Chapter 3

CHAPTER 3

METHOD

Phase 1 : Pilot Study
Phase 2 : Thematic Analysis
Phase 3 : Tool Construction
Phase 4 : Testing Phase
Phase 5 : Verification
Phase 6 : Model Proposal
Method

The method of a research work is the totality of the procedures followed by the investigator to make it scientific and valid to the largest extent possible. It is very crucial that every research depends on the method adopted and the measures/techniques employed for data collection and analysis. This chapter presents various steps pursued by the investigator in conducting the study like the research design used, selection of the participants, the procedure followed and measures used for data collection, the statistical analysis used and so on.

Research Design

The formidable problem that follows the task of defining the research problem is the preparation of the design of the research project popularly known as the research design. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The research design is the conceptual structure within which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data.

In the current scenario the crime rates are mounting, even though number of interventions is being introduced to curb crimes through prevention and rehabilitation reforms. But less consideration is being given to the root causes that pave way to criminality. There are many factors that may prove to be the base for an individual to turn to the path of criminality. It will be a herculean task to study all the factors at large. For such an extensive study to take place, a longitudinal study is preferred, which is usually not being done due to time constraints faced by the researchers. Here the study aims to explore the collection of psychosocial factors which bring the development of specific behaviour especially antisocial/criminal behaviour based on the
Method

existing theories and from the prisoners’ own perspectives. The entire method comprises of six different phases, which are as follows;

**Phase 1**

Pilot study was conducted in this phase to explore certain psychosocial variables that were present in the prisoner population which would lead an individual to the path of criminality. In phase 1 three activities were carried out which are described later in detail.

**Phase 2**

Through phase 2, analysis of the theories related to crime causation and theories related the variables under study which pave way to criminality were carried out.

**Phase 3**

Phase 3 was the construction of standardized tools to assess variables like Peer Pressure and Impulsivity due to the unavailability of scientifically valid and reliable tools.

**Phase 4**

Phase 4 happens to be the testing phase where the tools constructed by the investigator as well as readily available standardized tools were used.

**Phase 5**

Phase 5 comprises with the conduction of structured interview and in-depth studies of the cases of prisoners’ based on their self-theorizations for the verification of those variables that contribute to the development and formation of antisocial/criminal behaviour.
Phase 6

Phase 6 involves proposing a model to explain criminal psyche development.

The method that was followed by the investigator throughout the research work is described in detail under the following sections.
Phase 1

Pilot Study

Activity 1: Studying the Prison System and Administration
Activity 2: Conducting Uncontrolled Observation
Activity 3: Conducting Unstructured Descriptive Interview
The initial phase i.e., phase 1 constitutes a pilot study in order to explore certain psychosocial variables which would lead an individual to the path of criminality through a minor study among prisoners. The investigator had concluded this phase by conducting three activities as follows;

Activity 1: Studying the Prison System and Administration

Activity 2: Conducting Uncontrolled Observation

Activity 3: Conducting Unstructured Descriptive Interview

**Activity 1: Studying the Prison System and Administration**

Entering into the prison was a mammoth task to the investigator as it was not easy to obtain the acquiescence from the Government. It was heard and reported that permission would not be granted easily to visit the central prisons. The Home Ministry was very much reluctant in issuing granted orders. The reason for putting a stop to new orders granting prison visiting permission was due to the visitors coming to see the prisoners in disguise as relatives of the prisoners thereby illegally supplying deadly commodities required by the prisoners like drugs, sharp things like tools and so on without the knowledge of the authorities; jail break attempts; students of various professional courses coming to take interviews and emphasizing on various unwanted emotionally disturbing queries and the attitude of students towards the prisoners as extra-terrestrial aliens; some people who were granted permission misused the chance they got by humiliating the prisoners and insulting them using obscene words and giving them threats, especially by political party members. But for the investigator getting the permission was an obligation. Therefore he went to the office of the Home Ministry at the Secretariat situated in the capital, Thiruvananthapuram. After struggling for five months making in between up and down trips to the Secretariat the investigator was able to get at last the inevitable permission letter to enter all
the central prisons of Kerala, which are Kannur Central Prison (Pallikkunnu, Kannur), Poojappura Central Prison (Thiruvananthapuram) and Viyyur Central Prison (Thrissur) for the purpose of data collection related to the research.

After obtaining the permission letter, appointments were taken to visit the central prisons. At first the investigator went to Kannur Central Prison for the pilot study as it is the largest central prison of Kerala and the numbers of prisoners occupied there in the Kannur Central Prison was seen to be high. It was the Gate Keepers in the three central prisons’ reception who directed the investigator to the Prison Office. There he consulted with the central prison Superintendents and Deputy Jailors and discussed about the research work of the investigator. It was at that time that the investigator was informed about the sensational murder that had taken place during that time and various problems associated with it. Due to the sensational political murder that took place, there were ministers inside the premises who had come to see the prisoners and to make sure of the prison security given to them to be tightly secure. Visiting the three central prisons and meeting with the prison inmates was very seriously restricted thing as there were lots of unforeseen things taking place such as the accuses of a political murder being shifted to the central prisons; the jail breaking of two famous convicts and so on. All this brought about the question regarding the jail security under tight scrutiny and strict measures regarding the security at the prisons were taken up by the Government. These were hindering the investigator from meeting the inmates at the prisons at large. This legal affair was about to take enough time from the investigator but he decided and utilized the time in studying and gathering information about the prison system and its administrational aspects.
Participants

The participants of the first activity of phase 1 of the study i.e., studying the prison System and Administration consist of central prison officials from the three central prisons of Kerala i.e., Kannur Central Prison, Poojappura Central Prison, and Viyyur Central Prison who belong to different ranking. As the investigator conducted the research work in central prisons for male prisoners, only male prison staffs were included in the study. The prison official participants include 3 Jail Superintendents, 3 Jailors, 6 Warders, 5 Welfare Officers, and 18 Police Officers of different ranks in three central prisons.

Measure

a) Unstructured Interview

a) Unstructured Interview

The interview method of research is a conversation with a purpose and is non-experimental in design. It is a qualitative research method. The interviewer in one-to-one conversation collects detailed personal information from individuals using oral questions. The interview is used widely to supplement and extend the knowledge about individual(s) thoughts, feelings and behaviours. An unstructured interview is an interview in which questions are not prearranged, allowing for spontaneity and for questions to develop during the course of the interview. This is considered to be the opposite of a structured interview which offers a set amount of standardized questions. Unstructured interviews are used in a variety of fields and circumstances, ranging from research in social sciences, such as sociology, to college and job interviews. Unstructured interviews allow questions based on the interviewee's responses and proceeds like a friendly, non-threatening conversation.
Procedure

The investigator personally contacted the authorities of the three central prisons of Kerala. The investigator disclosed the relevance of the proposed research and need of collecting data from them and their consent was sought in order to interview them. After obtaining the consent, appointment was taken and their convenient date and time was fixed in order to collect information from them. As per the fixed date and time the investigator contacted them and the officials were interviewed by the investigator on an individual and group basis to know about the administration and its related aspects. The interactions with them were much informative. The information related to the administration of the three central prisons, staff pattern, its infrastructure facilities, trainings given to the prison inmates, time schedule followed in prisons etc. were collected from the prison authorities. The officials were highly cooperative. The investigator extended his gratitude to those officials who had participated in this study.

Analysis

The collected information regarding the prisons’ administration and its related aspects, the schedule that the prisoners follow inside the prison and the training given to the prisoners had been analyzed and described using thematic content analysis and discussed in chapter 4.

Activity 2: Conducting Uncontrolled Observation

Once the political murder issues calmed down and everything got back to the normal functioning, the investigator consulted the prisons authorities in order to start with his data collection in the prisons. But many a times it would happen that the investigator had to go to the prisons only to know that he would not be permitted to interact with the prisoners as it was the day for prison occupants to have their medical check-up done, and it was the visiting
day wherein relatives of the prisoners would come to meet them and so on. The end result was that the investigator would have to go back without getting any chance to interact with the prisoners whom he had come to meet on that particular day. It was at that time the investigator got an opportunity to conduct naturalistic observation inside the prison premises. Even though the investigator had heard lots about the prison organization and its functions from Jailors and Warders, it was the first time the investigator got an opportunity to enter in to the prisons.

**Features Observed**

As a part of the observation, the investigator observed the prison administration of the three central prisons, its functioning, infrastructure facilities, rehabilitation and training programmes given to the prison inmates, cell alignment, lives of the inmates inside the prison, attitude of authorities towards prison inmates and vice versa, prison inhabitants’ interpersonal relationships, their way of interaction with one another and so on. Inside the central prisons both the prison officials and prison inmates were also observed by the investigator.

**Measure**

a) Uncontrolled Observation

**a) Uncontrolled Observation**

Observation is a research method in which data collection is achieved by watching and recording the activity of people (or animals). If the observation takes place in the natural setting, it may be called as uncontrolled observation. In the natural setting the activity being observed and makes no attempt to manipulate or control the situation. This means they will be more likely to find behaviour that is representative of real life as they won’t be affected so
much as it would be if the setting was unfamiliar. In uncontrolled observation, no attempt is made to use precision instruments. The major aim of this type of observation is to get a spontaneous picture of life and persons. It has a tendency to supply naturalness and completeness of behaviour, allowing sufficient time for observing it. Uncontrolled observation is resorted to in case of exploratory researches. The investigator preferred uncontrolled observation method than other methods since the prison atmosphere would not allow him to manipulate the life and behaviour of the prisoners.

**Procedure**

In order to get permission to explore the prison premises the investigator consulted the central prison officials. Only after the authorities were convinced thoroughly, he got permission from the Jail Superintendent to enter inside the prisons. There were many security reasons for not permitting outsiders to enter inside the prisons as mentioned earlier. There were set rules and regulations to be followed by the investigator before entering the prison premises. He was permitted to enter inside the prison premise only during the time of unstructured observation and not for other academic/research works. He was permitted to conduct observation inside the prisons only in the presence of Welfare Officers. He was not allowed to interact and intervene with prisoners in their cells. The investigator could enter in to the prisons any day except Sundays. The timings to be followed were from 9 a.m. to 1 p.m. and from 3 p.m. to 5 p.m. respectively. The Welfare Officers of three central prisons accompanied the investigator inside the prison premises showed him the watch tower and the nearby cells. The investigator completed the observations in 6 days. Through the observation the investigator wanted to verify the information he got from the prison officials about the prison administration and its functioning.
Analysis

The data collected by the investigator through uncontrolled observation method and whatever the investigator had experienced in the central prisons has been illustrated qualitatively in chapter 4.

Activity 3: Conducting Unstructured Descriptive Interview

Prior interviewing and interacting with the prison occupants, the investigator was able to go through various First Information Reports (F.I.Rs) in the Superintendent’s office with the permission of the prison authorities. There were cases in common and at the same time there were cases that were very peculiar in nature that caught the attention of the investigator. From this the investigator got a general awareness about the types of crimes committed by the inhabitants in the prisons, crimes of high and low graveness etc. Initially there was difficulty faced by the investigator in selecting his sample for the research purpose. But the fact that the investigator gained an opportunity to go through the F.I.Rs helped him in the selection of his sample. More than the civil cases, criminal cases seized his interest especially the intentionally committed violent crimes. He decided to select the cases which appeared peculiar to him through the interaction with the prison authorities as well as going through the F.I.Rs. In order to try to explore the contributing psychosocial factors that cause the commission of crime by the prisoners the investigator had decided to start his research work using the unstructured descriptive interview method with the consent of the prison authorities and the prisoner participants.

Participants

Altogether 198 inmates of three central prisons of Kerala i.e., Kannur Central Prison (Pallikkunnu, Kannur), Poojappura Central Prison (Thiruvananthapuram) and Viyyur Central Prison (Thrissur) who hail from
different backgrounds having committed different crimes of violence like murder, murder attempt, rape, rape attempt, domestic violence, robbery, child abuse and aggravated assault intentionally; who did criminal activities in solitude and in groups; who were either first time offenders (caught by law for the first time committing a criminal act) or habitual offenders (who keep repeating doing crimes again and again) were taken as participants for the purpose of data collection related to the research. Purposive sampling method was chosen for the research purpose.

