Abstract—The present study was done primarily to address two major research gaps: firstly, development of an empirical measure of life meaningfulness for substance users and secondly, to determine the psychosocial determinants of life meaningfulness among the substance users. The study is classified into two phases: the first phase which dealt with development of Life Meaningfulness Scale and the second phase which examined the relationship between life meaningfulness and social support, abstinence self efficacy and depression. Both qualitative and quantitative approaches were used for framing items. A Principal Component Analysis yielded three components: Overall Goal Directedness, Striving for healthy lifestyle and Concern for loved ones which collectively accounted for 42.06% of the total variance. The scale and its subscales were also found to be highly reliable. Multiple regression analyses in the second phase of the study revealed that social support and abstinence self efficacy significantly predicted life meaningfulness among 48 recovering inmates of a de-addiction center while level of depression failed to predict life meaningfulness.

Keywords—Perceived Life meaningfulness, Social Support, Abstinence Self Efficacy, Depression, Substance Use.

I. INTRODUCTION

According to Frankl, lack of meaning in one’s life (“existential vacuum”) often leads to negative coping behaviors, the most common being involvement in substance use [1], [2]. However, while this existentialist concept has been extensively researched for understanding recovery process in varied populations like patients suffering from cancer, HIV-AIDS and other life terminal diseases [3], [4], fewer empirical studies have been done to examine life meaningfulness among substance users.

Prior studies however have revealed the importance of life meaningfulness in maintenance of sobriety among substance users [5], [6], [7], [8], [9]. In short, life meaningfulness in this population is an important correlate of recovery from substance use and should further be explored from the perspective of its psychosocial determinants.

As stated by Reference [10], “the definition of meaning in life varies throughout the field, ranging from coherence in one’s life [11], [12], to goal directedness or purposefulness [13] ‘to the ontological significance of life from the point of view of the experiencing individual’ [14]. Each person must create meaning in his or her own life [11], whether through the pursuit of important goals [15] or the development of a coherent life narrative [16], [17]. Others have indicated the importance of everyday decision making and action [18] or of self transcendence [19], [20] in the creation of meaning.”

In the present study, this concept has been approached in context of ways addicted people understand a ‘meaningful life’. Due to limited existence of empirical measures of the construct and practically no measure for assessing life meaningfulness among substance users, this study aims to understand and define the construct through the development of an objective questionnaire.

Theoretical & empirical literature considers life meaningfulness to be related to a couple of psychosocial factors like social support and depression [3]. Reference [21] shows perceived meaning in life to be strongly related to social support, absence of depression and self efficacy among Hungarian people. But the relationship between life meaningfulness and self efficacy particularly abstinence self efficacy (i.e. perceived self control over use of drugs/alcohol) among substance abusers is not known. Thus in the context of this research gap from the literature discussed above, the present study proposes perceived social support, depression and abstinence self efficacy as major psychosocial determinants of life meaningfulness perceived by substance users.

The major objectives of the present study were:

1. To develop an empirical measure of perceived life meaningfulness for substance users and to understand this concept from the perspective of substance use.

2. To investigate the relationship between perceived life meaningfulness, perceived social support, depression and abstinence self efficacy.

The current study can be broadly divided into 2 phases: phase 1 where the first objective was met and phase 2 which addressed the second objective.
II. PHASE I

2.1 Scale Construction

Perceived life meaningfulness (meaning in life or existential meaning as referred to in previous literature) has lately been gaining momentum for research on diverse populations including substance users. However, the assessment measures of the construct for this population have mostly been popular measures like Life Regard Index [11], Meaning in Life Questionnaire [10], etc that have assessed life meaningfulness in general. These measures have however not emphasized upon life meaningfulness affected by involvement in drugs and alcoholism. In other words, there has been no assessment instrument of perceived life meaningfulness tailor-made for this population. Therefore, one of the primary aims of this study was to develop such an empirical measure and determine its initial psychometric properties as discussed in the first phase of the study.

The development of the Life Meaningfulness measure involved the following steps:

2.1.1 Semi-structured interview & Qualitative Content Analysis:

Based on Reker and Wong’s definition of meaning in life [12] following were the open ended questions asked to 11 alcohol and drugs dependent inmates receiving rehabilitation treatment in a Kolkata based de-addiction center:

- Do you feel your life or existence has any purpose or meaning?
- What thoughts come to your mind when you say or feel that your life has some meaning?
- How do you really feel when you say that your life is meaningful?
- How do you try to make your life meaningful?
- The responses of the inmate addicts were taken through 2 media: written (for those who were literate/comfortable in writing) and audio-recorded (for those who were illiterate or were more comfortable in speaking). The written interview lasted for about 45 minutes while the audio-recorded ones lasted about an hour.

