METHODOLOGY AND PROCEDURE
CHAPTER-III

METHODOLOGY AND PROCEDURE

Research Methodology is a very important and vital part for any research study. This chapter is concerned with the methodological aspect of the present study.

The aim of the present work is to find out the role of academic stress, personality type and parental rearing among computer addict adolescent, and to find the correlation among academic stress, personality type and parental rearing in computer addicts.

This study was made to be started by reflecting on questions like: can stress be a cause of computer addiction? Is any specific type of personality become computer addict? Can parental rearing be a cause of computer addiction? Is their any correlation among stress, personality and rearing?

The Objectives of the study are :-

- To study the association between academic stress and computer addiction.
- To study the association between Type 'A' personality and computer addiction.
- To study the association between parental rearing and computer addiction.
To study the correlation between academic stress and Type A personality.

To study the correlation between academic stress and parental rearing.

To study the correlation between Type A personality and parental rearing.

**HYPOTHESES**

A hypothesis is a testable statement of the relationship between the variables under study. Since it is testable, it can be shown whether a hypothesis is either true or false. The formulation of a hypothesis is a creative task and involves a lot of thinking and imagination.

Various hypotheses in the present study are described below:-

1. Academic stress would be significantly higher in computer addicts.
   1.a. Academic Frustration would be significantly higher in computer addicts.
   1.b. Academic conflict would be significantly higher in computer addicts.
   1.c. Academic Pressure would be significantly higher in computer addicts.
   1.d. Academic anxiety would be significantly higher in computer addicts.
2. The presence of Type 'A' personality would be significantly higher in computer addicts.

3.i. Faulty parental rearing would be significantly higher in computer addicts.

3.a. Parental Rejection would be significantly higher in computer addicts.

3.b. Parental Carelessness would be significantly higher in computer addicts.

3.c. Parental Negligence would be significantly higher in computer addicts.

3.d. Parental Utopian expectation would be significantly higher in computer addicts.

3.e. Parental Lenient standard would be significantly higher in computer addicts.

3.f. Parental Freedom would be significantly higher in computer addicts.

3.g. Parental Faulty Role Expectation would be significantly higher in computer addicts.

3.h. Parental Marital conflict would be significantly higher in computer addicts.

3.1. Faulty mother rearing would be significantly higher in computer addicts.
3.2. Faulty father rearing would be significantly higher in computer addicts.

4. Academic stress would be positively correlated with Type 'A' personality in computer addicts.

5. Academic stress would be positively correlated with faulty parental rearing in computer addicts.

6. Type 'A' personality would be positively correlated with parental rearing in computer addicts.

RESEARCH DESIGN

The sequence of those steps taken ahead of time to ensure that the relevant data will be collected in a way that permits objective analysis of the different hypotheses formulated with respect to the research problem, is a research design.

It helps the researcher in testing the hypothesis by reaching valid and objective conclusion regarding the relationship between the independent and dependent variables.

In this type of research it always explain the phenomena, which has already occurred. Though research the experimenter wants to know the possible causes of that phenomena. The experimental design suited in such a situation is technically known as "Ex post-facto Research Design." In this design researcher moves to opposite direction from dependent variable to independent variable. Computer addicts and non-computer addicts are dependent variable in the present study and
academic stress, personality type, and parental rearing are **independent** variables in this study. There are some limitation of ex-post facto research design that independent variable can't be manipulated and random sampling method can't used.

**THE VARIABLE STRUCTURE**

**Independent Variable:**
- Academic Stress,
- Personality Type,
- Parental Reading.

**Dependent Variable:**
Computer Addiction  
(include all computer activities like internet, chatting, gaming, shopping, pornography etc.)

**Controlled Variable:**
- Age : Matching (15 to 18 years)  
- SES : Matching (40 thousand & above)  
- Sex : Male  
- Religion & Caste : Elimination.

**SAMPLE**

In the present study systematic purposive sampling technique was used to draw out the sample, because random sampling technique was neither relevant nor humanly possible to adhere to the procedure in addict situation.
However to ascertain that no bias was involved, the investigator took all possible precaution in selecting the representative sample. The experimental group consisted of computer addiction. There were 150 male adolescents (15 yrs. to 18 yrs.) in experimental group and controlled group consisted of 150 addition free or normal adolescent of same age group. There were 300 adolescent in both groups. Computer Addicts were drawn from very famous reputed and known public schools of Kanpur City, 150 non addict normal adolescents were selected from the same schools by using same sample technique.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Experimental (Computer addicts)</th>
<th>Control Group (Non Computer addicts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

Procedure of Data Collection

For any experical research collection of data is most important step, and it includes proper selection and identification of sample, establishment of rapport as well as administration of tools. Present study was related to computer addict adolescents. Many reputed and known schools were selected as a center of collection of data. Managers, directors and principals of the respected schools were contacted for the permission. Only those adolescents were selected for the study who were using computer regular at least from last one year.

