METHODOLOGY
There is no doubt that it is around the family and the home that all the greatest virtues, the most dominating virtues of human society, are created, strengthened and maintained.

Winston Churchill
CHAPTER III

METHODOLOGY

AIMS & OBJECTIVES OF THE STUDY

• To examine the personality variables of the alcohol dependent fathers and their male sons.

• To examine the personality variables of the alcohol nondependent fathers and their male sons.

• To examine the family environment of the alcohol dependent fathers and their male sons.

• To examine the family environment of the alcohol nondependent fathers and their male sons.

• To examine the attachment styles of the alcohol dependent fathers and their male sons.

• To examine the attachment styles of the alcohol nondependent fathers and their male sons.

• To study the relationship among personality, family environment and attachment styles in the alcohol dependent fathers and their sons.

• To study the relationship among personality, family environment and attachment styles between the alcohol nondependent fathers and their sons.
HYPOTHESES

1. Fathers with alcohol dependent syndrome will not differ from fathers with non-dependent use of alcohol on extraversion.

2. Fathers with alcohol dependent syndrome will be higher on neuroticism than fathers with non-dependent use of alcohol.

3. Sons of alcohol dependent fathers will not differ on extraversion from children of fathers with non-dependent use of alcohol.

4. Sons of alcohol dependent fathers will be higher on neuroticism than the children of fathers with non-dependent use of alcohol.

5. Fathers with alcohol dependent syndrome will demonstrate insecure attachment styles in comparison to fathers with non-dependent use of alcohol.

6. Sons of alcohol dependent fathers and sons of fathers with non-dependent use of alcohol will use secure attachment styles.

7. Relationship dimensions will be conflictual in families of fathers with alcohol dependent syndrome in comparison to families of fathers with non-dependent use of alcohol.

8. Families of fathers with alcohol dependence syndrome will be lower on personality growth dimensions in comparison to families of fathers with non-dependent use of alcohol.

9. Families of fathers with alcohol dependence syndrome will not differ in system maintenance dimensions from families of fathers with non-dependent use of alcohol.
The present study was a case-control study with four groups of 50 subjects in each group comprising of fathers with alcohol dependence syndrome (ADF), fathers with non-alcohol dependence syndromes (NADF), sons of ADF (SADF) and sons of NADF (SNADF).

The four groups were the following:

1. 50 numbers of non-tribal individuals/fathers with alcohol dependence syndrome (ADS) and their male sons of more than 15 years of age (N= 50). Research throws light that the patterns of alcohol consumption and the reactivity of the family to alcohol use in family members would differ from one ethnic group to another and will not be the same. It is seen that in Assam, the tribals consider drinking alcohol as a norm and a part of their traditions and customs whereas in the plain areas alcohol use is considered to be a health hazard. Hence, the view toward alcoholism differs for which tribal population was excluded in our sample.

2. 50 number of non tribal individuals/fathers with non-alcohol dependence syndrome (NADS) and their male sons of more than 15 years of age (N= 50).
GROUP 1: FATHERS WITH ALCOHOL DEPENDENCE SYNDROME (ADF)

INCLUSION CRITERIA:

Indoor patients of Gauhati Medical College Hospital (GMCH) diagnosed as Alcohol dependence syndrome (ADS) by ICD-10 criteria. Patients with Alcohol dependent syndrome from other hospitals and De-Addiction centres following the same treatment regimen for alcoholics.

- **Age:** 40-60yrs.
- **Ethnicity:** Non-tribal
- **Sex:** Male population.
- **SES:** Middle class.
- **Education:** Minimum qualification- Xth standard.
- **MAST** score of> 13.
GROUP 1 A: SONS OF FATHER WITH ALCOHOL DEPENDENCE SYNDROME (SADF)

- Age: 15 yrs and above
- SES: Middle class.
- Education: Minimum qualification- Xth standard.

