METHODOLOGY
Chapter-III

METHODOLOGY

It is evident from the introduction and review of literature that the use of alcohol and other drugs are becoming common in youth or college students. Our students are adopting western patterns of living style and facing several stresses and strains of life both at home and outside, and therefore drug addictive behaviour in student population of our country is not uncommon now. Role of personality, family environment, worry, anxiety and depression are amply demonstrated in the development of such behaviour. Furthermore, self-efficacy of students is considerably lower down following drug addictive behaviour.

Therefore, the present investigator examined the extent of alcohol and other drug use in college students as well as predictors of such behaviour in terms of these measures (viz., locus of control, worry, anxiety, depression, family environment and life events). Effects of drug addictive behaviour in self efficacy also were examined. More specifically following are the aims and objective of this research study:
AIMS OF THE PRESENT STUDY

1. To determine the prevalence and pattern of alcohol and other drug abuse in college students in Haryana during one academic session.

2. To study the role of personality, worry, anxiety and depression in students who abuse drugs.

3. To examine the importance of family environment and life events in this group of students.

4. To explore the effect of drug addictive behaviour in self-efficacy of students.

To fulfill the above aims and keeping the above theoretical background following hypotheses were formulated.
HYPOTHESES

1. Alcohol and tobacco may be the common drug of abuse among the current drug users as compared to other use of drugs.

2. The drug users will be significantly high in external locus of control than non drug-users.

3. The drug users will be significantly high in worry than non drug-users.

4. The drug users will be significantly high in anxiety than non drug-users.

5. The drug users will be significantly high in depression than non drug-users.

6. The drug users will have significantly poor home environment than their non-drug user counterpart.

7. The drug users will experience significantly more life events than non-drug users in past one year.

8. The drug users will be significantly low on self efficacy than non-drug users.
RESEARCH DESIGN

The major part of this study is based on survey methodology. The remaining part of this chapter provides details regarding the selection of the samples, tools used for the data collection, procedure undertaken and statistical techniques employed. It is important to emphasize that the empirical verification of the proposed hypotheses, however depends on the reliable measurements of variables of relevance to the study as well as on the methods and procedures employed for deriving conclusions. This needs (a) selection of adequate sample (b) selection of appropriate tools that could be profitably used for reliable measures (c) administration and scoring of tests, and (d) selection of suitable statistical techniques for analyzing the data.

Thus, it seems appropriate to describe the sample, the tools used and the method and procedure employed in completing the research being reported. Now we will cover the description of the sample used for collecting reliable measures pertaining to the aims and objectives of the study, information concerning different tests, description of the procedure followed for the administration and scoring of different tests. Finally the procedure followed for analysis of data will have been described.
SAMPLING DESIGN

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>Name of colleges</th>
<th>Faculty of courses</th>
<th>No. of students selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D.A.V. College, Ambala City (Science, Arts and Commerce faculties)</td>
<td>1st yr.; 2nd yr. &amp; 3rd yr., science faculty, arts faculty, commerce faculty</td>
<td>* 90 90 90</td>
</tr>
<tr>
<td>2</td>
<td>G.M.N. College, Ambala City (Science, Arts and Commerce faculties)</td>
<td>1st yr.; 2nd yr. &amp; 3rd yr., science faculty, arts faculty, commerce faculty</td>
<td>90 90 90</td>
</tr>
<tr>
<td>3</td>
<td>S.D. College, Ambala City (Science, Arts and Commerce faculties)</td>
<td>1st yr.; 2nd yr. &amp; 3rd yr., science faculty, arts faculty, commerce faculty</td>
<td>90 90 90</td>
</tr>
<tr>
<td></td>
<td><strong>Total students</strong></td>
<td></td>
<td><strong>810</strong></td>
</tr>
</tbody>
</table>

*equal numbers of subjects (30) were selected from each year.

The survey was conducted in two stages. In the first stage, 810 students were studied through the self administered questionnaire method to assess the nature and extent to the prevalence of alcohol and other drug use among the respondents of three colleges described above. The second stage survey (intensive sample) was in depth study of 220 alcohol and drug abuse students and 100 non-user students, through interview method as well as on the basis of psychological tests.

The categories of non-users, alcohol-users and other-drug-users were based on the following criterion of frequency of alcohol and other drug use:

1. The students who have never experimented or used them once in a month or rarely have been categorized as “non-users”.

2. Those who used them “with a frequency of at least once a month without medical prescription” were considered as “current users” (Sethi & Manchanda, 1972).
(3) Those who followed the same criteria as in No.2 in the past but now discontinued were considered as “Past-Users” (tried earlier but discontinued during the time of survey).

