71	21.99(3.29)				-	.26***	.04	-.10
6 Drug-Related Locus of Control Scale	.83	19.71(2.09)					-	1.00***	.19
7 Drug-Related Internal Locus of Control Scale	-	25.00(1.86)						-	.19
8 Drug-Related External Locus of Control Scale	-	21.25(9.90)							-

***p<.000, **p<.01, *p<.05

Table 2 indicates the reliability of Drug-related self-esteem scale and its subscales. The overall Cronbach's alpha reliability is acceptable for Drug-Related Self-Esteem Scale (α= .72) and for its subscales i.e., Self-Competency (α= .82), Lack of Self-Confidence (α= .80) and Lack of Self-Regard (α= .74) respectively. For Beck Depression Inventory and Drug-Related Locus of Control Cronbach's alpha coefficients are α=.83 and α=.71 respectively. For the mean and standard deviation analysis of drug-related Locus of Control scale, composite score were computed for internal and external dimensions of locus of control separately for participants scoring higher on any of these.

To establish discriminant validity of newly developed Drug-related Self-Esteem Scale exclusively for Drug Addicts; we used already developed Drug-Related Locus of Control scale (DRLOCS) which measures patient's feelings about internal and environmental control over drugs and Beck Depression Inventory. The zero-order correlation indicates that Drug-Related Self-Esteem Scale has negative correlation ($r = -.17, p = <.001$) with Beck Depression Inventory. The results also suggest significant negative relationship ($r=-.75, p= <.001$) between Drug-related Self-Esteem scale and Drug-Related Locus of Control scale. There was also significant negative relationship between Drug-Related Self-Esteem ($r = -.69, p =<.001$) and internal locus of control dimension of DRLOCS. Furthermore, subscales of Drug-Related Self-Esteem scales such as Self-Competency ($r=-.54, p=<.001$), Self Confidence ($r=-.61, p=<.001$) and Lack of Self Regard ($r=-.42, p=<.001$) also have negative correlations with internal locus of control dimension of DRLOC scale. These findings demonstrate the discriminant validity of newly developed Drug-related Self-Esteem scale (DRSES) with Beck Depression Inventory and Drug-Related Locus of Control.

Table 3. Means, Standard deviations and t-value of the Drug-Related Self-esteem and Depression in Participant with drug-related Internal Locus of Control and drug related External Locus of Control (N=230).

Scales	Drug-Related Locus of Control							
	Internal Locus of Control (*n*=101)		External Locus of Control (*n*=129)			95% CI		
	M	*SD*	*M*	*SD*	*t*	*LL*	*UL*	*Cohen's D*
Drug-Related Self-esteem	66.75	13.53	52.33	6.47	-10.65***	-17.09	-11.75	1.36
Self-Competency (SC)	35.02	7.81	26.50	8.27	-7.94***	-10.63	-6.40	1.06
Lack of Self Confidence (LSC)	13.27	4.91	10.60	5.18	-3.97***	-3.99	-1.34	0.53
Lack of Self Regard (LSR)	18.34	5.35	14.70	6.72	-4.45***	-5.25	-2.03	0.59
Depression	18.68	8.36	23.26	10.56	3.57***	2.05	7.04	0.48

*df= 228, ***p<.001*

As instructed by Hall (2001), we divided our sample into two groups based upon their scores on Drug related Locus of Control including drug addicts with Drug-Related Internal locus of control and External locus of control. 22 were the cutoff score for drug-related internal locus of control while above 22 were participants with drug-related external locus of control. The results indicate that there are significant differences between two groups on

Drug-related self-esteem. The result shows that substance users having more internal locus of control have high drug-related self-esteem (*M* = 66.75, *SD* = 13.53) as compared to substance users having external locus of control (*M* = 52.33, *SD* = 6.47). Self-esteem among abusers can be improvised by enhancing their external locus of control (Hafiz& Manju, 2020).

The above table further shows that there are significant differences between both groups on depression. Substance users with drug related external locus of control have higher depression (*M* = 23.26, *SD* = 10.56) as compared to substance users with drug related internal locus of control (*M* =18.68, *SD*= 8.36). Furthermore, substance users with drug related internal locus of control have high feelings of self-competency (*M*= 35.02, *SD*= 7.81) than participants with external locus of control (*M*= 26.50, *SD*= 8.27). The above table also shows that substance users with internal locus of control have higher self-confidence (*M*=13.27, *SD*= 4.91) and self-regard (*M*=18.34, *SD*= 5.35).

Discussion

Self-esteem is a widely studied construct that is based upon three presumptions; each notion has been studied independently. First, conceptualization is that self-esteem is an "outcome" that focuses on the process through which self-esteem can be produced or inhibited (Coopersmith, 1967; Harter, 1993; Peterson & Rollins, 1987; Rosenberg, 1979). Second, is the concept of "self-motive", according to which the researcher studies the individual's predisposition to behave in a way that increase and maintain positive self-concept (Kaplan, 1975; Tesser, 1988). Third, conceptualization of self-esteem is to study as a "buffer" of self which protects the individual from negative and harmful experiences (Cast, & Burke, 2002). Current study is related to the first conceptualization of

self-esteem that is related to outcome of drug addiction and decision of treatment, rehabilitation and abstinence.

