CHAPTER III

RESEARCH METHODOLOGY
Need for the Study

Recent studies involving more female subjects reveal that drinking differs between men and women. Women obtain higher concentrations of alcohol in the blood and become more impaired than men after drinking equivalent amounts of alcohol. These have physiological consequences; women are at a higher risk for organ damage and failure than men. Additionally women’s alcohol dependency is considered a taboo which prevents these women from getting the needed intervention and treatment (NIAAA, 1998). Such Gender differences in alcohol use have bolstered costly biases in how societies identify and try to control alcohol-related problems. This research thus attempts to understand in a culture where women have access to alcohol, are they influenced by the same antecedents to alcohol and accordingly do they also face similar psychosocial consequences as men.

The present study thus investigates differences between male and female respondents on alcohol expectancies, stress and coping indicators and social cultural variables as various antecedents to alcohol consumption and psycho social consequences on family and social relationships, occupational hazardous, legal and financial liabilities, with levels of alcohol consumption (hazardous, harmful use and alcohol dependency) as the dependent variable, within Goan society.
The following research questions are being addressed.

1. Is there any significant difference in the levels of alcohol consumption between male and female respondents?

2. Is there any significant difference between males and females with their alcohol expectancies?

3. Is there any significant difference between males and females with their stress indicators?

4. Is there any significant difference between males and females with their coping indicators?

5. Is there any significant difference between males and females with their social cultural variables i.e. age of initiation, availability, peer pressure and family influence as antecedents to levels of alcohol consumption?

6. Is there any significant difference between males and females with their psycho social consequences of alcohol consumption?

7. What is the influence of the independent variables i.e. alcohol expectancies (global/ social enhancement/ health/ women/ negative), stress (who am I, recent life changes/ psychological/ physical/ behavior and emotions), coping (health/ purpose / connection/ stress response/social support), social cultural variables (Availability/ peer pressure/ family influence) and psychosocial consequences of alcohol consumption of respondents, which contributes significantly to the dependent variables i.e. their levels of alcohol consumption (hazardous/harmful use/ alcohol dependency and low risk drinkers).
This chapter contains the methodology of the study and endeavors to represent a systematic account of the steps taken to conduct this research.

**Objectives**

The aim of the study was to understand the significance of alcohol expectancies, stress and coping, social cultural variables and psychosocial consequences on alcohol consumption in the given population.

This was carried out by exposing the respondents to a series of structured questionnaires and standardized test. The respondents were given the AUDIT (Alcohol Use Disorder Identification Test), The Brief Stress and Coping Inventory (BSCI), The Alcohol Expectancy Questionnaire (AEQ), the Social Cultural Variables and Psychosocial Consequences Questionnaire.

The objectives of the study were as follows:

1. To study the significant difference between males and females respondents on levels of alcohol consumption (hazardous, harmful use and dependency) using the AUDIT (alcohol use disorder identification test)

2. To analyze the significant difference between male and female respondents on the antecedents (alcohol expectancies; stress coping indices and balance; social cultural variables) and psychosocial consequences (family and social relationship, absence from occupation, trouble with law/ legal and financial liabilities) of alcohol consumption

3. To find if the following antecedents (alcohol expectancies; stress coping indices and balance; social cultural variables) and psychosocial consequences (family and social relationship, absence from occupation, trouble with law/ legal and financial liabilities) are significantly influenced by
levels of alcohol consumption (hazardous, harmful use and dependency) categorized by AUDIT

**Hypotheses**

The following hypotheses and sub-hypotheses have been formulated based on the above objectives of the study.

**Ha**

There is a significant difference between male and female respondents on levels of alcohol consumption as indicated by the Alcohol Use Disorder Identification Test (AUDIT).

On the whole, women who drink will report to consume less alcohol and have fewer alcohol-related problems and dependence symptoms than men; however, since the biology of women influence the way they metabolize alcohol, among the heaviest drinkers, women will equal or surpass men in their drinking. (NIAAA, 1998)

**Ha**

There is a significant difference between male and female respondents with their hazardous drinking patterns of alcohol.

**Ha**

There is a significant difference between male and female respondents with their harmful use of alcohol.

**Ha**

There is a significant difference between male and female respondents with their dependency to alcohol.
Ha 2

There is a significant difference between male and female respondents across levels of alcohol consumption with their alcohol expectancies.

Expectancies have been implicated in the initiation and maintenance of drinking alcohol (Goldman et al., 1991). Some alcohol expectancies are however more strongly related to actual alcohol consumption than others. In general men would tend to hold stronger positive and weaker negative expectancies than do women; however there could be culture specific beliefs that might influence these perceptions about alcohol between genders.

Ha 2.1

There is a significant difference between male and female respondents with their positive expectancy index - the global positive effect of alcohol.

Ha 2.2

There is a significant difference between male and female respondents with their positive expectancy index of the use of alcohol as a social enhancer.

Ha 2.3

There is a significant difference between male and female respondents with their positive expectancy index of the health benefits of alcohol.

Ha 2.4

There is a significant difference between male and female respondents with their positive expectancy index of the use of alcohol for tension reduction.
**Ha 2.5**

There is a significant difference between male and female respondents with their expectancy index of global negative effects of alcohol consumption.

