CHAPTER III
METHODOLOGY

3.1 INTRODUCTION

In this chapter the method and design selected for the study (knowledge and opinion of infected persons about HIV disease, family environment scale, and marital adjustment inventory) hypotheses formulated, variables selected, selection and assessment procedure of subjects are outlined. In brief the chapter includes the details on the selection of the sample, selection of the tools, procedural aspects of data collection and scoring and statistical methods applied.

3.2 PURPOSE OF THE STUDY

The purpose of the present research work was to find out the problems faced by the rural infected women who are under ARV treatment for more than 3 years. These women may be infected by their husbands or partners and any other route of infection. This study mainly focuses on psycho social factors influencing an anti retro viral drug compliance and adherence to the ARV treatment therapy, to assess how best family supports them, in regular follow up for counseling and treatment therapy, opportunistic infection management, with whom she shares her feelings and reveals her condition in family, how best that person gave care and support for her in family, their attitude towards her and her family members, guardians who support her to take ART drugs, if she is widow or separated from her family, how she maintains her family and children with social stigma, if it is second marriage due to HIV cause then the marital relationship with them, earning status of family member, their psychological and social support for her.

Probably the single most important factor in producing and extending the negative psychosocial effect of HIV and AIDS is stigma. Consequently, actions to reduce or protect against stigma may be the most significant step that can be taken to improve the psychosocial well-being of people with HIV/AIDS. Stigma can be defined as “an act of identifying, labeling, or attributing undesirable qualities targeted towards those who are perceived as being shamefully different and deviant from the social ideal” and as “an attribute that is significantly discrediting (and is) used to set
the affected persons or groups apart from the normalized social order.” (Definitions from UNAIDS Inter-country Team for East and Southern Africa [D. Miller, Stigma and HIV/AIDS in Africa: setting the operational research agenda], Tanzania, June 2001.)

People with HIV/AIDS are stigmatized and discriminated against for many reasons, including the following: 1. HIV is a slow, incurable disease that eventually results in suffering and death. 2. Many people regard HIV as a death sentence. 3. The public often poorly understands how HIV is transmitted and is irrationally afraid of acquiring HIV from people infected with it. 4. HIV transmission is often associated with violations of social mores regarding proper sexual relationships, so people with HIV are associated with having done something “bad.” For example, in some cultures, people believe that a woman becomes infected with HIV because she has violated the mourning period after her husband died. 5. Therapeutic protocols are lacking for anti-HIV medications that could control the spread of the epidemic and prolong lives.

HIV-infected adults live in a social and cultural environment, and the economic and political conditions of the state that they live in directly affect these people. In this complex context there are specific developmental stages that all adults, regardless of their HIV status, tend to go through. Developmental psychology described these stages decades ago, and we should consider them when we want to understand the effect of HIV on an adults’ lives and their movement toward achievement of life tasks. HIV can affect an adult while he or she is forming a couple and developing a sense of intimacy and trust, or while becoming a parent and moving toward a different life stage: parenthood. For a certain period the illness can take away the person’s ability to work and keep a job, thereby affecting the sense of productivity, self-control, and security of daily life. Redefining identity through the condition of HIV can be a big challenge because it can come in deep contradiction with life goals and plans. Sexuality is important during adulthood; however, having a sexually transmitted disease that is not curable will affect dynamics and form of sexual life. Having HIV can affect other social relationships because infected adults need to make decisions regarding levels of HIV diagnosis disclosure. Within the developmental stages of the adult, Rosen et al. (2008) have also noted that the
individual infected with HIV will move through personal psychological stages of response to finding out that he or she is infected. These stages tend to mirror Kübler-Ross’s stages of death and dying because HIV/AIDS is still seen as a threat to life; however, with the stigma associated with both AIDS and sexuality, it also contains aspects of adapting to, and protecting information about, a stigmatized identity.

3.3 STATEMENT OF PROBLEM

To study the knowledge and opinion along with psychosocial factors in anti retro viral drug compliance therapy (ARVT) for rural women afflicted with HIV/AIDS in India.