**Measures**

a) Unstructured Interview  
b) Personal Data Sheet

**a) Unstructured Interview**

Unstructured interviews are characterized by a flexibility of approach to questioning. Unstructured interviews do not follow a system of pre-determined questions and standardized techniques of recording information. In a non-structured interview, the interviewer is allowed much greater freedom to ask, in case of need, supplementary questions or at times the interviewer may omit certain questions if the situation so requires; may even change the sequence of questions; and has relatively greater freedom while recording the responses to include some aspects and exclude others. But this sort of flexibility results in lack of comparability of one interview with another and the analysis of unstructured responses becomes much more difficult and time consuming than that of the structured responses obtained in case of structured interviews. Unstructured interviews also demand deep knowledge and greater skill on the part of the interviewer. Unstructured interviews however happens to be the central technique of collecting information in case of exploratory or formulative research studies.
b) Personal Data Sheet

A personal data sheet consists of the specific information that involves an individual. A personal data sheet was used for the present study by the investigator in order to collect information regarding the socio-demographic variables as well as the information related to the crime committed by the prisoner participant. The socio-demographic information related to the prisoner participant comprise of name, age, sex, religion, place of dwelling, family type, economic status, educational qualification, marital status, and habits. Details like the crime committed by the prisoner, reason behind the crime commission, victim of the offence committed, whether it was an individual or group crime, whether the prisoner participant was a first time offender or a habitual offender, if there was any family history of crime commission, punishment they got for their criminal activity and if the prisoner participant was repentant for the act were also included in the personal data sheet. The personal data sheet was used by the investigator amongst the total 360 prisoner participants taken for the present research purpose on a one to one basis. Copy of personal data sheet is attached in Appendix – 1.

Procedure

The Prison Superintendents of three central prisons were approached and permission was sought in order to interview the prisoners. As per the strict rule of the Prison Superintendents the investigator could interact with the prison occupants only under the supervision of the Welfare Officers. Hence the investigator had to request the Welfare Officers of the central prisons to meet the prisoners for interviewing them and collecting data from them respectively. The investigator was permitted to see the prison inmates in the Welfare Officer’s room only. The Welfare Officers at the prisons made the necessary arrangements to call each prisoner at the time of the unstructured descriptive interview. Informal consent was taken from the participants who
The investigator made them understand the relevance of the research and why they had been chosen as the sample. They were provided enough understandable information to make a voluntary decision. The investigator started the data collection from the first day he met the prisoners. The investigator was permitted to see the prison inmates at forenoon from 10 a.m. to 1 p.m. and afternoon between 3 p.m. and 4.30 p.m. except Saturdays and Sundays.

The investigator faced great difficulty in establishing rapport with the participants. It took somewhat three months to establish the rapport with them. Initially almost all the prisoner participants looked at the investigator in a suspicious manner. May be because they felt as though the investigator was a spy appointed by the judiciary officials to know about their case and would feel as though their case would turn against them if they said anything related to their cases to the investigator. But when the visits by the investigator became a regular thing for the prisoners, they started showing closeness and trust with the investigator. The investigator received help from few educated prison inhabitants who made their fellow inmates comfortable in the presence of the investigator by making them understand that the investigator had come to know and hear about their lives very closely. After many unsuccessful attempts the investigator was able to cut loose the lock and communicate with the prisoner participants.

After rapport establishment the participants were interviewed on a one to one basis. Using the unstructured descriptive interview and the personal data sheet the details regarding the socio-demographic data as well as various information like the crime committed by the participants, the reason that initiated for the crimes to have taken place, whether the crime was done single handed or in a group, whether there was any history of crime commission by the participants themselves, how was their past life, whether these prisoner
participants were juvenile delinquents in the past, were they ever detached from their family, the interpersonal relationships they had with others (if there were problems in maintaining relationships with others), whether they were influenced by peers to a large extent, if they felt guilty about the crime they committed and whether they were justifying their act in a moral way and so on were collected by the investigator. The investigator focused upon the root causes that may have ignited the flare for the participants to commit that particular crime more than the pattern or type of crimes they have committed.

**Analysis**

The data related to the prisoners’ background information, childhood experiences and memories were collected utilizing unstructured descriptive interview. The collected data were analyzed using qualitative descriptive method and depicted in chapter 4.
Phase 2

Thematic Analysis
Through the interaction with the prisoner participants and the results attained from the unstructured descriptive interview conducted in phase 1 the investigator noticed the impact of certain psychosocial factors such as detachment and rejection experienced by the prisoner participants from their significant others, negative pressure they experienced from their peers, their aggressive and impulsive nature etc., on the development of their personality. This made the investigator to finalize the research variables namely, Attachment, Rejection Sensitivity, Aggression, Peer Pressure and Impulsivity and to explore whether these variables contributed to the development of the participants’ specific personality make up and to their antisocial/criminal behaviour. In order to form a theoretical base for the verification of the influence of the research variables on the formation of antisocial/criminal behaviour and to propose a model the investigator decided to go ahead with phase 2 which comprises of the analysis of the existing theories of crime causation as well as theories related to the research variables taken for the research purpose i.e., attachment, rejection sensitivity, aggression, peer pressure, and impulsivity in connection with criminality.

Sources of Data Collection

For the analysis purpose the data that consisted of several theories of crime causation as well as theories related to the five research variables in connection with criminality were collected from published literatures, books, journals, and websites respectively by the investigator himself.

Mode of Data Collection

The investigator made use of libraries (where he got an opportunity to refer books, journals, thesis, manuals etc), info net services (for e-journals, using search engines like Science Direct, Sage Journals, Springer link, J-Gate Custom Content for Consortia (JCCC) for articles), and internet browsing
respectively to collect the data. Through the above mentioned sources the investigator gathered old and new published literatures and articles which cover a broad range of theories that are related to the area of research in connection with criminality in order to carry out the analysis. The data assembled were verified with the experts in Psychology.

Analysis

Theories related to crime causation and theories related to research variables in connection with criminality were thematically analyzed. The filtering process was used by the author in order to select, which of the theories were to be included in the analysis. The details are given in chapter 4.
Phase 3

Tool Construction
The outcome achieved through the unstructured interview conducted in the first phase and the theoretical base arrived at in the second phase made the investigator study the variables of the research such as attachment, rejection sensitivity, aggression, peer pressure and impulsivity in detail. Since studying these variables seemed to be a difficult task as most of the variables under study had no standardized tools available that could assess them in the present context i.e., applicable in prison population. Hence the investigator decided to use the available foreign standardized tools related to some of the research variables that is attachment, rejection sensitivity and aggression. There were unavailability of scientifically valid and reliable tools to assess the peer pressure experienced by the prisoners in their life and their impulsive nature. The available questionnaires and checklists that dealt with peer pressure and impulsivity and other related issues seen were done in a western format. This very fact led the investigator to prepare a full tool that touched the various negative aspects of peer pressure and impulsivity concerning adult population. Due to this, peer pressure and impulsivity along with other related aspects were thoroughly reviewed from books, journals and e-net related to the areas of Adolescent and Adult Psychology, Forensic Psychology, Criminal Personality and Criminology by the investigator.

This phase i.e., phase 3 involves the detailed description regarding the construction and standardization of two different tools constructed by the investigator for assessing the research variables peer pressure and impulsivity which were used in the present study.

**Participants**

The total sample size included in this third phase that consists of test construction was 226 prisoners from three central prisons of Kerala, who committed violent crimes intentionally. Since the investigator collected the whole data from the central prisons meant for males, only male prisoners
were taken as sample. The sample taken for the construction of Peer pressure Inventory was 110 and for Impulsivity Inventory was 116 respectively. The sample that was included once for collecting data on the construction of one tool was not included in the construction of another tool as well as in any data collection method related to this particular research. The central prison wise sample distribution is presented in the following table 3.3.1.

**Table 3.3.1**

**The Prison wise Sample Distribution**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Central Prison</th>
<th>Sample Size</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peer Pressure Inventory</strong></td>
<td>Kannur</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Viyyur</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poojappura</td>
<td>43</td>
<td>110</td>
</tr>
<tr>
<td><strong>Impulsivity Inventory</strong></td>
<td>Kannur</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Viyyur</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poojappura</td>
<td>38</td>
<td>116</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>226</td>
</tr>
</tbody>
</table>

The above table shows that, for the construction of the Peer Pressure Inventory the total sample taken were 110 amongst which 36 prisoners were from Kannur Central Prison, 31 prisoners from Viyyur Central Prison and the rest 43 prisoners were from Poojappura Central Prison. For the construction of another inventory i.e., Impulsivity Inventory the total 116 sample were taken from the three central prisons of Kerala, i.e., Kannur Central Prison (38 prisoners), Viyyur Central Prison (40 prisoners) and from Poojappura Central Prison (38 prisoners).

**Measures**
The tools constructed and standardized by the investigator in order to assess the extent of the research variables i.e., peer pressure experienced and impulsivity nature of the prisoner population were;

1) Peer Pressure Inventory (Ameen, 2011), and
2) Impulsivity Inventory (Ameen, 2011)

A brief description about the tools constructed and the procedures of standardization including their psychometric properties are given below:

1. **Peer Pressure Inventory (Ameen, 2011)**

Peer pressure itself is the influence that a peer group, or individual exerts that encourages others to change their attitudes, values, or behaviours to conform to the group norms. Peer Pressure is a strong form of conformity because it motivates one to have the desire to belong to a group. Peer pressure can have positive effects when people are pressured towards positive behaviour, such as volunteering for charity or excelling in academics or athletics, by their peers. This kind of Peer Pressure which initiates positive outcome is known as positive peer pressure. However, not all peer relations are beneficial for an individual. When a group coerces someone into doing something inappropriate negative peer pressure occurs (Langholt, 2013). The activity may be as simple as drinking alcohol at a party or smoking marijuana. It could extend to committing a crime or engaging in unprotected sex. Whatever the activity, the person being pressured feels torn between his value system and his desire to be accepted or avoid the group's punishment (Langholt, 2013).

Peer pressure is most commonly associated with youth, in part because most youth spend large amounts of time with peers (Rubin, Bukowski, and Parker, 1998) in schools and other fixed groups that they do not choose and
are seen as lacking the maturity to handle pressure from friends. Positive peer pressure will generally lead to improvements in the social and emotional development relative to an absence of any pressure. Negative peer pressure can lead to efficient outcomes, but differentially impacting ones, benefiting some and hurting others. As an individual one has the choice of whether to surround oneself with friends who will positively or negatively influence them. One also has the responsibility of deciding whether one would have a positive or negative peer influence on others. Also, young people are more willing to behave negatively towards those who are not members of their own peer groups.

Peer group influence has been recognized as a powerful socializing agent, from the traditional societies to the present modern societies (Tizifa, 1993, cited by Mukama, 2005). As noted by Berndt (1992), however, friendships may exert either a positive or a negative influence, depending on the friends' characteristics. A child can select peers based on prior similarities of important attributes and behaviours and/or peers can influence and encourage (i.e., socialize) children to engage in similar behaviour, including delinquency (Curran, Stice, and Chassin, 1997; Dishion, Capaldi, and Yoerger, 1999; Fergusson, Swain-Campbell, and Horwood, 2002; Mrug, Hoza, and Bukowski, 2004). Non-deviant friends appear to prevent youth from engaging in antisocial behaviour (Brown, Lohr, and McClenahan, 1986), whereas the association with deviant friends is related to the development of delinquent behaviour in adolescence (Agnew, 1991; Keenan, Loeber, Zhang, Stouthamer-Loeber, and van Kammen, 1995; Simons, Wu, Conger, and Lorenz, 1994). Peers may influence each other to engage in antisocial behaviour (Keenan, Loeber, Zhang, Stouthamer-Loeber, and van Kammen, 1995). Here comes, the relevance to study this variable which happens to be
significant as it is seen to be one main factor provoking an individual going against law hence to become an offender.

