Chapter-III

Method

This chapter deals with the methods followed in the study, such as, the research design, the sample chosen, the tools used, the procedure for collection of data and the statistical techniques employed for analysis of the data.

Research design

The present study is descriptive in nature. Out of the many descriptive methods, the survey method was adopted for the study. A survey is an attempt to collect data from members of a population in order to determine the status of that population with respect to the variables. The survey method is undoubtedly the most popular and the most widely used research method in social sciences research. It is very useful in getting descriptive data, which people can provide from their own experience. It is the only method through which the opinion, attitude, suggestions for improvement and such other data can be obtained.

In this research, the investigator attempted to know and compare the home environment, the coping styles, psychological adjustment, and the personality characteristics of conduct-disordered and normal children and to make an analysis of the relative impact of, and the relationships between these variables among conduct disorder children. So the research design used for this study was ex post facto
research. Ex post facto research is a systematic empirical inquiry in which the scientist does not have direct control of the independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among the variables are made, without direct intervention, from concomitant variations of independent and dependent variables.

Sample

The study made use of two samples, the main/clinical sample comprising of 50 conduct disorder children, and a matched (with respect to age and gender) sample of 50 normal children for comparison purposes. Out of 50 conduct disorder children, 36 were childhood onset type and 14 were adolescent onset-type. The main sample was selected using multi-stage random sampling method. In the first stage, out of the six juvenile justice homes, four juvenile homes and four observation homes in the state of Kerala were selected. In the second stage, from the selected institutions the participants who met the inclusion criteria were selected by administering the screening test and a list of such children was prepared. From this list, the conduct disorder children who have given their informed consent were included in the sample. Then the tools were administered individually and interviews were made with parents/care givers. The case histories in respect of each of these children also were taken from the official records. The matched group compared with respect to age and gender was selected from different zones of Kerala.
Table 1

Breakup of the sample

<table>
<thead>
<tr>
<th></th>
<th>CD Children</th>
<th>Normal children</th>
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Clinical sample

Inclusion criteria

- Children who obtained scores above 9 in OADP
- Children in the age group of 12 to 18 years
- Children fulfilling criteria for the ICD-10 diagnosis of Conduct Disorders (F91), and Mixed Disorder of Conduct and Emotions (F92)
- Children who are attending and who have attended school
- Children whose parents and/or care givers were available for interview

Exclusion criteria

- Children who got scores below 9 in OADP
- Children below the age of 12 years and above the age of 18 years
- Children with mental retardation
- Children with pervasive developmental disorders
- Children with sensory and motor handicaps
- Children who are staying in orphanages
- Children not having attended schools

Non-clinical sample

A matched group of 50 healthy normal children was selected after screening and those who scored below the cut-off point of 9 in Oregon Adolescent Depression Project Conduct disorder Screener (OADP) were selected for the study.

Inclusion Criteria

- Children in the age group of 12 to 18 years
- Children who got scores below 9 in OADP
- Children who are attending and have attended schools

Exclusion Criteria

- Children below the age of 12 years and above the age of 18 years
- Children who got scores above 9 in OADP
- Children with mental retardation
- Children with pervasive developmental disorders
- Children with sensory and motor handicaps
- Children with any other identified mental/physical disorders
Illiterates

Children who are staying in orphanages

Tools

The following six tools were used for collecting the relevant data for the study:

1) Personal Information Schedule
2) Oregon Adolescent Depression Project Conduct Disorder Screener
3) Home Environment Scale
4) Coping Scale for Children and Youth
5) IAS Rating Scale
6) Adjustment Inventory

1. Personal Information Schedule

The Personal Information Schedule was prepared by the investigator in order to collect information regarding the sociodemographic characteristics of the participants like age, gender, number of siblings, order of birth, religion, type of family, education of the parents, occupation of the parents, economic status, locality, extracurricular activities, mental illness in the family, alcoholism, smoking, drug use, and dysfunctional family. The case histories of the children also were made use of in collecting the relevant information.
1. Oregon Adolescent Depression Project Conduct Disorder Screener

(OADP-CDS)

In the present study, the OADP was used only for screening the conduct disorder children. The test was developed by Lewinsohn et al. (2000). This is a six-item self-report screener for conduct disorder developed for adolescents and it was found effective to predict antisocial personality disorder at later stages also.

