Chapter-III  
Method & Procedure of the Study  

Introduction:-  

The success of the research depends upon the modus operandi adopted to meet the objectives and to test the hypothesis. A planning is of vital importance to achieve the set objectives of research work. Planning gives systematic attempts to the research work. The procedure of a research work depends upon the research problem, its objectives and hypothesis. It is an importance stemmed of every field of research. According to Kerlinger 1964, 1973, “it deals with the procedural steps to solve the selected research problem. It is not only a step to complete. The research but it also helps the future researchers to produce the research, to reanalysis the data or to arrive at unambiguous conditions as to the adequacy of the methods, tools and data collection.” So this step of research needs a careful attempt in planning and execution. The first step of planning educational research is its methodology followed by sampling procedure. The second step is the instruments used for the measurement of variables. This step includes justification of the instrument and evidence of their reliability and validity, its standardized test are used by the researcher. The researcher has also constructed his own tools for the measurement of nationalities. The last step in the description of statistical tools used to test the hypothesis is of the research problem.

Statement of the Problem:--  

Title of the Research : “A STUDY OF EMOTIONAL MATURITY IN RELATION TO LIFE SATISFACTION OF THE STUDENT’S STUDYING IN COLLEGES OF EDUCATION”  

Objectives of the Study:--  

The objective of a proposal delineate the ends or aims which the inquirer seeks to bring about as a result of completing the research, development, or evaluation undertaken. An objective may be thought of as either a solution to the problem or a step along the way toward achieving a solution; an end state to be achieved in relation to the problem. The sentence often used improperly as a problem statement, i.e., ”The purpose of this project is to.....” is properly completed by the inclusion of the objectives,
ordinarily a section following related research and preceding a delineation of procedures that will operationally the objectives.

Functions of the Objectives Section of a Proposal :-

1. Proposing - To propose the goals or ends that the researcher or developer intends to achieve as a result of the proposed inquiry, i.e., the obverse, reverse, or extension of a problem statement.

2. Justifying - Justifying the selection of the objectives that are chosen by explicating the criteria employed in making the choice and by showing how the objectives meet the criteria.

Objectives:-

1. To study the relationship between Emotional Maturity and Life Satisfaction of the students, studying in colleges of Education.

2. To study the relationship between Emotional Maturity and Life Satisfaction of Male students, studying in colleges of Education.

3. To study the relationship between Emotional Maturity and Life Satisfaction of Female students, studying in colleges of Education.

4. To study the relationship between Emotional Maturity and Life Satisfaction of Rural students, studying in colleges of Education.

5. To study the relationship between Emotional Maturity and Life Satisfaction of Urban students, studying in colleges of Education.

6. To study the relationship between Emotional Maturity and Life Satisfaction of Married students, studying in colleges of Education.

7. To study the relationship between Emotional Maturity and Life Satisfaction of Unmarried students, studying in colleges of Education.

Hypothesis of the Research:-

Hypotheses and questions are linked to the speculative proposition of the problem statement, can be inferred from the overall conceptual framework of a study, and are of critical importance to data analysis and interpretation. In research studies, the term hypothesis implies a derivation, within a hypothetic-deductive theoretical system, of a particular assertion or prediction. The hypothesis is subject to test, i.e., to confirmation or rejection on empirical grounds. The term question implies an interrogative statement that
can be answered by data, which is logically related to the same conceptual framework, but which does not necessarily stem from that framework through logical deduction. In the behavioral research tradition, hypotheses are developed when the degree of sophistication of the conceptual framework is high, approximating that of a hypothetic-deductive theory, and the objectives of the study call for the application of higher order inferential statistical analysis. In behavioral research, questions are appropriate when the degree of sophistication is low and rigorous deductions are therefore not possible. Hypothesis deserves further clarification. A hypothesis is a conjectural statement in the form of a relational proposition. The conjectural nature of the statement derives from the researchers best "sense" (informed judgment) of the relationships between variables which, when subjected to analysis, will yield new understandings about those particular relationships in the discrete terms that bound the hypothesis itself and, when taken together with the research questions or other hypotheses, will fill in the blanks inherent in the theoretical framework of the entire study. However, when we get our results, it’s possible that any relationship that appears in your data was produced by random chance. In order to back up your hypothesis you need to compare the results against the opposite situation: that the loss of socks is not due to alien burglary. This is your null hypothesis – the assertion that the things you were testing (i.e. rates of alien activity and sock loss) are not related and your results are the product of random chance events. The practice of science involves formulating and testing hypotheses, assertions that are capable of being proven false using a test of observed data. The null hypothesis typically corresponds to a general or default position. For example, the null hypothesis might be that there is no relationship between two measured phenomena or that a potential treatment has no effect.