The investigator visited different schools and concerned for adolescents kind co-operation in collection of the data. Firstly, computer
addiction scale was given to the adolescents, which is filled by them, then the investigator has sorted the selected the desired adolescents (computer addicts) for the present research work. Researcher fixed next day with the addict adolescents concerned and gave all the questionnaires one by one.

Subjects were requested to read the instructions carefully and to ask the researcher, if there was any difficulty in the understanding of the instructions and items of questionnaires. It was assured that their answer and identity would be kept confidential. It was emphasized that no item should be omitted and there was nothing "right" or "wrong" about the question. There was no limit for filling the questionnaires. However, it normally took 45 minutes to complete them.

After that investigator collected all the questionnaires from subjects.

The Tools

The tools used in the presented study are:

1. Academic Stress by Dr. Abha Rani Bisht
2. Type A/B behavioural pattern scale by Mr. Upinder Dhar
   Ms. Manisha Jain
3. Parenting Scale by Dr. Rajeev L. Bharadwaj
   Dr. Harish Sharma
   Smt. Amita Garg
4. Computer Addiction with approved by
Academic Stress Scale: To measure academic stress in adolescents as subjects, academic stress scale developed by Dr. Abha Rani Bisht has been used. It is a very useful tool for evaluating stress of adolescents.

It scale consist 80 items which were divided into four parts, Academic Frustration, Academic Conflict, Academic pressure and Academic anxiety. This test measured two type of stress. The frequency of stress and quantity of stress.

Reliability of the Scale: The reliability of the scales was calculated in three ways (i) dependability (short term test-retest correlations) (ii) stability (retest after a longer interval) and (iii) internal consistancy. The dependability was found .87, stability was found .82, and internal consistancy was found .88 which is very high and significant.

Validity of the Scale: This scale appear to be having content validity and item validity. Construct validity was estimated in a two fold fashion. In both the construct validity was affirmed.

Scoring: In the academic stress scale there are 80 items including four areas:

- Academic Frustration: 26 items
- Academic Conflict: 15 items
Academic Pressure : 24 items
Academic Anxiety : 15 items

Among all items there are some negative and some positive items. There are two ways of responding frequency of stress and quantity of stress. Five point scale has been used for scoring.

**For positive items:**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Too much</td>
<td>Much</td>
<td>Average</td>
<td>Less</td>
<td>Not at all</td>
</tr>
<tr>
<td>Frequency</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Quantity</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**For Negative items:**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
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</tr>
<tr>
<td>Frequency</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Quantity</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Two way of responses and five alternative responses have been given for each statement i.e. "frequency : always, often, sometimes, rarely, never. Two way quantity of stress : Too much, much, average, less, not at all. The scoring of which has been objectified by assigning 4 to 0 scores respectively for five alternative of positive items. For the negative items the scores assigned to each of alternatives have been reversed. The
total of frequency of stress and total of quantity of stress has been the grand total of academic stress.

**Type A/B Behavioural Pattern:**

To measure type of personality A/B of the subjects, Type A/B behavioural pattern scale, developed by Mr. Upinder Dhari and Manisha Jain has been used. It is a very useful tool for analyzing the personality of subjects, present scale has two parts. Form A and Form B to measure Type A and Type B behaviours patterns separately, because if a person scores high on Type A, It does not mean that he is not having any characteristic of Type 'B' personality, as personality is mixture of Type A and Type B personality.

The final form of the scale constituted 33 items, 17 items in Form A and 16 items in Form B.

**Factors of Type A Behaviour Pattern:** The Part I of the scale has 17 items or statements for administering Type 'A' behaviour pattern in subjects. Six factors were identified: astense, impatient, restless, achievement, domineering and workaholic.

**Factors of Type B Behaviour Pattern:** The Part II of the scale has 16 items or statements for administering Type 'B' behaviour pattern in subjects. Five factors were identified: complacent, easy going, non-assertive, relaxed and patient.
Reliability of the scales: The odd-even reliability of both the forms of the scale was determined by calculating reliability coefficient. The reliability coefficient of Form A was found to be .54 and for Form B also, it was found to be .54.

Validity of the Scale: All the items in the scale are concerned with the personality type, the scale has high content validity, besides face validity. Judges/experts also asserted that items of the scale were directly related to the concept of personality type. The reliability index was calculated to find out the validity from the coefficient of reliability and it was found to be .73 for both the forms separately.

Norms: Norms of the scale were calculated on a sample of working population. Individuals with very high score on Form A were considered as Type A personalities and individuals having very high score an Form 'B' were considered as Type B personalities.

Scoring: In the type A/B behavioural pattern Scale (ABBPS) there are 33 statements i.e. Part I having 17 statement and Part II having 16 statements. Five alternative responses have been given for each statement i.e. strongly agree, agree, uncertain, disagree and strongly disagree. Each statement were scored as 5 for strongly agree, 4 for agree, 3 for uncertain, 2 for disagree and 1 for strongly disagree.