**Ha 2.6**

There is a significant difference between male and female respondents with their expectancies about women’s alcohol consumption

**Ha 3**

There is a significant difference between males and female respondents with their stress indicators obtained by the Brief Stress and Coping Inventory (BSCI) by Richard Rahe.

Alcohol is seen as a drug disengagement behavior to help cope with life stressors. Adequate and alternative coping strategies take a back seat. This Hypothesis thus predicts that women, more often than men, have difficulty in coping with a stressful situation and this could often turn to alcohol as a means to drown their sorrows.

**Ha 3.1**

There is a significant difference between male and female respondents with their stress index–‘Who You Are’ category of the BSCI

**Ha 3.2**

There is a significant difference between male and female respondents with their stress index–‘Recent Life Changes’ category of the BSCI

**Ha 3.3**

There is a significant difference between male and female respondents with their stress index—physical symptoms of the BSCI.
Ha 3.4
There is a significant difference between male and female respondents with their stress index - psychological symptoms of the BSCI.

Ha 3.5
There is a significant difference between male and female respondents with their stress index - behavioral and emotional predisposition to illness as measured by the BSCI.

Ha 4
There is a significant difference between males and female respondents with their stress indicators obtained by the Brief Stress and Coping Inventory (BSCI) by Richard Rahe.

Ha 4.1
There is a significant difference between scores of male and female respondents with their coping index - health habits of the BSCI

Ha 4.2
There is a significant difference between male and female respondents with their coping index - social support as indicated by the BSCI.

Ha 4.3
There is a significant difference between male and female respondents with their coping index - response to stress as indicated by the BSCI.

Ha 4.4
There is a significant difference between male and female respondents with their coping index - the life satisfaction of the BSCI
There is a significant difference between male and female respondents with their coping index – purpose and connection as indicated by the BSCI.

There is a significant difference between male and female respondents with their social cultural influences to alcohol consumption.

Age of initiation to alcohol use; alcohol availability; peer pressure and family history.

Excessive drinking is a pattern of learned behavior which has been reinforced by societal norms that exists about drinking may include the availability of alcohol (Consumption of Alcohol is seen by many as casual and considered mandatory for festive celebrations); peer pressures and modeling of heavy drinking especially by family members.

There is a significant difference between male and female respondents with their age of initiation to alcohol consumption.

There is a significant difference between male and female respondents with the availability of alcohol.

There is a significant difference between male and female respondents with peer pressure experienced to consume alcohol.

There is a significant difference between male and female respondents with their family of alcohol consumption as a social cultural influence.
Ha 6

There is a significant difference between males and female respondents with the psycho social consequences

Within the Indian context, the women still predominantly play the central figure in a family; however high-risk drinking compromises this role, thereby affecting relationships far strongly than men drinkers.

Ha 6.1

There is a significant difference between males and female respondents with the psycho social consequences of alcohol consumption on family relationships

Ha 6.2

There is a significant difference between males and female respondents with the psycho social consequences of alcohol consumption on social relationships

Ha 6.3

There is a significant difference between males and female respondents with the psycho social consequences of alcohol consumption on occupation

Ha 6.4

There is a significant difference between males and female respondents with the psycho social consequences of alcohol consumption on legal issues

Ha 6.5

There is a significant difference between males and female respondents with the psycho social consequences of alcohol consumption on finances
The independent variables such as alcohol expectancies (global/social enhancement/health/women/negative), stress (who am I, recent life changes/psychological/physical/behaviours/emotions), coping (health/purpose/connection/stress response/social support), social cultural variables (Availability/peer pressure/family influence) and psychosocial consequences of alcohol consumption of respondents, contribute significantly to the dependent variables i.e. their levels of alcohol consumption (hazardous/harmful use/alcohol dependency and low risk drinkers).

**Operational Definitions**

1. **Levels of Alcohol Consumption**

The alcohol contents in the research have been taken from the World Health Organization guidelines where a standard drink is equivalent to 12 grams of pure alcohol, which is equivalent to 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of distilled spirits. For example, one bottle of beer (330 ml at 5% ethanol), a glass of wine (140 ml at 12% ethanol), and a shot of spirits (40 ml at 40% ethanol) represent a standard drink of about 13 g of ethanol.

Figure 3.1 indicates standard drink of about 13 g of ethanol with different types of alcohol beverages

![Image](image.png)

- a) Beer = b) shot of whisky = c) wine = d) cocktail
So one Can Beer is (330 ml) at 5% x (strength) 0.79 (conversion factor) = 13 grams of ethanol; similarly a Wine Glass (140 ml) at 12% x 0.79 = 13.3 grams of ethanol and a Shot Spirits (40 ml) at 40% x 0.79 = 12.6 grams of ethanol.

Keeping these measures into considerations the following levels of drinking have been maintained:

a) Alcohol dependence:

The World Health Organization’s International Classification of Mental and Behavioural Disorders (1992), ICD-10, defines alcohol dependence as a cluster of physiological, behavioural, and cognitive phenomena in which the use of alcohol takes on a much higher priority for a given individual than other behaviours that once had greater value. A central characteristic is the desire (often strong, sometimes perceived as overpowering) to drink alcohol. Return to drinking after a period of abstinence is often associated with rapid reappearance of the features of the syndrome.

The features are described in figure 3.2.

