CHAPTER V

SUMMARY, CONCLUSION AND SUGGESTIONS

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Summary, Conclusion and Suggestions

V:10 Summary

Stress as such has been widely studied by investigators of diverse disciplines. However, it has relatively a new terminology that appeared as a new word in Psychological Abstracts in 1944 by Grace Hiter. Smelser (1963) introduced the stress theory of collective behaviour according to which stress has been considered as a social outburst causing social dis-equilibria while Selye (1956) has been instrumental in stimulating a reversal of engineering convention by employing the term stress to refer to (1) initial impact of the stressor on the tissues, the alarm stage, (2) sometimes to the adaptation mechanism whose function it is to restore homeostasis, and (3) sometimes to the wear and tear, damage and disease, conclusions of prolonging the homeostatic processes.

In addition to the sociological interpretation of the definition of stress as conceptualised by Smelser (1963) and Selye (1956), psychological stress has been pinpointedly applied under induced experimental conditions by numerous investigators (Grinker and Spiegel, 1945; Arnold, 1960; Lazarus, 1966; Bettelheim, 1960; Epstein, 1962; Janis, 1958; Wisotsky, Hamburg, Goss and Lebovits, 1961, Mirsky, 1964, etc.). Mechanic (1962) studied the inherent
psychological stress among the students and remarked that "most students reported considerable relief of anxiety once they got started on examinations. However, before the examinations started they experienced severe psychological stress; may be because of the anticipated threat that have visualised by way of thwarting of their motives."

Such an inherent psychological stress as studied by Mechanic (1962) has deeper significance for further study where psychological stress as a response of some stress stimulus variables could be studied and the amount of psychological stress covered by such independent variables could be determined.

Achievement motivation and level of aspiration constitute important psychological constructs which certainly decide the psychological stress of the student communities. It is obvious that a highly motivated student has more interest in his studies with the primary aim of fetching high scores in his examinations. Consequently, he is more disturbed. Thus it appears that he may experience greater amount of psychological stress than one who does not do so. Similarly, a student who has got higher educational aspiration behaves differently from his counterpart so far as the emotional disturbances inherent in him are concerned. Thus, it appears that achievement motivation and educational and occupational aspirations may largely determine the nature and kind of psychological stress of the student. In view of this assumption, we formulate our hypotheses as under:
H-1: There exists a significant positive relationship between the scores on the test of achievement motivation and psychological stress.

H-2: There exists a significant positive relationship between the scores on the test of educational aspiration and psychological stress.

H-3: There exists a significant positive relationship between the scores on the test of educational aspiration and psychological stress.

H-4: The kind and degree of psychological stress measured in terms of total scores on its various parameters of $H_{n Ach}$ - $H_{Ea}$ - $H_{Oa}$ would be different from those of $L_{n Ach}$ - $L_{Ea}$ - $L_{Oa}$, $L_{H_{n Ach}}$ - $H_{Ea}$ - $H_{Oa}$, $L_{H_{n Ach}}$ - $L_{Ea}$ - $L_{Oa}$, and such other tri-extreme groups.

In addition to these primary hypotheses some other by-hypotheses as given below have also been formulated:

BH-1: There exists a significant difference between the means of boys and girls of the same age and grade on psychological stress. Further, they would also show significant difference between other means on various independent variables.

BH-2: The pupils studying at the terminal grade of PG classes would show significantly greater amount of psychological stress than those studying at the terminal grade of higher secondary schools.
BH-3: There exists a significant difference between the means of pupils offering different educational streams on psychological stress as measured by the total scores on its various parameters.

BH-4: There will be a significant difference between the means of pupils of different socio-economic status on psychological stress.

BH-5: Pupils belonging to different castes would display different degree of psychological stress. Further, psychological stress would also follow caste-hierarchy.

BH-6: Pupils belonging to urban areas should show significantly higher degree of psychological stress than those residing in rural areas; whereas those leaving in the tribal blocks would have inherently the lowest level of psychological stress.

