PERCEIVED STIGMA, BEHAVIOURAL PROBLEM AND DEPRESSION AMONG INDIVIDUALS WITH SUBSTANCE ABUSE ATTENDING SELECTED DE-ADDICTION CENTRES, KOLKATA, WEST BENGAL

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ABSTRACT

Substance abuse is a considerable public health problem throughout the world with vast implication on public health. Its real impact is on the social and family dynamics that underlie its communities.

Aim: This study aims to assess perceived stigma, behavioural problem and depression among individuals with substance abuse attending selected de-addiction centers, Kolkata, West Bengal.

Methods: A Descriptive survey design was adopted and 200 individuals with substance abuse were selected using simple random sampling technique. Data were collected using semi structured demographic Proforma, standardized perceived stigma of substance abuse scale (PSAS), standardized behavioural problem scale (BPS) and Beck’s depression Inventory.

Result: The findings revealed that majority (81%) individual with substance abuse had moderate perceived stigma whereas 18% had high perceived stigma and 1% had low perceived stigma and (85%) individuals with substance abuse were mild behavioural problem and (15%) in individuals with substance abuse were moderate behavioural problem and (41.5%) individuals had moderate depression, (28%) had borderline clinical depression, (27.5%) had mild mood disturbance, (3%) had these ups and downs were considered normal. Result showed that there was significant association between level of depression with Regularity of treatment, life style practices with monthly family income and educational status of participants.

Conclusion: The current study concludes that perceived stigma, behavioural problems and depression among individuals with substance abuse is effective to motivational prevention in the field of psychiatry nursing.

Keywords: Perceived Stigma, Behavioural Problem, Depression and Substance Abuse

1. INTRODUCTION

Substance abuse is a major public health problem throughout the world with vast implication on public health. According to National Mental Health Survey (NMHS) conducted in 12 states of India, the prevalence of substance use disorders is 22.4% in those above 18 years (20.9% for alcohol use disorders, 4.6% for tobacco...
use disorders, 0.6% for illicit substance use disorders). Substance abuse is a chronic, relapsing condition. It includes the use of illicit substances such as alcohol, tobacco, diversion of prescribe drugs, as well as illicit drugs. There is a pressing need to improve short-and long-term treatment outcome. Sidana et al. (2021) It is well recognized as a complex psychological phenomenon an substance dependence is considered as a 'family disease. It affects the individual as well as those around physically, emotionally and financially. It also leads to distress and social and occupational dysfunction.

According to the World Health Organization (WHO) substance abuse is continual or sporadic drug use inconsistent with or unrelated to perfect clinical exercise. World Health Organization (1994)

2. BACKGROUND OF THE STUDY

This survey record additionally advocate that Alcohol (21.4%) was the primarily substance used (apart from tobacco) succeeded by cannabis (3.0%) and opioids (0.7%). 17 to 26% of alcohol users qualified for ICD 10 diagnosis criteria of dependence, translating to average prevalence of about 4%. Tobacco use prevalence was high at 55% among males, with maximum use in the age group of 18-50 years Luoma et al. (2002).

The Drug Abuse Monitoring system, which evaluated the primary substance of abuse in patient treatment centres found that major substance use were found that alcohol (43.9%), opioids (26%) and cannabis (11.6%). So, need of the study should be motivational to prevent substance abuse which depends on the stigmatisation of the Abuser.

Perceived stigma is fear of being discriminated towards or the worry of enacted stigma and arises from society's perception Luoma et al. (2020). Research on stigma is vast and focussed on stigma directed toward members of stigmatized group defind by race and ethnicity, homosexuality, region, and mental illness, to name a few. Outcomes of those research imply that reviews of stigma, whether or not enacted, perceived, or self-stigma, may have extreme effects for people. Some of the consequences of stigma for those with behavioral health problems include difficulties obtaining employment Fiato (2005). The alcohol abuse and other drugs results in a multiple of problems for the abuser, family members and the wider community. Stigma in opposition to substance use could be the potential barrier for human beings with substance use to seek expert help. Perceived stigma is worry of being discriminated in opposition to or the fear of enacted stigma and arises from society's perception. Substance use-associated stigma has additionally affect the medical population Kulesza et al. (2013).