2.1.2 Transcription:

The written and audio-recorded responses were first separately transcribed. The transcribed versions of the 11 inmates were then further content analyzed by the author and by 3 independent raters. The raters were handed out brief case histories of each of the 11 respondents. However the identity of the respondents was kept confidential keeping in mind the ethics of qualitative researches.

After analyzing the ratings of the 3 independent raters and the author, following subthemes/attributes of life meaningfulness were obtained:
- Personal Success
- Personal Happiness
- Family Welfare
- Social welfare
- Constructively using previous life experiences
- Living in reality
- Healthy Lifestyle
- Attainment of independence
- Happiness
- Hope
- Mental Exhaustion
- Depression
- Disappointment
- Pleasure

Inter-rater agreement:

A rating schedule was prepared and given to a group of 4 independent psychologists/counselors engaged in substance use interventions. The group was asked to rate on a 6 point scale (strongly disagree to strongly agree) whether they agree or not that the above dimensions are important attributes of meaning in life among substance users. Kendall’s W was computed to assess overall agreement over the importance of the dimensions among the 4 raters. A good agreement was obtained ($W=0.60, p<0.01$) revealing that the raters highly agreed over the dimensions as being good indicators of the construct. However, those with higher mean rank were included as the dimensions for item framing. The dimensions with higher mean ranks were healthy life, pleasure, family welfare, and hope, social welfare, using previous life experiences, personal happiness and personal success.

2.1.4 Item Framing:

A pool of 33 items was framed based on the themes/dimensions short-listed. It must be mentioned that items based on the themes of pleasure and personal happiness were repetitive and redundant and thus the two themes were merged into one theme pleasure/happiness. The scale items were to be rated on a four-point scale (Very Meaningful, Just Meaningful, Just Meaningless and Absolutely Meaningless).

2.2 Method

2.2.1 Sample:

100 substance users enrolled in a de-addiction center volunteered to participate in the study after giving their consent for participation. All the inmates were males and were in the psycho social rehabilitation phase of their treatment. The Mean Age of the sample participants was 36.50 years, (S.D=10.25). The following scales were administered to the sample after giving them the initial instructions.

2.2.2 Instruments

Life Meaningfulness Scale (LMS): The LMS with 33 items was administered. Each item had to be rated on a four point Likert scale (very meaningful to absolutely meaningless).

Life Regard Index: This scale comprises 28 items to be rated on a three point Likert scale. The items are broadly classified into two subscales, Framework & Fulfillment.

2.2.3 Determination of initial psychometric properties of the LMS:
Cronbach’s alpha of the responses to the LMS was found to be 0.84. However, 8 items with low item-total correlations with values less than 0.30 were dropped. The alpha for the remaining 25 items was computed to be 0.85. The 25 items were then subjected to Principal Component Analysis using SPSS version 16. Bartlett’s Test of Sphericity was found to be significant ($\chi^2 (300) = 954.30; p<.01$) indicating that the 25 items were reducible through component analysis. Scree plot and varimax rotation revealed the emergence of basically 3 components (with Kaiser Eigen values >1) collectively predicting 42.06% of variance. The first component predicted 23.50% of variance followed by second component (11.00%) and third component (7.56%). The first component comprised of 7 items that measured a substance user’s overall or general goal-directedness in life, the second component (4 items) measured “healthy lifestyle” among the substance users. (See Appendix for Varimax Rotated Factor loadings of the LMS). 4 items loaded on the third component centered on “concern for loved ones”. The reduced 15 item scale reported good internal consistency ($\alpha=0.83$). The internal consistency reliabilities for the 3 subscales were also calculated using Cronbach’s alpha. The alphas for the first component were 0.82 for General Goal Directedness, 0.72 for Healthy Lifestyle and 0.72 for Concern for loved ones. The correlation coefficient between scores of Directedness, 0.72 for Healthy Lifestyle and 0.72 for Concern for loved ones were found to be significantly and positively related with perceived social support, overall goal directedness was not found to be significantly related with social support. As shown in the correlation matrix, perceived life meaningfulness was significantly and positively related with perceived social support and abstinence self-efficacy of the participants. This subscale had 7 items responded by the participants on a four point scale.