(4) Those who used them several times in a week and in a month or used them daily on a regular basis and indicated that they cannot do without a substance (habitual user) were considered as alcohol or drug dependent or drug addict.

For the purpose of analysis, non-users included those who have never experimented or used them rarely. “Past-Users” were also put together in this category but 100 students as “non-users” were randomly selected from rarely. For “Alcohol-users” (Current users) the same criteria as given in No.2 was followed.

Other Drug-users (current users) were also classified in accordance with criteria No.2 provided they don’t fall in the category of “Alcohol-users”.

However students who were alcohol or drug dependent or addicted as per criteria No.4 were also included in the categories of either “Alcohol users” or “Other-Drug-Users”.

By and large, the study adhered to the criteria as employed by the survey study carried out by other investigators in past such as Sethi and Manchanda (1972) and Ram Ahuja (1982).

Following pattern of drug use finally emerged based on the above criteria:

<table>
<thead>
<tr>
<th>Drug-usage</th>
<th>No. of students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-users</td>
<td>496</td>
<td>61.23</td>
</tr>
<tr>
<td>Past Drug users (tried earlier but discontinued)</td>
<td>94</td>
<td>11.60</td>
</tr>
<tr>
<td>Current Drug users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol users</td>
<td>80</td>
<td>9.87</td>
</tr>
<tr>
<td>Other drug users</td>
<td>140</td>
<td>17.28</td>
</tr>
<tr>
<td><strong>Total current drug users</strong></td>
<td><strong>220</strong></td>
<td><strong>27.16</strong></td>
</tr>
</tbody>
</table>

*They also included 18 cases of drug dependence or addiction (8.18%)
Each of the respondents in these three categories of sample was administered the following Battery of Psychological Tests:

1. Performa for general information
2. Rotter's Locus of Control Test (adapted by Agarwal, 1975)
3. Worry Domain Questionnaire (Tallis et al., 1992, 1994)
5. Shortened Beck Depression Inventory (Beck & Beck, 1972)
6. Moos Family Environment Scale (adapted by Joshi & Vyas, 1987)
7. The Presumptive Stressful Life Events (Singh & Kaur, 1981)
8. Self-efficacy Scale (Sherer et al., 1982)

(1) **Performa for General Information**

A performa containing several questions was prepared to have identification data and socio-demographic information of the students including their age, course of study and its faculty etc. (copy enclosed in the appendix). It also contained information regarding detailed drug history based on the manual of National House Hold Survey of “Drug and Alcohol Abuse in India” and so also several “Substance Abuse Rating Scales” including CAGE questionnaire and MAST (Michigan Alcohol Screening Test). Thus this part of performa contained questions on history of substance use any time and current time, nature, quality and frequency of drug used. Also included was information on the effects of used drug.

(2) **Locus of Control (Rotter, 1966)**

Locus of Control Test by Rotter was developed by Rotter (1966) to assess the internal and external dimension of personality. The scale consists of 23 forced choice items, along with 6 filler items, designed to make the purpose of the test less obvious.
(copy of the test is enclosed in appendix). Each item consists of a pair of alternatives, lettered “a” and “b”. One choice in each pair represents externality and internality in each item. The respondent is instructed to select one statement out of each pair which most strongly believes to be the case as far as he is concerned. On this 29 forced choice questionnaire, each question was checked for the answers (whether a or b) selected. One mark was given if respondents ticked ‘a’ for the questions 2, 6, 7, 9, 16, 17, 18, 20, 21, 23, 25, and 29. Similarly, one mark was given to the remaining questions 3, 4, 5, 11, 12, 13, 15, 22, 26, and 28 if they were followed by ‘b’ response. The questions 1, 8, 10, 14, 19, 24, and 27 were filler items. The total score on each questionnaire was calculated by summing up the marks. The lower the score, more is the tendency of internal locus of control whereas higher the score more is the tendency of external locus of control. The scale has been extensively used throughout the world. Its standardization and validation of data is reported by Rotter and many others. The range of possible scores is 0-23. In the current study test adapted in Hindi by Agarwal (1975) was study.

(3) **Worry Domain Questionnaire (WDQ) (Tallis et al., 1992, 1994)**

As a measurement of amount of worry, the worry domain questionnaire (WDQ) (Tallis, Davey, & Bond, 1994) was included (copy of the questionnaire is enclosed). The WDQ is a 25 item measure that covers five domains of everyday worries, namely relationship, lack of confidence, aimless future, work incompetence and financial issues (Joorman & Stober, 1997). Each item presents a potential worry (e.g. “that I will lose close friends” or “that my money will run out”). For each item, respondents indicates, how much they worry on a 5-point scale ranging from not at all (0) to always (4). The minimum score is 0 and maximum score is 100.