The OADP-CDS comprises of six items, to be rated on a four-point scale with the following response categories and scores:

“Rarely or none of the time = 1; Some or little of the time = 2; Occasionally or a moderate amount of time = 3 and Most or all the time = 4”.

The total score is the sum of all the responses, with a highest possible score of 24 and a lowest possible score of 6. A cut off point of ‘9’ was found to have high sensitivity and specificity to identify conduct disorder cases.

**Reliability and Validity**

The test-retest reliability coefficients ranged from .10 to .33 for the scale. The tool has discriminant validity and prospective validity. The authors also have reported that the validity of the tool was not attenuated by the tendency of respondents to underreport socially desirable behaviors when participants were assured of anonymity.
2. Home Environment Scale

The ‘Home Environment’ scale developed by Sarla Jawa (1997) was used to measure the perceptions of the participants toward various aspects of their home environment. The scale consists of 74 items measuring the following 13 components of home environment with a five point response category of “Always = 5; Very often = 4; Sometimes = 3; Seldom = 2; Never = 1”. The direction of scoring is reversed for negatively worded items. In addition to the 13 subscales scores, the total score may be obtained by adding all the subscale scores. The possible range of scores was 74 to 370. In all cases, a lower score indicates better home environment. Thirteen variables (factors) were identified as factors involved in child-rearing, which constituted how parents bring up their children.

The 13 components/subscales are given below.

Personal freedom: Freedom of the person in going and coming, freedom of opinion and its expression at home. Children whose parents fail to give personal freedom through neglect, abuse or misguided permissiveness, either learn the hard way on their own, find a way to abandon their personal freedom, or become the sociopathic monsters in future.

Critical: This means willingness or being able to criticize or find faults. When it comes to parents, children never want them to find their faults; not even look out
for their faults. But, this is not always the case. Parents criticize their children with
the hope that it will be for the good of their children. Some children may take this
in a positive sense, but others may feel that parents are trying to portray them in
the wrong way in front of others. Creating a ‘good for nothing’ attitude in a child
is the worst thing any parent can do to a child.

**Social isolation:** Social isolation can lead to staying home for days or weeks at a
time; having no communication with anyone including family or even the most
peripheral of acquaintances and friends; and willfully avoiding any contact with
other humans when those opportunities do arise.

**Acceptance:** This refers to considering someone or something as satisfactory and
welcoming. It can be viewed as the opposite of rejection, which indicates refusing
to accept, use, or believe someone or something. Parents are the people who are
believed to accept their children, irrespective of the behaviour of their children.
But, all children do not feel accepted to the same level. There are differences in
the way children feel accepted or rejected, which is directly related to how parents
behave towards them. This difference in parental acceptance will definitely affect
the behaviour of the children.

**Understanding:** Children always want their parents to be understanding.
Understanding means having the ability to know how someone else is feeling or
what their situation is, and forgiving them if they do something wrong. A
relationship is understanding when it is positive, truthful, and sympathetic. When children feel that there is no one to understand and help them, it may lead to a negative, dishonest, and unhappy parent-child relationship.

**Severity of discipline**: It means to order, limit, instruct or rule something or someone’s actions or behaviours. Most parents are not sure as to the amount of control that is to be exerted on their children. Sometimes this confusion may lead the children to get an impression, which is not the same as what their parents intend to. No one likes others to control them. But, when it comes to parents, they are believed to have the right to control their children. Sometimes this controlling behaviour of the parents may go to such an extreme that it may be difficult for the child to tolerate. Each child is unique and children differ in the way they are affected by the control-permissiveness dimension of the behavior of their parents.

**Emotional stability in disciplinary action**: This means emotionally and mentally balanced and consistent. There are immense circumstances where people lose their balance and get irritated. We have to overcome these variations and changes and should try to be in a balanced state. For a healthy personality we have to maintain emotional stability. Emotional instability on the part of the parents can have a very negative effect on their children. Children may be hesitant to interact with parents, who are suffering from sudden and extreme changes in their mental and emotional state. They may not interact openly with their parents, as they are
confused about how their parents would react. A certainty regarding how their parents would react towards them would bring a sort of openness in the child’s interaction with their parents.