The problem of medicine abuse has preoccupied scholars since time old. It is a psychosocial problem that affects every society and threatens the future of the youthful people. Drug dependency has turned numerous youthful people into psychopaths, zombies and culprits hence the subject to exploration.

Depressive complaints are constantly setup as a comorbidity among cases with substance abuse. Utmost of the time it is reported as under diagnosed and a majority of cases go undressed. Numerous studies have indicated that comorbid depressive symptoms play a major part in the prognosis of substance use complaint and the relapse has been setup to be greater in patients who have a comorbid depression. The present study seeks to determine the comorbidity of depression in cases with substance abuse and their socio-demographic features.
It is important to realize that even the families of the substance abuser needs help. The family is often viewed as the basic source of strength, which provides nurturance and support for its individual members as well as ensuring stability and generational continuity for community and culture. In reality, the family is a long way greater complex. Drinking and family functioning are related Roberts & Linney (2000), although the relationship may be unfruitful, complimentary, iterative, or incidental to other causes. There are several family problems that are likely to ooccur with an individual’s alcohol abuse, including intimate partner violence, conflict and low relationship satisfaction, economic and legal vulnerability, and child risks Great Britain (2010).

While working in Psychiatry ward, it is seen that the substance abuse client is considered devalued and unimportant to others then he believes negative thoughts. Some of consequences of perceived stigma leads to behavioural problem and depression. The stigma as a barrier to recovery from addiction. So, the investigator think that it is important to assess perceived stigma, behavioural problem and depression among individuals with substance abuse persons.

3. PROBLEM STATEMENT
Perceived stigma, behavioural problem and depression among individuals with substance abuse attending selected de-addiction centres, Kolkata, West Bengal.

4. OBJECTIVES OF THE STUDY
1) To assess perceived stigma among individuals with substance abuse
2) To assess the behavioural problem among individuals with substance abuse
3) To determine the level of depression among individuals with substance abuse
4) To find out association between perceived stigma with selected demographic variables.
5) To find out association between depression with selected demographic variables.

5. METHODOLOGY
Quantitative approach was adopted with descriptive survey design. The study was conducted from 13.02.23 to 09.03.23. The subjects were people between 18 - 50 years of age attending de-addiction centre of Institute of psychiatry, Lumbini Park Mental Hospital, Pavlov Hospital, Kolkata, West Bengal.

Simple random sampling technique was adopted to prefer 200 samples, were met the designated inclusion and exclusion criteria. Samples were selected from prepared frame through lottery method.

Ethical clearance was taken from Institutional Ethical Committee of Medical College and Hospital, Kolkata, permission for data collection were taken from MSVP of Pavlov and Lumbini Park Mental Hospital, Kolkata and Permission also was taken from Director of Institute of Psychiatry, Kolkata, West Bengal. Informed consent was taken from all participants in their language. Confidentiality and anonymity was maintained.
Four validated and reliable tools were developed and three standard tool used for data collection. Demographic Proforma were used to collect information regarding demographic characteristics, Standardised perceived Stigma of Substance Abuse Scale (PSAS), Standardised Behavioural problem Scale (BPS), Beck’s Depression Inventory.

Data was collected through interview technique.

6. FINDINGS OF THE STUDY

6.1. FINDING RELATED TO PERCEIVED STIGMA

The current study found that, Majority 81% of substance abuse individual had moderate perceived stigma whereas 18% had high perceived stigma and 1% had low perceived stigma. A study conducted by Belete Het al on “Perceived stigma and associated factors among adults with problematic substance use in Northwest Ethiopia” 36.1% had low-perceived stigma and the rest had high perceived stigma. These findings fully supported with present study.

6.2. FINDING RELATED TO BEHAVIOURAL PROBLEMS

The current study established that (85%) individuals with substance abuse were mild behavioural problem and (15%) in individuals with substance abuse were moderate behavioural problem.

A study conducted by Poudel A et al, on Psychosocial problems among individuals with substance use disorders in drug rehabilitation centers, Nepal. The study focused on higher problems in substance use and peer relationship domains while less in work adjustment domain though the score were inconsistent.

6.3. FINDINGS RELATED TO LEVEL OF DEPRESSION

The present review found that Most (41.5%) individuals with substance abuse had moderate depression, (28%) had borderline clinical depression, (27.5%) had mild mood disturbance, (3%) had these ups and downs were considered normal.

