CHAPTER-5
METHODOLOGY

The aim of the present study is to compare abstinent and relapsed opioid dependents on personality, stress, coping and social support. For this purpose, total of 200 subjects were taken, which were divided into two groups. First group comprised of relapsed opioid dependents (n=100) & second group comprised of abstinent opioid dependents (n=100). The study explored differences among relapsed and abstinent opioid dependents on all study variables. The study also explored the predictors of Impulsiveness, Hardiness, Self-efficacy and Social Support among relapsed and abstinent opioid dependents.

For Personality assessment, NEO-Five Factor Inventory (Costa & McCrae, 1992) was used which assesses Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness.

For measuring Impulsiveness, Impulsiveness Scale-Brief (Patton, Stanford, & Barratt, 1995) was used which measures three dimensions of Impulsivity viz. Attentional Impulsiveness, Motor Impulsiveness, Non-planning Impulsiveness and Total Impulsiveness.

For measuring Hardiness, Hardiness Scale (Kobasa & Kahn, 1982) was used which measures three dimensions of Hardiness viz. Control, Commitment, Challenge and Total Hardiness.

For measuring Self-Efficacy, Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) was used.

For measuring Social Support, Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) was used, which measures three dimensions of social support viz. Support from Family, Friends and Significant Others and Total Perceived Social Support.

For measuring Depression, Anxiety and Stress, Depression, Anxiety and Stress Scale (DASS 21) (Lovibond & Lovibond, 1995) was used, which measures Stress, Anxiety and Depression.
For measuring **Coping, Brief COPE Scale** (Carver, 1997) was used which measures 14 dimensions viz. **Active Coping and Planning** which constitute **Problem Focused Coping**; **Denial, Substance Use and Behavioral Disengagement** which constitute **Total Avoidant Coping**; **Instrumental Social Support, Instrumental Emotional Support and Venting** which constitute **Socially Supported Coping**; and **Acceptance, Humor, Religion, Positive Reframing, Self-Blame** and **Self Distraction** which constitute **Emotion Focused Coping**.

**SAMPLE**

The sample comprised of 200 subjects within the age range of 18-35 years. There were 100 relapsed and 100 abstinent opioid dependents. All subjects were males from rural background. Sample was collected from OPD’s/IPD’s/Rehabilitation centres of government and private hospitals of Punjab.

**Inclusion Criteria**

- Patients with opioid dependence syndrome as per ICD-10 (1992) and seeking active treatment for the same in OPD’s/IPD’s/Rehabilitation centres in government and private hospitals.
- Educated up to Matric & above.

**Inclusion Criteria for Relapsed Opioid Dependent subjects**

- Reverted to previous pattern of substance use within 6 months of the treatment.

**Inclusion Criteria for Abstinent Opioid Dependent subjects**

- Opioid dependence in past, now abstinent for at least past 6 months.

**Exclusion Criteria**

- Subjects who are reluctant to participate in study.
- History of organic brain syndrome, epilepsy, mental retardation etc.
- Subjects having multiple substance dependence except tobacco.
- Subjects having co-morbid psychiatric illness i.e. schizophrenia.
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**TESTS AND TOOLS USED:**

The following tests and tools were used:

2. **Impulsiveness Scale - Brief** (BIS 11) (Patton, Stanford, & Barratt, 1995).
3. **Hardiness Scale** (Kobasa & Kahn, 1982).
6. **Depression, Anxiety and Stress Scale (DASS 21)** (Lovibond & Lovibond, 1995)
7. **Brief COPE** (Carver, 1997)
8. **Semi Structured Interview Schedule:** A semi-structured interview schedule was developed to seek information on socio-demographic variables, family history, school history, food preferences, occupation and drug abuse history.