3.4 OBJECTIVES

1. To study the extent of knowledge regarding HIV/AIDS among rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

2. To study the extent of opinion regarding HIV/AIDS among rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

3. To study the family environment of rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

4. To study level of marital adjustment of rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

5. To study the influence of secondary factors (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) on knowledge of the rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

6. To study the influence of secondary factors (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) on or opinion of the rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

7. To study the influence of secondary factors (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) on knowledge and opinion of the rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.
modalities) on family environment of the rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

8. To study the influence of secondary factors (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) on marital adjustment of the rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

9. To suggest proper measures to improve psycho-social factors among rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy in India.

3.5 HYPOTHESES

Following directional hypotheses have been formulated for the present study:

H1: Knowledge regarding HIV/AIDS is low among rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy.

H2: Opinion regarding HIV/AIDS is unfavorable among rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy.

H3: The family environment of rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy is not encouraging.

H4: The marital adjustment of the rural women identified with HIV/AIDS and undergoing Anti Retro Viral drug therapy is very unsatisfactory.

H5: Secondary variables (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) significantly influence knowledge regarding HIV/AIDS of the rural women identified with HIV/AIDS and undergoing ART.

H6: Secondary variables (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) significantly influence opinion regarding HIV/AIDS of the rural women identified with HIV/AIDS and undergoing ART.

H7: Secondary variables (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) significantly influence family environment of the rural women identified with HIV/AIDS and undergoing ART.
H8: Secondary variables (age, education, family type, occupation, income, route of transmission, clinical stage and treatment modalities) significantly influence marital adjustment of the rural women identified with HIV/AIDS and undergoing ART.

### 3.6 PARTICIPANTS

The sample was drawn from FOUR Anti Retro Viral Treatment centers using patient convenience basis in

1. Krishnarajendra hospital of Mysore medical college, Mysore.
2. Bowring Hospital, Bangalore.
3. District Hospital Chamarajanagar.
4. District Hospital Mandya.

308 women from rural background, patients with human immune deficiency virus infected certified through proper laboratory investigations and also enrolling in Antiretroviral Treatment center for HIV infection consists of treatment purpose and on Antiretroviral treatment and the clinical stages I, II, III, IV were selected. Their age varied between 16 to 50 years.

### 3.7 STUDY DESIGN

The study used a hospital based cross sectional study design by selecting 308 HIV positive rural women patients on prophylactic Antiretroviral Treatment therapy. The study period extended over a period of 24 months between 2\textsuperscript{nd} April, 2007 and 31\textsuperscript{st} March, 2009.

### 3.8 STUDY CRITERIA

#### 3.8.1 Inclusion criteria.

1. The women identified as being afflicted with HIV/AIDS hailing from rural areas and aged above 16 years
2. The cases registered at Anti Retro Viral Drug Treatment (ARVDT) Centre, Krishna Rajendra Hospital, Mysore. Bowring and Lady Curzon Hospital, Bangalore, District Hospital Chamarajanagar and Mandya.
3. The cases with HIV/AIDS and undergoing anti retro viral drug therapy for at least 3 years.
3.8.2 Exclusion Criteria

1. Rural women patients identified with HIV/AIDS but not on Anti Retro Viral Drug therapy.

2. Women HIV/AIDS patients with other serious diseases (physical and psychological)

3.9 SOURCE OF DATA

Data was collected through Questionnaire with personal data sheet which included knowledge and opinion questionnaire on HIV/AIDS, family environment scale, marital adjustment inventory scale and Patient case history (white card in ART center available information about clinical aspect of patient.)

3.10 SAMPLE DETAILS

**Table 3.1: Distribution of the sample by age groups**

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-20</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>21-25</td>
<td>36</td>
<td>11.7</td>
</tr>
<tr>
<td>26-30</td>
<td>93</td>
<td>30.2</td>
</tr>
<tr>
<td>31-35</td>
<td>72</td>
<td>23.4</td>
</tr>
<tr>
<td>36-40</td>
<td>45</td>
<td>14.6</td>
</tr>
<tr>
<td>41 and above</td>
<td>52</td>
<td>16.9</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 3.2: Distribution of the sample by occupation**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled</td>
<td>62</td>
<td>20.1</td>
</tr>
<tr>
<td>Unskilled</td>
<td>113</td>
<td>36.7</td>
</tr>
<tr>
<td>Professional</td>
<td>34</td>
<td>11.0</td>
</tr>
<tr>
<td>unemployed</td>
<td>99</td>
<td>32.1</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 3.3: Distribution of the sample by marital status