Pradhan et al (2013) conducted a cross-sectional study on depression among patients of substance use disorder. Among 42 subjects, 31 (73.8%) were found to be suffering from Depression among which 19 (45.2%) had mild to moderate depression and 12 (28.6%) had severe depression. This study partially supported with present study.

In the present study, The significant relation between perceived stigma and behavioural problems as the t value is greater than table value 1.96 with df 198 at 0.05 level of significance. Study conducted by Latkin,2010 Strong relationship between drug use stigma IV drug users and HIV risk behaviours p<.001.

7. DISCUSSION

The current review found that, Majority 81% of substance abuse individual had moderate perceived stigma whereas 18% had high perceived stigma and 1% had low perceived stigma. A study conducted by Belete Het al on “Perceived stigma and associated factors among adults with problematic substance use in Northwest Ethiopia” 36.1% had low-perceived stigma and the rest had high perceived stigma. This findings complete supported with present study.
Hadera et al. (2019) conducted a community-based cross-sectional survey was conducted at Bahir Dar town, northwest Ethiopia cross-sectional study design study on to assess the magnitude and associated factors of perceived stigma among adults with mental illness in Ethiopia. A total of 384 participants were interviewed and the response rate was 100%. The prevalence of high and low perceived stigma was 51% and 44%, respectively. This findings partially supported with the present study.

The present study found that (85%) individuals with substance abuse were mild behavioural problem and (15%) in individuals with substance abuse were moderate behavioural problem.

Strandheim A et al, The influence of behavioural and health problems on alcohol and drug use in late adolescence - a follow up study of 2 399 young Norwegians Prospective population based cohort study of 2 399 adolescents attending the Young-HUNT study, aged 13-15 at baseline in 1995/97, and 17-19 at follow-up 4 years later. At follow-up 19% of the students drank alcohol once a week or more frequently. This review uphold the opinion that especially conduct problems.

The present study found that Most (41.5%) individuals with substance abuse had moderate depression, (28%) had borderline clinical depression, (27.5%) had mild mood disturbance, (3%) had these ups and downs were considered normal.

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In the present study, The significant relation between perceived stigma and behavioural problems as the t value is greater than table value 1.96 with df 198 at 0.05 level of significance. Study conducted by Latkin,2010 Strong relationship between drug use stigma IV drug users and HIV risk behaviours p<.001.

In the present study statistically significant association between level of depression with selected demographic variables (Regularity of treatment) as the calculated value of chi square is greater than table value of chi square at 0.05 level of significance. Study conducted by Luoma,2010 The measure of perceived stigma was significantly associated with internalized stigma p<00001. this was fully supported with present study.

8. CONCLUSION
Based on the findings of the present study, it can be concluded that majority of the people average perceived stigma followed by greater perceived stigma & lesser perceived stigma. In the domain i.e. highest mean% of behavioural externalising problems and internalising behavioural problems. Majority of individuals had moderate depression followed by borderline clinical depression, mild mood disturbance and these ups and downs were considered normal. There is statistically significant association between level of depression with selected demographic variables (Regularity of treatment). There was a positive relation between perceived stigma & Behavioural problem individuals with substance abuse

9. LIMITATION
The study has several limitations.
The outcome of this study shall not be universal to apply to the county wide. The study with its boundary is only 200 sample a general analysis carried out on de-
addiction center. Consequently, other investigations on the same topic can be reproduced in other counties. The study subjects are limited to few settings.

10. RESULTS

Computed data are organized and presented under various subheadings according to objectives of the study.