Sample: With a view to put these hypotheses to test, samples were drawn from two terminal grades of student population, i.e. M.A. Final of PG class and Class XI of Higher Secondary Schools. 310 pupils studying in the M.A. classes of different disciplines of Ravishankar University, Raipur were drawn which represented 100 percent of the population because of only testable size of students being available for the study. From the terminal grade of Higher Secondary Schools located in Raipur city, 370 representative pupils were drawn out randomly from class XI. This constituted about 5 percent of the population. Stratified quota sampling technique followed by randomization of schools as well as of the pupils were employed in this study.
**Psychological Variables**

Achievement motivation, educational aspiration and occupational aspiration were the independent variables of the study whereas psychological stress as dependent variable was measured in terms of frustration and anxiety as negatively toned affects as well as by motor behaviour reaction. Electro-physiological indicator of psychological stress by making use of EEG records were employed as measured of EEG, EKG and EMG. Frustration was measured in terms of its four components; regression, fixation, resignation and aggression. In order to measure these dependent and independent variables the following instruments have been used.

**Instruments:**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Achievement Motivation Inventory by Prayag Mehta.</td>
<td>Parameters of Psychological Stress measured by:</td>
</tr>
<tr>
<td>2. Educational Aspiration Scale by V.P. Sharma and A. Gupta.</td>
<td>1. Frustration test by N.S. Chauhan and G.P. Tiwari</td>
</tr>
<tr>
<td></td>
<td>3. Motor Behaviour Reaction Scale Constructed by the investigator hereself.</td>
</tr>
<tr>
<td></td>
<td>4. Electro-physiological measures measured by:</td>
</tr>
<tr>
<td></td>
<td>(i) EEG</td>
</tr>
<tr>
<td></td>
<td>(ii) EKG</td>
</tr>
<tr>
<td></td>
<td>(iii) EMG</td>
</tr>
</tbody>
</table>
These instruments have been used on the strength of their validity, reliability and objectivity; and further supported by their ease in application and availability.

The design of the Experiment:

The entire study has been classified into 4 types of designs from the point of view of their data collection and statistical treatment.

Design A:

Correlational studies: H-1, H-2, and H-3 deal with the inter-relations among the dependent and independent variables.

Design B:

Comparative study of psychological stress of tri-extreme high and low achievement motivation and aspiration groups. H-4 deals with the differential pattern of psychological stress of tri-extreme groups. Data collection technique has been sketched below:
Independent Variables | Dependent Variables
|----------------------|---------------------------------------------------
| Ach                 | Level of Aspiration                               |
| Indicate the kind and degree of Psychological Stress in terms of: |

I Negatively Toned Affects:
(a) Frustration:
   (i) Regression
   (ii) Fixation
   (iii) Resignation
   (iv) Aggression
(b) Anxiety
   II Motor Behaviour Reactions.
   III Electro-physiological Indicators
   (i) EEG
   (ii) EKG
   (iii) EKG

Design C1: Differential study of Psychological stress of different stratified samples:

By Hypotheses: BH₁, BH₂, BH₃, BH₄ and BH₅ have been formulated with a view to show whether significant difference exists between the means on various indicators of psychological stress of different stratified samples or not. Obviously, the collection of data follows the proper stratification of the normative sample; and then estimating the level of difference between means of any two stratified samples. The normative sample has been stratified on the basis of:
(i) Sex differences
(ii) Developmental differences in terms of educational maturity,
(iii) Educational stream offered by S
(iv) Socio-economic Status,
(v) Caste differences, and
(vi) Territorial Variations

The study has been so designed as to collect data on these biographical aspects also.

Procedure:

1. The procedure deals with the way the data has been collected. It takes into consideration how:

1. The rapport was established with the subjects before the collection of data was initiated.

2. The responses were recorded.

3. The instructions were delivered to the subjects with a view to represent the stimuli presented to them.

4. The tests were administered.

5. The instruments were operated.

6. Time was scheduled for the administration of the test and operation of the instruments.

7. Precautions were observed in the conduct of the research and collection of data by employing various instruments and psychological tests, and

8. How the situational and other variables affecting the results were controlled.
The entire procedure followed with respect to above aspects of collecting data has been discussed elaborately under two heads:

(1) Rapport and responses,
(2) Administration of Psychological tests and operation of polyrite recorder.

Identification of extreme criterion groups:

For putting hypothesis $H_4$ to test, extreme group samples have been identified on three independent variables:

(1) Achievement motivation
(2) Educational aspiration, and
(3) Occupational aspiration.