**Figure 3.2:** ICD 10 Criteria for Alcohol Dependence

1. Evidence of tolerance to the effects of alcohol, such that there is a need for markedly increased amounts to achieve intoxication or desired effect, or that there is a markedly diminished effect with continued use of the same amount of alcohol.

2. A physiological withdrawal state when alcohol use is reduced or ceased, as evidence by the characteristic withdrawal syndrome for the substance, or use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms.

3. Persisting with alcohol use despite clear evidence of harmful consequences as evidenced by continued use when the person was actually
aware of, or could be expected to have been aware of, the nature and extent of harm.

4. Preoccupation with alcohol use, as manifested by: important alternative pleasures or interests being given up or reduced because of alcohol use; or a great deal of time being spent in activities necessary to obtain alcohol, consume it, or recover from its effects.

5. Impaired capacity to control drinking, behavioral terms of its onset, termination or level of use, as evidenced by: alcohol being often taken in larger amounts or over a longer period than intended or any unsuccessful effort or persistent desire to cut down or control alcohol use.

6. A strong desire or sense of compulsion to use alcohol.

b) Harmful Drinking

Based on the epidemiological data relating alcohol consumption to harm, the World Health Organization has adopted a working definition of harmful alcohol consumption as a regular average consumption of more than 40g alcohol a day for women and more than 60g a day for men (Rehm et al 2004).

Harmful drinking is thus defined as a pattern of drinking that causes damage to health, either physical (such as liver cirrhosis) or mental (such as depression secondary to alcohol consumption)
c) Hazardous Alcohol Consumption

There is no standardized agreement for the level of alcohol consumption that defines hazardous drinking, and, any level of alcohol consumption can carry risk. A working definition of the World Health Organization describes it as a regular average consumption of 20g-40g of alcohol a day for women and 40g-60g a day for men (Rehm et al. 2004).

Thus hazardous consumption has been defined as a level of consumption or pattern of drinking that is likely to result in harm should present drinking habits persist (Babor et al. 1994). Binge drinking is also categorized under hazardous consumption of alcohol and is defined as having five or more drinks at one sitting for men and four or more drinks at one sitting for women. Not only is binge drinking extremely unhealthy and unsafe, but it significantly increases the possibility of contracting sexually transmitted diseases and the risk of serious injury, and it can also result in alcohol poisoning. In fact due to the fact that most cases of alcohol poisoning are from binge drinking, it is not surprising that the alcohol poisoning statistics are highly correlated to the binge drinking statistics.

d) Low Risk Drinking

Responsible drinking and social drinking, all of which are impossible to define and depend on social, cultural and ethical values can differ widely from country to country, from culture to culture, and from time to time. In this study the consumption of no more than 20 grams of alcohol per day, 5 days a week (recommending 2 non-drinking days) is taken into consideration low risk consumption of alcohol
2. Antecedents

Those factors that introduce or maintain and influence alcohol consumption and for this study, include the following:

a) Alcohol Expectancies

Alcohol expectancies are defined as beliefs about the effects alcohol will have on most people's behaviour, mood and/or emotions. These beliefs are learned through the observation of behaviour of parents and peers and through the influence of mass media, long before the actual consumption of alcohol takes place (Goldman, Brown & Christiansen, 1987). Expectations about alcohol are reinforced through society, and act as incentives to drink. When people then consume alcohol, they perceive the situation selectively and look for a confirmation of their expectations, while being insensitive to aspects of the situation that contradict their expectations. This way, alcohol expectancies are reinforced through a self-fulfilling prophecy. Some alcohol expectancies are however more strongly related to actual alcohol consumption than others. For example, a strong belief that alcohol will produce certain positive outcomes such as social enhancement, positive mood, assertiveness, or coping with problems, or the belief that alcohol will not cause certain negative outcomes such as negative moods, health problems, or cognitive impairment is associated with a higher consumption (Oei & Young, 1999).

b) Stress indictors obtained through The Stress and Coping Balance:

"Stress" often is used to describe the subjective feeling of pressure or tension. However, when scientists refer to stress, they mean the many objective physiological processes that are initiated in response to a stressor. The stress response is a complex process which is often difficult to measure and hence for this study the stress and coping indicators obtained through the Brief
Stress and Coping Inventory by Richard H. Rahe is considered. This inventory includes both stress indices and coping indices. The stress indicators cover five dimensions i.e. the early childhood and development background which helps understand the person’s early life traumas versus a nurturing environment; recent life changes; the physical and psychological symptoms as indicative of present stressors and their behavioral and emotional predispositions to illness. The coping indicators also cover five dimensions i.e. the health habits, social support obtained, their responses to perceived stressful events; life satisfactions and their purpose and connection to life. The difference between these two categories gives a balance that indicates two dimensions of near future health versus illness risk.

c) Social Cultural Variables

This includes traditions and practices that influence alcohol consumption in a given population. Indicators taken into consideration are the age of initiation to alcohol consumption, availability of alcohol consumption in the person’s immediate social environment, family history and current alcohol drinking of parents and siblings, peer pressure measured in terms of time spent with peers who drink, number of peers consuming alcohol, and perceived peer pressure.