III. PHASE 2

The major purpose of this phase of the study was to examine the overall relationship between life meaningfulness and its psychosocial predictors (i.e. perceived social support and abstinence self-efficacy).

3.1 Method

3.1.1. Sample:

The sample participants in this phase comprised 48 residential inmates receiving de-addiction treatment. All the participants had undergone the basic detoxification treatment and were in the psycho-social rehabilitation phase. All the inmates were males with average age of 34.26 years. (S.D = 10.44). While majority of the participants came from lower socio-economic strata (45.8%), 27.1% were from higher strata and remaining 27.1% were from the middle socioeconomic background. A major proportion of the sample was financially dependent on other family members (60.4%) and the remaining 39.6 % were independent and earned their own living. 33.3 % of the respondents were found to be dependent on alcohol, 29.2% were found to dependent on drugs and the remaining 37.5 % were reportedly consumed both alcohol and drugs.

3.1.2. Instruments:

Apart from the 15 item LMS and 28 item LRI used in the previous phase, the following instruments were used in the second phase of the study:

Berlin Perceived General Social Support Subscale:

Perceived social support, subscale of Berlin Social Support Scale [22] was used to assess perceived social support of the substance users. It is an 8-item scale with each item to be rated on four point Likert scale.

Abstinence self-efficacy Subscale:

20 items Alcohol Abstinence Self Efficacy Scale [23] was used to measure abstinence self-efficacy to overcome drugs/alcohol addiction. In this study, the scale had 19 items that were rated on a four point Likert scale. The 19th item was not considered on account of difficulties in interpreting the statement in the context of Indian culture.

The Depression subscale of DASS (Depression Anxiety Stress Scale) [24] measured depression level of the study participants. This subscale had 7 items responded by the participants on a four point scale.

3.1.3. Procedure:

Firstly, permission was taken to visit and interview the inmates of a Kolkata based rehabilitation center from the concerned administrative authorities. Informed consent of 48 out of 55 recovering addicts (both drug addicts & alcoholics) for participation in the study was taken. After giving them basic instructions, the above mentioned measures were administered to them. LMS developed in the first phase of the present study was used to assess life meaningfulness of the sample. Cronbach’s alpha of the LMS was found to be 0.80. The 15 item measure was also found to be moderately correlated with the LRI ($r=0.50$, $p<.01$) indicating that even though the scale had convergent validity it was a distinct measure of assessing life meaningfulness. The other scales also reportedly had good internal consistency ranging from 0.60 – 0.80.

The demographic and clinical information of the participants were collected from the case history records maintained by the center. The study participants were assured of the anonymity of their responses.

IV. RESULTS

In order to examine the relationship between Life Meaningfulness and its hypothesized predictors, Pearson correlations were computed as shown in table I.Table I presents the results of Pearson order correlations computed between life meaningfulness (LM), its subscales, social support (SS), abstinence self-efficacy (ASE) and depression (DEP). All the 3 components were found to be positively and significantly related with the overall life meaningfulness. While the sub dimensions healthy life and concern for loved ones were found be positively and significantly correlated with social support, overall goal directedness was not found to be significantly related with social support. As shown in the correlation matrix, perceived life meaningfulness was significantly and positively related with perceived social support and abstinence self-efficacy of the participants. This implies that higher levels of perceived life meaningfulness is associated with perceiving higher social support from the social mainstream of the recovering addicts as well as higher self efficacy to abstain from drugs and alcohol.
which showed that both social support and abstinence self efficacy significantly predicted life meaningfulness. Social support however turned out to be a stronger predictor than self efficacy. The study thus helps to conclude that perceiving adequate amount of support from an addict’s social network (i.e. family, friends, caretakers, etc) play an important role in helping substance users find more meaning in their lives. The result is in accordance with prior findings where social support was found to have a positive relationship with meaning in life [3], [21].

The importance of self efficacy to abstain from drugs and alcohol in making life of an addict meaningful has seldom been researched. Its importance therefore can be inferred particularly from the emergence of ‘striving for a healthy lifestyle’ factor of the LMS and its positive relationship with abstinence self efficacy. This finding underlines that life meaningfulness among recovering addicts is the extent to which one wants to pursue ‘an addiction free’ life, a healthy lifestyle so as to fulfill major life goals. Hence, the emergence of abstinence self-efficacy as a significant predictor adds on to the importance of developing self-control over addiction related impulses and cravings in order to discover and retain meaning in life.