**Null Hypothesis of Present study is following:-**

1. There is no significant correlation between Emotional Maturity and Life Satisfaction of the students, studying in colleges of Education.
2. There is no significant difference of Emotional maturity and life satisfaction between Rural and Urban students, studying in colleges of Education.
3. There is no significant correlation between Emotional Maturity and Life Satisfaction of Rural students, studying in colleges of Education.
4. There is no significant correlation between Emotional Maturity and Life Satisfaction of Urban students, studying in colleges of Education.

5. There is no significant difference of Emotional maturity and life satisfaction between Married and Unmarried students, studying in colleges of Education.

6. There is no significant correlation between Emotional Maturity and Life Satisfaction of Married students and Unmarried students, studying in colleges of Education.

Methods of the Research:-

Research has three fold objectives: Theoretical, factual and application. These objectives are achieved by employing different methods and strategies if research. A research scholar should know the meaning of the term method and strategy of research. In present study follow survey method to collection of data. This method is scientific and reliable. About survey method Mouly (1970) states “No category of educational research is more widely used than the type known variously as the survey, the normative-survey, status and descriptive research.”

The survey is a non-experimental, descriptive research method. Surveys can be useful when a researcher wants to collect data on phenomena that cannot be directly observed (such as opinions on library services). Surveys are used extensively in library and information science to assess attitudes and characteristics of a wide range of subjects, from the quality of user-system interfaces to library user reading habits. In a survey, researchers sample a population. Basha and Harter (1980) state that "A population is any set of persons or objects that possesses at least one common characteristic." Examples of populations that might be studied are 1) all 1999 graduate of GSLIS at the University of Texas, or 2) all the users of UT General Libraries. Since populations can be quite large, researchers directly question only a sample (i.e. a small proportion) of the population.

Types of Surveys:-

Data are usually collected through the use of questionnaires, although sometimes researchers directly interview subjects. Surveys can use qualitative (e.g. ask open-ended questions) or quantitative (e.g. use forced-choice questions) measures. There are two
basic types of surveys: cross-sectional surveys and longitudinal surveys. Much of the following information was taken from an excellent book on the subject, called Survey Research Methods, by Earl R. Babbie.

**Cross-Sectional Surveys:-**

Cross-sectional surveys are used to gather information on a population at a single point in time. An example of a cross sectional survey would be a questionnaire that collects data on how parents feel about Internet filtering, as of March of 1999. A different cross-sectional survey questionnaire might try to determine the relationship between two factors, like religiousness of parents and views on Internet filtering.

**Longitudinal Surveys:-**

Longitudinal surveys gather data over a period of time. The researcher may then analyze changes in the population and attempt to describe and/or explain them. The three main types of longitudinal surveys are trend studies, cohort studies, and panel studies. It attempts to describe and interpret what exists and present in the form of conditions, practices, Processes, trends, effects, attitudes, beliefs etc.

**Survey studies collect three types of information:-**

(i) Of what exists.
(ii) Of what we want,
(iii) Of how to get there,

Writers have used various term like “normative,” “Descriptive,” ‘survey’, or “trend” to describe survey investigation. The compound adjective (normative survey’ is applied in order to suggest the two closely related aspects of this kind of study. The word ‘normative’ is used because surveys are frequently made for the purpose of ascertaining which the normal of typical condition or practice is. The ‘survey’ indicates the gathering of data regarding current conditions.¹

**Characteristics of the survey Method:-**

(i) The survey method collects data from relatively large number of cases.
(ii) It may be cross sectional.
(iii) It requires expert imaginative planning.