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>267</td>
<td>86.7</td>
</tr>
<tr>
<td>Unmarried</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>Separated</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Widow</td>
<td>27</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.4: Distribution of the sample by clinical stages status

<table>
<thead>
<tr>
<th>Clinical staging</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage-I</td>
<td>125</td>
<td>40.6</td>
</tr>
<tr>
<td>Stage-II</td>
<td>94</td>
<td>30.5</td>
</tr>
<tr>
<td>Stage-III</td>
<td>62</td>
<td>20.1</td>
</tr>
<tr>
<td>Stage-IV</td>
<td>27</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
<td>100.0</td>
</tr>
</tbody>
</table>

3.11. TOOLS USED

Following tools were used in present research study:

1. Personal Data Sheet (developed by the researcher)
2. HIV/AIDS Knowledge Questionnaire (developed by the researcher)
3. HIV/AIDS Opinion Questionnaire (developed by the researcher)
4. Marital Adjustment Inventory by Harmohan Singh (1987)
5. Family Environment Scale by Moos and Moos (1986)

3.11.1 Personal Data Sheet

This protocol was included to elicit relevant data on each participant’s ART age, Occupation, Education, Marital Status, Type of Family, Mode of Transmission, Economical Status, Annual income, Age, Pregnancy status, Number of children, Year
of Diagnosis, Opinion Disease, Opportunistic Infection, CD4 count, spouse infection Status, Clinical Stage, Post history of Infection, ARVT Status and treatment. Etc.

3.11.2 Knowledge of HIV/AIDS

Based on review of relevant literature, discussion with subject experts, and perusal of similar tools, the researcher came up with an item pool of 15 questions intended to elicit knowledge, myths or misconceptions associated with cause, characteristics, magnitude, transmission, spread, prevention and treatment of HIV/AIDS to be answered by respondents as ‘right’, ‘wrong’ or ‘can’t say’. Sample items included: ‘A person infected with HIV/AIDS can be recognized by their looks’, ‘A person can get HIV infection by donating blood’, ‘Breast feeding by infected mother spreads HIV/AIDS’, etc. Care was taken to randomly distribute the direction as well as meaning of the statements in such a manner that it did not predispose the respondents to tick only in one given direction. Scoring involved awarding one mark for ‘right’ answer, zero for ‘wrong’ or ‘can’t say’ answers. Higher score for an individual indicates more knowledge in the person. The maximum possible score on this questionnaire is 15 and minimum is zero. The reliability coefficient for this tool was worked out to be 0.696 (Cronbach Alpha). It was evaluated by three experts in the field as having adequate face and content validity.

3.11.3 Opinion regarding HIV/AIDS

Based on review of relevant literature, discussion with subject experts, and perusal of similar tools, the researcher came up with another item pool of 15 statements intended to elicit opinions regarding HIV/AIDS, which was to be answered by respondents as ‘Agree’, ‘Disagree’ and/or ‘Can’t Say’. The statements did not carry any correct or incorrect answers. It was worded only to elicit personal opinions on matters like ‘HIV/AIDS is the punishment given by god’, ‘Open discussion on sex related matters is harmful to society’, etc. The statements and their content were arranged in such a way that they carried both positive and negative valence items in the tool. Scoring involved marking 2 for favorable opinion, zero for unfavorable opinion and 1 for neutral opinion. The higher score of individual indicates favorable opinion as low score denotes unfavorable opinion. The maximum possible score is 30 and minimum score is 0. The questionnaire was pre-tested in a local language and to
establish 2-week test-retest reliability measure on a sample of 15 participants (not a part of the main sample) from different sub populations of the rural areas. After analyzing the data, Cronbach’s Alpha was calculated to assess internal consistency of the questions. Alpha coefficients were found to be 0.81 and 0.75 for ‘knowledge’ and ‘opinion’ on HIV/AIDS. The test retest reliability coefficient was measured at 0.83. Responses to all items were converted to a number score indicating the magnitude of favorable responses.