**Brief Description of tests and tools used is given below**

1. **NEO - FFI - Five Factor Inventory** (NEO-FFI; Costa and McCrae ,1992)

   The NEO-FFI is a 60-item version of the NEO PI-R that provides a brief, comprehensive measure of the five domains of personality. It consists of five 12-item scales that measure each domain. The following Personality dimensions are measured:

   **Neuroticism**

   The general tendency to experience negative affect such as fear, sadness, embarrassment, anger, guilt and disgust is the core of the Neuroticism domain. Individuals high on Neuroticism are also prone to have irrational ideas, to be less able to control their impulses and to cope more poorly than others with stress. Individuals low on this score are emotionally stable. They are usually calm, even-tempered and relaxed and they are able to face stressful situations without becoming upset or rattled.

   **Extraversion**

   Extraverts are sociable but sociability is only one of the traits that comprise the domain of extraversion. In addition to liking people and preferring social groups and gatherings, extraverts are also assertive, active and talkative. They like excitement and stimulation and tend to be cheerful in disposition. They are upbeat, energetic and
optimistic. Thus, introverts are reserved rather than unfriendly, independent rather than followers, even paced rather than sluggish. Introverts may say they are shy when they mean that they prefer to be alone; they do not necessarily suffer from social anxiety. Finally, introverts are not unhappy or pessimistic.

**Openness to Experience**

As a major dimension of personality, openness to experience is much less well known than Extraversion (E). The elements of Openness (O) – active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity and independence of judgment–have often played a role in theories and measures of personality, but their coherence into a single broad domain has seldom been recognized. Open individuals are curious about inner and outer worlds, and their lives are experientially richer. They are willing to entertain novel ideas and unconventional values and they experience both positive and negative emotions more keenly than do closed individuals. Openness is especially related to aspects of intelligence, such as divergent thinking that contribute to creativity. But it is by no means equivalent to intelligence.

**Agreeableness**

Like extraversion, agreeableness is primarily a dimension of interpersonal tendencies. The agreeable person is fundamentally altruistic. He or she is sympathetic to others and eager to help them, and believes that others will be equally helpful in return. By contrast, the disagreeable or antagonistic person is egocentric, skeptical of others’ intentions, and competitive rather than cooperative.

**Conscientiousness**

A great deal of personality theory, particularly psychodynamic theory, concerns the control of impulses. During the course of development, most individuals learn how to manage their desires and the inability to resist impulses and temptations is generally a sign of high Neuroticism (N) among adults. But self-control can also refer to a more active process of planning, organizing and carrying out tasks and individual differences in this tendency are the basis of conscientiousness. The conscientious individual is purposeful, strong-willed and determined.
Following instructions were given for NEO - FFI:

“Write only where indicated in this booklet. Carefully read all of the instructions before beginning. This questionnaire contains 60 statements. Read each statement carefully. For each statement fill in the circle with the response that best represents your opinion. Make sure that your answer is in the correct box.

- Fill in (SD) if you strongly disagree or the statement is definitely false.
- Fill in (B) if you disagree or the statement is mostly false.
- Fill in (N) if you are neutral on the statement, if you cannot decide, or if the statement is about equally true and false.
- Fill in (A) if you agree or the statement is mostly true.
- Fill in (SA) if you strongly agree or the statement is definitely true.

For example, if you strongly disagree or believe that a statement is definitely false, you would fill in the (SD) for that statement”.

The reliability of the NEO-FFI had been established by evaluating the Cronbach’s-alpha reliability coefficients. The values of the coefficient are 0.90, 0.78, 0.76, 0.86 and 0.90 for the dimensions of neuroticism, extraversion, openness, agreeableness and conscientiousness, respectively. These values are high enough (0.76 and more) to reflect on the reliability of the inventory.

This scale has been used in India by Chatha (2009); Chouhan and Joshi and Thingujam (2009); Dubey, Arora, Gupta and Kumar (2010); Mehta (2012); Kackar (2016); and Halder, Roy and Chakraborty (2017).