3. Consequences of alcohol consumption

In this study, consequences are restricted to psychosocial complications of alcohol use. The repercussions areas of alcohol misuse and abuse that are included in this investigation are the following:

a) **Family relationships** which includes arguments over alcohol use, neglect of family obligations, role change and conflict, quarrels and physical violence.
b) Social relationships which includes peer alienation, misbehavior with others, arguments, fights, decreased social reputation, loss of social position, social ostracization.

c) Legal/ Trouble With Law which includes violation of rules, driving while intoxicated, petty thefts and crimes, arrests and court cases, involvement with criminal gangs, conviction and imprisonment.

d) Financial which includes spending money on alcohol instead of essential needs, not fulfilling financial obligations, exhausting savings, borrowing money and financial bankruptcy.

Method

In the present investigation, while developing research design, alcohol antecedents, consequence and gender are independent variables and levels of alcohol consumption are dependent variables.

Population

The present study investigated female and male respondents on various antecedents and consequence with levels of alcohol consumption as the dependent variable, in Goan society. Thus, the sample was selected from Goa.

Goa a small state on the western coast of the Indian Territory has had the influence of the Portuguese for over 450 years. It is India's smallest, but richest per capita, state in India with a population of 1.3 million people. There is a liberal attitude towards alcohol; in essence Goa is best described as having a wet culture. In wet cultures, alcohol is integrated into daily life and
activities (e.g., is consumed with meals) and is widely available and accessible. In these cultures, abstinence rates are low, and wine is largely the beverage of preference (Kim Bloomfield, 2001). The selection of the sample was conducted in stages.

In the first stage; the AUDIT C which is a three item questionnaire (part of the AUDIT) which determines the level of alcohol dependency was administered to 750 females and 750 males. The sample was obtained through the intercession of doctors, mental health professionals, alcoholic anonymous group members, social workers and peers. From the above population, of the 750 women, 669 were low risk or abstainers and 81 drank at high risk levels. From the 750 men 270 qualified for high risk drinking and the 480 were either categorized as low risk or abstainers.

In the second stage, from this 1500 sample, volunteers were obtained for further investigation. 75 female respondents who were categorized as high risk on the AUDIT and 75 low risk female respondents were selected; and similarly a male population was obtained. The respondents can hence be classified as a convenient population. The age range of the respondents was from 16 years to 75 years (within the age categories of below 25, 26 to 35, and 36 to 45 and above 45 years) (refer table 3.3 and table 3.4). They lived either along the coast, rural or urban (refer table 3.5). The respondents were either single or married with one report of divorce status (refer table 3.6). They were of varied religious affiliations (refer table 3.7). Some of the respondents were still studying, while others were either employed or at home (refer table 3.8). They were categorized into AUDIT indicators as indicated in table 3.3.
Table 3.3: Age group, Gender - Gender Cross Tabulation

<table>
<thead>
<tr>
<th>Age group</th>
<th>Count</th>
<th>Gender Male</th>
<th>Gender Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=25</td>
<td></td>
<td>44</td>
<td>46</td>
<td>90</td>
</tr>
<tr>
<td>26-35</td>
<td></td>
<td>44</td>
<td>50</td>
<td>94</td>
</tr>
<tr>
<td>36-45</td>
<td></td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
<tr>
<td>46+</td>
<td></td>
<td>27</td>
<td>19</td>
<td>46</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>150</td>
<td>150</td>
<td>300</td>
</tr>
</tbody>
</table>

% within gender - gender

29.3% 30.7% 30.0%
29.3% 33.3% 31.3%
23.3% 23.3% 23.3%
18.0% 12.7% 15.3%
100.0% 100.0% 100.0%

Table 3.4: Age, Mean, Standard Deviation of sample (N=300)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Male</td>
<td>34.85</td>
<td>150</td>
<td>13.793</td>
</tr>
<tr>
<td>2 Female</td>
<td>33.03</td>
<td>150</td>
<td>11.082</td>
</tr>
<tr>
<td>Total</td>
<td>33.94</td>
<td>300</td>
<td>12.523</td>
</tr>
</tbody>
</table>

Table 3.5: Frequency, Percentage, Valid Percentage and Cumulative Percentage of Geographical Location of respondents (N=300)

<table>
<thead>
<tr>
<th>Geographical locations</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid 1 Rural</td>
<td>93</td>
<td>31.0</td>
<td>31.0</td>
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</tr>
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</table>
### Table 3.6: Frequency, Percentage, Valid Percentage and Cumulative Percentage of Marital Status of respondents (N=300)

<table>
<thead>
<tr>
<th>Martial status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
<tbody>
<tr>
<td>Valid Single</td>
<td>123</td>
<td>41.0</td>
<td>41.0</td>
<td>41.0</td>
</tr>
<tr>
<td>Married</td>
<td>176</td>
<td>58.7</td>
<td>58.7</td>
<td>99.7</td>
</tr>
<tr>
<td>Widow</td>
<td>1</td>
<td>.3</td>
<td>.3</td>
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<tr>
<td>Total</td>
<td>300</td>
<td>100.0</td>
<td>100.0</td>
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</tr>
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### Table 3.7: Frequency, Percentage, Valid Percentage and Cumulative Percentage of Religious Status of respondents (N=300)