¹ Srivastava, G.N., Advanced Research methodology, 1994, Radha publication, new Delhi. page -166
(iv) It requires definite objectives.
(v) It involves careful analysis, interpretation and skilful reporting of the findings.
(vi) Survey very in complexity.
(vii) Generally it provides information to solve local problems.
(viii) It determines the present trend, solves current problems, and suggests the course of future development.

**Sample of the Research:-**

A sample is a small proportion of a population selected for observation and analysis. By observing the characteristic of the sample, one can make certain inferences about the which it is drawn. Contrary to some popular opinion, samples are not selected haphazard:

**In present study sample size will be total 400 students.**

**Pi-chart of Students:-**
1. The study will be completed only B.Ed. stream students.
2. The study will be related 6 colleges in Sri Ganga Nagar District of Rajasthan.
3. The sample selection had 200 Male & 200 Females Students.
4. The study will be conducted related to rural and urban students.

**Sampling:**

Stratified Random Sampling method used in collection of data. Under this system, the universe is dividing into a number of group or strata. Then certain number items are taken from each group on random basis. At the time of construction strata. Certain points should be kept in mind.

I. There should be perfect homogeneity in the different units of strata.
II. Stratification must be clear, well-defined and free from overlapping.
III. The size of stratified sample must not be too small.
IV. Different variable involved in the study should be taken into account.

Stratified sampling in divided into three main parts, i.e

A. Proportionately stratified sampling
B. Disproportionate stratified sampling.
C. Stratified weight sampling

Proportionately stratified sampling. By this method, the number units are drawn from each group strata in the same proportion as they are in the universe. In this inter-strata comparison in possible. Under this system, the number of elements drawn from the strata is independent of the size of these strata.

Stratified weight sampling. In this system, equal number of items are selected from each group and thereby averages are drawn from each stratum. After doing this, they are given weight according to the size of the stratum in the whole universe.

**Merits of Stratified sampling:**

1. By this method, a representative character can be obtained with a few numbers of items.
2. In this method replacement of an inaccessible case by an accessible case is easily possible.
3. Under this system, no significant or important group is left out.
4. The method saves time and money, as most of the items or units can be geographically localized.

**Demerits:**

The null hypothesis related to a statistical method of interpreting conclusions about population characteristics are inferred from the variable relationships observed in sample. The null hypothesis assert that observed differences or relationships merely result from chanceries inherent in the sampling process. If the researcher, the null hypothesis, He or she accepts the research hypothesis concluding that the magnitude of the observed variable relationship is probably too great to attribute to sampling error.

**Limitation of the study:-**

The limitation of the study is a necessary point of research. Because it saves to wastage of time, money, labor and over sources researcher. Therefore, adopted limitation process of the study is given below:-

1. The study relates to only Rajasthan state.
2. The study will be related Sri Ganga Nagar District of Rajasthan.
3. The study will be completed from only Students of Education Colleges.
4. In present study included only B.Ed. stream students.
5. The sample selection had only 400 students (200 Male+200 Females)
6. The study will be conducted related to only two variables, Emotional Maturity, and Life Satisfaction.
Data Collection:

Table III.1. Details of the Students & Colleges:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of College</th>
<th>Urban</th>
<th></th>
<th>Rural</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1.</td>
<td>Sh. S. R. B. Ed. College, Patroda.</td>
<td>23</td>
<td>18</td>
<td>41</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>Geeta T. T. College, Gharsana</td>
<td>22</td>
<td>12</td>
<td>34</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>MMD Girls T. T. College Anupgarh</td>
<td>0</td>
<td>34</td>
<td>34</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>5.</td>
<td>Tagore M. T. T. College Suratgarh</td>
<td>28</td>
<td>7</td>
<td>35</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>200</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Total**: 400
A data collection of students in colleges of education about 400 was selected; 200 male, 200 female, 200 urban, 200 rural. The data collection will be conducted related to only B.ed. stream students.