Going through the review of literature, to develop the inventory for the assessment of peer pressure special attention had been given by the investigator to certain components like, compliance, devotion, fanaticism, dedication, obligation, fondness, passion, conformity, concordance, vulnerability, attachment, unanimity, significance, imitation, susceptibility, compulsion, affection, care, intensity, commitment, intimacy, concern, and so on. By keeping these components as a base, items were prepared and the preliminary form was produced before the experts for the evaluation. As per the experts’ suggestions modifications of the already existing items of the initial draft, elimination of the unwanted items and inclusion of new items were made during the tool preparation. After preparing the preliminary draft it was brought for try out. Finishing which the item analysis procedures, the validity and reliability of the tool were confirmed and the Peer Pressure Inventory was finalized.

The various steps and procedures undertaken in the construction and standardization of the scale are described and represented in the following headings.

a) Planning of the Tool

The construction of the tool in order to assess peer pressure began with the planning. For preparing the tool the investigator made an extensive literature review in the area of peer pressure by referring to a number of National and International; Psychology, Criminology and Forensic Psychology related journals and books.
b) Preparation of the Tool

After severe healthy discussions with subject experts in the field of psychological research and informal discussions and interviews with researchers and experts from different areas related to Forensic Psychology, Police Department, and Legal Justice with immense experience working in and out of prisons the investigator had prepared a list of items related to peer pressure. After preparing the item pool it was presented in front of the experts to avoid ambiguity and confusion that helped the investigator to decide how many items needed to be included and what sort of items would have to be used in this tool. Some items were deleted and some others were modified. The items were selected and included very carefully thereby determining whether the taken items represent the taken domain and the content of each item was looked into carefully to eliminate any problems regarding it with the respondents. Though the regional language is Malayalam and almost all the prisoners were not comfortable with English language the Peer Pressure Inventory that was prepared initially in English language was translated in to Malayalam language by the investigator and an expert in both the languages in such a way that it would be specific and suit the Indian culture without losing the concept of items. Another proficient individual equally competent in both the languages back translated the items into English. Since there was no difference seen between the original English version and the back translated English version, the Malayalam version was considered satisfactory to be used in the present study.

c) Try Out

In the preliminary form of the inventory 36 items were included that were related to the area Peer Pressure. The items were arranged in a random order. The statements in the preliminary form were related to the importance that the peers had in one’s life and the influence they exerted upon them. Each
and every statement were provided with three response categories in order for the respondent to express his/her responses, namely, ‘Never’, ‘Sometimes’, and ‘Always’. In the initial draft of the inventory there were 35 positive items and only one negative item. The inventory was administered to the participants with appropriate instructions. In the case of uneducated prison inhabitants the instructions and statements were read out by the investigator to the respondents and whatever answers came to their mind at the first instance immediately after hearing a statement were marked in the appropriate bullets by the investigator himself on behalf of the respondents. Copy of the draft is appended (see Appendix – 2).

d) Participants

The sample was taken from the three central prisons of Kerala State i.e. from Kannur Central Prison, Kannur; Viyyur Central Prison, Thrissur; and Poojappura Central Prison, Thiruvananthapuram. The sample size was 110 prisoners amongst which 36 prisoners were selected from Kannur Central Prison, 31 prisoners were taken from Viyyur Central Prison, and 43 prisoners from Poojappura Central Prison. Only male prisoners were taken as sample. The age of the participants ranges from 26 to 53 years. Prisoners who had committed various violent offences intentionally were selected for the research purpose. Purposive sampling technique was used for selecting the participants.

e) Administration

The prison inhabitants were met individually inside the prison premises. The investigator made the prisoner participants know the purpose of the researcher's visit to the prison and why they had been selected for the research in detail. After taking the oral consent from those prison inhabitants who were willing to participate in this procedure voluntarily were provided
with the draft tool of peer pressure on an individual basis followed by the establishment of a good rapport with them. The directions needed for the task were provided with the draft tool. While preparing the tool the investigator made sure that the instructions given along with the tool was clear and unambiguous without the usage of any unwanted terminology. Even though the investigator explained the instructions personally to the participants as follows; “There are some statements in this instrument that enquire about the importance of peers having in your life and the direct and indirect influence that the peers exerted upon you. Here there is no right or wrong answer. Read each statement carefully and darken the circled numbers that is given adjacent to each statement which represents which ever option you feel is related to you the most. Please do not omit any of the statements without marking. The information and the data collected from you will be used only for research and study purpose. The three response categories along with numbers from one to three in order to express the responses, namely, 1 for ‘Never’, 2 for ‘Sometimes’, and 3 for ‘Always’ were given adjacent to each statement.”

The doubts regarding certain statements if any were clarified then and there itself. After completion of the filling of the inventory, the inventory were collected from the respondents by the investigator and checked for omissions.

f) Scoring

The 36 items included in the draft inventory consists of both positive and negative items. Hence different scores were provided for the responses of positive and negative items. Amongst the total 36 items only one item was a negative one. The lone negative item in Peer Pressure Inventory was the 34\textsuperscript{th} item. Except the 34\textsuperscript{th} item rest all of the items were scored positively. For the positive items a score of 3, 2, and 1 was given for the responses ‘Always’, ‘Sometimes’, and ‘Never’ respectively. Since the 34\textsuperscript{th} item is a negative item it was scored reversely.
g) Item Analysis

The responses of the 110 respondents obtained through the draft were used for item analysis. Only the completed inventories without any kind of omissions were taken for the analysis. Item analysis was done as per the method suggested by Edwards, (1969). The scores of the respondents were arranged in an ascending order of the scores. The upper and lower 25% of the response were treated as upper group and lower group respectively. The ‘t’ was calculated between the lower and upper group means and discrimination capacity of each item was fixed. Once this was over a statistical analysis was done on the results of the answers given by the developmental sample. The ‘t’ value of each statement was calculated to find out the discriminating power. This made it little simpler to remove the unwanted items that showed less significance. The value of ‘t’ is a measure of the extent to which a given statement of peer pressure differentiates between the high and low group. The ‘t’ value was calculated using the formula given below.

\[
t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sum (X_H - \bar{X}_H)^2 - \sum (X_L - \bar{X}_L)^2}{n(n-1)}}}
\]

\[
\bar{X}_H = \text{The mean score of the given statement for high group.}
\]

\[
\bar{X}_L = \text{The mean score of the given statement for low group.}
\]

\[
n = \text{Number of cases.}
\]

\[
\sum (X_H - \bar{X}_L)^2 = \sum X_H^2 - \left(\frac{\sum X_H}{n}\right)^2
\]
\[
\sum (XH - \bar{XL})^2 = \frac{\sum XL^2 - (\sum XL)^2}{n}
\]

To be precise those statements that had a ‘t’ value less than 1.96 were removed and those statements exceeding a ‘t’ value of 4.00 were selected for the final inventory. Finishing the said procedure the investigator could be sure and content with the feeling that the items remaining after eliminating the unwanted items was accurate and was free from any cultural or other biases. The following table 3.3.2 shows the details of the item analysis of Peer Pressure Inventory.

**Table 3.3.2**

**Details of the Item Analysis of Peer Pressure Inventory**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>High Group</th>
<th>Low Group</th>
<th>t value</th>
<th>Selection of Items</th>
</tr>
</thead>
<tbody>
<tr>
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<td>M</td>
<td>S.D</td>
<td>N</td>
<td>M</td>
</tr>
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<td>55</td>
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<td>55</td>
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<td>55</td>
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<td>Item No.</td>
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<td>t value</td>
<td>Selection of Items</td>
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<td>2.2182</td>
<td>.68559</td>
<td>55</td>
<td>1.5455</td>
</tr>
</tbody>
</table>

From the above table it is clear that the items 30 and 31 have a low ‘t’ value of .463 and 1.741 respectively. Hence these items were removed from the preliminary draft and were not included in the final Peer Pressure Inventory. The following table displays the mean, standard deviation and the ‘t’ value of high and low groups with reference to the Peer Pressure Inventory.
Table 3.3.3
Mean, Standard Deviation and t value of High and Low Scoring Groups for Peer Pressure Inventory

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>Standard Deviation</th>
<th>t value</th>
</tr>
</thead>
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<tr>
<td>High Group</td>
<td>65.9818</td>
<td>11.12303</td>
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<tr>
<td>Low Group</td>
<td>43.7273</td>
<td>5.58919</td>
<td></td>
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</table>

The above table displays the mean of high group (65.9818) and low group (43.7273); and the standard deviation of high group (11.12303), and low group (5.58919) for the Peer Pressure Inventory respectively. The ‘t’ value obtained of High and Low Scoring Groups for Peer Pressure Inventory is 13.258. While the item analysis was being done the investigator emphasized and focused upon the quality of the taken items. The items taken for the inventory by the investigator was to measure the knowledge that it was designed for.

h) Validation

Validity refers to whether the study is able to scientifically answer the questions it is intended to answer. The final inventory was subjected to the verification of different experts in the field of psychological research. On the basis of their thorough examination and judgments, the statements related to the pressure experienced by the sample from their peers were selected. They examined the statements of Peer Pressure Inventory and subjectively viewed as covering the concept it purports to measure and admitted the inventory as a whole is sufficient for the assessment of peer pressure. Hence the face validity of the inventory is ensured. As the peer pressure inventory, a tool to measure peer pressure exerted by the peers upon the sample, included majority of the features or items that focuses upon the construct peer pressure, content
validity that intended to measure the degree to which the contents of the tool matches a content domain associated with the construct was also verified.

i) Establishment of Reliability

The reliability of Peer Pressure Inventory was established through test-retest and Cronbach’s alpha. Cronbach’s alpha is used as an estimate of the reliability of a peer pressure inventory test for the prisoner sample whose age ranged in between 26 to 53 years. The test-retest reliability that is used to estimate components of measurement error by repeating the measurement process on the same subjects, under conditions as similar as possible is warranted using a sample of 29-48 year olds. It was worked out on a representation sample of 52, on whom the validation was done. Two consecutive administrations had an interval of one month duration. The two sets of scores thus obtained were correlated using Pearson’s Product Moment Technique. The reliability coefficients’ obtained through Cronbach's Alpha coefficient is .81 and the test retest is .89 respectively.

By considering the power of discrimination, validity, and the established reliability the final inventory was prepared. The final inventory thus consisted of 30 items. The necessary instructions were also given in the inventory along with the selected final items. Copy is attached in Appendix – 3.

2. Impulsivity Inventory (Ameen, 2011)

Impulsivity (or impulsiveness) is a multi-factorial construct (Evenden, 1999) that involves a tendency to act on a whim, displaying behaviour characterized by little or no forethought, reflection, or consideration of consequences (VandenBos, 2007). Impulsive actions typically are poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situation that often result in undesirable consequences, (Daruna and Barnes, 1993) which imperil long term goals and strategies for success (Madden and
A functional variety of impulsivity has also been suggested, which involves action without much forethought in appropriate situations that can and does result in desirable consequences. When such actions have positive outcomes, they tend not to be seen as signs of impulsivity, but as indicators of boldness, quickness, spontaneity, courageousness, or unconventionality (Daruna and Barnes, 1993; Dickman, 1990). Thus, the construct of impulsivity includes at least two independent components: (1) acting without an appropriate amount of deliberation (Daruna and Barnes, 1993), which may or may not be functional, and (VandenBos, 2007) choosing short-term over long-term gains (Rachlin, 2000). Seager (2005) explored the possibility that impulsive behaviours are learnt via early experiences demonstrating that delayed responding is not always rewarded; some individuals who engage in impulsive aggressive behaviour may have found inhibition handicaps the goal they seek.