2. Impulsiveness Scale (BIS 11; Patton, Stanford, & Barratt, 1995)

Impulsivity was measured with the help of Barratt Impulsiveness Scale (BIS-11, Patton et al., 1995). The Barratt Impulsiveness Scale is a self-report questionnaire that asks participants to rate how often a series of statements apply to them. It consists of 30 statements of personal characteristics. Respondents are asked to indicate the extent to which the statements apply to them using a four-point scale ranging from ‘rarely/never’ to ‘always/almost always’. Each item is rated on 1 (rarely/never) to 4 (always/almost always) scale. The scoring on items no. 1, 4, 7, 8, 9, 10, 12, 13, 15, 20, 23, 29 and 30 is done in reverse order i.e. 4 (rarely/never) to 1
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(always/almost always). The raw impulsiveness measure is the sum of the scores of these responses (the larger the sum, the more impulsive is the respondent). Cumulative scores range from 30 (low in trait-impulsivity) to 120 (high in trait impulsivity). Higher scores indicate higher impulsivity.

**Following instructions were given for BIS-11**

“People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and put an (O) on the appropriate circle on the right side of this page. Do not spend too much time on any statement. Answer quickly and honestly”.

1. Rarely/Never
2. Occasionally
3. Often
4. Almost Always/Always

The BIS-11 has been shown to be reliable in both clinical and community samples, with Cronbach’s alpha coefficients ranging from .79 to .83 (Patton et al., 1995). The BIS-11 is structured to assess long-term patterns of behavior and has been used to assess trait levels of impulsivity across a variety of populations, including substance-dependent individuals. This scale has been used by Stanford, Greve, Boudreaux, Mathias and Brumbelow (1996); Crean, Dewit and Richards (2000); Kirby, Petry and Bickel (1999); Singh (2011) and Agrawal (2015).

3. **Hardiness Scale (Kobasa & Kahn, 1982)**

This scale has 12 items to measure Hardiness. This scale is designed to measure 3 components of Hardiness viz Challenge, Commitment and Control. For total hardiness score, summation of scores on all the three dimensions were calculated.

**Following instructions were given:**

“Write down how much you agree with the following statements, using this scale.

0 = Strongly Disagree
1 = Mildly Disagree
2 = Mildly Agree
3 = Strongly Agree”
The alpha coefficient of total scale is 0.81 (Kobasa, 1982) and 0.74 (Rhodewalt & Zone, 1989). This scale has been used by Rhodewalt and Agustsdottir (1984); Allred and Smith (1989); Thakur (2000), Shourie (2003) and Usha (2011).


Originally the scale was developed in German Language in 1979 by Jerusalem and Schwarzer, and later revised and adapted in thirty other languages including English by various co-authors. The scale was developed to assess Generalized Self-Efficacy with the aim to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. The construct of Perceived Self-Efficacy reflects an optimistic self-belief (Jerusalem & Schwarzer, 1992). This is the belief that one can perform a novel or difficult tasks, or cope with adversity in various domains of human functioning. Perceived self-efficacy facilitates goal-setting, effort investment, persistence in face of barriers and recovery from setbacks. It can be regarded as a positive resistance resource factor. Ten items are designed to tap this construct. Each item refers to successful coping and implies an internal-stable attribution of success. Perceived self-efficacy is an operative construct, i.e., it is related to subsequent behavior and, therefore, is relevant for clinical practice and behavior change.

The scale has 10 items with 4-point scale, ranging from 1 to 4 with 1 indicating not at all true, 2 indicating hardly true, 3 indicating moderately true, to 4 indicating exactly true. Responses to all the 10 items have to be summed up to yield the final composite score ranging from 10 to 40.

Following instructions were given:

“Kindly read the questions/statement that follow carefully. See how often they are applicable to you and indicate your response. None of the responses are right or wrong. Please do not leave any question unanswered. Your responses will be kept strictly confidential. Thus, feel free to give honest responses to the questions. Your co-operation in this connection would be highly appreciated.

Rating scale:

1) = Not At All True 2) = Hardly True 3) = Moderately True 4) = Exactly”
A correlation of at least .80 is suggested for at least one type of reliability as evidence; however, standards range from .50 to .90 depending on the intended use and context for the instrument. In samples from 23 nations, Cronbach’s alphas ranged from 0.76 to 0.90, with the majority in the higher range of 0.80. The scale is unidimensional. Criterion-related validity is documented in numerous correlational studies where positive coefficients were found with favorable emotions, dispositional optimism, and work satisfaction. Negative coefficient was found with depression, anxiety, stress, burnout and health complaints.