**Name of the Tools:**

1. Emotional Maturity Scales : Self made
2. Life Satisfaction Inventory : Self made

**Tool’s Description:**

**1) Emotional Maturity Scale:-**

Therefore, the emotionally mature is not one who necessarily has resolved all condition that aroused anxiety and hostility but it is continuously in process of seeing himself in clearer perspective, continuously in process of seeing to gain healthy integration of feeling, thinking action. When a person reaches level one of emotional maturity, they realize that they can no longer view their emotional states as the responsibility of external forces such as people, places, things, forces, fate, and spirits. They learn to drop expressions from their speech that show disownership of feelings and a helpless or victim attitude towards their feelings.

Emotional honesty concerns the willingness of the person to know and own their own feelings. This is a necessary step to self-understanding and acceptance. The issues of
resistance to self-discovery are dealt with at this level. They are related solely to the person's conscious and unconscious fears of dealing directly with the critical voices they hear inside. In the past, they have typically lost all interactions with this internal adversary, so their fears are justified. Now, however, they know how to choose to feel so that they can keep from being destroyed, or they can choose not to interact with their accuser at all. The realization of the old maxim, "To thine own self be true," is the primary goal at this level. This means that we are always true to what we feel: we do not hide, stuff, suppress, or repress what we feel, but honestly experience it at this level of maturity. Here, you are at least honest with yourself about how you really feel. As a secondary goal on this level, people learn to locate others with whom they can safely share their real feelings, their real selves. Such work to never again accept self as behavior.

This level concerns the person's willingness and skills in sharing their feelings in an appropriate manner and at appropriate times. Persons at this level experience and learn the value of ventilating feelings, and also the dangers involved in hiding feelings from self and others. Self-disclosure is the important issue at this level of work. Yet, it will never be as important as the willingness of the person to be open to experiencing all of their feelings as they arise without the critical voices they hear inside trying to change, control, or condemn them. The dangers of suppressing feelings, and the values inherent in exploring and allowing all feelings internal expression are investigated further. At this level, one has the openness, the freedom to experience any emotion without the need, the compulsion to suppress or repress it.
Guilford, J.P. has prepared a matrix of temperamental factors which is being reproduced below:

<table>
<thead>
<tr>
<th>Kinds of Dimension</th>
<th>Areas of Behaviour involved</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General</td>
<td>Emotional</td>
</tr>
<tr>
<td>Positive</td>
<td>Confidence</td>
<td>Cheerful</td>
</tr>
<tr>
<td></td>
<td>Vs</td>
<td>Vs</td>
</tr>
<tr>
<td>Negative</td>
<td>Inferiority</td>
<td>Depression</td>
</tr>
<tr>
<td>Responsive</td>
<td>Alerts</td>
<td>Immaturity</td>
</tr>
<tr>
<td></td>
<td>Vs</td>
<td>Vs</td>
</tr>
<tr>
<td>Unresponsive</td>
<td>Inattentiveness</td>
<td>Maturity</td>
</tr>
<tr>
<td>Controlled</td>
<td>Impulsive</td>
<td>Nervousness</td>
</tr>
<tr>
<td></td>
<td>Vs</td>
<td>Vs</td>
</tr>
<tr>
<td>Unresponsive</td>
<td>Deliberateness</td>
<td>Composure</td>
</tr>
<tr>
<td>Objective</td>
<td>Objective</td>
<td>Poise</td>
</tr>
<tr>
<td>Ego-centric</td>
<td>Vs</td>
<td>Vs</td>
</tr>
<tr>
<td></td>
<td>Hypersensitive</td>
<td>Self-confidence</td>
</tr>
</tbody>
</table>

Taking these factors into consideration, authors of the present scale. Prepared a list of five broad Factors of emotional immaturity.

[A] Emotional instability
[B] Emotional regression
[C] Social maladjustment
[D] Personality disintegration
[E] Lack of independence
[A] Emotional instability:-

This is a broad factor representing syndrome of lack of capacity to dispose off problems, irritability, needs, and constant help for one’s day to day work, vulnerability, stubbornness and temper tantrums. This group factors has a high correlation (.75) with the total score obtained on the scale. On the inter-correlation matrix, syndrome of emotional unstability has high intercorrelation with social maladjustment but low correlation with emotional regression, personality disintegrations, and lack of independence. This factor has low correlation with the two factors analysed in factor analysis (Table No. 7) and seems to be an independent factor of emotional immaturity.