Relative to non-impulsive people, impulsive people tend to be more delinquent (Krueger, Caspi, Moffitt, White, and Slouthamer-Loeber, 1996; Lynam and Miller, 2004; White, Moffitt, Caspi, Bartusch, Needles, and Stouthamer-Loeber, 1994), engage in more risky sexual behaviour (Kahn, Kaplowitz, Goodman, and Emans, 2002) and driving behaviour (Bogg and Roberts, 2004), engage in more substance abuse (Bogg and Roberts, 2004; Wulfert, Block, Ana, Rodriguez, and Colsman, 2002), have poorer academic performance (Merrell and Tymms, 2001), be more aggressive (Krueger, Caspi, Moffitt, White, and Stouthamer-Loeber, 1996; Tangney, Baumeister, and Boone, 2004), be more violent (Bogg and Roberts, 2004), choose short-term over long-term rewards (Funder, Block, and Block, 1983), be unable to cope with stress or distress (Tangney, Baumeister, and Boone, 2004), and commit more crimes (Wulfert, Block, Ana, Rodriguez, and Colsman, 2002). The data on various indices of criminal behaviour and impulsivity among adult offenders clearly suggests that impulsivity is an important construct in
the study of criminality. In particular, several studies have shown that impulsivity is predictive of recidivism in adult offender samples.

Modern theorists have linked criminal offending to impulsivity that appears as the center piece of several individual difference accounts of offending (Gottfredson and Hirschi, 1990; Lynam, 1996; Moffitt, 1993; Newman and Wallace, 1993; Wilson and Herrnstein, 1985). Criminologists believe that impulsivity warrants the most research attention of all psychological factors implicated in juvenile delinquency and crime (Ellis and Walsh, 1999). Researchers and practitioners from various fields have linked impulsivity to antisocial conduct. Impulsivity is a concept that has often been linked to criminal acts (Hare, 1980; Heilbrun, 1979; Oas, 1985; Rotenberg and Nachson, 1979; Vinogradov, Dishotsky, Doty, and Tinklenberg, 1988). Impulsivity reliably distinguishes offenders and non-offenders (Lynam and Miller, 2004; White, Moffitt, Caspi, Bartusch, Needles, and Stouthamer-Loeber, 1994). Accurately measuring impulsivity in forensic populations enables better identification of specific treatment needs and risk factors, enabling better allocation of persons to intervention programmes and potentially reducing future offending (Lynam and Miller, 2004; White, Moffitt, Caspi, Bartusch, Needles, and Stouthamer-Loeber, 1994).

The diverse steps and procedures carried out in the construction and standardization of the impulsivity inventory are described in detail in the following headings.

a) Planning of the Tool

The construction of the inventory which can be used to measure impulsive nature of an individual began with the proper planning. For preparing the tool the investigator made an extensive literature review in the area of impulsivity by referring to a number of national and international
books and journals related to the area of psychology, criminology and forensic psychology.

b) Preparation of the Tool

As a part of preparing the tool for assessing the impulsivity, the investigator underwent a severe healthy discussion with subject experts in the field of psychological research and informal discussions with researchers. As a result the investigator had prepared a list of items related to impulsivity. After preparing the item pool it was unwrapped in front of the experts in order to avoid the uncertainty and mystification. This helped the investigator to decide what sort of items, which items and how many items could be included in this tool. On the suggestions made by the experts some items were modified while some other items were eliminated from the initial draft. The content of each item was looked into and the items were selected and incorporated very carefully thereby determining whether the taken items adequately represent the taken area and to eliminate any problems regarding it with the respondents. Since almost all the prison inmates were not comfortable with English language the inventory that was prepared initially in English language was translated in to Malayalam language by the investigator and an expert in both the languages in such a way that it would be specific and suit the Indian culture without losing the concept of items. Another expert equally competent in both the languages back translated the items into English. As there was no difference in the original English version and the back translated English version, the Malayalam version was considered satisfactory for the use in the present study.

c) Try Out

In the initial draft of the impulsivity inventory 25 items related to the area of impulsivity were included and were arranged in a random order. The
statements in the inventory were related to components like, risk taking behaviour, impulsiveness, boredom susceptibility, lack of self control, psychoticism, disinhibition, perseverance, lack of thinking, inattention, lack of conscientiousness, inability to delay gratification, low interpersonal relationship, aggression, poor self-monitoring and so on. Each and every statement were provided with four response categories in order to express the participants’ responses, namely, ‘Never’, ‘Sometimes’, ‘Often’ and ‘Always’. In the initial draft of the inventory there were 25 items positive in nature. Then after, the inventory was administered to the participants with proper instructions. In the case of uneducated prisoner participants the instructions and statements were read out by the investigator and whatever answers came to their mind at the first instance immediately after hearing a statement were marked in the appropriate bullets by the investigator himself on behalf of the respondents. Copy of the draft is attached in Appendix – 4.

d) Participants

The sample was preferred from the three central prisons of Kerala State i.e. from Kannur Central Prison, Kannur; Viyyur Central Prison, Thrissur; and Poojappura Central Prison, Thiruvananthapuram. The sample size was 116 prisoner participants amongst which 38 prisoners were selected from Kannur Central Prison, 40 prisoners were taken from Viyyur Central Prison, and 38 prisoners from Poojappura Central Prison. The age of the participants ranged from 25 to 49 years. Prisoners who had committed various violent crimes intentionally were selected for the research purpose. Purposive sampling technique was used.

e) Administration

The prison inhabitants were met individually inside the prison premises after obtaining the prior permission through proper channel to
collect data from them using the inventory. As a start the investigator made the participants to know the purpose of the researcher’s visit to the prison and why they have been selected for the present research in detail. After taking the oral consent from those prison inhabitants who were voluntarily willing to participate in the research procedure were supplied with the initial draft of impulsivity inventory on an individual basis followed by the establishment of a good rapport. The directions necessitate the task were provided with the draft tool. While preparing the tool the investigator made sure that the instructions given along with the tool was sufficient and unambiguous without the usage of any unnecessary terminology. Nonetheless, the investigator elucidated the instructions personally to the participants as follows; “Here given in this instrument are some statements that enquire about your impulsive nature. Read each statement carefully and darken the circled numbers that is given adjacent to each statement which represent which ever option you feel is related to you the most. Please do not omit any of the statements without marking. The information and the data collected from you will be used only for research and study purpose. The four response categories along with numbers from one to four in order to express the responses, namely, 1 for ‘Never’, 2 for ‘Sometimes’, 3 for ‘Often’ and 4 for ‘Always’ were given adjacent to each statement.”

The doubts of the respondents regarding certain statements if any were clarified then and there itself by the investigator. After the completion of the inventory it was collected from all the respondents and checked for omissions if any.

f) Scoring

The 25 items included in the draft inventory were positive items. There were no negative items in the instrument as a whole. Hence scores provided for the responses were the same for all the positive items. Since there is no
negative items all the items were scored positively. For the positive items a score of 4, 3, 2, and 1 was given for the responses ‘Always’, ‘Often’, ‘Sometimes’, and ‘Never’ respectively.

g) Item Analysis

The responses obtained through the draft instrument given to the 116 respondents who were selected through purposive sampling method were used for item analysis. Only the completed inventories without any kind of omissions were taken for the analysis. Item analysis was done as per the method suggested by Edwards, (1969). The scores of the respondents were arranged in an ascending order of the scores. The upper and lower 25% of the response were treated as upper group and lower group respectively. Items with discrimination capacity were selected on the basis of the value of calculated ‘t’ between the upper and lower groups for each item. Once this was over a statistical analysis was done on the results of the answers given by the developmental sample. The ‘t’ value of each statement was calculated to find out discriminating power. This made it little simpler to remove the unwanted items that showed less significance. The value of ‘t’ is a measure of the extent to which a given statement of impulsivity differentiate between the high and low group. The ‘t’ value was calculated using the formula given below.

\[ t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\Sigma(XH - \bar{X}_H)^2 - \Sigma(XL - \bar{X}_L)^2}{n(n-1)}}} \]

\( \bar{X}_H \) = The mean score of the given statement for high group.

\( \bar{X}_L \) = The mean score of the given statement for low group.

\( n \) = Number of cases.
To be precise those statements that had a ‘t’ value less than 1.96 were removed and those statements exceeding a ‘t’ value of 3.00 were selected for the final inventory. Finishing the said procedure the investigator could be sure and content with the feeling that the items remaining after eliminating the unwanted items was accurate and free from any cultural or other biases. The following table shows the details of item analysis of the impulsivity inventory.

Table 3.3.4
Details of the Item Analysis of Impulsivity Inventory

<table>
<thead>
<tr>
<th>Item No.</th>
<th>High Group</th>
<th>Low Group</th>
<th>t value</th>
<th>Selection of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
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<td>M</td>
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</table>
From the above table it is clear that the all the items included in the inventory having a ‘t’ value of above 3.00. Hence none of the items were removed from the final impulsivity inventory. The following table displays the mean, standard deviation and ‘t’ value of high and low groups for impulsivity inventory.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>High Group</th>
<th>Low Group</th>
<th>t value</th>
<th>Selection of Items</th>
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</thead>
<tbody>
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Table 3.3.5
Mean, Standard Deviation and t value of High and Low Scoring Groups for Impulsivity Inventory
<table>
<thead>
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<th>t value</th>
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<td>13.269</td>
</tr>
<tr>
<td>Low Group</td>
<td>41.1897</td>
<td>5.99256</td>
<td></td>
</tr>
</tbody>
</table>

The above table demonstrates the mean (56.3103) and the standard deviation (6.27780) of high group, and the mean (41.1897) and the standard deviation of the low group (5.99256) for the impulsivity inventory respectively. The t value obtained of High and Low Scoring Groups for Impulsivity Inventory is 13.269. While the item analysis was being done the investigator emphasized and focused upon the quality of the taken items. The items taken for the impulsivity inventory by the investigator was to measure the knowledge that it was designed for.

**h) Validation**

Validity of the tool was found in order to check whether the tool constructed was able to achieve its target. The final inventory was subjected to the verification by eight experts in the field of psychological research. They examined the statements of Impulsivity Inventory. On the basis of their thorough verification and judgments, the statements related to the impulsiveness of the sample were selected and admitted the inventory as a whole was sufficient for the assessment of impulsivity. Hence the face validity of the inventory was ensured. As the inventory was verified, its ability to assess whether the present sample under study had the personality characteristic viz., impulsivity in them, the content validity of the tool in order to assess the degree to which the content of the representative of the domain it’s proposed to measure is verified.

**i) Establishment of Reliability**
The reliability of impulsivity inventory was established through test-retest reliability, in order to measure the consistency of the test and assessment and Cronbach’s alpha, in order to determine the internal consistency or average correlation of items. Cronbach’s alpha of impulsivity inventory was established using the prisoner sample whose age ranged in between 25 to 49 years. The test-retest reliability is established using a sample of 47 prisoners who belongs to an age group 27–45 year olds, on whom the validation was done. Two consecutive administrations had an interval of one month duration. The two sets of scores thus obtained were correlated using Pearson’s Product Moment Technique. The reliability coefficients’ obtained through Cronbach's Alpha coefficient is .86 and the test retest is .83 respectively.

By considering the power of discrimination, validity, and the established reliability the final inventory was prepared. The final Impulsivity Inventory thus consisted of 20 items. The necessary instructions were also given in the inventory along with the selected final items. Copy of Impulsivity Inventory is attached in Appendix – 5.

The phase 4 happens to be the testing phase where the tools were used in order to verify the part of the research variables like, attachment, rejection sensitivity, aggression, peer pressure and impulsivity among the prisoner population which left a trace in the life of a person that led him do criminal act. The Peer Pressure Inventory and Impulsivity Inventory developed by the investigator in the absence of scientific tools for assessing the negative pressure that the peers had exerted in the prisoners’ life, and the degree of their impulsive nature that made them to commit the crime respectively, were utilized along with other three standardized foreign instruments related to the research variables like, attachment, rejection sensitivity and aggression. Here the investigator illustrates below the details regarding the participants taken,
instruments used, procedure, administration, reliability, validity, and scoring of all the instruments used in the current research respectively.