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
<td>Catholic</td>
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<td>67.3</td>
<td>67.3</td>
<td>67.3</td>
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<tr>
<td>Hindu</td>
<td>94</td>
<td>31.3</td>
<td>31.3</td>
<td>98.7</td>
</tr>
<tr>
<td>Muslim</td>
<td>3</td>
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<td>1.0</td>
<td>99.7</td>
</tr>
<tr>
<td>Parsi</td>
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<td>.3</td>
<td>.3</td>
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<tr>
<td>Total</td>
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<td>100.0</td>
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</tr>
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</table>

### Table 3.8: Frequency, Percentage, Valid Percentage and Cumulative Percentage of Occupational Status of Respondents (N=300)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tbody>
<tr>
<td>Prof</td>
<td>185</td>
<td>61.7</td>
<td>61.7</td>
<td>61.7</td>
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<tr>
<td></td>
<td>Student</td>
<td>Housewife</td>
<td>Retired</td>
<td>Total</td>
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<tr>
<td>------</td>
<td>---------</td>
<td>-----------</td>
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<tr>
<td>Sex</td>
<td>74</td>
<td>27</td>
<td>14</td>
<td>300</td>
</tr>
<tr>
<td>%</td>
<td>24.7</td>
<td>9.0</td>
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<tr>
<td>Indicators</td>
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<td>Hazardous</td>
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<tr>
<td>Count</td>
<td>16</td>
<td>33</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>% within gender</td>
<td>10.7%</td>
<td>22.0%</td>
<td>16.3%</td>
<td></td>
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<tr>
<td>Alcohol Dependency</td>
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<td></td>
</tr>
<tr>
<td>Count</td>
<td>42</td>
<td>13</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>% within gender</td>
<td>28.0%</td>
<td>8.7%</td>
<td>18.3%</td>
<td></td>
</tr>
<tr>
<td>Harmful Use</td>
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</tr>
<tr>
<td>Count</td>
<td>17</td>
<td>29</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>% within gender</td>
<td>11.3%</td>
<td>19.3%</td>
<td>15.3%</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Count</td>
<td>38</td>
<td>37</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>% within gender</td>
<td>25.3%</td>
<td>24.7%</td>
<td>25.0%</td>
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<tr>
<td>Low risk</td>
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<tr>
<td>Count</td>
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<td>38</td>
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<td></td>
</tr>
<tr>
<td>% within gender</td>
<td>24.7%</td>
<td>25.3%</td>
<td>25.0%</td>
<td></td>
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<tr>
<td>Total</td>
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</tr>
<tr>
<td>Count</td>
<td>150</td>
<td>150</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>% within gender</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.9: AUDIT indicators: gender - gender Cross tabulation (N =300)
Tools and Measures

**AUDIT - Alcohol Use Disorders Identification Test** (Refer annexure 1).

The AUDIT, that was developed by the World Health Organization (Barbor *et al*., 1989) and has been used in India (Silva *et al*., 2003; Pal *et al*., 2004). The AUDIT covers three domains on alcohol consumption. These are as follows: 1) Hazardous Use (i.e. frequency and quantity of intake); 2) Harmful Use (i.e. guilt after drinking, blackouts, alcohol-related injuries, and others concerned about their drinking), and 3) Dependence (i.e. impaired control over drinking, increased salience, and morning drinking).

The recommended threshold scores are ≥8 for a diagnosis of harmful drinking and ≥20 for a diagnosis of dependent drinking according to the 10th Edition of the International Classification of Diseases (WHO, 1992). This cut-off was based on data from several validation studies (Allen *et al*., 1997; Cherpitel *et al*., 1995; Conigrave *et al*., 1995) include one done in India (Carey *et al*., 2003). This 10-item scale that assesses alcohol use in the past 12 months with a score ranging from 0 to 40. Internal reliability estimates for the scale over 18 studies had an acceptable Cronbach’s alpha with estimates of test-retest reliability ranging from .64 to .92 over three studies (Reinert & Allen, 2002). Shevlin and Smith (2007) found that a three factor model (consumption, associated problems, and dependence) was the best explanation of AUDIT scores based on an analysis of the BPMS.

**The Alcohol Expectancy Questionnaire** (Refer annexure 11).

This is an adaptation by Brown, which identifies both internal features and behavioral changes that the individual associates with alcohol consumption (Brown *et al*., 1987).
Adapting to the local population, some of the expectancy statements were taken and modified and other new statements were added. The items have popular cognitive processes that people encompass about alcohol, which include both the positive expectations as well as negative expectations towards alcohol consumption. Also included is a special dimension that includes expectancy people have regarding the use of alcohol in women. Internal reliability estimates for the scale from previous studies had an acceptable Cronbach’s alpha with estimates of test-retest reliability ranging from .47 and .82 (Brown, Christiansen & Goldman, 1987)

The items were categorized under the following indices.

**Global Expectancies to Alcohol Consumption (EXP G)**

This includes beliefs of the overall positive traits and expectancies of alcohol consumption.

**Expectancies of Health (EXP H)**

The belief or expectation that alcohol has medicinal properties and its consumption will cure illness like a common cold, viral fever and other physical ailments like pain from stomach aches, wounds and keep the person healthy especially the heart.

**Expectancies Regarding Coping with Stress (EXP C)**

This expectancy deals with the belief that alcohol is an enhancer of mood and helps a person to relax after a stressful at day and also can help them cope with a difficult situation by helping them forget their problems.