This scale has been used in India by Sharma (2005); Kaur (2007); Bala (2007); Dhaliwal (2010); Rampal (2011); Sharma (2012); Jaswal (2013) and Kaur, (2015).

5. Multidimensional Scale of Perceived Social Support (MSPSS ; Zimet et al.,1988)

Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) made this questionnaire to measure the extent to which an individual perceives social support from three sources: Significant Others, Family and Friends (items 6, 7, 9, and 12). The Multidimensional Scale of Perceived Social Support is a brief, easy to administer self-report questionnaire which includes twelve items rated on a seven-point Likert-type scale with scores ranging from very strongly disagree (1) to very strongly agree (7).

Following instructions were given:

“We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

- Circle the “1” if you Very Strongly Disagree
- Circle the “2” if you Strongly Disagree
- Circle the “3” if you Mildly Disagree
- Circle the “4” if you are Neutral
- Circle the “5” if you Mildly Agree
- Circle the “6” if you Strongly Agree
- Circle the “7” if you Very Strongly Agree”
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The Multidimensional Scale of Perceived Social Support (MSPSS) has proven to be psychometrically sound in diverse samples, and to have good internal and test-retest reliability, and robust factorial validity. Overall alpha coefficient was 0.91 and its subscale alpha coefficients ranged from 0.90 to 0.95. Scale has been used in India by Osmany, Ali, Rizvi, Khan and Gupta (2014); Saleem, Tahir and Huda (2013) and Atadokht, Hajloo, Karimi and Narimani (2015).

6. Depression, Anxiety and Stress Scale (DASS 21; Lovibond & Lovibond, 1995)

It has 21 items and three scales for each indicator under study and is designed to measure the negative emotional states of Depression, Anxiety and Stress. The Depression scale assesses depression, feelings of restlessness and blame, despair, devaluing life, self-dissatisfaction, lack of interest/involvement, and immobility. The Anxiety scale measures automatic arousal, situational anxiety, and subjective experience of anxiety. The Stress scale is sensitive to the levels of chronic arousal which causes difficulty in achieving peace and evaluates nerve impulses and leads to being easily confused, irritable and impatient. Respondents use a 4-point Likert type scale ranges from 0 to 3 (0 = never, 1 = low, 2 = moderate, and 3 = high) to assess experiencing these states in the previous week. The scores on depression, anxiety, and stress are calculated by the sum of the scores on related items (Antony, Bieling, Cox, Enns, & Swinson, 1998).

Following instructions were given:

“Please answer all the questions as honestly and accurately as you can. Answer each question by writing the appropriate number corresponding to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>Quite a bit</td>
<td>Very much</td>
</tr>
</tbody>
</table>

In a study conducted on a normal sample, the results indicated that considering depression, anxiety, and stress, this test had a high internal consistency (0.91, 0.84, and 0.90, respectively) (Lovibond & Lovibond, 1995). In another study carried out on a clinical population, the internal consistency coefficients (Cronbach’s alpha) of these three subscales were calculated which were 0.96, 0.89, and 0.93, respectively
(Brown, Chorpita, Korotitsch, & Barlow, 1997). All these coefficients were higher than the minimum acceptable amount recommended by Nunnally and Bernstein (1994), i.e. 0.70. Test-retest coefficients (Pearson) for depression, anxiety, and stress were 0.84, 0.89, and 0.90, respectively. These correlation coefficients were significant ($p < 0.001$). Considering intra-class correlation (0.74), it can be noted that this scale’s validity is desirable. Moreover, given the fact that correlation coefficients are significant, it can be mentioned that DASS’s reliability is acceptable.