EXCLUSION CRITERIA

- History of psychotic disorders
- History of Severe depressive disorder and affective disorder
- History of treatment for any psychiatric disorder in the past.
- History of Epilepsy or past history of generalized tonic-clonic seizures (excluding withdrawal seizures).
- History of Organic Brain Disorder or dysfunctions or Mental Retardation
- History of any chronic debilitating physical illness.
- Past and present history of other drug use and multiple substance abuse/dependence.
Flow Chart no.1

ALCOHOL DEPENDENT FATHER (ADF)

G.M.C.H / KRIPA
OTHERS

ADL CLINICAL SAMPLE 50

SAME TREATMENT REGIMEN

INFORMED CONSENT FORM

SCREENING TOOLS
- MAST / KSES / CL Socio-Demoproforma
- EPI - EYSENCK'S PERSONALITY INVENTORY
- ASQ - ATTACHMENT STYLE Q
- FES - FAMILY ENVIRONMENT SCALE

No. of Hours of assessment 2 hours

SONS OF ALCOHOL DEPENDENT FATHER ADF (SADF)

SADE SAMPLE 50

INFORMED CONSENT FORM
SOCIO DEMOGRAPHICS DATA SHEET

- MAST / KSES / CL
- EPI - EYSENCK'S PERSONALITY INVENTORY
- ASQ - ATTACHMENT STYLE Q
- FES - FAMILY ENVIRONMENT SCALE

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GROUP II: FATHERS WITH NON-ALCOHOL DEPENDENCE SYNDROME (NADF)

Individuals with non-dependent use of alcohol were recruited using the snow-ball technique.

**INCLUSION CRITERIA**

- **Age:** 40-60yrs
- **Ethnicity:** Non-tribal
- **Sex:** Male population
- **SES:** Middle class.
- **Education:** Minimum qualification- Xth standard
- **Score of** <13 in MAST scale.

**Group II A: SONS OF FATHER WITH NON-ALCOHOL DEPENDENCE SYNDROME (SNADF)**

- **Age:** 15 yrs and above
- **SES:** Middle class.
- **Education:** Minimum qualification- Xth standard

**EXCLUSION CRITERIA**

- History of psychotic disorders
- History of Severe depressive disorder and affective disorder
- History of treatment for any psychiatric disorder in the past
- History of Epilepsy or past history of generalized tonic-clonic seizures.
- History of organic brain disorder or dysfunction or Mental Retardation
- History of any chronic debilitating physical illness.

- Past and present history of other drug use and multiple substance abuse/dependence.
Tools administered:

- Informed consent form.
- Socio-demographic proforma.
- Michigan alcohol screening test (MAST) (Selzer, 1971)
- Kuppuswamy socio-economic scale (KSES) (Kuppuswami, 1976)
- Check list of various common ailments
- Eysenck’s Personality Inventory (EPI) (Eysenck & Eysenck, 1964)
- Family Environment Scale (FES) (Rudolf H. Moos and Bernice S. Moos, 1994)
- Attachment Styles Questionnaire (ASQ) (Feeney & Noller, 1994).

Description of the tools

Socio-demographic proforma:

This was developed for the study by the investigator to elicit the respondent’s basic information about age, gender, marital status, education, occupation, income, family composition and children.

Check list of physical illnesses.

This was developed for the study by the investigator to elicit the respondent’s physical illnesses and any chronic debilitating illnesses in the past and present illnesses by history method. Any chronic illnesses which could interfere with the test results, was not included.

Michigan alcohol screening test (MAST) (Selzer 1971)

MAST was developed by (Selzer, 1971) and its one of the oldest and most accurate alcohol screening tests available to identify dependent drinkers with up to
There have been several variations of the MAST that includes the brief MAST, the short MAST, as well as the self-administered MAST.

The MAST is a 22-question self-administered test and is a revised version which helps one to be aware of use or abuse of alcohol. The questions relate to the patient's self-appraisal of social, vocational, and family problems frequently associated with heavy drinking. It assess symptoms and consequences of alcohol abuse, such as guilt about drinking; blackouts; delirium tremens; loss of control; family, social, employment, and legal problems following drinking bouts; and help-seeking behaviors, such as attending alcoholics anonymous meetings or entering a hospital because of drinking.