**Enhancement of Social Enhancement Expectancies (EXP S)**

This expectancy deals with the belief that alcohol will loosen the tongue and extend the hand of friendship and this index includes such a range of behaviors that enhance social interactions like a socializing custom, can talk better in a group, loose inhibitions and have fun in a group.
Global Negative Expectancies (EXP N)

This expectancy deals with a belief that alcohol consumption results in behaviors that are negative, such as people who consume alcohol make a fool of themselves, behave with a lack of responsibility, and show a decrease of performance.

Expectancies on women consuming alcohol (EXPW)

This expectancy carries an inclination towards the prejudice and taboo that women alcoholic are facing compared to men. The belief or expectancy people have towards women consuming alcohol which include women’s drinking and getting drunk in public, having loose morals/ or being a bad parent as compared to men alcoholics

A total of 35 statements corresponding to the above mentioned indices were finalized. (Refer table 3.11 for item wise matching with indices)

The face validity of all this scale was obtained from the consensus of five experts in the field of alcoholism treatment, psychiatry and psychology. Their consensus was also obtained for the appropriateness of the statements. Once again the items in the scales were scrutinized. The suggestions given by the five experts were incorporated. Ambiguous words and expressions in the statements were removed or modified. The scale was again administered to a group of 40 individuals who volunteered to take the test to establish its reliability. Demographic details of the initial trial sample test are given below in table 3.10Table: 3.10 frequency and percentage of the age group of the individuals in the initial trial sample. (N=40)

<table>
<thead>
<tr>
<th>Age group</th>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td></td>
</tr>
<tr>
<td>&lt;25</td>
<td>8</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>25 to 45</td>
<td>8</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>&gt;45</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>
Coefficient alpha was found to be .71. Reliability by the Spearman-Brown method was found to be .070. After establishing its reliability and validity, the questionnaire was then put to use with the sample.

Items in the alcohol expectancy questionnaire with the corresponding indices.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Drinking alcohol makes a person feel good and happy.</td>
<td>EXPG</td>
</tr>
<tr>
<td>02</td>
<td>Drinking alcohol makes people friendlier.</td>
<td>EXPS</td>
</tr>
<tr>
<td>03</td>
<td>Drinking alcohol can cure illnesses like cold and fever.</td>
<td>EXPH</td>
</tr>
<tr>
<td>04</td>
<td>Drinking alcohol relaxes people.</td>
<td>EXPC</td>
</tr>
<tr>
<td>05</td>
<td>Most alcoholic drinks taste good.</td>
<td>EXPG</td>
</tr>
<tr>
<td>06</td>
<td>Drinking alcohol can take a person’s mind off his/her problems at home and work.</td>
<td>EXPC</td>
</tr>
<tr>
<td>07</td>
<td>Drinking is an important socializing custom in business, for relaxation and for improving interpersonal relationships.</td>
<td>EXPS</td>
</tr>
<tr>
<td>08</td>
<td>Hosts that do not serve alcohol at their party are trying to save cost.</td>
<td>EXPG</td>
</tr>
<tr>
<td>09</td>
<td>It is allowed for parents to let their young child sip from their glass of alcohol.</td>
<td>EXPG</td>
</tr>
<tr>
<td>10</td>
<td>People drink alcohol because they enjoy it and it gives them a nice high feeling.</td>
<td>EXPG</td>
</tr>
<tr>
<td>11</td>
<td>A person can talk with the opposite sex better after a few drinks of alcohol.</td>
<td>EXPS</td>
</tr>
<tr>
<td>12</td>
<td>Alcohol has medicinal properties and is a good home remedy.</td>
<td>EXPH</td>
</tr>
<tr>
<td>13</td>
<td>Drinking alcohol makes people worry less.</td>
<td>EXPC</td>
</tr>
<tr>
<td>14</td>
<td>It is easier to speak in front of a group of people after a few drinks of alcohol.</td>
<td>EXPS</td>
</tr>
<tr>
<td>15</td>
<td>Drinking alcohol creates problems.</td>
<td>EXPN</td>
</tr>
<tr>
<td>16</td>
<td>Most alcohol tastes terrible.</td>
<td>EXPN</td>
</tr>
<tr>
<td>17</td>
<td>After consuming alcohol, people tend to laugh a lot and act silly.</td>
<td>EXPN</td>
</tr>
<tr>
<td>18</td>
<td>After a stressful day, alcohol helps you to calm down and sleep.</td>
<td>EXPC</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>Category</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>19</td>
<td>Drinking alcohol makes a bad impression on others.</td>
<td>EXPN</td>
</tr>
<tr>
<td>20</td>
<td>After a few drinks, people loosen up and can have fun at a party.</td>
<td>EXPS</td>
</tr>
<tr>
<td>21</td>
<td>It is hard to reason with a person who has been drinking alcohol.</td>
<td>EXPN</td>
</tr>
<tr>
<td>22</td>
<td>Alcohol consumption helps settle an upset tummy.</td>
<td>EXPH</td>
</tr>
<tr>
<td>23</td>
<td>People are apt to break and destroy things when they are drinking alcohol.</td>
<td>EXPN</td>
</tr>
<tr>
<td>24</td>
<td>Drinking alcohol makes a person feel healthier.</td>
<td>EXPH</td>
</tr>
<tr>
<td>25</td>
<td>When drinking alcohol, people are more likely to insult and make fun of others.</td>
<td>EXPN</td>
</tr>
<tr>
<td>26</td>
<td>In our society, Most women, who get drunk, do so in the quiet.</td>
<td>EXPW</td>
</tr>
<tr>
<td>27</td>
<td>Alcohol consumption helps one cope during stressful situations.</td>
<td>EXPC</td>
</tr>
<tr>
<td>28</td>
<td>Drinking alcohol is good for health.</td>
<td>EXPH</td>
</tr>
<tr>
<td>29</td>
<td>People become loud, noisy and irritating when they consume alcohol.</td>
<td>EXPN</td>
</tr>
<tr>
<td>30</td>
<td>Drinking alcohol does not get rid of problems, it just pushes them aside.</td>
<td>EXPN</td>
</tr>
<tr>
<td>31</td>
<td>People are more likely to be careless and taken advantage of after they have consumed alcohol.</td>
<td>EXPN</td>
</tr>
<tr>
<td>32</td>
<td>A child gets affected much more if a mother is an alcoholic than if the father is an alcoholic.</td>
<td>EXPW</td>
</tr>
<tr>
<td>33</td>
<td>It is against our culture for women to get drunk in public compared to men.</td>
<td>EXPW</td>
</tr>
<tr>
<td>34</td>
<td>Women who get drunk are looked down upon and considered as being with low morals as compared to men.</td>
<td>EXPW</td>
</tr>
<tr>
<td>35</td>
<td>It is acceptable for women to drink socially, but it is unacceptable for her to get drunk.</td>
<td>EXPW</td>
</tr>
</tbody>
</table>