[B] Emotional regression:-

Emotional regression is also a broad group of factors representing such syndromes as feeling of inferiority, restlessness, host ability, aggressiveness and self-centeredness. This factor has correlation with total score on the scale. On inter-correlation matrix, it is highly intercorrelated with other two factors, that of personally disintegration and lack of independence, but has low intercorrelations with those of emotional unstability and social maladjustment factors. This has emerged as the most broad factor in the scale as revealed by the factorial analysis (Table 7). It has high intercorrelation with (.47) (.45) and low intercorrelation with (.27) and (.18). It also has a high correlation (.63) with the total score on all the five factors of the scale.

[C] Social maladjustment:-

Such a person shows lack of social adaptability should hatred, exclusive but boasting, lier and shirker.

[D] Personality disintegration:-

It include all those symptoms, which represent disintegration of personality, like reaction, phobias formation rationalization, pessimism, immorality etc. such a person suffers from inferiorities and hence reacts to environment through aggressiveness, destruction and has distorted sense of reality. In brief such person shows varied degrees of neuroticism which could be put as below:
Vs x Ss \(\alpha\) Ad/F \(\alpha\) R/P \(\alpha\) T/E \(\alpha\) N

Where:

Vs = Specifies emotional vulnerability
Ss = External stresses specially in relation to emotional vulnerability
Ad = Difficulty of adjustment – internal and external
F = Flexibility
R = Regressive Forces
P = Progressive Forces
T = Emotional tensions
E = Ego strength
N = Degree of Neuroticism

[E] Lack of independence:

Such a person shows parasitic dependence on others is egotic and lack ‘objective interests’. People think of him an unreliable person.

Description and scoring:

Emotional maturity scale has a total of 48 items under the five categories given below:

<table>
<thead>
<tr>
<th>Areas</th>
<th>Total No of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Emotional unstability</td>
<td>10</td>
</tr>
<tr>
<td>B. Emotional regression</td>
<td>10</td>
</tr>
<tr>
<td>C. Social maladjustment</td>
<td>10</td>
</tr>
<tr>
<td>D. Personality disintegration</td>
<td>10</td>
</tr>
<tr>
<td>E. Lack of independence</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
</tr>
</tbody>
</table>

EMS is self-reporting Five Point scale. Items of the scale are in question form demanding information for each in any of the five options mentioned below:

V. Much, Much, Undecided, Probably, Never
The items are so stated that if the answer is in positive say, a score of 5 is given; for 4; and for 3 and for 2 and for negative answer of score of 1 is to be awarded. Therefore, the higher the score on the scale, greater the degree of the emotional immaturity and vice-versa.

**Reliability:**

The reliability of the scale was determined by: (i) Test – retest method and (ii) Internal consistency.

(i) **Test-retest reliability:**

The scale was measured for its test – retest reliability by administering upon a group of collegiate students (N=150) including male and female students aged 20-24 years. The time interval between the two testing was that of six months. The product moment between the two testing was .75.

(ii) **Internal Consistency:**

The internal Consistency of the scale was checked by calculating the coefficient of correlation between total scores and scores on each of the five arrears. Table 1 given below, shows the values of internal consistency.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Areas</th>
<th>r Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Emotional unstability</td>
<td>.75</td>
</tr>
<tr>
<td>B.</td>
<td>Emotional regression</td>
<td>.63</td>
</tr>
<tr>
<td>C.</td>
<td>Social maladjustment</td>
<td>.58</td>
</tr>
<tr>
<td>D.</td>
<td>Personality disintegration</td>
<td>.86</td>
</tr>
<tr>
<td>E.</td>
<td>Lack of independence</td>
<td>.42</td>
</tr>
</tbody>
</table>

**Validity:**

The scale was validating against external criteria i.e. the Gha area of the adjustment inventory for college students by Sinha and Singh. The inventory has ‘gha’ area measuring emotional adjustment of college students. The number of items of this
area is twenty-one. Product moment correlation obtained between total score on all twenty one ‘Gha’ items and total scores on EMS was .64 (N=46)

**Interpretation:**

The scale was administered upon 193 collegiate students belonging to urban as well as rural background. The three quantities were calculated for the scores of all the 198 respondents.