**Neglecting:** Neglecting is ongoing failure to provide the right care and attention to children’s needs, including food and safe environment, or to a child's emotional needs including warmth, security, and love. A lack of these things is likely to result in serious damage to the child's health or emotional development.

**Rapport with parents, and rapport with siblings:** This refers to a harmonious understanding or relationship. It means a good understanding of someone and ability to communicate well with them. Most children want their parents and siblings to behave in a friendly manner towards them. Parents and siblings are considered to be the people with whom one can completely open up their thoughts and feelings. Whatever happens between parents and children, the harmonious relationship is always expected to exist. It is expected that parents be the best friends of their children. When children are in trouble, they always want to share their worries with someone trustworthy, and for them, parents are the best people. As rapport between parents and children increases, happiness also increases. However, all parents do not maintain good rapport with their children. Some parents are too busy to find time for their children, which will have a negative effect on the parent-child relationship.
Socio-economic image: Socio-economic image is resulting from how the individual perceives himself or herself based on occupation, education, income, and place of residence. SES (socioeconomic status) and position of the family in the society have influence on the disparity of self-image among children. Psychologists and sociologists often use socioeconomic image as a means of predicting behavior.

Inter-parental relations: Keeping the characteristic of a parent, parental feelings or having the relation of a parent between the parents, parent and child or other members of a family.

General satisfaction: General satisfaction of children at home includes personal freedom, being un-critical, effective social communication and attachment, acceptance and understanding from the part of parents, emotional stability in disciplinary action, proper rapport with parents and siblings, healthy inter-parental relations, etc.

Reliability and validity

The split- half reliability coefficient of the scale using the Spearman-Brown formula is found to be .88. Guilford (1963) suggests that if a test measures only one factor, it is desirable to combine the sub-test scores in order to increase reliability of the criterion. The scale has demonstrated its validity as a good
measure of perceived home environment in many studies (Menon, 2003; Shiny, 2001; Joseph, 2000).

The scores of 400 students for the components were factor analyzed by using principle-component method of Hotelling (1933). The results of the factor analysis yielded only one factor.

3. Coping Scale for Children and Youth

The coping scale for children and youth developed by Brodzinsky et al. (1992) was used to assess the coping skills of the participants. The scale, developed on the basis of factor analysis, consists of 29 items, representing four factors, namely, assistance seeking, cognitive–behavioral problem solving, cognitive avoidance, and behavioral avoidance. The objective of the scale is to assess the presence and strength of coping skills in children and adolescents. A four point response category of Never = 0; Sometimes = 1; Often = 2; very often = 3 was used for scoring. The direction of scoring is reversed for the negatively worded item 5. The subscale scores are obtained by adding the individual item response for that subscale. Active coping was a single indicator, using a composite score calculated by adding the assistance seeking and the cognitive-behavioral problem solving subscale scores. Children were asked to focus on a recent primary stressor and respond to items about coping strategies according to the degree to which the strategy was used to deal with the identified stressor. High scores indicate greater active coping. Child avoidance coping also was
a single indicator calculated as a composite score by adding behavioral and cognitive avoidance subscale scores. The same instructions, response options and scoring described above for child active coping were used. The brief descriptions of the four factors are given below.

**Assistance seeking (ASK)** refers to asking others for help or advice, as well as sharing feelings with others in a state of stress.

**Cognitive-behavioral problem solving (PROB)** involves the use of strategies or those attempts made to generate alternative solutions, act on possible ones and reframe the problem such that it is less disturbing. This coping strategy is associated with increased parent-related social competence.

**Cognitive avoidance (CAV)** involves not thinking about the stressor, fantasizing that it did not happen or avoiding being exposed to stressful situations. In other words, it is avoidant actions, repression (going back to childhood memories) and wishful thinking or imaging the problem was better (e.g., put it out of your mind).

**Behavioral avoidance (BAV)** involves active attempts to avoid reminders of the problem. Behavioral avoidant coping was associated with greater self-reported anxiety and parent-rated externalizing behavior.