**Brief Stress and Coping Inventory (BSCI)  (Refer Annexure 111)**

This is a standardized questionnaire to measure stress and coping balance. It is a condensed version of the full stress and coping inventory (SCI-2). It has five stress categories and five coping categories.
The five stress categories are:

**Who you are**
This section is a composite of demographic and childhood development information. Dimensions of childhood and developmental background is obtained, early life trauma, and love and caring received during childhood. The more negative answers found in childhood and adolescence the higher the score.

**Recent life changes**
Consist of a list of recent life change events from Dr. Rahe’s research. The BSCI contains 55 of the 74 life events. Each event has a life change unit value, indicating the intensity of change updated in 1995.

**Physical Symptoms**
This section contains symptoms checklist commonly used in medicine to indicate extremely responsiveness to the impact of stress.

**Psychological symptoms**
This section contains two common psychological indicators of stress that are taken from medicine that focuses on anxiety and depression.

**Behaviour and emotion**
This is a measure of predisposition to illness. Aspects of behavior and emotions achieved prominence from works of Friedemen and Roseman and their Type A behavior pattern. Also included is the more recent Themoshok identified a Type C personality which appears to predispose persons for immune suppression disorder, such as cancer.

A total score of 10, or higher, indicates a significant amount of stress in the respondent’s life.
The five categories of coping are:

**Health Habits**

The person’s uses of substance use and abuse, physical activity, and nutrition are investigated.

**Social support**

This index of the coping indicators looks at the social support that a person has excess to like friends, family and community. A key concept to cope with stress is the belief that others support is readily available.

**Responses to stress**

Positive responses involve developing problem solving strategies and finding a silver lining admits life difficulties.

**Life satisfaction**

That explores those aspects of one’s daily life like health, work, relationships and financial matters. The ability to feel fulfilled in these aspects is important for health.

**Purpose and connection**

Sense of purpose and meaning in life is extremely important to mind and body well being i.e. The scale looks at concepts of joy, meaning, purpose and spiritual beliefs

A total coping score of 10- or more, indicates good coping skills.

An individual’s stress and coping balance is then obtained by subtracting their total stress score from their total coping score. If the two totals are equal than the results would be “0”, implying a balanced score. If the total coping score is greater than the total stress score, the results will be a positive number. The larger the positive numbers better the prognosis for health in the upcoming year. If the total coping score is less than the total stress score, a negative response will be the
result. The greater the negative response higher will be the risk for behaviors that are risky and health illnesses.

The scale was then again circulated to the above group of 40 individuals who volunteered to take the test and the reliability of the scale was established. Coefficient alpha was found to be .62. Reliability by the Spearman- Brown method was found to be .060.

Questionnaire on Social Cultural Norms and Consequences (Refer Annexure 1V)

This questionnaire was self-constructed keeping in mind the local social cultural influences to alcohol consumption. Research that has been sponsored by the national institute of alcohol abuse and NIAAA and GENACIS (Gender, Alcohol, and Culture: An International Study) have intently looked at social cultural perspectives and consequences in details. Using this reference, a questionnaire with total of 12 sets of questions was initially formulated.

This questionnaire was circulated to a group of 15 people for an initial examination. Overlapping statements were eliminated or modified. The difficulty levels of each item were was checked out by administering on a pilot sample. The face validity of the above questionnaires was obtained from the consensus of five experts in the field of alcoholism treatment and practicing mental health professionals. Their consensus was also obtained for the appropriateness of the statements. The suggestions were incorporated. The final scale consisted of 12 sets of questions. The scale was then again circulated to a group of 40 individuals who volunteered to take the test and the reliability of the scale was established. Refer table 3.8 for demographic details of the sample. Coefficient alpha was found to be .080. Reliability by Spearman- Brown was found to be .085. Once reliability and validity was established, the scale was put to use with the clinical sample.