### 3.11.4 Family Environment Scale (FES)

This has been developed by Moos and Moos (1986). The FES was initially developed on a sample of 285 families drawn from a wide range of sources. Families were recruited from three different Church groups, from a Newspaper advertisement, and through students at a local high school. An ethnic minority sample was recruited in part from the above sources and in part by having Black and Mexican-American families. A disturbed or ‘clinic’ sample was collected from two different sources; a psychiatrically oriented family clinic and a probation and parole department affiliated with a local correctional facility. A representative sample of 100 families was selected from the total group of 285 families. The sample closely approximated the total group both in terms of major socio-demographic characteristics and in terms of the average family social environment. The characteristics of the families differed widely, e.g., the type of home they lived in, whether they were renters or owners, how long they had lived in their present home, whether the number of rooms in their home, or not they spoke a second language, their religious preference and so on. Thus the sample included a diverse group of families and was originally designed to ensure that the FES would be broadly applicable. This scale assesses family social environments as perceived by the family members themselves or with slight item modifications, as rated by some visitors or interviewers. The FES consists 90 true/false items that fall into ten subscales, each of which measures the emphasis on one dimension of family climate. The cohesion, expressiveness and conflict subscales assess relationship dimensions. These subscales assess the extent to which family members feel that they belong to and are proud of their family, the extent to which there is open expression within the family, and the degree to which there is open expression within the family and the degree to which confliction interactions are characteristics of the family. The
second group of subscales assesses personal development or personal growth dimensions. They measure the emphasis within the family on certain developmental process that family living fosters me. Independence measures the emphasis on autonomy and family members doing things on their own. Achievement orientation measures the amount of emphasis on academic and competitive concerns. Intellectual cultural orientation reflects the degree to which the family is concerned with a variety of intellectual and cultural activities. The active recreational orientation and moral religion emphasis sub scales measure other important dimensions of personal growth. The last two sub scales of organization and control measure system maintenance dimension. These dimensions are system oriented in that they obtain information about the structure of organization within the family and about the degree of control usually exerted by family member’s vis-à-vis each other.

**Descriptions of the sub scales of FES**

The first three dimensions, i.e., Cohesion, Expressiveness and Conflict come under Relationship dimension. The second four dimensions are, Independence, Achievement orientation, Intellectual Cultural Orientation, Active Recreationalal, The last three dimensions are Moral Religious Emphasis, Organization and Control. Come under the system Maintenance Dimension. The ten dimensions are described below:

1. **Cohesion (FES1)**

   The extent to which family members are concerned and committed to the family, and the degree to which they are helpful and supportive to each others. The items are 1, 11, 21, 31, 41.51,61,71 and 81

2. **Expressiveness (FES2)**

   The extent to which family members are allowed and encouraged to act openly and to express their feelings directly (there are lot of spontaneous discussions in our family). The items are 2, 12,22,32,42,52,62,72 and 82.
3. Conflict (FES3)

The extent to which open expression of anger and aggression and generally conflictual interactions are characteristics of the family (family members often criticize each other). The items are 3, 13,23,33,43,53,63,73 and 83.

4. Independence (FES4)

The extent to which family members are encouraged to be assertive and self-sufficient to make their own decisions and to think things out for themselves. (In our family, we are strongly encouraged to be independent). The items are 4, 14,24,34,44,54,64,74 and 84.

5. Achievement orientation (FES5)

The extent to which different types of activities (e.g. school and work) are cast into an achievement-oriented or competitive framework (Getting ahead in life is very important in our family). The items are 5, 15,25,35,45,55,65,75 and 85.

6. Intellectual cultural orientation (FES6)

The extent to which the family is concerned about issue like political, social, intellectual and cultural activities. The items are 6, 16,26,36,46,56,66,76 and 86.

7. Active recreational (FES7)

The extent to which the family participates actively involved in various recreational and sporting activities. The items are 7, 17,27,37,47,57,67,77 and 87.

8. Moral-religious emphasis (FES8)

The extent to which the family actively discusses and emphasizes ethical and religious issues and values (Family members attend church, temple fairly often). The items are 8, 18,28,38,48,58,68,78 and 88.
9. Organization (FES9)

The extent to which order and organization are important in the family in terms of structuring of family activities, financial planning and the explicitness and clarity of rules and responsibilities (Activities in our family are pretty well planned). The items are 9, 19, 29, 39, 49, 59, 69, 79 and 89.

10. Control (FES10)

The extent to which the family is organized in a hierarchical manner, the rigidity of rules and procedures and the extent to which family members order each other around (There are very few rules to follow in our family). The items are 10, 20, 30, 40, 50, 60, 70, 80 and 90.