10.1. DEMOGRAPHIC CHARACTERISTICS

Table 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (in years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-26</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>27-34</td>
<td>69</td>
<td>34.5</td>
</tr>
<tr>
<td>35-42</td>
<td>61</td>
<td>30.5</td>
</tr>
<tr>
<td>43-50</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td><strong>Educational status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>33</td>
<td>16.5</td>
</tr>
<tr>
<td>Primary</td>
<td>75</td>
<td>37.5</td>
</tr>
<tr>
<td>Secondary</td>
<td>68</td>
<td>34</td>
</tr>
<tr>
<td>Higher secondary</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Graduate &amp; above</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>49</td>
<td>24.5</td>
</tr>
<tr>
<td>Independent business</td>
<td>95</td>
<td>47.5</td>
</tr>
<tr>
<td>Government service</td>
<td>35</td>
<td>17.5</td>
</tr>
<tr>
<td>Private job</td>
<td>21</td>
<td>10.5</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried</td>
<td>87</td>
<td>43.5</td>
</tr>
<tr>
<td>Married</td>
<td>113</td>
<td>56.5</td>
</tr>
<tr>
<td><strong>Family Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear</td>
<td>117</td>
<td>58.5</td>
</tr>
<tr>
<td>Joint</td>
<td>83</td>
<td>41.5</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>81</td>
<td>40.5</td>
</tr>
<tr>
<td>Urban</td>
<td>119</td>
<td>59.5</td>
</tr>
<tr>
<td><strong>Family History of substance abuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>71</td>
<td>35.5</td>
</tr>
<tr>
<td>No</td>
<td>129</td>
<td>64.5</td>
</tr>
<tr>
<td><strong>Types of substance abuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>42</td>
<td>21</td>
</tr>
<tr>
<td>Marijuana</td>
<td>51</td>
<td>25.5</td>
</tr>
<tr>
<td>Vaping</td>
<td>51</td>
<td>25.5</td>
</tr>
<tr>
<td>Illicit drug</td>
<td>56</td>
<td>28</td>
</tr>
<tr>
<td><strong>Duration of substance use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 yrs</td>
<td>83</td>
<td>41.5</td>
</tr>
<tr>
<td>6-10 yrs</td>
<td>117</td>
<td>58.5</td>
</tr>
</tbody>
</table>
Table 2

<table>
<thead>
<tr>
<th>Perceived stigma</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (&lt; 19)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Moderate (19-26)</td>
<td>162</td>
<td>81</td>
</tr>
<tr>
<td>High (&gt;26)</td>
<td>36</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 2 shows that majority 81% individual with substance abuse had moderate perceived stigma whereas 18% had high perceived stigma and 1% had low perceived stigma.

Table 3

<table>
<thead>
<tr>
<th>Behavioural problem</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild (&lt; 30)</td>
<td>170</td>
<td>85</td>
</tr>
<tr>
<td>Moderate (30-40)</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>Severe (&gt;40)</td>
<td>Nil</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 Frequency & Percentage Distribution of Behavioural Problem Among Individuals with Substance Abuse
Table 3 shows that (85%) individuals with substance abuse were mild behavioural problem and (15%) among individuals with substance abuse were moderate behavioral problem.

**Table 4**

<table>
<thead>
<tr>
<th>Domain Rank</th>
<th>Score range</th>
<th>Max. score</th>
<th>Min. score</th>
<th>Mean</th>
<th>Mean%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Externalising Problems 1</strong></td>
<td>5 – 25</td>
<td>16</td>
<td>7</td>
<td>11.32</td>
<td>45.3</td>
</tr>
<tr>
<td><strong>Intranalising Problems 2</strong></td>
<td>May-25</td>
<td>14</td>
<td>7</td>
<td>10.2</td>
<td>40.3</td>
</tr>
</tbody>
</table>

Table 4 shows that heighest mean% of behavioural externalising problems score was 45.3% and lowest mean% of internalizing behavioural problems score was 40.3%.

**Table 5**

<table>
<thead>
<tr>
<th>Score range</th>
<th>Level of depression</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10_These ups and downs are considered normal</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>11-16_Mild mood disturbance</td>
<td>55</td>
<td>27.5</td>
<td></td>
</tr>
<tr>
<td>17-20_Borderline clinical depression</td>
<td>56</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>21-30_Moderate depression</td>
<td>83</td>
<td>41.5</td>
<td></td>
</tr>
<tr>
<td>31-40 Severe depression</td>
<td>Nil</td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td>Over40_Extreme depression</td>
<td>Nil</td>
<td>Nil</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows that (41.5%) individuals had moderate depression, (28%) had borderline clinical depression, (27.5%) had mild mood disturbance, (3%) had these ups and downs were considered normal.