A detail description of the indices in the questionnaire are given below
Age of initiation

The age of initiation is that age of the respondent where the respondent took more than just a sip of alcohol and had consumed at least a glass or so of any alcohol beverage.

Availability/Cultural context

The availability / cultural context takes into account the various social and cultural celebrations like birthday parties, weddings, feast and social gatherings, during which alcohol is served to family and guests.

Family influence

Family influence is measured from details of alcohol that is consumed by parents, siblings or relatives of the respondent who could serve as models and create expectations and values about alcohol use.

Peer pressure

Peer pressure as measured by the number of peers drinking, time spent with friends who drink, reactions to refusal to drink along with friends and time spent in actual drinking with peers.

Psycho social Consequences of alcohol consumption

As a result of drinking those behaviors that affect the respondent’s relationship i.e. with family, friends and other social relationships, with the respondents work or occupation, with respondents’ daily households chores, trouble with the law, and financial liabilities caused because of drinking are taken into considerations.

Pilot Study

A pilot study was conducted on the general population to test the effectiveness of the research study with the objective of testing the effectiveness of the tools constructed.

Fifteen females and fifteen males were selected. Their age ranged from 18 to 62 years.
All the tools were administered to the respondents namely the AUDIT, the alcohol expectancy questionnaire, the Brief Stress and Coping Inventory by Rahe and the social cultural and consequence questionnaire.

Once a brief rapport was established, the questionnaires were administered. The respondents was given first given the AUDIT, then the alcohol expectancy questionnaire followed by the stress and coping inventory and finally the social cultural consequences questionnaire was administered. After each questionnaire the respondent was given a break period of about 5 to 15 minutes each.

The following concerns were noted and incorporated in the final study.

The respondents were able to understand the question with no difficulty, however they felt rushed and fatigue over the number of questions to be answered although there was a break period given after every session. It was also observed that the respondents had difficulty responding to questions regarding alcohol consumption initially for the fear of being judged.

After the session ended the respondents felt compelled to know information regarding healthy drinking and requested for scores interpretation.

After reviewing their questions the respondents were met once again and were given their scores with brief counseling over low risk healthy drinking and information obtained about their areas of stress and coping skills.

Based on the conclusion drawn from the pilot study, the procedure of the main study was conducted as follows:

**Procedure**

The procedure contains a detailed explanation of data collections.
The data collection was done over two or three sessions according to the needs of the respondents.

Session 1

This session consisted of building rapport with the respondent and administrating the AUDIT and the brief stress and coping inventory.

1. An initial contact was made via a reference of peer, NGO, Alcohol anonymous, doctor or counselor. Clients were either met at home or at work place or clinic of the doctor or office of NGO. It was made mandatory to have the respondent sit in a place where there would be minimal disturbance in the surrounding.

2. A short explanation for the need of the research study was provided to the respondent and their consent to participate in the same was obtained on a consent form (refer annexure 1).

Confidentiality was ensured to each respondent.

3. Questions if any regarding the research or the data collected were entertained.

4. Thereafter AUDIT was administered which is three questions of the AUDIT and allows for brief screening of respondents.

5. Because of the sensitive nature of data collected it was necessary that a relationship of trust and acceptance be initiated with the respondent, hence questions would either be read or further explained to the respondent and a counseling environment was stimulated by the researcher.

6. After AUDIT C, the respondent was requested to further volunteering for testing.

7. Those respondents that volunteered were administered the BSCI. This questionnaire was filled by the respondent. When needed questions by respondent were answered. Empathy and a nonjudgmental attitude were most important so that respondents did not feel pressurized by time and answered genuinely.
8. Another appointment was obtained according to the convenience of the respondent

**Session 11**

1. The BSCI questionnaire was scored before the next appointment. The respondent was requested if they were interested in the scores of the previous test and accordingly the scores were discussed, highlighting any stress and coping forte or problems area seen. This helped the clients to open up about their feeling and further rapport was initiated that was crucial for trust and empathy required in reveling personal data.

2. The respondents were then administered with the alcohol expectancy questionnaire, the social cultural and consequences questionnaire and the remaining AUDIT questions.

3. If the scores were requested by the respondent then another appointment was obtained.

4. At the end of the session with each of the respondents, were given a presentation titled rethinking drinking. This power point gives information about alcohol consumption and the effects of high risk drinking.

**Data Analysis**

The collected data was scrutinized, coded, scored and then transformed into standard (T) scores. Appropriate statistical analysis was carried out on the data to find out the relation and significance difference between variables under study.
**Statistical Analysis**

The Statistical tools applied to test the hypotheses were

**The independent t-Test** was used to determine whether males and female respondents were significantly different from each other on levels of alcohol consumption, alcohol expectancies, stress, coping, social cultural influences and psycho social consequences.

**Stepwise multiple regression analysis:**

The outcome of the analysis is used to identify the variables that would significantly contribute to the dependent variables.

In summary it can be seen that the main focus of the study is to evaluate women’s alcohol consumption in comparison to men’s alcohol consumption. The questions that are being asked revolve around the alcohol predictors in a given social cultural context. Would the same antecedents influence both the sexes in the manner to consume alcohol and if so are women at the same risk as men? And would the psycho social consequences of alcohol consumption for both men and women be the sam...