**Participants**

In this phase 30 prisoners of three central prisons of Kerala i.e., Kannur Central Prison (Pallikkunnu, Kannur), Poojappura Central Prison (Thiruvananthapuram) and Viyyur Central Prison (Thrissur) who hailed from different backgrounds having committed crimes intentionally; who did criminal activities in solitude and in groups; who were either first time offenders (caught by law for the first time for committing a criminal act) or habitual offenders (who kept repeating crimes again and again); who had committed violent crimes like murder, murder attempt, rape, rape attempt, domestic violence, robbery, child abuse and aggravated assault; and those who have not take part in any of this research procedures were taken as participants of data collection related to the research. Purposive sampling method was chosen for the research purpose.

Based on what had been reported to the investigator and what the investigator had experienced it was seen that the Prisoner population was different in characteristics from that of non prisoners. They are a vulnerable population. Most of the prison inhabitants were very aggressive in nature while others were under depression as they had lost their hope about life when they were approached by the investigator for the data collection. They were lazy to do the task when the five tools together were given to each participant. Majority of the prisoners were found to be ready to take part in the research interview rather than fill out a questionnaire as some of them considered it to act as a proof against them if they wrote anything in paper and gave it to the investigator as they were sure about the fact that other recording devices were not allowed inside the prison premises. In such occasions adequate assurance had to be taken by the investigator from the Jail Superintendent and other jail
officials that parole boards would not take into account a prisoner’s participation in the research in making decisions regarding parole, and each prisoner was clearly informed in advance that his cooperation in the research work would have no effect on his parole or pending cases in his name. Besides, many a times the investigator would lose the participants as those participants seen by the investigator might have gone on a parole, been shifted to another central prison or might have finished his prison term which are unpredictable. Such incidents did bring problems in front of the investigator in the selection and inclusion of participants and the investigator found it difficult to include more participants in the testing phase.

**Instruments**

The nature and technical qualities of each instrument used for collecting the required information in the present study are described below.

1) Inventory of Parent and Peer Attachment (IPPA) (Armsden and Greenberg, 1987)
2) Peer Pressure Inventory (Ameen, 2011)
3) Buss-Perry Questionnaire (AGQ) (Buss and Perry, 1992)
4) Impulsivity Inventory (Ameen, 2011)
5) Rejection Sensitivity Questionnaire-Adult (RSQ) (Berenson et al., 2009)
6) Personal Data Sheet

**Adaptation of the Instruments**

Initially Peer Pressure Inventory and Impulsivity Inventory developed by the investigator; and the other three foreign standardized instruments were in English language. Since majority of the prisoners being dealt with was from the state of Kerala, the investigator found it to be very difficult and impossible to administer all the items in the tools into Malayalam to each and
every participant at the time of data collection. Hence, a Malayalam version of all the tools is used in the present study. For this purpose the English version of both the prepared tools and the other three standardized tools were translated into simple Malayalam language by the investigator and an expert in both the languages without losing the concept of items. Another expert equally competent in both the languages back translated these into English. As there was no difference between the original English version and the back translated English version, the Malayalam version of the tools were considered satisfactory for the use in the present study. In the case of uneducated participants the instructions and statements were read out by the investigator and whatever answers came to their mind at the first instance immediately after hearing a statement were taken as their response and were marked in the appropriate bullets by the investigator himself on behalf of the respondents. Malayalam version of all the above mentioned instruments was administered to the 30 participants of this phase one after the other.

**Procedure**

With the formal permission from the ministry the authorities of the three central prisons of Kerala were contacted by prior appointment in order to obtain the permission to meet the prisoners and collect the data for the research purpose from them respectively. The authorities were informed and discussed on the purpose, importance and application of the study, and the nature of information required from the prisoners for the study. After obtaining the permission from the authorities their convenient date and time was fixed to start along with the procedures. The prison officers made the necessary arrangements for the investigator with regard to meet the prison inhabitants. The investigator was permitted to interact with the prison inmates only in the Welfare Officer’s room. With the help of Welfare Officers the investigator met the prisoners and made them understand the relevance of the
present study, why they had been chosen as the participants, the need of collecting data from them and the nature of information required from them. They were provided enough information to make a voluntary decision. Then the consent was taken from those prisoners who were voluntarily willing to participate in the present research and gave assurance to them that the information gathered would be used only for research purposes and that everything including their identity would be kept confidential. After establishing the rapport the investigator started collecting data from the prison inmates using all the instruments meant for the data collection on individual basis. Each and every participants of this phase were provided with all the instruments viz., Inventory of Parent and Peer Attachment (IPPA), Peer Pressure Inventory, Buss-Perry Questionnaire (AGQ), Impulsivity Inventory, and Rejection Sensitivity Questionnaire-Adult (RSQ), that cover the research variables namely, attachment, rejection sensitivity, aggression, peer pressure and impulsivity. The socio-demographic and crime details were also collected using the personal data sheet. The details of the instruments used are given below.

1. **The Inventory of Parent and Peer Attachment (IPPA) (Armsden and Greenberg, 1987).**

   Armsden and Greenberg developed and adapted The Inventory of Parent and Peer Attachment (IPPA). The original version of the IPPA was developed to measure attachment in older adolescents. It assesses the positive and negative affective and cognitive dimensions of adolescents’ relationships with their parents and close friends- particularly how well these figures serve as sources of psychological security. The theoretical framework is attachment theory, originally formulated by Bowlby and recently expanded by others. The inventory consists of each of the 28 items assessing parent attachment and the 25 items assessing peer attachment.
Later in her dissertation, Gay Armsden revised the IPPA in order to separately assess perceived quality of attachment to mothers and fathers (instead of parents together). The revised version of IPPA (Mother, Father, and Peer Version) is comprised of 25 items in each of the mother, father, and peer sections, yielding three attachment scores. The measures have been used in a study of over 400 college students and Gay has found (with minor changes) that most of the same items fall on the same factors for mothers and father separately that we found in the factor analysis of parents together on the IPPA. Three broad dimensions assessed in the scale are: degree of mutual trust; quality of communication; and extent of anger and alienation. The development samples were 16 to 20 years of age; however the IPPA has been used successfully in several studies with adolescents as young as 12.

The instrument is a self-report questionnaire with a five-point Likert-scale response format. Respondents are required to rate the degree to which each item is true for them on a five-point scale ranging from ‘Almost always or always true’ to ‘Almost never or never true’. The items in each of the scales (i.e. parent, peer) were demonstrated through principal components analysis to cluster into three factors (trust; communication; anger and alienation). Scores on the IPPA have also been found to be associated with a number of personality variables. Among late adolescents, parent and peer attachment are correlated with positiveness and stability of self-esteem, life-satisfaction, and affective status (depression, anxiety, resentment/alienation, covert anger, and loneliness) (Armsden and Greenberg, 1987). Quality of attachment to parents and to a lesser extent, peers, is associated with self-reported tendencies toward the use of more problem-solving coping strategies relative to emotion-managing efforts in stressful situations (Armsden, 1986). Among early to middle adolescents, parent attachment, and to a lesser extent, peer attachment, were found to be associated with lesser hopelessness and less externally
oriented locus of control and with greater self-management (coping) skills (Armsden and Greenberg, 1987).

The authors recommend its use over the original version whenever possible. For the present study, the revised version of the IPPA was used by the investigator. Even though the scale was meant for adolescents it was used in the present study in order to assess the pattern of attachment the prison population had with their significant others or vice versa in their early years of life especially during adolescence. As in adolescence, unlike childhood and adulthood, the construct of attachment relationships with parents are associated with psychosocial adjustment; the interactions with parents can promote healthy adolescent adjustment outside the family context; and attachment with parents constitutes an important personal resource that may promote adolescents’ exploration of new social contexts and adaptive regulation of emotions, especially in times of stress.

Brief descriptions of the three dimensions are given below:

1) **Trust**: It is the reliance on another person or entity. It is a belief that someone or something is reliable, good, honest, effective, etc. It denotes a feeling of certainty that a person or thing will not fail. Trust implies depth and assurance of feeling that is often based on inconclusive evidence. Attachment is a reciprocal system of behaviours between an infant and a caregiver—generally the mother. Through attachment one learns about trust. If the attachment factor is absent it affects the establishment of trust, which in turn affects the ability to relate to many others, to form and retain friendships, and to engage in mutually satisfying emotional and physical relationships.

2) **Communication**: Communication is any act by which one person gives to or receives from another person the information about that
person's needs, desires, perceptions, knowledge, or affective states. Attachment security is an important aspect of parent-child communication because it indicates how children first learn communication from parents, and then employ those skills in other relationships. A high level of parent attachment security will lead a child to have high communication with others. Secure attachment with care givers may lead to more constructive communication and more intimate self-disclosures, which in turn increase relationship satisfaction.

3) **Alienation:** Alienation is the feeling of apartness and/or strangeness in the absence of warm or friendly relationships with people. From birth, children turn on the attachment behaviour of seeking physical closeness and soothing emotional attention from their parents and other significant adults, as needed. When they feel secure enough, they turn off their attachment behaviour and explore their environment. If these attachment gets affected either due to the externalizing behaviour of the child or due to the rejection the child experiences from the significant others alienation crop ups.

Copy is attached in Appendix – 6.

**Reliability**

Using two samples of undergraduate students who ranged in age from 16 to 20 years, Armsden and Greenberg (1987) reported good internal consistency for the IPPA with Cronbach’s alpha coefficients ranging between 0.72 and 0.91 for the sub-scales across both the parent and peer scales. Good test–retest reliability for a sample of 18–20- year-olds over a three-week period was also reported with correlation coefficients ranging between 0.86 for peer attachment and 0.93 for parent attachment (Armsden and Greenberg,
For the revised version, internal reliabilities (Cronbach’s alpha) are: Mother attachment, .87; Father attachment, .89; and Peer attachment, .92.

Validity

Convergent validity has been reported on the basis of moderate correlations between the IPPA and other measures, including the Family Self-Concept subscale of the Tennessee Self-Concept Scale (r = 0.78 with parent attachment; r = 0.28 with peer attachment) and the Social Self-Concept subscale (r = 0.46 with Parent attachment; r = 0.57 with Peer attachment). Also, significant positive correlations between parent attachment and the Cohesion (r = 0.56), Expressiveness (r = 0.52) and Organization (r = 0.38) subscales of the Family Environment Scale (FES) have been reported. In addition, significant negative correlations with the Conflict (r = -0.36) and Control (r = -0.20) subscales of the FES were reported (Armsden and Greenberg, 1987).

Administration

The Inventory of Parent and Peer Attachment (IPPA) includes three separate parts which comprise of 25 items in each of the mother, father, and peer sections in order to assess perceived quality of attachment to mothers, fathers, and peers. Hence, a general instruction, and separate instructions for each part regarding responding to the statements in the instrument were printed in the tool itself unambiguously. The investigator had given oral instructions to the participants. The general instruction given was as follows: “This questionnaire asks about your relationships with important people in your life; your mother, your father, and your close friends. Please read the directions to each part carefully. Here there is no right or wrong answer. The information and the data collected from you will be used only for research and study purpose.” The separate instruction provided for the three separate
parts that deals with mother, father and peers were given as follows; for Part 1 “Some of the following statements ask about your feelings about your mother or the person who has acted as your mother. Please read each statement carefully and darken the circled numbers that is given adjacent to each statement which represents which ever option you feel is related to the person very important you the most. Please do not omit any of the statements without marking.” For part 2: “This part asks about your feelings about your father or the person who has acted as your father. Please read each statement carefully and darken one of the circled numbers which represents whichever option you feel is related to you the most. Please do not omit any of the statements without marking.” For part 3: “This part asks about your feelings about your peers very close to you. Please read each statement carefully and darken one of the circled numbers which represents whichever option you feel is related to you the most.”