Reliability and validity

The ten sub scales have adequate internal consistency (ranging from 64 to 79) show good eight week, test re-test reliability (ranging from 68 to 86) and show average sub scale inter-correlations around 20 indicating that they measure distinct, though somewhat related aspects of family social environments. In Indian setting, it (FES scale) has been used by Rani (1985) on psychotics and neurotics, Sujatha (1985) on children of alcoholics, Elamma (1988) and Aruna (1988) also used this scale and found to be useful for the purpose of the study.

3.11.5 Marital Adjustment Inventory

Dr. Harmohan Singh of R.B.S College, Agra developed a scale on marital adjustment inventory for literates in the year 1987. This questionnaire contains both form A and Form B for husband and wife respectively. In the present study Form-B for wives was employed. The inventory can also be used for illiterates but the only difference shall be that in this case, it will cease to be self-administering; and self-explanatory. That for illiterates’ examiner should interview the subject and after having his opinion, should himself fill in the inventory.
Instructions to the Husbands/Wives

"Below are given ten questions which should be replied either in negative or in affirmative (No or Yes). After giving the consent, for yes or no, mark yes (√) on the place provided on the inventory, best explaining your opinion towards the issue. The rating scale ranges from 4-10 (most favorable) to +1 (least favorable). Avoid doubtful situations. To make the things clear here is an example:

Q. Do you always quarrel with your Wife/Husband?

Yes... … … … … No (√)

10 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 10 (√)

(Since I never quarrel with my wife, hence I have replied in negative and have marked (√) on 10th place on the rating scale.)

Use of the Inventory

The inventory has been found successful when used with couples of six professions 1) Teachers (schools) 2) Teachers (college) 3) Doctors. 4) Lawyers 5) Businessmen. 6) Clerks. It is suitable for use with both sexes. The high reliability of measures makes possible comparison of one individual with another. The reliabilities are found most significant when data is collected from those persons who give honest and correct (responses) answers. The inventory has two forms, Form-A for husbands Form-B for wives. Each form contains ten questions. Each question may be replied either in Yes or No only. Each Yes or No item is then to be answered by placing (√) Yes on only one point out of ten points on the rating scale ranging from +10 (most favorable) to 4-1 (least favorable). Only selected answers are recorded and scored. This will be clear from the Scoring Key supplied with the Manual.

The total score is then used to indicate the General Marital Adjustment Score of either husband or wife.

1. The inventory is self-administering. To ensure careful understanding of the instructions the examiner should explain the instructions appearing on the second page of the blank while the individual being tested, is reading them.
2. There is no time limit, ordinarily not more than fifteen minutes are required for a person to complete the inventory.

3. Each person being tested should interpret the questions for himself. However the questions regarding the meaning of the words or contents may be answered by the examiner (tester).

4. The examiner should make every effort to secure complete cooperation of the person filling the inventory. He may indicate the value of the results to the person assuring him the scores will be treated with strict confidence honestly.

5. If questions concerning the purpose and use of the inventory arise, they should be answered frankly and honestly.

Scoring

The inventory can be accurately scored in five minutes. Thus, to obtain the score for general marital adjustment, one has to use the scoring key and sum up the scores for each question. Each question may have maximum 10 scores and minimum 1 score and zero score when the reply is other than expected according to the scoring key, as in Table.

<table>
<thead>
<tr>
<th>Scoring Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. Nos.</td>
</tr>
<tr>
<td>Form-A Form-B</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Meaning of the terms

To facilitate, the filling of the blank of the inventor, the following list of meaning of the terms shall be of value:

<table>
<thead>
<tr>
<th>Number stands for</th>
<th>Meaning of number</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Most favorable</td>
</tr>
<tr>
<td>9</td>
<td>significantly favorable</td>
</tr>
<tr>
<td>8</td>
<td>more than slightly favorable</td>
</tr>
<tr>
<td>7</td>
<td>slightly favorable</td>
</tr>
<tr>
<td>6</td>
<td>just favorable</td>
</tr>
<tr>
<td>5</td>
<td>Favorable</td>
</tr>
<tr>
<td>4</td>
<td>definitely favorable</td>
</tr>
<tr>
<td>3</td>
<td>comparatively favorable</td>
</tr>
<tr>
<td>2</td>
<td>more than least favorable</td>
</tr>
<tr>
<td>1</td>
<td>least favorable</td>
</tr>
</tbody>
</table>

Psychometric properties of the tool

Reliability

The coefficient of reliability for each of the six professions of the inventory and for general population is reported in table-2. These were determined for correcting the odd-even terms and applying the Spearman-Brown-prophecy formula. The subjects were from Meerut district.