**Reliability and Validity**

The scale is reported to have high internal consistency of .70 to .81 and test-retest reliability coefficients of .73 to .81. The internal reliability is .72 for assistance
seeking, .81 for cognitive behavioral problem solving, .80 for cognitive-avoidance, and .70 for behavioral-avoidance category and also have high degree of test-retest reliability (.80, .80, .81, and .73) and high construct validity for each coping category. Further studies on a critical psychometric review in adolescent coping scales (Sveinbjornsdottir & Thorsteinsson, 2008) have reported low to moderate correlations between the four factors of the CSCY and seven out of ten of Kidcope’s coping strategies (Spirito et al., 1988), with coefficients ranging from .30 to .62.

4. IAS Rating Scale

The IAS rating scale was developed by Mathew (1995) is used for rating one’s own personality or the personality of another person. The scale consists of 35 items measuring the root personality variables Inertia or Thamas, Activation or Rajas and Stability or Sathwa. The instrument can be used to get self ratings or other ratings. Other ratings involve Typical Group Member rating (TGM), Peer rating, Superior rating, and Subordinate rating. Another possible type of rating is Expert rating. The rating scale can be administered individually or in groups. The scoring is done by checking the answer sheet for omissions. Write 1, 1, 1 for omitted scales. It is recommended that an answer sheet with more than three omitted scales should not be scored. The total point for one scale is 3. Fill in blanks or make necessary corrections to make totals 3. Add the points in each column. Thus, there will be three scores (for I, A and S) for each type of rating. The total of the three scores should be 105. Scores
can be interpreted in an absolute sense by comparing the relative predominance of the three raw scores of each individual, or means of a group. In the present study, only self-rating was employed. The three components of personality are mutually exclusive. The items were classified into the following categories.

**Inertia** is inability to act; it is the result of overall inhibition resulting from restrictiveness. It is also seen in people subjected to a great deal of social restriction. A man with a great degree of inertia gives an impression of apparent balance when not exposed to stress. However, when he has to face situations which he is not biologically programmed for, he tends to withdraw or breakdown as he has a low level of stress tolerance. He is incapable of having deep emotions. When stress is prolonged and when these devices are not satisfactory, he may break down into psychosis.

**Activation** is inability to rest; be alone to be at peace with oneself. It is seen in people having to be adventurous and active to survive. They generally have high degree of mechanical ability, manipulative skill to plan ahead, for purposely organize them and be active and alert. These people are with a great deal of restlessness and ambition. When exposed to immediate stress, they become aggressive and may show delinquent, criminal or psychopathic behavior.

**Stability** is transcendence, self-sufficiency and meta-motivation, and the ability to act or not act; mix with others or be alone with equal ease. At the cortical level
this involves balance or transcendence. A man with a great deal of stability has the maximum stress tolerance, he responds to delicate things like incongruity of instructions, moral contradictions, and so on. He is capable of deep emotions.

Modern concept of introversion involves a mixture of inertia and stability and the concepts of extraversion include activation and stability.

**Reliability and Validity**

The scale is a revision of two personality inventories; the SRT inventory (Mathew, 1972) and the Mathew Temperament Scale (Mathew, 1976). Reliabilities were determined for each population for each type of rating. Reliabilities are in general high, particularly for reasonably educated adult raters. Vinodkumar (1995) reports split-half reliabilities of .73, .89, and .86 for the scales I, A, and S respectively in a sample of 43 adult raters for self-rating.

The trait classification has a high degree of construct validity as they are based on a highly developed theory anchored on a time-tested traditional concept of personality. Meaningful mean group differences have been reported on the three scales in a variety of studies.

**5. Adjustment Inventory**

The SRA junior inventory, Form A developed by Rammers and Baverfield (1951) was used to study the adjustment status of the respondents. It is a needs and problems inventory designed for use with boys and girls in grades four through
twelve. The SRA inventory was developed for a number of reasons, one of them being to provide a research instrument for the psychological study of children’s problems. The scale consists of 102 items measuring the five major areas of needs and problems viz., health, social, school, self, and home. The child has to mark the problems as ‘yes’ that bother or worry them. The scoring is done as ‘1’ or ‘0’ depending on the presence or absence of a problem. Thus five sets of scores are obtained, one from each area. The higher the score, the greater the likelihood that a child is having difficulty adjusting in a particular area. That is, a high score indicates poor adjustment. There are both positive and negative items in each area.