This test specifically focuses on use and abuse of alcohol and not on the use of other drugs. It has been productively used in a variety of settings with varied populations. The MAST when compared with other diagnostic criteria of alcohol problems gave validity measures with the following span: predictive positive value (PVpos) 0.24–0.96, predictive negative value (PVneg) 0.78–1, sensitivity 0.36–1, and specificity 0.36–0.96. The studies indicate that the long version of the MAST possesses good internal-consistency reliability, as indicated by Cronbach's alpha coefficients of .83 to .93 (Gibbs, 1983). Therefore, the scale does appear to measure a unitary construct.

The various reports of the use of MAST in diverse population and the generally encouraging reviews of its utility as on alcoholism detection technique suggests that MAST is an efficient and economical screening device and had withstood the test of time. (KNOX 1976 & 1978, Landeen et al 1977, Miller D &Krop, 1985, Zung, 1980: Paton and Saunders , 1989).

In our study, to avoid chances and over-inclusion we applied MAST to patients already diagnosed as alcohol dependent in the clinic settings. Selzer scores of 7 for alcohol abuse and in many studies more than 13 for dependency in alcohol was reported. In another study by Ross, Gavin, and Skinner (1990) compared scores on the MAST to diagnoses of alcoholism obtained from the National Institute of Mental Health Diagnostic Interview Schedule (NIMH-DIS) (Robins, Helzer, Croughan, & Ratcliff, 1981). In the study, the MAST cut of score for alcohol dependent syndrome
that yielded the highest overall accuracy was 13 or greater. Hence, in our study we kept 13 as the cut off for ADS group.

In various research studies it is significantly noted that problems of addiction are not limited to individuals in certain social strata but appear to affect people in all the levels of the society and substance use patterns are notorious for their ability to change over time as reported by (Murthy et al., 2010). They used MAST as a screening tool for alcoholism and Michigan alcohol screening test (MAST) was used in most of the surveys in India.
The Kuppuswamy socio-economic scale (KPSS) is a simple instrument to measure the socio-economic status of a person. Education, occupation and income were selected as three variables which is found to contribute to the socio-economic status of a person. Kuppuswamy socio-economic status scale has been in use as an important aid to measure socio-economic status of families in urban communities.

The original 1976 version has been updated by (Mishra & Singh, 2003) and (Kumar, Shekhar, Kumar, & Kundu, 2007) in 2007. Mishra and Singh have pointed out that due to inflation the economic criteria in a scale lose their relevance over time. For this reason they had proposed a revision of the original scale. The scale was last revised in 2007 to bring to income classification up to date and published in public domain in 2007. This latest update, may be applicable in the studies ongoing in 2012 which is done using latest consumer price index numbers for industrial workers – CPI (IW) for January 2012 (accesses http://labourbureau.nic.in/indnum.htm on 4-3-12).

Each variable was scaled from 1-12 points providing equal weightage to the different variables. Total number of items- 21.

The scale had ranges from 3-29. The social classes were divided into the following groups:

- Upper: 26-29
- Middle: 16-25
- Lower Middle: 11-15
- Upper Lower: 5-10
- Lower: < 4
Kuppuswamy’s socio-economic scale: update of income range follows:

<table>
<thead>
<tr>
<th>Score</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>=30375</td>
</tr>
<tr>
<td>10</td>
<td>15188-30374</td>
</tr>
<tr>
<td>6</td>
<td>11362-15187</td>
</tr>
<tr>
<td>4</td>
<td>7594-11361</td>
</tr>
<tr>
<td>3</td>
<td>4556-7593</td>
</tr>
<tr>
<td>2</td>
<td>1521-4555</td>
</tr>
<tr>
<td>1</td>
<td>=1520</td>
</tr>
</tbody>
</table>

Validity of the scale was matched against outside criterion and it was found to be satisfactory. In distribution pattern also it was found to give very satisfactory results. When all the three variables were included the multiple biserial reliability was found to be .885 which is quite significant.

One moderator of parental alcoholism, which is found to influence the well-being of the child and conflicts in family atmosphere is socio-economic stress and adversity. Economic difficulty is associated with alcoholism (Fitzgerald & Zucker, 1995, Midanik & Room, 1992) and in turn, alcoholism frequently results in downward occupational drift leading to dysfunctional family atmosphere (Fitzgerald & Zucker, 1995).