The total WDQ score gives a general indication of the intensity of worry frequency. The test is reported to be a reliable and valid measure of worry. The alpha coefficient is 0.85.

(4) **Beck Anxiety Rating Scale (Beck et al., 1988)**

As a measure of anxiety, the Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & steer, 1988) was employed (copy of the scale is enclosed). The BAI comprises of 21 items that cover a broad range of somatic and cognitive anxiety symptoms (e.g.
numbness, feeling hot, feeling of losing control etc.). Each symptom has four response
categories marked as “Not at all”, “Mildly”, “Moderately” and “Severely”. These response
categories were recorded as 0, 1, 2 and 3 respectively. The range of score is 0-63. The
respondents are asked to indicate how much they have been bothered by each symptom
“during the past week including today”. The BAI possesses high internal consistency
(alpha-coefficient is 0.93).

(5) Shortened Beck’s Depression Inventory (1952)

As a measure of depression (or more precisely: depressive symptomatology), this
study included the 13 item short form of Beck’s Depression Inventory (BDI) (Beck &
Beck, 1972). The BDI short form has been developed as a fast screening test for
depressive symptoms. The short and long forms of BDI have shown correlations of .96
and .95 (Beck & Beck, 1972), respectively. In the original instruction for the BDI short
form participants were asked to indicate how they feel “today, that is right now”. The
Beck Depression Inventory, short form consists of 13 items scored in four point rating
scale as 0 to 3. Low score indicates low depression. Total ratings are summed up for total
score of depression. Range of score is 0-39.

(6) Moos Family Environment Scale (Joshi, 1987)

Moos family environment scale suitable for Indian culture as adapted by M.C.
Joshi and O.R. Vyas (1987) was used. This scale was developed to provide a handy tool
to know family environment of the subject (copy of the scale is enclosed in appendix).

The family environment scale assesses the social climates of all types of families.
It focuses on the measurement and description among family members of the directions
of personal growth which are emphasized in the family, and on the basic organizational
structure of the family.

It has subscales described in the table. Each item of every sub-scale is rated on a
five point scale of “4 to zero”. There are some negatively framed items for which the
scoring is in reserve direction of weightage, i.e. “zero to 4”. The total score of each sub-
scale has to be obtained by adding scores obtained in each respective item of that scale.
Thus, for each sub-scale, total is obtained.
Family Environment Scale:
Subscales are given below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Relationship Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cohesion</td>
<td>The extent to which family members are concerned and committed to the family and the degree to which family members are helpful and supportive of each other.</td>
</tr>
<tr>
<td>2. Expressiveness</td>
<td>The extent to which family members are allowed and encouraged to act openly and to express their feelings directly.</td>
</tr>
<tr>
<td>3. Conflict</td>
<td>The extent to which the open expression of anger and aggression and conflictual interaction are characteristic of the family.</td>
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<table>
<thead>
<tr>
<th>Description</th>
<th>Personal Growth Dimensions</th>
</tr>
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<tbody>
<tr>
<td>4. Independence</td>
<td>The extent to which family members are encouraged to be assertive, self-sufficient, to make their own decisions and to think things out for themselves.</td>
</tr>
<tr>
<td>5. Achievement Motivation</td>
<td>The extent to which different types of activities (i.e. school and work) are cast into an achievement oriented or competitive framework.</td>
</tr>
<tr>
<td>6. Intellectual Cultural Orientation</td>
<td>The extent to which the family is concerned about political, social, intellectual and cultural activities.</td>
</tr>
<tr>
<td>7. Active Recreational Orientation</td>
<td>The extent to which the family participates actively in various kinds of recreational and supporting activities.</td>
</tr>
<tr>
<td>8. Moral Religious Emphasis</td>
<td>The extent to which the family actively discusses and emphasised ethical and religious issues and values.</td>
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</table>
### System Maintenance Dimensions

<p>| | | |</p>
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<tbody>
<tr>
<td>9</td>
<td>Organization</td>
<td>Measures how important order and organization is in the family in terms of structuring the family activities, financial planning and explicitness and clarity in regard to family rules and responsibilities.</td>
</tr>
<tr>
<td>10</td>
<td>Control</td>
<td>Assesses the extent to which the family is organized in a hierarchical manner. The rigidity of family rules and procedures and the extent to which family members order each other around.</td>
</tr>
</tbody>
</table>

### SCORING KEY FOR FAMILY ENVIRONMENT SCALE

**A. Relationship Dimension**

(1) Cohesion (c)

- **True** - 1, 18, 28, 47, 62
- **False** - 11, 38, 55

(2) Expressiveness (E)

- **True** - 12, 29, 39, 56, 72
- **False** - 2, 19, 63

(3) Conflict (Co)

- **True** - 3, 20, 40, 48, 64
- **False** - 30, 57, 73

**B. Personal Growth Dimension**

(4) Independence (Ind)

- **True** - 13, 21, 31, 49, 58
- **False** - 4, 41, 65, 74

(5) Achievement orientation (A.O.)