**Table 6**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Area</th>
<th>Maximum possible score</th>
<th>Obtain mean score</th>
<th>Mean percentage</th>
<th>Rank Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sadness</td>
<td>3</td>
<td>0.55</td>
<td>18.33</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Pessimism</td>
<td>3</td>
<td>0.545</td>
<td>18.17</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Part failure</td>
<td>3</td>
<td>0.695</td>
<td>23.17</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>Loss of pressure</td>
<td>3</td>
<td>0.96</td>
<td>32</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Guilty feeling</td>
<td>3</td>
<td>1.16</td>
<td>38.67</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Punishment feeling</td>
<td>3</td>
<td>0.90</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Self -dislike</td>
<td>3</td>
<td>0.85</td>
<td>28.33</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>Self -criticalness</td>
<td>3</td>
<td>0.95</td>
<td>31.67</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Suicidal thought or wishes</td>
<td>3</td>
<td>1</td>
<td>33.33</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Crying</td>
<td>3</td>
<td>0.834</td>
<td>27.8</td>
<td>18</td>
</tr>
<tr>
<td>11</td>
<td>Agitation</td>
<td>3</td>
<td>0.84</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>12</td>
<td>Loss of interest</td>
<td>3</td>
<td>0.975</td>
<td>32.5</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 6 shows that maximum possible score, obtained mean, mean% and rank order of 21 items questionnaire of Beck’s depression inventory response given by the individuals with substance abuse. The highest mean % (38.67) individuals with substance abuse guilty feeling of level of depression and lowest mean % (18.17) pessimism of level of depression.

**Table 7**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Corr. Coeff (r)</th>
<th>t value</th>
<th>P.value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived stigma</td>
<td>24.74</td>
<td>25</td>
<td>0.162</td>
<td>2.31</td>
<td>.021</td>
</tr>
<tr>
<td>Behavioural problem</td>
<td>21.52</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7 shows that there was a weak positive relation between perceived stigma & Behavioural problem as the correlation between them is 0.162 & P. value is. 021. There is statistically significant relation at 0.05 level of significance.

**Table 8**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Corr. Coeff (r)</th>
<th>t value</th>
<th>P.value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived stigma</td>
<td>24.74</td>
<td>2.718</td>
<td>25</td>
<td>-0.138</td>
<td>1.96</td>
<td>.051</td>
</tr>
<tr>
<td>Depression</td>
<td>18.76</td>
<td>4.234</td>
<td>19.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 shows that there was a negative relation between perceived stigma & depression as the correlation between them is -0.138 at 198 degree of freedom, where the calculated values 1.96 & P. value is. 051. So we can infer that if the perceived stigma is low then depression level will be low.

**Table 9**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Corr. Coeff (r)</th>
<th>t. value</th>
<th>P. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioural problem</td>
<td>21.52</td>
<td>2.718</td>
<td>22</td>
<td>-0.085</td>
<td>1.20</td>
<td>.231</td>
</tr>
<tr>
<td>Depression</td>
<td>18.76</td>
<td>4.234</td>
<td>19.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 shows that there is a negative relation between perceived stigma & Behavioural problem as the correlation between them is -0.085 at 198 degree of freedom, where the calculated values 1.20 is less than the table value & P. value is.
So we can infer that if the behavioural problem is low then depression level will be low.

**Table 10**

<table>
<thead>
<tr>
<th>Category</th>
<th>Stigma</th>
<th>X²</th>
<th>DF</th>
<th>P. Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X &lt; median</td>
<td>X ≥ median</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age (in years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-26</td>
<td>14</td>
<td>16</td>
<td>2.649</td>
<td>3</td>
</tr>
<tr>
<td>27-34</td>
<td>20</td>
<td>41</td>
<td>458</td>
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Table 10 shows that there are no statistically strong relation between perceived stigma with selected demographic variables as the calculated value of chi square is lower than table value of chi square at 0.05 level of significance.

Table 11

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Perceived Stigma, Behavioural Problem and Depression Among Individuals with Substance Abuse Attending Selected De-Addiction Centres, Kolkata, West Bengal

Table 11 shows that there is consequential association between level of depression with Regularity of treatment as the calculated value of chi square is greater than table value of chi square at 0.05 level of significance.

**CONFLICT OF INTERESTS**
None.

**ACKNOWLEDGMENTS**
None.

**REFERENCES**