**Table.III.3 –**

**Table showing Quartile Deviation of Scores for N=198**

<table>
<thead>
<tr>
<th>Quartile deviation</th>
<th>Q₁ = 80</th>
<th>Q₂ = 88.5</th>
<th>Q₃ = 106.7</th>
</tr>
</thead>
</table>

**(M=100, F=98)**

**Table.III.4-**

**Interpretation of Scores**

<table>
<thead>
<tr>
<th>Score</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-80</td>
<td>Extremely stable</td>
</tr>
<tr>
<td>81-88</td>
<td>Moderately stable</td>
</tr>
<tr>
<td>89-106</td>
<td>Unstable</td>
</tr>
<tr>
<td>107-240</td>
<td>Extremely unstable</td>
</tr>
</tbody>
</table>
Table III.5-

Table showing factor analysis (Centeroid Method) of the five factors of EMS

<table>
<thead>
<tr>
<th>Sub-test</th>
<th>Factor analysis</th>
<th>Check Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>- .18 .56 .12</td>
<td>.12</td>
</tr>
<tr>
<td>ER</td>
<td>.18 - .27 .47</td>
<td>.45</td>
</tr>
<tr>
<td>SM</td>
<td>.56 .27 - .23</td>
<td>.23</td>
</tr>
<tr>
<td>PD</td>
<td>.12 .47 .23 -</td>
<td>.28</td>
</tr>
<tr>
<td>LI</td>
<td>.12 .45 .23 .28 -</td>
<td>1.08</td>
</tr>
<tr>
<td>S1</td>
<td>.98 1.37 1.29 1.10</td>
<td>1.08</td>
</tr>
<tr>
<td>D,</td>
<td>.56 .47 .56 .47 .45</td>
<td>2.51</td>
</tr>
<tr>
<td>S1+D=E,</td>
<td>1.54 1.84 1.85 1.57</td>
<td>1.53</td>
</tr>
<tr>
<td>E/T=a,</td>
<td>.53 .64 .64 .55 .53</td>
<td>2.89=T</td>
</tr>
<tr>
<td></td>
<td>1/T=M = .35</td>
<td></td>
</tr>
<tr>
<td>A12</td>
<td>.28 .41 .41 .30 .28</td>
<td>1.68</td>
</tr>
</tbody>
</table>

Percentage Variance = 1.68/5 x 100 = 33.60% = 34%
### Table III.6-
Hierarchical order of Intercorrelations matrix

<table>
<thead>
<tr>
<th>Factors</th>
<th>EN</th>
<th>ER</th>
<th>SM</th>
<th>PD</th>
<th>LI</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>-</td>
<td>.56</td>
<td>.23</td>
<td>.23</td>
<td>.23</td>
</tr>
<tr>
<td>ER</td>
<td>.56</td>
<td>-</td>
<td>.18</td>
<td>.12</td>
<td>.12</td>
</tr>
<tr>
<td>SM</td>
<td>.23</td>
<td>.18</td>
<td>-</td>
<td>.47</td>
<td>.45</td>
</tr>
<tr>
<td>PD</td>
<td>.23</td>
<td>.12</td>
<td>.47</td>
<td>-</td>
<td>.28</td>
</tr>
<tr>
<td>LI</td>
<td>.23</td>
<td>.12</td>
<td>.45</td>
<td>.8</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table III.7-
$r$- Transformed into Z standar score (Fisher’s Z Scores)

$r = Z$

<table>
<thead>
<tr>
<th>EN</th>
<th>ER</th>
<th>SM</th>
<th>PD</th>
<th>LI</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>.63</td>
<td>.23</td>
<td>.23</td>
<td>.23</td>
</tr>
<tr>
<td>.63</td>
<td>-</td>
<td>.18</td>
<td>.12</td>
<td>.12</td>
</tr>
<tr>
<td>.23</td>
<td>.18</td>
<td>-</td>
<td>.57</td>
<td>.48</td>
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<td>.23</td>
<td>.12</td>
<td>.51</td>
<td>-</td>
<td>.29</td>
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<tr>
<td>.23</td>
<td>.12</td>
<td>.48</td>
<td>.29</td>
<td>-</td>
</tr>
<tr>
<td>1.37</td>
<td>1.05</td>
<td>1.45</td>
<td>1.15</td>
<td>.12</td>
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</table>
Table III.8-
Table showing two broad factors having high correlations
(N = 198)