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Target groups</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teachers (School)</td>
<td>0.89</td>
</tr>
<tr>
<td>2</td>
<td>Teachers (College)</td>
<td>0.85</td>
</tr>
<tr>
<td>3</td>
<td>Doctors</td>
<td>0.87</td>
</tr>
<tr>
<td>4</td>
<td>Businessmen</td>
<td>0.88</td>
</tr>
<tr>
<td>5</td>
<td>Lawyers</td>
<td>0.80</td>
</tr>
<tr>
<td>6</td>
<td>Clerks</td>
<td>0.90</td>
</tr>
<tr>
<td>7</td>
<td>General population</td>
<td>0.90</td>
</tr>
</tbody>
</table>
Validity

The inventory has been validated in the following ways: The items in the inventory were selected in terms of the degree to which they differentiate between the upper and lower fifteen percent of the persons in a distribution of scores. Only those items which clearly differentiated between these extreme groups are included in the present form of the inventory. The results of the various professions were checked during interviews with four hundred couples over a period of a year. Table-4 summarizes the means, the differences between the n cans, and the standard errors of the mean differences of all the groups used for the validation purposes.

Inter Correlations

Coefficients of inter correlation (N = 50)

<table>
<thead>
<tr>
<th></th>
<th>$T_s$</th>
<th>$T_c$</th>
<th>$D_o$</th>
<th>$B_s$</th>
<th>$L_s$</th>
<th>$C_s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers (school)</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers (college)</td>
<td>.54</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor</td>
<td>.42</td>
<td>.45</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Businessmen</td>
<td>.04</td>
<td>.30</td>
<td>.15</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawyers</td>
<td>.05</td>
<td>.05</td>
<td>.30</td>
<td>-.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerks</td>
<td>.62</td>
<td>.15</td>
<td>.05</td>
<td>.31</td>
<td>.10</td>
<td></td>
</tr>
</tbody>
</table>

Norms

The interpretation of individual scores is made more meaningful by the use of certain (six) descriptive designations. However, the difference between the descriptive terms should not be overemphasized since the difference of only one point frequently determines whether the score falls under one heading or another.

If the investigator reports scores to persons who have taken the test, he should use caution in giving out results to those who have evidenced unsatisfactory marital adjustment,
### Interpretation of derived Scores*

<table>
<thead>
<tr>
<th>T-Scores</th>
<th>Sten Scores</th>
<th>Percentile rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 and Above</td>
<td>9 and 10</td>
<td>93 and above</td>
<td>very high</td>
</tr>
<tr>
<td>55-64</td>
<td>7 and 8</td>
<td>71-72</td>
<td>high</td>
</tr>
<tr>
<td>46-54</td>
<td>5 and 6</td>
<td>30-70</td>
<td>Average</td>
</tr>
<tr>
<td>35-45</td>
<td>3 and 4</td>
<td>8-29</td>
<td>low</td>
</tr>
<tr>
<td>34-and below</td>
<td>2 and 1</td>
<td>7 and below</td>
<td>very low</td>
</tr>
</tbody>
</table>

* Other values can be interpolated

1. T-Scores are standard normalized scores with a mean=50 and SD=10

2. Sten-Scores are standard normalized scores with a mean=5.5 and SD=2.

### 3.12 METHOD OF DATA COLLECTION

Study was conducted on out patients at Krishna Rajendra Hospital Mysore, District Hospital Chamarajanagar, Bowring Hospital, Bangalore and positive people network in Mandya district.

#### 3.12.1 Pilot study

A Pilot study on a sub sample of 80 cases was carried out first; informed consent was taken with the assurance of confidentiality by the researcher with appropriate instructions. To avoid fatigue and burden of patient’s time, the questionnaire was administrated in two or three sessions.