**Scoring**

The revised version of IPPA comprised of 25 items in each of the mother, father, and peer. The items are the same for Mother and Father and separate for Peer. The items in each of the scales (mother, father, and peer) are clustered into three factors such as trust, communication, and alienation separately. The items are also categorized as direct scored items and reverse scored items. The items of Mother and Father Trust are 1, 2, 3, 4, 9, 12, 13, 20, 21, and 22, in which all the items are direct scored items except the items 3 and 9 as they are negatively worded, hence they should be reverse-scored in order to make them positively worded. The factor Mother and Father Communication consists of the items 5, 6, 7, 14, 15, 16, 19, 24, and 25 amongst items 6 and 14 are reverse scoring items and the rest are direct scored items. The third factor Mother and Father Alienation includes items 8, 10, 11, 17, 18 and 23, and all are reverse scored items.
In the case of peer attachment the items of the subscale Peer Trust are 5, 6, 8, 12, 13, 14, 15, 19, 20, and 21, in which item 5 is a reverse scored item since it is negatively worded while others are directly scored items. The items of Peer Communication are 1, 2, 3, 7, 16, 17, 24, and 25. None of them were negative items. The items that come under the sub scale Peer Alienation are 4, 9, 10, 11, 18, 22, and 23, and all are negatively worded and should be reverse scored. Attachment scores for mother, father and peer are calculated separately by directly scoring the positive items and reverse scoring the negative items and summing all 25 items for each scale. It is necessary to reverse score all Alienation subscale items.

2. **Peer Pressure Inventory (Ameen, 2011)**

The Peer Pressure Inventory was developed by the investigator Ameen in 2011 in order to assess the importance of peers an individual has in their life and extent of the direct and indirect pressure/influence that the peers exert upon him/her. The Peer pressure is the influence that a peer group, or individual exerts on an individual that encourages him/her to change the attitudes, values, or behaviours to conform to the group norms. It is a self-report questionnaire consisting of 30 items where the participants rank certain statements in order to express the responses, namely, ‘Never’, ‘Sometimes’, and ‘Always’. The development samples selected for the research purpose were 110 prisoners belonging to an age group between 26 and 53 years from the three central prisons of Kerala State i.e. Kannur Central Prison, Kannur; Viyyur Central Prison, Thrissur; and Poojappura Central Prison, Thiruvananthapuram who had committed various violent crimes.

**Reliability**

Using samples of prisoners who ranged from 26 to 53 years of age Ameen (2011) reported good internal consistency for the Peer Pressure
Inventory with Cronbach’s alpha coefficient .81. Good test–retest reliability for a sample of 29–48 year olds at an interval of one month duration was also reported with correlation coefficient .89 for Peer Pressure Inventory (Ameen, 2011).

Validity

The face validity of the inventory is ensured through subjecting the inventory to the verification of different experts in the field of psychological research. On the basis of their thorough examination and judgments they acknowledged that the inventory as a whole was sufficient for the assessment of peer pressure. As the peer pressure inventory included items that focuses upon the construct peer pressure, content validity that intended to measure the degree to which the contents of the tool matches a content domain associated with the construct was also warranted.

Administration

A clear and unambiguous direction needed for the task without the usage of any jargons was given along with the Peer Pressure Inventory that the participants were provided with. The instructions given was as follows; “There are some statements in this instrument that enquire about the importance of peers having in your life and the direct and indirect influence that the peers exerted upon you. Here there is no right or wrong answer. Read each statement carefully and darken the circled numbers that is given adjacent to each statement which represents which ever option you feel is related to you the most. Please do not omit any of the statements without marking. The information and the data collected from you will be used only for research and study purpose. The three response categories along with numbers from one to three in order to express the responses, namely, 1 for ‘Never’, 2 for ‘Sometimes’, and 3 for ‘Always’ were given adjacent to each statement.” The
doubts regarding certain statements if any were clarified then and there itself. 
Even though the investigator gave oral instructions to the participants

Scoring

After completion of the filling of the inventory, the inventory were 
collected from the respondents by the investigator and checked for omissions.
The responses were scored according to the scale. The 30 items included in 
the inventory consists of only positive items. Hence the items were direct scored. A score of 3, 2, and 1 was given for the responses ‘Always’, 
‘Sometimes’, and ‘Never’ respectively. The sum of all the items was the score 
of Peer Pressure Inventory for a respondent.

3. Buss-Perry Aggression Questionnaire (Buss and Perry, 1992)

The Buss-Perry Aggression Questionnaire (sometimes referred to as 
the AGQ or simply the Aggression Questionnaire) was designed by Arnold 
Buss and Mark Perry, professors from the University of Texas at Austin in 
1992. The first version (Buss and Perry, 1992) consisted of 52 items, some 
borrowed intact from the Buss-Durkee Hostility Inventory and others 
rewritten more clearly. The correlation matrix of the 52 items for a first 
sample of 406 college students was subjected to principal-axis factoring and 
oblique rotation. This initial factor analysis was followed by a confirmatory factor analysis on a second and third sample of students. In the first sample, 
four rotated factors proved to be the maximum interpretable number: Physical Aggression, Verbal Aggression, Anger, and Hostility (a combination of Resentment and Suspicion). This was replicated over the next two samples. 
Of the list of 52 items, 23 were excluded. The remaining 29 items constitute 
the original version of the Aggression Questionnaire where participants rank certain statements along a 5 point continuum from "extremely uncharacteristic of me" to "extremely characteristic of me." The scores are normalized on a
The Buss and Perry (1992) have interpreted aggression as consisting of four sub traits. In this way, Physical and Verbal Aggression would represent the instrumental or motor components, Anger would be the emotional or affective component, and Hostility would represent the cognitive component. This factorial structure and the subscale distinction of the Aggression Questionnaire have also been found in other student samples (Bernstein and Gesn, 1997; Harris, 1995).

A brief description of the factors of the inventory is given below:

1. **Physical Aggression** refers to an act carried out with the intention of physically hurting another person. The individual may find it difficult to control urges towards physical aggression. The harm can range from the minor pain produced by a slap to systematic torture or murder.

2. **Verbal Aggression** refers to the tendency to be argumentative. It is a communication intended to cause psychological pain to another person or a communication perceived as having that intent. The communication act may be active or passive and verbal or non-verbal.

3. **Anger** involves the psychological arousal and preparation for aggression, representing the emotional or affective component of behaviour that involves a strong uncomfortable and emotional response related to one's psychological interpretation of having been offended, wronged, or denied and a tendency to react through retaliation to a perceived provocation.

4. **Hostility** is an attempt to force reality to produce the desired feedback, by extorting validating evidence to confirm types of social prediction, constructs that have failed. Instead of re-construing their constructs to meet disconfirmations with better predictions, the hostile person
attempts to force or coerce the world to fit their view, even if this is a forlorn hope, and even if it entails emotional expenditure and/or harm to self or others.

Most of the results obtained with the Aggression Questionnaire are based on English-speaking samples, but there are not many studies that evaluate the psychometric properties of the Aggression Questionnaire either in countries where other languages are spoken or in offender population (Williams, Boyd, Cascardi, and Poythress, 1996). Therefore, the instrument had been used in Malayalam speaking (Keralites) samples (prisoners). Copy is attached in appendix - 7.
Reliability and Validity

With respect to its psychometric standards, the results showed adequate test-retest reliability and internal consistency both for the general questionnaire and the subscales (Buss and Perry, 1992; Harris, 1995, 1997). The internal consistency of the four factors and the total score ranged between .72 and .89. As far as the test-retest reliability is concerned, the analyses yielded a group of indexes, ranging between .72 and .80 (Buss and Perry, 1992). The correlations found between the Aggression Questionnaire and peer nominations of aggression also showed values around .40, lending support to construct validity (Buss and Perry, 1992).

Administration

Instructions for the Malayalam adaptation of Aggression Questionnaire were printed in the tool itself unambiguously though the investigator gave oral instructions as follows: “The questionnaire consists of statements which indicate how uncharacteristic or characteristic each of the following statements is in describing you. Please read each statement and place your rating by writing the number given for the responses like 1 for ‘extremely uncharacteristic of me’, 2 for ‘somewhat uncharacteristic of me’, 3 for ‘neither uncharacteristic nor characteristic of me’, 4 for ‘somewhat characteristic of me’, and 5 for ‘extremely characteristic of me’ in the box to the right of the statement that indicates which ever option you feel is related to you the most. Please do not omit any of the statements without marking. The information and the data collected from you will be used only for research and study purpose.”

Scoring

Buss-Perry Aggression Questionnaires collected from the respondents of the study after entering their responses without any omissions were scored
on a 5 point scale. For the items a score of 1 to 5 was given for the responses like 1 for ‘extremely uncharacteristic of me’, 2 for ‘somewhat uncharacteristic of me’, 3 for ‘neither uncharacteristic nor characteristic of me’, 4 for ‘somewhat characteristic of me’, and 5 for ‘extremely characteristic of me’. The 29 items of the questionnaire had been categorized under 4 factors. The items that come under the factor Physical Aggression (PA) are item 2, 5, 8, 11, 13, 16*, 22, 25, and 29. Items come under the second factor Verbal Aggression (VA) are item 4, 6, 14, 21, and 27. The third factor Anger (A) consist the items 1, 9*, 12, 18, 19, 23, and 28. Hostility (H) i.e., the final factor includes the items 3, 7, 10, 15, 17, 20, 24, and 26. The two items i.e. 9 and 16 with the asterisk should be reverse scored. The score of the 4 factors were found separately and the total score for Aggression is the sum of the 4 factor scores.

4. Impulsivity Inventory (Ameen, 2011)

In order to assess the impulsive nature of an individual the investigator Ameen developed Impulsivity Inventory in 2011. Impulsivity involves action without much forethought in appropriate situations that can and does result in desirable consequences. When such actions have positive outcomes, they tend not to be seen as signs of impulsivity. Impulsivity Inventory is a self-report questionnaire consisted of 20 statements which are positive in nature related to the nature and the extent of impulsiveness that an individual possess. The each and every statement were provided with four response categories in order to express the participants’ responses, namely, ‘Never’, ‘Sometimes’, ‘Often’ and ‘Always’. The sample consisted of 116 prisoners who had committed various violent crimes intentionally, were selected by using purposive sampling technique preferred from the three central prisons of Kerala State with the age ranges from 25 to 49 years.
Reliability

The Cronbach’s alpha coefficient .86 for impulsivity inventory was established by Ameen (2011) using a sample of prisoners who ranged in age from 25 to 49 years. The test-retest reliability for a sample of 47 prisoners of 27-45 year olds at an interval of one month duration was also reported with correlation coefficient .83 for Impulsivity Inventory (Ameen, 2011).

Validity

The final form of Impulsivity Inventory was subjected to verification of experts in the field of psychological research. The face validity of the inventory is ensured on the basis of their examination and judgments and the impulsivity inventory as a whole was admitted to be sufficient for the assessment of impulsivity. As the inventory was verified, its ability to measure whether the present sample under study had the personality characteristics viz., impulsivity in them, the content validity of the tool in order to assess the degree to which the content of the representative of the domain it’s proposed to measure is verified.

Administration

The impulsivity inventory was administered to the participants by the investigator with proper instructions. The directions which were sufficient and unambiguous without the usages of any unnecessary terminology necessitate the task were provided with the tool itself. Nonetheless, the investigator elucidated the instructions personally to the participants as follows; “There are given some statements in this instrument that enquire about your impulsive nature. Read each statement carefully and darken the circled numbers that given adjacent to each statement which represents which ever option you feel is related to you the most. Please do not omit any of the statements without marking. The information and the data collected from you
will be used only for research and study purpose. The four response categories along with numbers from one to four in order to express the responses, namely, 1 for ‘Never’, 2 for ‘Sometimes’, 3 for ‘Often’ and 4 for ‘Always’ were given adjacent to each statement.” The doubts of the respondents regarding certain statements if any were clarified then and there itself by the investigator. After the completion of the inventory it was collected from all the respondents and checked for omissions if any.