Studies related to SES and alcoholism indicates mixed results. Hence, we had administered this scale and had proposed to take only middle socio-economic status in order to control the sampling bias and to reduce the influence of socio-economic status to alcoholism and family dysfunction.

EYSENECK PERSONALITY INVENTORY (EPI) (Eysenck&Eysenck, 1964)

Eyesenck’s personality inventory (EPI) measures neuroticism and extraversion, and
consists of 2 parallel forms-A and B -thus making retesting possible, without the interference of memory factors. A lie score is also incorporated to assess the possible role of “desirability response set”. EPI form A was administered in the present study. The scale consists of 57 items. The two personality dimensions, Extraversion and Neuroticism, were described in his 1947 book *Dimensions of Personality*.

It is extensively used in psychosomatic research. It is extensively used to measure neuroticism and extraversion in preference to other personality questionnaire by virtue of its brevity, its high reliability and negligible correlation with variables such as age and sex.

It is highly correlated to the M-R score of the Cornell Medical Index. Many of the claims of Eysenck regarding the various aspects of E.P.I. have been confirmed in Indian population. (Abraham, Sundar Rao, & Verghese, 1977) after the scale was standardized in Indian population by Abraham et al and presented in the Indian psychiatric conference annual conference in 1976.

Personality factors especially antisocial personality is identified with alcoholism in most studies. Conrod, Peterson & Pihl, 1997 showed that the psychoticism scale of the EPQ Eysenck and Eysenck 1994, which measures social aspects of personality predicted self reported measures in a sample of non-alcoholic males.

The cut off scores are for Extraversion - Mean 11.3 (+, -) 3.5, Neuroticism-mean 11.6 (+) 4.6 and lie score - 4. This scale is widely used in India since the last decade due to high reliability and validity in Indian population.

**ATTACHMENT STYLE QUESTIONNAIRE (ASQ) (Feeney & Noller, 1994).**

The Attachment Style Questionnaire is a 40-item instrument that provides scores on 5 subscales: Confidence in Self & Others, Need for Approval, Preoccupation with Relationships, Discomfort with Closeness, and Relationships as Secondary. The score on the Confidence subscale provides the measure of secure attachment, while the sum of scores on the remaining four subscales constitutes the measure of insecure attachment.
The instrument was developed and tested by (Feeney et al., 1994) to provide a broader-based measure of the underlying dimensions of adult attachment.

One of the sample items from the secure subscale reads: "Overall, I am a worthwhile person." Sample items from the subscales measuring insecure attachment include: "I find it hard to trust other people" and "I prefer to keep to myself."

The underlying structure of the ASQ is based on (Hazan & Shaver, n.d.) secure, anxious/ambivalent, and avoidant attachment styles and uses a 6-point Likert scale from "Totally disagree" to "Totally agree."

Coefficient alphas for the five subscales ranged from .76 to .84. Test-retest reliability coefficients over a 10-week period ranged from .67 to .78. In order to test the validity of the ASQ, Feeney et al. correlated scales from their new measure with the three Likert ratings based on Hazan and Shaver's original forced-choice measure. As a further validity check, they ran analyses of variance (ANOVAs) using the original forced-choice measure as the independent variable. Again, their findings indicate that the ASQ measures attachment styles similar to those conceptualized by Hazan and Shaver's original measure.

Research on the Attachment Style Questionnaire has shown that the most consistent and useful distinction between attachment styles looks at the secure (Confidence subscale) measure and the combination of the four subscales that comprise the insecure measure (Discomfort with Closeness, Need for Approval, Preoccupation with Relationships, and Relationships as Secondary (Brennan et al., 1991).

The insecure measure can be further broken down into two separate subscales: Anxious/ambivalent and Avoidant. This scale has been used in various studies in India to assess for attachment styles in various population samples and found to be valid and reliable. Hence, we had administered this scale on our sample based on earlier research work with this scale.