The five areas of adjustment are described below.

*Health adjustment:* About me and my health, this contains eighteen items dealing with attitudes toward health of children.

*Social adjustment:* Getting along with other people. This section contains twenty-four statements in the area of social adjustment.

*School adjustment:* About me and my school, this contains eighteen items dealing with attitudes toward school and school activities.

*Self adjustment:* About myself is a section in which twenty-three items which concentrates upon the concept of a child as seen by himself.

*Home adjustment:* About me and my home, this contains nineteen items covering the attitudes of the child about his home and family.
Reliability and Validity

The inventory was initially analyzed statistically on a stratified sample of 847 elementary school children and each item was evaluated for internal consistency. The reliability coefficients for the 5 areas computed using Spearman-Brown formula are .82 for health adjustment, .91 for social adjustment, .90 for school adjustment, .88 for self adjustment, and .81 for home adjustment. The median bi-serial correlation between each item and its area total score ranges from .43 to .56. The scale has been used by Dutta (1975) for studying psychological problems in children. Uma (1988) used this inventory in a study of hysteria in children and Rao (2001) used this inventory in adopted children. These studies have proved that the tool has sufficient validity.

Procedure for data collection

The main sample for the study comprised of already identified conduct disordered children, who were inmates of Juvenile justice homes and conduct disordered children from General hospital, Ernakulum. Permission to conduct the study on conduct disordered children in juvenile homes at different parts of Kerala was obtained from the Director, Social Welfare department, Trivandrum and Ethical Board of General Hospital, Ernakulam. Multi-stage sampling method was employed for selecting the participants. A list of 95 children who were diagnosed by Clinical Psychologists in Juvenile homes and general hospital was initially includedin the
study. They were also screened using the OADP by the investigator for being included in the sample. After screening, the basic relevant information about the selected children were taken from the parents, guardian or care givers. Out of the 95 children, only 50 children met the inclusion criteria and gave their informed consent. Of the 95 children, 12 children could not communicate properly, 16 of them were mentally retarded, 9 of them were not interested in the study and 7 of them dropped out in the course of data collection. In addition to the conduct disordered children, a matched group of 50 healthy normal children (matched with respect to age and sex) was also taken for comparison purposes. The normal healthy children were drawn purposively based on matching with respect to sex and age from schools at different zones of Kerala, after screening 120 normal healthy children. All the children in the comparison group had undergone screening procedure using OADO-CDS and only those children who scored below the cut-off score of ‘9’ in the scale was selected.

Prior to inclusion in the study, the children’s informed consent was taken and all the information about these children were kept confidential. The children were told about the purpose and relevance of the current research and rapport was established. They were informed that they had the right to refuse participation in the study and to opt out at any time during the study.

The tests were administered to each child individually with sufficient intervals. There was no time limit for any test. It was quite difficult to collect data from the conduct disorder children as they were not able to sit for long and had to probe them to get the relevant information.
**Figure 1: The flow-chart of sample recruitment for the present study**

**CD children screened for the study (N=95)**
- Healthy normal children (N=120)

**CD children excluded from the study (N=45)**
- >12 years and <18 years (N=3)
- Communication problem (N=12)
- Mild mental retardation & pervasive development disorders (N=10)
- Not given consent (N=9)
- Dropped in the course of data collection (N=6)
- Co-morbid with other psychological disorders (N=5)

**Non-clinical sample (normal children) excluded from the study (N=70)**
- >12 years and <18 years (N=7)
- cut-off score < 9 in OADP-CDS (N=19)
- Mild mental retardation (N=3)
- Not given consent (N=8)
- Children staying in foster homes (N=14)
- Learning Disabled (N=4)
- Children with sensory (blind) and motor handicaps (N=15)

**Met inclusion criteria (N=50)**
- Non-clinical sample matched with CD group in terms of age and gender

**Multistage sampling method was used to collect CD children**
- Conduct disorder Screening was done by using OADP
- Assessments were done in home environment, coping, personality, and adjustment

**Purposive sample method**
- Conduct disorder Screening was done by using OADP
- Assessments were done in home environment, coping, personality, and adjustment
Analysis of data

The data collected were analyzed using the following statistical techniques

1. Frequency and percentages
2. Descriptive statistics
3. Students t-test
4. Chi-square ($X^2$) test
5. Pearson’s Correlation Coefficient

Frequency and Percentages.