- **True** - 5, 14, 32, 42, 66, 75
- **False** - 22, 50

64
(6) Intellectual cultural organization (I.C.O.)
True- 6, 23, 51, 59, 76
False- 33, 43, 67

(7) Active Recreational Orientation (A.R.O.)
True- 15, 34, 44, 60, 68
False- 7, 24

(8) Moral Religious Emphasis (M.R.E.)
True- 8, 25, 45, 52, 69, 77
False- 16, 35

C. System Maintenance Dimension

(9) Origination (O)
True- 9, 17, 36, 53, 78
False- 26, 70

(10) Control (Con)
True- 27, 37, 46, 71, 79
False- 10, 54, 61

True: Always = 4, Frequently = 3, Generally = 2, Sometime = 1, Never = 0
False: Always = 0, Frequently = 1, Generally = 2, Sometime = 3, Never = 4

Test is reported to be reliable and valid measures of different dimensions of family (Joshi & Vyas, 1987)

The reliability coefficients of the 10 sub-scales found to be varying from a low of 0.68 for independence to a high of 0.86 for cohesion. The test-retest reliability on the 10 sub-scale for individuals who took from R twice with a 2-month of 4-month interval between assessments were relatively high. The scale and its sub-scales have high content validity.

(7) The Presumptive Stressful Life Events (Singh & Kaur, 1981)

Gurmeet Singh’s life events scale was used for this study (copy of the scale is enclosed in the appendix). This scale has been made for use in India as it was felt that in the absence of a proper standardized scale consisting the items which are shown to be
relevant to the Indian culture and represents the common life events experienced as stressful by our population. The scale was constructed with following aims:


2. To estimate the mean number of stressful life events experienced by normal adult population in the culture.

3. To give a quantitative estimation of presumptive stress (weighted scores) as experienced by Indian population in each specified life events in order to quantify the total stress experienced by the different clinical groups.

Scoring of this scale is very simple as total number of events experienced in past one year life time was summed up separately to find out the stress for each individual subject.

(8) Self-efficacy Scale (Sherer & Adams, 1983)

The self-efficacy scale was initially developed by Bandura. As a measurement of general self-efficacy (Bandura, 1977, 1986), the general self efficacy subscale of the self-efficacy (Sherer & Adams, 1983) was selected for this study. A factor analysis yielded two subscales: a general self-efficacy subscale (6 items). The general self-efficacy scale of 17 items is used here (see copy of the scale in appendix). Each item has a 5 point scale (e.g. "when I make plans I am certain that I can make them work") ranging from strongly disagree (scored as -1) to strongly agree (scored as 5). Some negatively worded items are scored in reversed manner as (5, 4, 3, 2, 1).

Cronbach alpha reliability coefficient of .86 and .71 were obtained for the general self-efficacy and for the social self-efficacy sub-scales, respectively. This scale is positively correlated with personality measures such as locus of control and ego-strength etc. providing evidence of construct validity.
PROCEDURE

The major concern of the current study was with drug abuse and with drug addiction or drug dependence. As a consequence the first phase of the study started by eliciting the total number of students' faculty wise and class wise in each of the five colleges. These students were administered a performa/ questionnaire either individually or in a group setting of 5-10 students, depending on the time and availability of the students in their respective colleges. Once the data on alcohol and drug abuse behaviour of 810 students were collected from each of the five colleges, data were analyzed for the three major categories viz non users; current alcohol users and current other drug users. Current alcohol users and current drug-users also included the cases that are dependent as well as who take them not infrequently.

The students who presented themselves as current alcohol users and current other drug users but did not turn out for interview (false positives) were also put in the category of non-users. In the second and final stage of survey based on questionnaire and subsequent interview enquiry, the present researcher had a total of 80 current alcohol users and 140 other drug users as stated earlier.

Of the 496 non-users, (excluding 94 past drug users), 100 students were randomly selected to compare them on psycho-social measures with current alcohol users and current other drug users. Thus 100 non-users, 80 current alcohol users and 140 other drug users were administered questionnaires pertaining to locus of control, worry, anxiety, depression, family environment, life events and self-efficacy. They were personally contacted and tests were given individually in four sessions. The participants were assured that the data are being collected purely for research purpose and would remain confidential. The assertion of confidentiality was accepted in good faith. Participants took keen interest in filling out different questionnaires.

ANALYSIS

The following statistical techniques were employed for analyzing the data:

(A) Descriptive statistics.
(B) Analysis of Variance