**Scoring**

After checking for any omissions the filled inventory were collected from the respondents by the investigator. As the 20 items included in the inventory were positive items all the items were scored positively. For the items a score of 4, 3, 2, and 1 was given for the responses ‘Always’, ‘Often’, ‘Sometimes’, and ‘Never’ respectively. The sum of all the items was the score of Impulsivity Inventory for a respondent.

5. **The Rejection Sensitivity-Adult Questionnaire (A-RSQ) (Berenson et al., 2009)**

Rejection sensitivity (RS) is a cognitive-affective processing disposition to anxiously expected rejection, shaped by cognitive-social learning history and triggered in situations when either rejection or acceptance is possible. The Rejection Sensitivity – Adult Questionnaire (A-RSQ) was developed by Berenson, Gyurak, Ayduk, Downey, Garner, Mogg, Bradley, and Pine, in 2009. It is a measure of sensitivity to actual or perceived rejection. It assesses anxious expectations for rejection by significant others. It is a version of the RSQ (Downey and Feldman, 1996) recently developed and adapted for general samples of adults in 685 adults who completed the measure over the internet. It was created by revising situations on the RSQ to have more generally applicable wording, removing those that were specific to
college life, and generating additional items about potential rejection situations in adults’ lives. The Adult RSQ consists of 9-situation that correlated with the original college-based 18-situation RSQ among students.

The answers to the hypothetical situations given in Adult RSQ varied along two dimensions: (a) degree of anxiety and concern about the outcome and (b) expectations of acceptance or rejection. The Adult RSQ asks participants to indicate their degree of concern or anxiety about the outcome of each situation on a 6-point scale ranging from very unconcerned (1) to very concerned (6). They are then asked to indicate their expectation that the other person(s) would respond in an accepting fashion or not on a 6-point scale ranging from very unlikely (1) to very likely (6). High likelihood of this outcome represents expectations of acceptance, and low likelihood represents expectations of rejection. Copy of the tool is appended (see appendix – 8).

Reliability

As reported in Berenson, Downey, Rafaeli, Coifman, and Leventhal (2011), 85 adults (including 45 who met DSM-IV-TR criteria for borderline personality disorder and 40 healthy participants recruited from the general community) completed the A-RSQ twice, an average of 6.9 weeks apart. The internal consistency (alpha) was .89 for each administration and the test-retest reliability (Spearman-Brown coefficient) was .91. Scores were significantly higher in the borderline personality disorder group (M =14.86, SD=6.09) than in the healthy comparison group (M = 6.19, SD = 2.80), t (63.4) = 8.58, p < .001.

Validity

The A-RSQ was completed by 685 adults in an internet survey. Scores (M = 8.6, SD = 3.6, range= 1.0–24.2, α = .70) did not systematically vary with gender or age (range 18–78, M = 25.6 years), but were inversely
associated with years of education \(r = -0.15\); \(p < 0.001\). Controlling for education, the A-RSQ showed expected correlations (all \(p < 0.001\)) with related constructs measured in a subsample of survey respondents \((n = 245)\), including: neuroticism (John, Donahue, and Kentle, 1991, \(r = 0.32\)); social avoidance/distress (Watson and Friend, 1969, \(r = 0.34\)); self-esteem (Rosenberg, 1965, \(r = -0.46\)); attachment anxiety and attachment avoidance (Fraley, Waller, and Brennan, 2000; \(r = 0.48\) and \(r = 0.33\), respectively); and interpersonal sensitivity and depression (Derogatis, Lipman, and Covi, 1973, \(r = 0.45\) and \(r = 0.37\), respectively). As evidence for its discriminant validity, the A-RSQ remained associated with attachment anxiety \((r = 0.21, p < 0.001)\) and interpersonal sensitivity \((r = 0.18, p < 0.01)\) when controlling for the rest of these constructs.

Further support for the validity of the A-RSQ derives from its ability to reflect the individual differences in RS associated with serious forms of psychopathology in which rejection concerns are prominent. In an ongoing study of adults who met diagnostic criteria for borderline and/or avoidant personality disorders \((n=80)\), the mean A-RSQ scores for those diagnosed with either one of the disorders fell above the 90th percentile for our unselected internet sample, whereas the mean A-RSQ scores for those diagnosed with both disorders fell above the 99th percentile (Downey, Berenson, and Rafaeli, 2009, cited by Berenson et al., 2009). Hence, the A-RSQ captures meaningful differences in RS across diverse groups of adults.

**Administration**

The A-RSQ deals with the sensitivity of an individual towards an actual or perceived rejection. The A-RSQ was provided to each and every participant along with other tools. The instruction that should be followed while doing the task of entering responses was given in the questionnaire itself as follows; “The items below describe situations in which people
sometimes ask things of others. There are two questions given based on each situation. For each item, imagine yourself in that situation, and indicate that response by circling the number (numbers given separately for both the questions) which you feel would be aptly relative of your emotion to that of the situation. The information and the data collected from you will be used only for research and study purpose.” The doubts of the respondents regarding certain statements if any were clarified then and there itself by the investigator. After the completion of the inventory it was collected from all the respondents and checked for omissions if any.

**Scoring**

A score of rejection sensitivity for each situation is calculated by multiplying the level of rejection concern (the response to question a) by the reverse of the level of acceptance expectancy (the response to question b). The formula is: rejection sensitivity = (rejection) x (7-acceptance expectancy).

Take the mean of the resulting 9 scores to obtain the overall rejection sensitivity score.

**6. Personal Data Sheet**

A personal data sheet which includes maximum information about the socio-demographical as well as biographical information about the individual who can be a part of the investigation helps the investigator to know that person more in a snap short. A personal data sheet was prepared and used for the research purpose by the investigator that comprises of the socio-demographic information of the prisoner participant like, name, age, sex, religion, place of dwelling, family type, economic status, educational qualification, marital status, and habits; as well as the details related to the crime committed by the prisoner participant like the type of offence committed, reason behind the crime commission, victim of the offence
committed, whether it was an individual or group crime, whether the prisoner participant was a first time offender or a habitual offender, if there was any family history of crime commission, punishment got for the criminal activity and if the prisoner participant was repentant for the act. The personal data sheet was used by the investigator amongst the prisoner participants on a one to one basis.

**Statistical Analysis**

The important statistical techniques used in the present investigation were simply correlation and ‘t’ test.
Phase 5

Verification Phase
It was noted by the investigator that whichever technique would have to be used in the present study, it had to be appropriate to the situation. Or else it would give unwanted and dreadful results much against the investigator’s anticipation. As the quantitative work seemed not apt for the current research, that came to be realized considering the results achieved from the phase 4, i.e., the testing phase using quantitative methods, the investigator become aware that rather than quantitative techniques qualitative methods would be effective to bring out the characteristics and personality of prisoner participants, the way they spent their life, emotional feelings of despair, the affect as well as the existence of the research variables in their life, the reasons behind them turning into incarcerators, the root causes of their offence, and so on. In such situations where the studies are meant about prison sample, it was evident that the qualitative techniques would be most appropriate. In the broad light of the above said the investigator felt the qualitative techniques would give a better exposure to bring out unseen root causes behind the crime commission in one way or the other.

Qualitative research involves any research that uses data that do not indicate ordinal values (Nkwi, Nyamongo and Ryan, 2001). Qualitative research is intended to penetrate to the deeper significance that the subject of the research ascribes to the area being researched rather than surface description of a large sample of a population. It involves an interpretive, naturalistic approach to its subject matter and gives priority to what the data contribute to important research questions or existing information. It aims to provide an explicit rendering of the experiences, behaviours, and beliefs there among a group of participants and generate data about human groups in social settings. In qualitative research concepts, data collection tools, and data collection methods can be adjusted as the research progresses. It aims to understand how the participants derive meaning from their surroundings, and how their meaning influences their behaviour. Qualitative research aims to get
a better understanding through firsthand experience, truthful reporting, and quotations of actual conversations. Qualitative research does not introduce treatments and interventions or manipulate variables, or impose the researcher's operational definitions of variables on the participants, or control group is not used (Royse, 1999).

Qualitative research was very much at the heart of early studies of crime (Miller, 2008). Largely as a result of the revitalization of neighbourhood studies of crime, as well as growing interest in situational aspects of offending, there has been a recent resurgence of appreciation for qualitative research in criminology (Miller, 2008). There are lots of studies upon prison population done by experts in the field of Criminology, Forensic Psychology, and Psychology that used qualitative methods. Qualitative research is perhaps most widely established in criminology (Bottcher, 2001; Joe-Laidler and Hunt, 1997; Kruttschnitt, Gartner, and Miller, 2000; Maher, 1997; McCorkel, 2003; Miller, 1998; Miller and White, 2003; Mullins and Wright, 2003). There are many qualitative studies in criminology that have utilized in-depth interview techniques, as this has been the approach most typically adopted (Ferrell, 1996; Fleisher, 1998; Maher, 1997; McCorkel, 2003). Most qualitative research in criminology relies on purposive or snowball sampling techniques (Miller, 2008).

In their paper Meuser and Loschper (2002) begins with, a brief overview of research traditions that paved the way for qualitative methods in criminological research (labeling approach and critical criminology). In addition, it outlines recent trends in qualitative criminology. The value, appropriateness and necessity of using qualitative methods is discussed by Tewksbury (2009) because of the unique contributions – depth of understandings being primary – that qualitative methods can provide it is argued that such approaches should be used more frequently, be more
frequently and strongly valued and seen as unique, often superior approaches to the creation of criminological and criminal justice knowledge. Liebling (1999) reflects on some of the tensions experienced in doing prison research. He opines that both qualitative and quantitative `styles of research’—in so far as they can be characterized as discrete styles—have their dangers and rewards. The absence of `pain' from quantitative research accounts of prison life is surprising. The author argues that research in any human environment without subjective feeling is almost impossible—particularly in a prison.

A qualitative evaluation research methodology was adopted by Clarke, Simmonds, and Wydall (2004) in their research with a purpose of understanding factors influenced the successful or unsuccessful delivery and impact of accredited cognitive skills training programmes for adult male prisoners, and to identify whether or not there were any non-reconviction benefits arising from the provision of such programmes. Face to face interviews were conducted with prisoners and prison staff at six prisons in England. A series of in-depth interviews were conducted with the goal of examining the processes and factors related to the entering, enduring, and exiting gang associations by Morden, (2011). This study provides strong support for future qualitative research into the phenomena of organized criminal gangs. Fitzgibbon and Curry (2007) used qualitative methods to study a prison in Punjab, India. They used semi structured interviews to suit their purpose which was to study the different experiences of the offenders. The purpose of the investigation by Suto (2007) was to study the experiences of inmates who attempted suicide in order to shed light on factors associated with the suicide attempts in prison. A qualitative research project was conducted among twenty-four inmates who attempted suicide in prison who were interviewed in six state prison facilities in Oregon.
According to Siegel (2007), in the field of Criminology there are two main sources/methods that the criminologists use to uncover the facts behind the crimes which are primary sources of crime data and secondary sources of crime data. Criminologists refer these records to assess the nature and extent of criminal behaviour and the personality attitudes and background of criminal offenders. The primary sources of crime data are official records and survey. The Criminologists use the official records of Government agencies such as police departments, prisons and courts in order to analyze to uncover the individual and social forces that affect crime. Another important method of measuring crime is through surveys which can provide information on the personal characteristics of offenders – such as attitudes, beliefs, values, characteristics, psychological profiles as well as their experiences with crime and victimizations in order to understand the social forces that cause crime that is unavailable from any other source.

The secondary sources of crime data include experimental research, case study, observational and interview research, meta-analysis, data mining, and crime mapping. In experimental research, criminologists manipulate or intervene into the lives of their subjects (which can cause ethical and legal road blocks) to see the outcome or the effect of the intervention which are relatively rare as it is difficult and expensive to conduct; and they require long follow up periods to verify results. Nonetheless, they have been an important source of criminological data. Sometimes criminologists focus their research on relatively few subjects, interviewing them and studying in-depth or observing them first hand to gain insight into their motives and activities. This research often results in the kind of in-depth data that absent in large scale surveys.