**Family Environment Scale (FES) (Rudolf H. Moos and Bernice S. Moos, 1994)**

The Family environment scale by Rudolf H. Moos and Bernice S. Moos is one of 10
social climate scales developed in 1994. The FES is composed of 10 subscales that measure the actual, preferred and expected social environment of families.

FES scale has 90 items. These 10 FES subscales assess three underlying sets of dimensions i.e. relationship dimension, personal growth dimension and system maintenance dimension. Relationship and system maintenance dimension reflect internal family functioning whereas the personal growth dimension primarily reflects the linkages between family and larger social context.

Relationship dimensions

- Cohesion: the degree of commitment, help and support family members provide for one another.
- Expressiveness: the extent to which family members are encouraged to express their feelings directly.
- Conflict: the amount of openly expressed anger and conflict among family members.

Personal growth dimensions

- Independence: the extent to which family members are assertive, self-sufficient and make their own decisions.
- Achievement orientation: how much activities are cast into an achievement oriented or competitive framework.
- Intellectual and cultural orientation: the level of interest in political, intellectual and cultural activities.
- Active-recreational orientation: the amount of participation in social and recreational activities.
- Moral-Religious emphasis: the emphasis on ethical and religious issues and values.
System maintenance dimensions

- **Organization**: the degree of importance of clear organization and structure in planning family activities and responsibilities.

- **Control**: how much set rules and procedures are used to run family life.

It is a 90 item true and false scale of a person's perception of his family environment. The Test-retest reliability on the 10 subscales all in an acceptable range vary from a low of .68 for independence to a high of .86 for cohesion. The internal consistency of the FES scale reported in the manual (Cronbach's $\alpha$) ranged from 0.61 (Independence) to 0.78 (Moral religious emphasis). And 4 week test retest reliability (Kuder–Richardson 20) ranged from 0.54 (Independence) to 0.91 (Moral religious emphasis). The FES has three forms. The Real Form, The Ideal Form and The Expectations Form. The Real form measures people's perception of their current family environment. Clinicians, consultants and program evaluators use this form to understand individuals perception of their family, formulate clinical case descriptions and understand the impact of the family on adaptation, monitor change and promote improvement in families, describe and compare family climates and contrast partner's or children's' perceptions, predict and measure the outcome of treatment, focus on how families adapt to life transitions and crisis and understand the impact of the family on children and adolescents.

We used the Real form in our study to assess the family climate which was found to be relevant in families with alcoholics as it focuses on measurement and description of the interpersonal relationships among family numbers, on the directions of personal growth emphasized within the family, and on the basic organizational structure of the family.

The FES significantly discriminates among families, is sensitive to parent-child differences in the way in which families are perceived is related to family size and drinking patterns and discriminates between psychiatrically disturbed and matched "normal" families. This scale has a reliability of 0.67 and the validity of this tool has been established.
Moos & Moos., (1984) reported acceptably high internal consistencies and 2 month
test retest reliabilities. Support for the construct validity of the FES is based on the
larger number of studies that have used the FES to discriminate more families from
families with depressed member, an alcoholic member (Filstead et al., 1981).

FES has established psychometric properties and it has been used in a number of
alcohol use studies in India. Hence, considering the earlier research and the scale’s
validity we had administered this scale in our study.

DESIGN OF THE STUDY

The study involved two phases: Pilot study and the Main study.

In the pilot study, the translations of the selected scales in Assamese language were
carried out. Three mental health professionals did the translation of the scales. They
did the translations independently and then met to discuss each item of the
translated questionnaire. And then two other psychiatrists did the back translation
into English language.

These scales were administered on two alcoholic dependent fathers and their sons
and two non dependent alcoholic fathers and their sons.

The investigator got familiarized with the tools and it took nearly 2 hours for the
administration of the tools.

In the main study for the ADF population, in-patients of Gauhati Medical College
Hospital (G.M.C.H) and “Kripa Foundation”, an alcohol - detoxification center were
considered for the study.

From G.M.C.H and “Kripa Foundation” the patients taking part had to undergo the
unit's standard regimen in order to keep the withdrawal process under control.
Patients were requested to stop all consumption of alcoholic beverages and non-
prescribed drugs from their first hospital day.