The reliabilities of the DASS-21 scales were .88 for Depression, .82 for Anxiety, .90 for Stress, and .93 for the Total scale. The scale has been used in India by Bhasin, Sharma and Saini (2010); Waghachavare, Dhumale, Kadamand and Gore (2013); Yadav, Banwari, Parmar and Mania (2013); Mutalik, Moni, Choudhari and Bhogale (2016); Yadav, Gupta and Malhotra, (2017) and Iliyas, Dar, Dilawar and Rahman (2018).

7. Brief COPE (Carver, 1997)

The Brief COPE scale is a multi-dimensional coping inventory developed to assess a broad range of people's coping response to stress (Carver, 1997). The Brief COPE is an abbreviated version of the COPE Inventory. The Brief COPE is a 28 item measure of coping style use. It uses a 4 point Likert Scale ranging from ‘I haven’t been doing this at all’ to ‘I’ve been doing this a lot’ to enquire a variety of different coping methods such as praying or meditating, receiving emotional support, substance abuse, self-blame, self-criticism, planning, acceptance and positive reframing. The Brief COPE (Carver, 1997) is a self-report questionnaire used to assess a number of different coping behaviors and thoughts a person may have in response to a specific situation. It is made up of 14 subscales: Active Coping and Planning which constitute Problem Focused Coping; Denial, Substance Use and Behavioral Disengagement which constitute Total Avoidant Coping; Instrumental Social Support, Instrumental Emotional Support and Venting which constitute Socially Supported Coping; and Acceptance, Humor, Religion, Positive Reframing, Self-Blame and Self Distraction which constitute Emotion Focused Coping. After reading a situationally specific scenario, 28 coping behaviors and thoughts are rated on frequency of use by the participant with a scale of 1 indicating “I haven’t been doing this at all” to 4 indicating “I've been doing this a lot”. Each subscale is scored separately and the score ranges from 2 to 8.
Following instructions were given:

“These items deal with ways you've been coping with the stress in your life since you found out you were going to have to have this operation. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1 = I haven't been doing this at all
2 = I've been doing this a little bit
3 = I've been doing this a medium amount
4 = I've been doing this a lot”

The Brief COPE showed marginal to adequate internal consistency among community (Carver, 1997) and undergraduate samples (Perczek, Carver, Price, & Pozo-Kaderman, 2000). Cronbach alpha reliability coefficient for the subscale in these samples ranged from .50 to .90 and .57 to .93 respectively. Arellano (2000) reported subscale alpha coefficient ranging from .41 to .85 and .86 for the total instrument. The estimates for test-retest reliability of the COPE inventory ranged from .46 to .86 and .42 to .89 (Carver et al., 1989). Evidence of both, the convergent and discriminant validity of the COPE was reported (Carver et al., 1989). In the reliability and validity data reported by Carver (1997) the Cronbach alphas ranged from .50 to .90. The scale was found to have satisfactory psychometric properties, and evidence for validity is provided (Carver, 1997).

Brief COPE has been used in India by Shakthivel, Amarnath, Ahamed, Rath, Sethuraman and Suliankatchi (2017); Parveenand and Javed (2015) and Iliyas, Dar, Dilawar and Rahman (2018).

PROCEDURE

All the respondents were contacted personally and requested to volunteer for the study. They gave informed consent. These respondents were then given the
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questionnaires in a booklet form and were requested to respond to them truthfully according to given instructions. They were assured that the information they give about themselves and their results would be kept strictly confidential and used for research purposes only. The testing schedule was started by firstly, asking the participants to fill in the general information and then proceed to respond to the tests one after the other until all tests and all questions have been responded to. The testing schedule was conducted personally in 3-4 sittings.

Ethical Considerations

1. Informed consent of the participants was obtained.
2. The confidentiality of the information given by the participants was ensured.

SCORING AND STATISTICAL ANALYSIS

Scoring for all the given tests was done as per the scoring instructions given in manual. The raw scores were tabulated and subjected to various statistical analyses by using Statistical Product and Service Solutions (SPSS) Package. Descriptive statistics i.e. Mean, Standard Deviations (SD’s), t-ratio, Correlation analysis, Stepwise Multiple Regression analysis and Discriminant Functional analysis were carried out for both relapsed and abstinent opioid dependent groups.