<table>
<thead>
<tr>
<th>Sub-test</th>
<th>A</th>
<th>Sub-test</th>
<th>B</th>
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<tbody>
<tr>
<td>PD</td>
<td>.47</td>
<td>PD</td>
<td>.23</td>
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<tr>
<td>LI</td>
<td>.45</td>
<td>LI</td>
<td>.23</td>
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<tr>
<td>EN</td>
<td>.23</td>
<td>SM</td>
<td>.23</td>
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<tr>
<td>ER</td>
<td>.18</td>
<td>ER</td>
<td>.56</td>
</tr>
</tbody>
</table>

[2] Life satisfaction Inventory:

This inventory is developed for measuring life satisfaction in B.Ed. Students of SriGangaNagar District Colleges. First of all for this scale researcher developed 35 statement related to life satisfaction many areas. For validity of this tool researcher send this inventory for the specialists, Psychologist, Educationalist and socialist. They modified this inventory's statements and scoring method. First tryout and 25 statements were selected for the next steps.

Instructions:

The insights learned from this Life Satisfaction Inventory will give you an indication how happy you feel on your current life's path and should take a maximum of 5 minutes. Please answer the following questions, using the criteria below. Please choose the number which most closely fits how you feel at this time in your life:

0 - Never feel this way
1 - Rarely feel this way
2 - Sometimes feel this way
3 - Often feel this way
4 - Always feel this way
Scoring And Analysis:

There are two ways to interpret your score. The first is our cumulative score, which gives us an indication of our overall sense of fulfillment and happiness in life:

**Scoring**

**81-100**
I am generally contented and happy in my life.
Feedback in specific areas might be useful.

**61-80**
My life is okay, but not always what I would like it to be. I could use some direction in making my life happier.

**41-60**
My life is not going in a direction I would like it to go. I need guidance in learning how to find happiness.

**40 & Under**
My life lacks fulfillment and joy. P.S. Don't give up - this is a great opportunity for growth!

The second way to interpret our score has to do with individual areas, which are covered in the survey. Research has shown that the twenty-five areas addressed in the questions are specific indicators which contribute to one's overall sense of happiness. So, for example, if a score was less than four on a particular question, it shows room for improvement in that specific area. The lower the score, the greater the opportunity for growth.

**Test-Retest Reliability:**

Test-retest reliability correlations were calculated for each individual scale (factor) as well as total score on the LSS. The test retest correlations varied from .68 to .84. This range of test retest reliabilities is common among psychological measures. This range is fairly high and suggests that the characteristics being measured by each factor are relatively stable over a three-month period. In addition, a pre and post comparison of
means was done for each scale and total scores. As expected, there was no significant change in scores over the ninety-day period.

Statistics Techniques: -

Following statistics used to analysis of data.

(i) Mean

(ii) Standard Deviation

(iii) C.R. value

(iv) Co-relation

(i) Mean :-

“The mean is the sum of the separate score or measures divided by their number.”

\[
M = \frac{\sum X}{N}
\]

\[
\sum X = \text{sum of Scores}
\]

\[
M = \text{mean}
\]

\[
N = \text{Number of scores}
\]

(ii) Standard deviation:-

The square root of the squares of individual deviation from the mean, in series James dreves 1968 . In the case of standard deviation, the deviation from the mean are squared up to eliminate the plus and minus signs. The sum of squares of deviation is then divided by the total number and the square root of the obtained values is the standard deviation.