At the end of the second week of abstinence they were screened using the semi-
structured interview for present or previous alcohol dependence, significant somatic
or psychiatric disorder at the time of the study, significant psychiatric disorder in the past and antecedents of affective or psychotic disorders and other psychiatric comorbidity.

Benzodiazepines were used to control the withdrawal symptoms during the first 7-10 days which could affect cognitive functions. The wash out period of long acting benzodiazepine is 7 days and persons may have features of wernicke's encephalopathy which may cause cognitive disturbance. This would affect the findings in the assessment as they would be confounding factors in the study population so only after two weeks the assessment were done. Because all addicts in the present study were more than two weeks abstinent at the time of testing (as confirmed by regular urine tests conducted by the treatment centers), the observed group differences are not attributable to residual drug effects or withdrawal effects.

MAST and KSES were administered as screening tools. Socio-demographic profoma was asked to be filled in and the check list for major physical illnesses was administered followed by Eysenck's Personality Inventory (EPI) scale, Attachment Styles Questionnaire (ASQ) and Family Environment Scale (FES). Their male sons as per the inclusion criteria were administered the same scales following the same procedure as mentioned above.
STUDY DESIGN AND PROCEDURE

PILOT PHASE
- TOOLS SELECTION
  - TRANSLATION – BY STANDARD PROCEDURE
- TOOLS ADMINISTERED
  - 2 ADF / SADF
  - 2 NADF / SNADF
- FAMILIARIZATION WITH TOOLS AND TIMING
  - MAST – APPLIED IN GENERAL POPULATION FOR ADS
  - CLINICAL POPULATION DIAGNOSIS + MAST
- AFTER 2 WEEKS
  - ABSTINENCE
  - TOOLS ADMINISTERED
    - KSES / CL / EPI / ASQ / FES

MAIN PHASE
- CLINICAL
  - G.M.C.H / KRIPA / ALCOHOL CENTER
  - SCREENING TOOLS
    - MAST / KSES / CL
  - INFORMED CONSENT / SOCIO DEMOGRAPHIC DATA
  - EPI – EYSENCK’S PERSONALITY INVENTORY
    - ASQ – ATTACHMENT STYLE Q
    - FES – FAMILY ENVIRONMENT SCALE
- COMMUNITY (SNOW BALL)
  - SCREENING TOOLS
    - MAST / KSES / CL
  - INFORMED CONSENT
    - SOCIO DEMOGRAPHIC SHEETS
  - EPI – EYSENCK’S PERSONALITY INVENTORY
    - ASQ – ATTACHMENT STYLE Q
    - FES – FAMILY ENVIRONMENT SCALE
For the NADF group from the general population. MAST was administered and the individuals who met the criteria for Alcoholism in the MAST score were excluded from the study. Those who had scores less than 13 were included for the NADF group. Those who were included for the study were also screened with a clinical check list interview for associated debilitating chronic physical and mental illnesses.

For the second group recruited from the general population MAST and KSES were administered as screening tools. Socio-demographic profoma was asked to be filled in and

the check list for major physical illnesses was administered followed by Eyesenck’s Personality Inventory (EPI) scale, Attachment Styles Questionnaire (ASQ) and Family Environment Scale (FES). Their male sons as per the inclusion criteria were administered the same scales following the same procedure as mentioned above.

**ETHICAL CONSIDERATIONS**

- Written informed consent was obtained from the study population.

- The group from the hospital and institution were continuing their standard treatment regimen so necessary precautions were taken so that participation in the study by them didn’t affect their treatment process.

- Participation was purely on voluntary basis and they were informed that there would be no direct or indirect benefits for participating in the study.

- Confidentiality and anonymity was assured.

- The participants could withdraw from the study at any point of time without giving any reason for the same.

- They were assured of the researcher’s availability if any assistance was required from the researcher and if required referred to the appropriate agencies for the needful.
“The mentality and behavior of drug addicts and alcoholics is wholly irrational until you understand that they are completely powerless over their addiction and unless they have structured help, they have no hope.”

Russell Brand