Experience of depression failed to predict life meaningfulness in the present research. This result is in accordance with the basic existential belief that “existential neurosis” (i.e. feelings of aimlessness marked with periods of depression) is often accompanied with meaningless in life [1], [25].

VI. CONCLUSIONS

From the present study it can be concluded that perceived social support and abstinence self-efficacy are primary psychosocial determinants of life meaningfulness among recovering substance users. The Life meaningfulness scale apparently emerged to be a reliable and valid tool for assessing life meaningfulness among substance users. Further psychometric evaluation of the 15 item Life Meaningfulness scale through confirmatory factor analytic techniques on a larger sample is recommended.

APPENDIX

Table II shows that both SS and ASE were significant predictors of life meaningfulness among substance users. 

V. DISCUSSION

Through the current research, life meaningfulness among substance users can be defined as the extent of their goal directedness in life, their strivings for a healthy lifestyle and for welfare of loved ones. Findings indicate that among recovering addicts, life meaningfulness shares a positive relationship with both social support and self efficacy but a negative one with level of depression.

The importance of social support and self-efficacy in determining meaning in life of the recovering addicts was further verified by conducting the multiple regression analysis which showed that both social support and abstinence self

### TABLE I INTERCORRELATION MATRIX OF PEARSON CORRELATION COEFFICIENTS BETWEEN LIFE MEANINGFULNESS, SOCIAL SUPPORT, DEPRESSION & SELF Efficacy

<table>
<thead>
<tr>
<th></th>
<th>LM</th>
<th>OGD</th>
<th>HL</th>
<th>CL</th>
<th>SS</th>
<th>ASE</th>
<th>DEP</th>
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<tr>
<td>LM</td>
<td>1</td>
<td>0.13</td>
<td>0.34*</td>
<td>0.46*</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td>OGD</td>
<td>0.13</td>
<td>1</td>
<td>0.34*</td>
<td>0.46*</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td>HL</td>
<td>0.34*</td>
<td>0.34*</td>
<td>1</td>
<td>0.46*</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td>CL</td>
<td>0.46*</td>
<td>0.46*</td>
<td>0.46*</td>
<td>1</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td>SS</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>1</td>
<td>0.34*</td>
<td>0.34*</td>
</tr>
<tr>
<td>ASE</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.34*</td>
<td>1</td>
<td>0.19</td>
</tr>
<tr>
<td>DEP</td>
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<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
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<td>0.19</td>
<td>1</td>
</tr>
</tbody>
</table>

(Key: LM= Life Meaningfulness; OGD=Overall Goal Directedness; HL= Healthy Lifestyle; CL= Concern for loved ones; SS=Social Support; ASE= Abstinence Self Efficacy; DEP= Depression; ** p<0.01; * p<0.05)

Table II MULTIPLE REGRESSION ANALYSES

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>S.E</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>22.524</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>0.55</td>
<td>0.21</td>
<td>0.35</td>
<td>2.56*</td>
</tr>
<tr>
<td>ASE</td>
<td>0.21</td>
<td>0.89</td>
<td>0.34</td>
<td>2.46*</td>
</tr>
<tr>
<td>DEP</td>
<td>0.13</td>
<td>0.21</td>
<td>0.09</td>
<td>0.64</td>
</tr>
</tbody>
</table>

(Key: SS= Social Support; ASE = Abstinence Self Efficacy; DEP = Depression; ** p<0.01; * p<0.05)
28. When I think there is no scope for further improvement, I find my life... .76
29. When I feel I will not be able to leave addiction, I find my life... .65
30. When I feel I will not be able to leave addiction, I find my life... .65
31. When I think of changing my life-style for the better, I find my life... .63
32. When I think of looking after my family members/near and dear ones happy, I find my life... .76
33. When I think of fulfilling expectations which my near and dear ones have towards me, I find my life... .74
34. When I feel relaxed using my skills/talents during free time, I find my life... .60
35. When I think of making my skills/talents during free time, I find my life... .68
36. When I think of following a daily healthy routine, I find my life... .75
37. When I think of living the daily healthy routine, I find my life... .75
38. When I think of fulfilling my skills/talents during free time, I find my life... .68
39. When I think of making my life-style for the better, I find my life... .68
40. When I think of looking after my family members/near and dear ones happy, I find my life... .68
41. When I think of changing my life-style for the better, I find my life... .68
42. When I think of living the daily healthy routine, I find my life... .68

REFERENCES