Calculation of S.D.

\[
S.D. = \sqrt{\frac{\sum fd^2}{N}}
\]

\[
d = \text{Deviation from mean}
\]

---

2 Srivastava, DN Modern Social Psychology.2007, Vinod pustak agra. page-584

\[ \Sigma d^2 = \text{sum of the squared deviations taken from mean} \]
\[ N = \text{No. of scores}. \]

(iii) **CR Value:**

CR value is a critical ratio in which a more exact estimate of the \( \sigma_d \) is used t is a CR but all CR’s are not ‘t’s. The sampling distribution of ‘t’ is not normal when \( N \) is smaller than 30.

\[
\text{C.R} = \frac{M_1 - M_2}{\sqrt{\frac{(SD_1)^2}{N_1} + \frac{(SD_2)^2}{N_2}}} 
\]

\( M_1 \) = SE of the mean of the first sample
\( M_2 \) = SE of the mean of the second sample
\( SD_1^2 \) = square of SD of the first sample
\( SD_2^2 \) = square of SD of the second sample.
\( N_1 \) = size of the first sample
\( N_2 \) = size of the second sample. Page 236

(iv) **Correlation:**

“Correlation indicates a joint relationship between two variables.”

“A coefficient of correlation is a single number that tells us what exact two things are related to what extent variations in the one go with the variations in other ……J.P. Gufford”

“Correlation is concerned with the extent to which individuals or objects which are average or below average in one direction. Tend also to be average, above average or below average in the other direction

“………Blomess Lindquist

“When every two variables are so related that the increase in one variable corresponds to the increase or decrease in other variable or vice versa, the variables are said to be correlated.”

\[ ^4 \text{R.C. Lathrop, Introduced to psychological research 1969, Page 153} \]
\[ ^5 \text{Srivastava, Dr. D.N. & Dr. Verma Priti ‘Psychology & statistics in education’ Agarwal Publication. Agra Page265.} \]

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\[
\rho = \frac{N \sum_{xy} - (\sum x)(\sum y)}{\sqrt{N \left[ \sum x^2 - \left( \frac{\sum x}{N} \right)^2 \right] \left[ \sum y^2 - \left( \frac{\sum y}{N} \right)^2 \right]}}
\]

x or y = Deviation from the assumed mean
\( \sum_{xy} \) = Sum of the product of x- deviations and y- Deviations
N = Number of scores
\( \sum x \) = correlation value of x- scores
\( \sum y \) = correlation value of y- scores

There are three types of correlations that are identified:

1. **Positive correlation:** Positive correlation between two variables is when an increase in one variable leads to an increase in the other and a decrease in one leads to a decrease in the other. For example, the amount of money that a person possesses might correlate positively with the number of cars he owns.

2. **Negative correlation:** Negative correlation is when an increase in one variable leads to a decrease in another and vice versa. For example, the level of education might correlate negatively with crime. This means if by some way the education level is improved in a country, it can lead to lower crime. Note that this doesn’t mean that a lack of education causes crime. It could be, for example, that both lack of education and crime have a common reason: poverty

3. **No correlation:** Two variables are uncorrelated when a change in one doesn’t lead to a change in the other and vice versa. For example, among millionaires, happiness is found to be uncorrelated to money. This means an increase in money doesn’t lead to happiness.\(^6\)

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\(^6\) [http://www.experiment-resources.com/correlational-study.html#ixzz1Y7yacFXu](http://www.experiment-resources.com/correlational-study.html#ixzz1Y7yacFXu)
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$+ 1.0$</td>
<td>Strong – Positive</td>
<td>As $X$ goes up, $Y$ always also goes up</td>
</tr>
<tr>
<td>$+ 0.5$</td>
<td>Weak – Positive</td>
<td>As $X$ goes up, $Y$ tends to usually also go up</td>
</tr>
<tr>
<td>$0$</td>
<td>- No Correlation -</td>
<td>$X$ and $Y$ are not correlated</td>
</tr>
<tr>
<td>$- 0.5$</td>
<td>Weak – Negative</td>
<td>As $X$ goes up, $Y$ tends to usually go down</td>
</tr>
<tr>
<td>$- 1.0$</td>
<td>Strong – Negative</td>
<td>As $X$ goes up, $Y$ always goes down</td>
</tr>
</tbody>
</table>

**Summary of the Chapter:-**

In the chapter researcher gave the work plan and research methodology of the research. He wrote about sample, sampling method, and data collection method, objective of the study, hypothesis, research method and limitation of study.