Parenting Scale:

To measure parenting as the style of child upbringing refers to a responsibility of mother and father and together in adolescents,
parenting scale developed by Dr. Rajeev L. Bharadwaj, Dr. Harish Sharma and Amita Garg has been used. This scale of parenting has been intended to measure perceptions of the individual or children's own feeling as to how they have been brought up by their parents on eight dichotomous modes of parenting. The two distinctive roles of parenting as mothering and fathering as well as parenting as a whole has been measured integrally and separately.

Reliability of the Scale: The coefficient of reliability of the scale was determined by test-retest method. The test was administered twice with a time interval of 21 days to a sample of 100 subjects. The test-retest reliability coefficient of the scale was found .72.

Validity of the Scale: The validity of the scale was found out by parallel form, the scores of present scale with parallel form as the scores was found .75.

Scoring: In the parenting scale, there are 40 items including 8 dichotomous area as 5 items for each area. The 8 dichotomous area are:-

1. Rejection Vs Acceptance
2. Carelessness Vs Protection
3. Neglect Vs Indulgence
4. Utopian expectation Vs Realism
5. Lenient standard Vs Moralism
6. Freedom Vs Discipline
7. **Faulty role expectation Vs realistic role expectation**

8. **Marital conflict Vs Marital adjustment.**

The scoring of this parenting scale has been based on five point scale. Each item of the scale has been scored from upper to lower in terms of 1, 2, 3, 4, 5. The scoring of item number 4, 11, 18, 25, 32 has been in reversed order i.e. 5, 4, 3, 2, 1. The scores have been added vertically to determine the raw score for mothering and fathering separately for different modes of parenting. The obtained raw scores for different mode of parenting have been transformed into 'Z' scores and the total of 'Z' scores for each mode of parenting in relation to both the parents have been treated as parenting score of that specific mode of parenting and grand total of each parenting mode has been treated as parenting score. 'Z' scores obtained for last mode that was marital conflict and marital adjustment mode of parenting have been added only once with other 'Z' scores obtained on seven mode of parenting to determined the parenting score as a whole. High Scores indicate good parental rearing and low scores indicate poor rearing. The low score on areas present the negative aspect of parental rearing and the high score on each areas indicate the positive aspect of parental rearing.

**Computer Addiction Scale:** In order to measure computer addiction level among adolescents, a addiction questionnaire was made. It consisted a series of questions regarding computer some renowned phychologist were consulted and discussed in the preparing the questionnaire. Questionnaire is based on the basic symptoms of addiction.
suggested by psychologist.

There are 18 questions related to the addition. Two alternative answer for each question as 'Yes' or 'No' has been given in front of each item.

**Scoring :-** For each item if subject answered yes when '1' mark was given and if 'no' marked then '0' (zero) mark was given, if subject answered more than 8 'yes' it showed that subject is addicted.

Final addiction scale was approved by Dr. Niranjana Shukla, Dr. Nirupma Dixit, Dr. Priya Jaiswal.

**Statistical Technique Used :-**

1. The data collected was subjected to scoring as per procedure laid down in the manual.

2. The scores now obtained were tabulated into compared on table.

3. Statistical techniques like means, standard evation, SED, critical ratio, 't' test were used to analyse the result and draw inferences.

**Mean** :

\[ M = \frac{\Sigma x}{N} \]

- \( M \) = Mean
- \( \Sigma x \) = Total of all frequency.
- \( N \) = Number of cases.
**Standard Deviation:**

\[ \sigma = \sqrt{\frac{\Sigma d^2}{N}} - (C)^2 \]

\(\sigma\) = Standard deviation

\(\Sigma\) = Sum of

\(d^2\) = Square of deviation

\(N\) = Number of cases

\(C\) = Correction

**Standard Error:**

\[ SE_d = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}} \]

\(SE_d\) = Standard error of difference between two means.

\(\sigma_1\) = Standard deviation of first sample.

\(\sigma_2\) = Standard deviation of Second Sample.

\(N_1\) = Number of first sample.

\(N_2\) = Number of second sample.

**Critical Ratio:**

\[ \frac{(M_1 - M_2)}{SE_d} \]

\(M_1\) = Mean of first sample

\(M_2\) = Mean of second sample

\(SE_d\) = Standard error of difference between two means.
**Correlation:**

\[ r = \frac{\sum xy - N \overline{Mx} \overline{My}}{\sqrt{(\sum x^2 - N \overline{Mx}^2)(\sum y^2 - N \overline{My}^2)}} \]

\( Mx = \) Mean value of x variable

\( My = \) Mean Value of y variable

\( \sum xy = \) Sum of multiplication of x and y variables

\( \sum x^2 = \) Square and sum of x variable

\( \sum y^2 = \) Square and sum of y variable

\( N = \) Number of cases.