In statistics, the frequency (or absolute frequency) of an event is the number of times the event occurred in an experiment or study. These frequencies are often graphically represented in histograms.

A percentage is a number or ratio expressed as a fraction of 100. It is often denoted using the percent sign, "%", or the abbreviation "pct."

Descriptive statistics.

Descriptive statistics have been used to describe the demographic and psychological variables. Arithmetic mean (AM) and standard deviation (SD) were computed for base line data analysis.

Mean (Arithmetic average).

The mean or arithematic average is one of the measures of central tendency. Mean is computed by adding all the scores up and dividing by N, the number of
scores. The mean reflects the actual value of all the scores. The formula for the
calculation of arithmetic average from a grouped data is as follows

\[ a = \frac{X_1 + X_2 + X_3 + \ldots + X_n}{N} \]

or \[ a = \frac{\sum m}{n} \]

Here, \( a \) is arithmetic average, \( X_1, X_2, X_3 \) = size of various items, \( \sum m \) = total of measurements, the Greek letter Sigma \( \sum \) is generally used to indicate summations, \( n \) = total number of items.

**Standard Deviation (SD).**

Standard deviation is the measures of variability or index of dispersion. Standard deviation reflects the degree of dispersion in a group of scores. If scores are tightly packed around the central value, the standard deviation is small. Standard deviation is simply the square root of the variance, designated as \( S^2 \).

\[ S^2 = \sum (X-X)^2 \]

**Student’s t-test.**

The concept of Student’s t-test was developed by Gosset (1915) who signed the name “student” for the publication of this test. Student t-test is most frequently used in survey and experimental designs when an investigator wants to determine whether there is a significant difference two independent means. The t-tests are based on t-distributions. If the calculated’ value exceeds the cut-off point (depending on degrees
of freedom) the difference between means is considered significant. When the t-value is below the critical value, the difference is not significant.

**Chi-square (X^2) Test.**

The chi-square is one of the most important non-parametric statistics, which is used for several purposes. Guilford (1956) has called it the general-purpose statistic. It is a non-parametric statistics because it involves no assumption regarding the normalcy of distribution or homogeneity of the variances. The chi-square test is used when the data are expressed in terms of frequencies of proportions or percentages.

Chi-square may be used as a test of equal probability hypothesis. By equal probability hypothesis is meant the probability of having the frequencies in all the given categories as equal. The second use of the chi-square test is in testing the significance of the independence hypothesis. By independence hypothesis is meant that one variable is not affected by or related to another variable and hence, these two variables are independent. The third important use of chi-square is in testing a hypothesis regarding the normal shape of a frequency distribution. It is also used in testing the significance of several statistics. For example, for testing the significance of the phi-coefficient, coefficient of concordance, and coefficient of contingency.

In the present study, chi-square test is used to express background variables in terms of frequencies of proportions or percentages and to find their significance.

**Correlation**
Coefficient of correlation is a statistical technique that is used to measure and describe relationships between variables. A correlation requires two scores for each individual (one score from each of the two variables). They are normally identified as X and Y. These pairs can be listed in a table, or graphically in a scatter plot. A correlation measures three characteristics of the relation between X and Y, namely, the direction of the relationship, form of the relationship, and the degree of relationship.

Correlations can be computed in different ways depending on the nature of the data. The standard kind of co-efficient of correlation and the one most commonly computed is the Pearson’s product moment correlation co-efficient. Pearson’s ‘r’ was employed in the present study to estimate the inter-relationships among the different variables. The product moment correlation between any two variables can be described in a general way as high, marked or substantial, and low or negligible. Garret (1969) has given the following classification for interpreting the various values of r:

r’s from .000 to +/- 0.20 denotes negligible relationship

r’s from +/- 0.20 to +/- 0.40 denotes moderate correlation present.

r’s from +/- 0.40 to +/-0.70 denotes substantial relationship

r’s from +/-0.70 to +/-1.00 denotes high or very high relationship.