The purpose of the pilot study was

a. To check the clarity of the items enlisted in the selected questionnaires

b. To get an approximation of time required to complete the questionnaire

c. To ensure the feasibility of the tools selected for the study

d. To get a fair idea of the respondents reaction towards research study and questionnaires
Each participant was met individually and they were informed in detail regarding the purpose of the study and they were assured absolute confidentiality regarding their identification and the information provided by them. A written informed consent by the participated was obtained. The tests were administered to each person individually. The data collection was done in three session and the researcher establish rapport with the persons and the purpose of the study was made clear to them and they were given appropriate instruction and questions were read out to them and they were asked to indicate response in the questionnaire itself.

3.12.2 Main study

The main study was done in 2 phases.

Phase I: Establishment of Rapport and administration of personal data sheet and FES scale

The researcher introduced himself to each affected rural HIV/AIDS affected women individually and briefed the need for the study. They were assured about the confidentiality of their responses. They were given consent form to fill up so that they were made clear that they are voluntarily participating in the study and not by force. Initially the researcher had to interview them in a casual way to get acquaintance with them so that they feel comfortable with him.

Later the personal information having demographic and other details was collected by the researcher. Once the personal data collection was done, they were continued with family environment scale developed by Moos and Moos. They were asked to answer freely as they wish. Whenever they had the doubt, the researcher clarified such questions by asking them in their local language. The instructions were given according to the manual.

Phase II: Administration of marital adjustment scale and knowledge/opinion regarding HIV inventories

After a gap of 3-4 days, the researcher administered marital adjustment scale as well as knowledge/opinion regarding HIV/AIDS. Same instructions were followed using the manual and as in the previous session.
In the case of illiterate sample, the researcher personally asked each question and enumerated on the prescribed proforma.

Once the data was collected and scrutinized, they were scored and coded. Scoring was done with the help of manuals provided. Further, a master chart was prepared and fed to computer for further statistical analysis.

3.13 STATISTICAL METHOD

Following statistical methods were applied in this study

1. Descriptive statistics
2. Independent samples ‘t’ test
3. One-way ANOVA
4. Tuckey’s Post hoc test

**Descriptive statistics:** The descriptive procedure displays univariate summary statistics for several variables in a single table and calculates standardized values. Descriptive statistics are used to describe the main features of collection of data in quantitative terms. Descriptive statistics provides general description of the sample in the form of central tendencies and measures of variability. In the present study mean values were calculated for each of the component of Family environment scale, marital adjustment scores as well as knowledge/opinion towards HIV/AIDS for the samples selected along with standard deviation values to get an idea regarding measures of central location and scatteredness of scores.

**One-way ANOVA:** The One-Way ANOVA procedure produces a one-way analysis of variance for a quantitative dependent variable by a single factor (independent) variable. Analysis of variance is used to test the hypothesis that several means are equal. This technique is an extension of the two-sample ‘t’ test. In the present study one-way ANOVA was employed to find out the influence of secondary variables on FES, marital adjustment and Knowledge/opinion regarding HIV/AIDS.

**Tuckey’s Post hoc test:** Tuckey’s post hoc test is one of the multiple range tests to see which of the means are different from other means. Post hoc comparisons are generally performed only after obtaining a significant omnibus F. Then we look at all
possible pair-wise or all possible pair-wise and otherwise comparisons. Here, we are focusing on the largest difference between levels of the Independent variable, but the researcher is still sifting through the data in hopes of finding something significant. Because of this, there is a very real problem that researcher will be capitalizing on chance findings; One probably would not look at or care about comparisons that do not differ. The largest differences, whatever they may be, are the most likely to be significant due to chance. In the present study Tuckey’s post hoc test was applied, whenever F value became significant, to see which of the mean differences are significant.

All the statistical calculations were done through SPSS for Windows software (version 16.0).

3.14 ETHICAL ISSUES AND ETHICAL CLEARANCE

The complete work was done in accordance with the permission granted by Human Ethical Committee of Department of Clinical Psychology, All India Institute of Speech and Hearing, Mysore, Karnataka.

1. Written informed consent was obtained from each subject participating in the study. (Appendix II)

2. Confidentiality was assured and maintained.

3. The subjects were explained about the nature of study and information the participant given in the research is voluntary and they have the right to opt out at anytime.

3.15 APA REFERENCING STYLE (6TH EDITION) USED FOR REFERENCE.

1. The American Psychological Association reference style uses the Author-Date format.