Meta-analysis involves collecting the findings from previously conducted scientific studies that address a particular problem, appraising and
synthesizing the evidence and using the collective evidence to address a particular scientific question that provide a more powerful and valid indicator of relationships than the results provided from a single study. A relatively new criminological technique, data mining uses multiple advanced computational methods, including artificial intelligence (the use of computers to perform logical functions), to analyze large data sets usually involving one or more data sources. The goal is to identify significant and recognizable patterns, trends, and relationships that are not easily detected through traditional analytical techniques. Criminologists use this information for various purposes, such as the prediction of future events or behaviours. Criminologists now a day use crime mapping to create graphic representations of the spatial geography of crime. Computerized crime maps allow criminologists to analyze and correlate a wide array of data to create immediate, detailed visuals of crime patterns.

Considering the psychosocial factors that caused crime commission, characteristics of the sample and the peculiarity of the research along with the results attained through unstructured interview conducted in the former phase i.e., phase 1, the investigator made use of case study and interview in order to verify the extent to which the psychosocial factors such as attachment, rejection sensitivity, aggression, peer pressure and impulsivity are contributing to the development and formation of antisocial/criminal behaviour. The current phase i.e. phase 5 was carried out in two parts. Part 1 deals with details of structured interview and Part 2 deals with the particulars of in-depth case studies.

**Part 1: Structured Interview**

There are certain factors that enforce an individual to commit a crime. The causes of crime may be different but in order to prevent crime it is important to have an understanding of its roots. In order to verify the
contribution of the research variables viz., attachment, rejection sensitivity, aggression, peer pressure and impulsivity in the crime commission of the participants, emphasizing on the results attained through unstructured interview the investigator decided to conduct structured interview using structured interview schedule.

Participants

The participants of this phase comprised of 120 male prisoners from the three central prisons namely, Kannur Central Prison (Pallikkunnu, Kannur), Poojappura Central Prison (Thiruvananthapuram) and Viyyur Central Prison (Thrissur) of Kerala. Prisoners who had committed violent crimes like murder, murder attempt, rape, rape attempt, domestic violence, robbery, child abuse and aggravated assault intentionally; who did not participate in any of the present research data collection procedures; who committed criminal activities either in solitude or in groups; who were either first time offenders (caught by law for the first time committing a criminal act) or habitual offenders (who keep repeating doing crimes again and again) were taken as participants. The participants were selected using purposive sampling method.

Instruments

a) Interview Schedule
b) Personal Data Sheet

a) Interview Schedule

An interview schedule is the guide an interviewer uses when conducting a structured interview. The schedule consists of a mixture of items of two formats. In one format, a set of questions were designed to be asked exactly as worded. The choices of answers to those items were fixed in advance by the
investigator and boxes in which the tick was supposed to be made were given subsequently to those items. In the other format the items were designed in such a way that, they could be administered verbatim by the investigator, exactly in the way the respondents were expected to give detailed information orally regarding those items in whichever way they were comfortable with. Here the investigator followed the first format. Interviewer prepared the interview schedule in English and asked the questions in Malayalam exactly as they appeared on the schedule to the participants at the time of interview without losing the concept of items. The interview schedule consists of 15 questions related to the five research variables under study namely, attachment, rejection sensitivity, aggression, peer pressure and impulsivity in order to find out the part of these variables in the life of the participants that paved way to crime commission. Copy is attached in Appendix – 9.

b) Personal Data Sheet

The personal data sheet provides a concise picture of who the participant is and his/her where about. Instead of trying to keep track of a number of documents, making a personal data sheet which includes maximum information about the participant under study will be helpful to the investigator. It also helps from collecting the socio-demographic and biographical information regarding the participant again and again for further procedures and cut down the amount of talking. The personal data sheet used for the present study comprised the details like, name, age, sex, religion, place of dwelling, family type, economic status, educational qualification, marital status, habits, the crime committed by the prisoner participant like the type of offence committed, reason behind the crime commission, victim of the offence committed, whether it was an individual or group crime, whether the prisoner participant was a first time offender or a habitual offender, if there
was any family history of crime commission, punishment got for the criminal activity and if the prisoner participant was repentant for the act.

**Procedure**

The investigator had already got permission from the prison authorities in order to interview the prisoners. Only those prisoners who were voluntarily willing to be the part of research were selected for the purpose. After obtaining the oral consent from the participants, appointment was taken and their convenient date and time was fixed to interview them. As per the fixed time the investigator with the help of Welfare Officers contacted the prisoners and made them understand the relevance of the present study and the need of collecting data from them. After the rapport establishment, the participants were interviewed by the investigator on individual basis. The investigator presented orally the questions one by one to the participants and collected information from them respectively. Details related to the participants’ attachment with their significant others, parenting, negative peer pressure, rejection experienced by them from their significant others, their attitude towards rejection, their impulsive and aggressive nature etc., were enquired. Further details were also collected as per the requirement.

**Analysis**

The prisoners self theorizations and justifications were given importance by the investigator. The data collected as per the prisoners reporting were to be taken as authenticated data since there was no other way to confirm its originality. The data collected through structured interview using the interview schedule was content analyzed and the results are discussed in chapter 4.
Part 2: In-depth Case Study

In order to verify the results accomplished through both unstructured and structured interview the investigator conducted in-depth case studies. Case studies are often confined to the in-depth investigations of a particular individual, group, or event within the real-life context. The primary purpose of a case study is to understand something that is unique to the case(s). It allows a researcher to investigate a subject matter in far more detail than might be possible if they were trying to deal with a large number of research participants. Implications of a case study approach for qualitative data collection and analysis are several. First, participants and/or cases, by definition, should be selected for their unique properties. Because it is the case’s special attributes that are of interest, sample sizes are generally small, usually one to several cases. Inquiry in these types of studies focuses largely on their defining case features and the differences they exhibit from other individuals/events in the larger population. The overall idea is to tease out what makes them so different and why. Often, knowledge gained from case studies is applied to a larger population. For conducting case studies the researchers select methods of data collection and analysis that will generate material suitable for case studies such as qualitative techniques (semi-structured interviews, participant observation, and diaries), personal notes (letters, photographs, notes) or official document (case notes, clinical notes, appraisal reports) in order to produce a fairly detailed and comprehensive profile of the person and a description of his/her behaviour. Here the investigator endeavoured to explore whether the psychosocial variables i.e., attachment, rejection sensitivity, aggression, peer pressure and impulsivity had played their own role in the development of antisocial/criminal behaviour thereby leading the prisoners to commit the crime.
Participants

The profiles of the convicts kept in the prisons; First Information Report (FIR) of the prisoners in the Superintendents’ office; the detailed conversations with the Jail officials; interaction with prisoners while the unstructured and structured interview helped the investigator in the selection of the participants for the in-depth case study and provided the investigator with supplementary information regarding the various peculiar cases he wanted to explore more about. The participants of this phase comprise of 12 male prisoners who had committed violent crimes intentionally from the three central prisons of Kerala who were excluded from other research data collection procedures in order to include in case studies, due to their peculiarity. The participants were selected using purposive sampling method.

Measures

a) Semi-Structured Interview
b) Personal Data Sheet

a) Semi-Structured Interview

A semi-structured interview is a different method of research most commonly associated with qualitative research which has a rigorous set of questions which does not allow one to divert. A semi-structured interview is open, allowing new ideas to be brought up during the interview as a result of what the interviewee says. Semi structured interview has a flexible and fluid structure, unlike structured interviews, which contain a structured sequence of questions. The interviewer in a semi-structured interview generally has a framework of themes to be explored. However, the specific topic or topics that the interviewer wants to explore during the interview should usually be thought about well in advance (especially during interviews for research projects). It is generally beneficial for interviewers to have an interview guide
prepared, which is an informal grouping of topics and questions that the interviewer can ask in different ways for different participants rather than a sequenced script of standardized questions. Interview guides help researchers to focus an interview on the topics at hand without constraining them to a particular format. This freedom can help interviewers to tailor their questions to the interview context/situation, and to the people they are interviewing.

b) Personal Data Sheet

Personal data refers to the personal information of an individual who can be a part of the investigation for the purpose of identification. Personal Data Sheet is a convenient way of organizing all the information related to an individual together on a few stapled pages that will be required to bring out all the relevant data needed by the investigator for the study. The personal data sheet prepared by the investigator for the present study covers the specific information like, name, age, sex, religion, place of dwelling, family type, economic status, educational qualification, marital status, habits, the details of the crime committed by the prisoner participant (the type of offence committed, reason behind the crime commission, victim of the offence committed, whether it was an individual or group crime, and whether the prisoner participant has committed the crime for the first time), if there was any family history of crime commission and the residue of their criminal act (punishment got for the criminal activity and if the prisoner participant was repentant for the act).

Procedure

After obtaining permission from the prison authorities in order to interview the prisoners appointment was taken and their convenient date and time was fixed to interview them. Oral consent was taken from the prisoners who were voluntarily willing to be the part of research purpose. The
investigator with the help of Welfare Officers contacted the prisoners in accordance with the prior appointment. The participants were made understand the relevance of the present study and the need of collecting data from them. After establishing the rapport, the participants were interviewed by the investigator on individual basis. The information collected using semi structured interview were mainly biographical and related to events in the individual's past like the participants’ attachment with their significant others, parenting, negative peer pressure, rejection experienced by them from their significant others, their attitude towards rejection, and their impulsive and aggressive nature.

Analysis

The researcher analyzed the data that was collected through the case study and interpreted the information thereby. The details were described qualitatively and are given in chapter 4.
Phase 6

Model Proposal
Scientific studies and discoveries come about after a well-thought-out hypothesis and thoroughly conducted experiments that produce models and theories. Models may be produced after the formulation of theories, but there can be instances when the models are produced first before the theories. There can also be cases when models produce theories which in turn lead to the construction of another model for the verification of a theory. Note that one difference relied upon the fact that models are the basis of theories, while theories are the main basis for the explanation of different phenomena. Models come in the form of a verbal, visual, or mathematical representation of a prospect or scientific process of structure that should be followed by scientists in order to come up with theories and test inferences. These can then be formulated after conducting extensive observations of physical phenomena. When scientists have come up with a model showing structures of the scientific methods, repeated experiments following the model will be conducted in order to come up with acceptable theories. Models can also be seen as an application of theories in some instances. They consist of a given group of boundary conditions which serve as a projected possibility based on the premises of a certain theory. The term model is used to refer to an abstract representation or a projection of possibility with an underlying theory as the basis. Models can also be defined as a physical representation of a theory. Physical models can, therefore, be a tool for the verification of the theory. Simply put, both a model and a theory state possibilities and provide explanations for natural phenomena. Models can be used in the formulation of experimental setups as the scientist performs the steps of the scientific method. They give structure for the formulation of theories. Models may also serve as the representation of possibilities with respect to the premises of theories. Scientists can create simulations and state hypotheses modeled after the theories. In some cases, models can also be used to confirm a theory. They
serve as the variable for experiments needed for the testing of the theory’s correctness.

The current phase i.e., phase 6 comprises of the proposal of a model by the investigator Ameen Abdulla and research supervisor Baby Shari. As a part of this existing theories and studies related to the variables taken for the research purpose i.e., attachment, rejection sensitivity, aggression, peer pressure, and impulsivity were referred thoroughly. A special emphasis was given to the new and old literatures which were published, related to several theories and studies that have a direct connection or interconnection with the research variables which in turn connected with antisocial/criminal behaviour that led to the crime committing situation. Libraries (in order to refer books, journals, thesis, manuals etc.), info net services (in order to refer e-journals, using search engines like Science Direct, Sage Journals, Springer link, JCCC for articles), and internet browsing respectively were used in order to collect recent articles on relevant topics. The data assembled through the above mentioned sources were verified with the expert in psychological research. The descriptions of the proposed model are given in chapter 4.