Current study aimed to develop a scale exclusively for drug addicts going through rehabilitation process in drug addiction treatment and rehabilitation centers. For this purpose, sample characteristics carefully selected. Inpatient substance users with multiple relapses, multiple treatments from different rehabilitation centers, poly drug use (heroin, cannabis, ice, opium) having heroin as a main drug of choice, foil, sniffing and intravenous mode of drug use and with no comorbid psychiatric illness were selected as a participant of the study. In the current study, we presume that self-esteem of drug addicts that we labelled as 'drug related self-esteem' is distinct to the generalized conception of self-esteem. As it aims to measure unique adaptive and maladaptive self-evaluation of drug addicts in the process of recovery and rehabilitation. Drug addicts with high drug related self-esteem would have an insight in recognizing their abilities and developing self-trust to fight against their addiction. On the other hand, drug addicts with low drug related self-esteem would consider themselves as worthless, incompetent and helpless to struggle against their addiction. Supporting this notion, Yu and Fan (2014) also suggested that self-esteem and depression are highly correlated with external locus of control (Yu& Fan, 2014).Substance users develop negative beliefs about themselves and others due to lack of trust and confidence in their personal worth and worth of others around them. This distinction of generalized self-esteem and drug related self-esteem is essential in helping practitioners and care givers to pay specific attention in enhancing self-worth and competence of drug addicts in the particular context of rehabilitation processes.

The study whilst suggested that assessing drug related self-esteem would be beneficial in the process of understanding relapse of drug addiction in Pakistani rehabilitation centers and to sustain the post drug addiction life. In this research we concluded that adolescence increased self-esteem is the predictor of avoidance of drugs such as Khan (2011) reported that lack of self-esteem can be correlated with increase in likelihood of drug abuse. Therefore regulating self-esteem enhances the competency which is essential to cope with post drug effects (Khan, 2011).

The resultsof the current study suggest that drug related self-esteem normative is a multi-dimensional construct including one's self competence, positive regard, and increased self-confidence. Due to social stigmatization a drug addicts are likely to experience feeling of low self-confidence and negative self-evaluation. This need addressing through adequate interventions whilst keeping a congruence between their self-worth and personal competence. We have proposed as such in our first proposed factor that is competence, an example items include "*In spite of drug use, I am still fulfilling my responsibilities as a family member*", or "*I feel I could not get over my drug abuse*". منشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان Measuring such negative as well positive کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں۔ aspects of self-esteem among drug addicts would enable practitioners to design and devise interventions accordingly. Moreover, it as well suggests that people with high drug related self-esteem are more driven for self-control and tolerance to drugs as compared to addicts having lower self-esteem. In this research we concluded that adolescence increased self-esteem is the predictor of avoidance of drugs such as Kahn and Fawcett (2007) reported that lack of self-esteem can be correlated with increase in likelihood of drug abuse. Therefore

regulating self-esteem enhances the competency which is essential to cope with post drug effects.

In order to establish discriminant validity of newly developed Drug-related Self-Esteem scale for Drug Addicts; we used already developed Drug-Related Locus of Control scale (DRLOCS) which measures patient's feelings about internal and environmental control over drugs and Beck Depression Inventory. Results indicate an inverse relationship between the two i.e., that when the drug related self-esteem is high, depressive tendencies become low. Papadopoulos, et al (2014) suggested similar findings and concluded that self-esteem has significantly negative correlation with aspects of psychopathology like depression, anxiety, melancholia except mania in visually impaired participants (Papadopoulos, et al, 2014).In this research we concluded that adolescence increased self-esteem is the predictor of avoidance of drugs and emotional issues like depression, suicidal ideation, anger leading towards relapse. Moreover, Self-esteem and depression are interrelated and have reciprocity in the relationship. Depression works negatively to decrease self-esteem which is important to understand in order to make treatment plan for depression and contributing factors that co-occurs such as anxiety, anger, fear or rage (Wilson, 2012).

The associations we have assessed in this study support our presumption that enhancing one's self esteem in the rehabilitation phase.Therefore, regulating self-esteem enhances thecompetency which is essential to cope with post drug effects. It calls for early interventions that could assist in decreasing the negative self-evaluation and enhancing positive self-regard among substance users under treatment. Besides, medicinal treatment adequate training must be provided to the professionals in skills enhancing self-esteem and self-regard among their clients. In addition, empowerment strategies should be directed

towards addicts who are in a cycle of abuse and disenfranchisement. These would assist professionals in decreasing their substance abuse problems, emotional problems, and help gaining more control and resilience to lead an independent addiction free life.

Conclusion

Drug-related Self-esteem is an important aspect in drug relapse prevention, thus promoting and enhancing self-esteem in drug addicts. Trainings and counseling sessions must be designed to provide interventions aimed at reducing adverse outcomes of lower self-esteem and lack of control among drug addict.

Due to time constrains, and lack of resources research was not conducted in other cities of Pakistan. The results thus cannot be generalized as the rehabilitation centers from where the participants were selected were located in the capital and twin cities. Other urban areas where the probability of drug addiction might be high were not part of this study and the rural areas may have different findings. Future research must include sample more representative of Pakistani population for a better understanding of the phenomenon. Another recommendation is to carry out the longitudinal studies to study the drug related self-esteem. As during different stages of life, changes occur in personality as well as in psychological coping. Government should make some policy decisions to protect the availability of drugs because not all individuals have conscience. Some more drug related rehabs should help in facilitating them.

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