The high and low criterion groups on a psychological continuum of sample distribution were identified on the strength of their $Q_3$ and $Q_1$ respectively on each of these independent variables. All those attaining above 75 percentile scores on the independent variables were classified in high extreme groups whereas those who secured below 25 percentile marks were placed in the low extreme groups. The rests were eliminated from the study untreated as residuals. The two criterion groups, i.e. high and the low extreme groups of each of the independent variables thus constituted into tri-extreme groups. In all eight high extreme groups have been identified with a view to study their differential amount of psychological stress.
(i) \[ H_n \text{ Ach} -H_{Ea} -H_{0a} \]
(ii) \[ H_n \text{ Ach} -H_{Ea} -L_{0a} \]
(iii) \[ H_n \text{ Ach} -L_{Ea} -H_{0a} \]
(iv) \[ H_n \text{ Ach} -L_{Ea} -H_{0a} \]
(v) \[ L_n \text{ Ach} -H_{Ea} -H_{0a} \]
(vi) \[ L_n \text{ Ach} -E_{Ea} -L_{0a} \]
(vii) \[ L_n \text{ Ach} -L_{Ea} -H_{0a} \]
(viii) \[ L_n \text{ Ach} -L_{Ea} -L_{0a} \]

The data of various psychological test and polyrite were collected in four sessions. The specifications of testing and experimental sessions have been presented below:

<table>
<thead>
<tr>
<th>Psychological Tests</th>
<th>Time allowed in minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A: First session: Testing:</strong></td>
<td></td>
</tr>
<tr>
<td>(i) Administration of occupational</td>
<td>30</td>
</tr>
<tr>
<td>Adpiration Scale :</td>
<td></td>
</tr>
<tr>
<td>(ii) Administration of Motor Behaviour</td>
<td>15</td>
</tr>
<tr>
<td>Reaction Scale :</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>45</td>
</tr>
<tr>
<td><strong>B: Second session: Testing:</strong></td>
<td></td>
</tr>
<tr>
<td>(iii) Administration of Educational</td>
<td>25</td>
</tr>
<tr>
<td>Aspiration Scale :</td>
<td></td>
</tr>
<tr>
<td>(iv) Administration of Frustration</td>
<td>25</td>
</tr>
<tr>
<td>Scale :</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>50</td>
</tr>
</tbody>
</table>
C : Third session : Testing :

(v) Administration of 
Inventory

(vi) Administration of Anxiety Scale:

Total

D : Fourth sessions : Laboratory Experimentation:

(vii) Operation of Polyrite
Electro-physiological Indicators:

(i) EEG, (ii) EKG, and (iii) EMG

Grand Total 3 hours and 25 minutes

The data so collected were processed, analysed, tabulated and statistically treated with a view to make them more meaningful and vivid. The treatment of scores attained in the study on the independent and dependent variables have been presented below:

The scores obtained by each individual subject on various psychological tests were systematically recorded under the relevant category of independent or dependent variables. The response were tabulated categorically as well as separately in accordance with the hypotheses formulated and design of the study outlined. From the statistical differentials obtained by the analysis of data in accordance with the hypotheses, the results were drawn and interpretation and discussions were made accordingly. The conclusions drawn from the results have been presented below.
CONCLUSIONS:

The following conclusions have been derived from the results obtained by analysing the data.

1. There existed a positive relationship between dependent and independent variables. All the measures of psychological stress have been found highly positive correlated with achievement motivation, educational aspiration and occupational aspiration. All inter-relationships were linear in nature. The $H_1$, $H_2$, $H_3$ have been retained.

2. Among all the tri-extreme groups, the $H_{\text{Ach}} - H_{\text{Va}} - L_{0a}$ proved to be in possession of the greatest amount of psychological stress while the $L_{\text{Ach}} - L_{\text{Va}} - L_{0a}$ the least. The other two tri-extreme groups have been found ranging in between these two limits. Achievement motivation stands out as the most potential independent variable determining the limits of psychological stress. $H_4$ has been partially retained.

3. Psychological stress is independent of sex difference so far as fixation, resignation, anxiety, global frustration and global psychological stress are concerned; however, sex proved to be a significantly contributory
factor in regression, aggression and motor behaviour reactions. The girls have excelled the boys in mean scores on regression whereas the boys have obtained higher means on aggression and motor behaviour reactions.

(4) The developmental academic career of pupils witnessed a sequential growth of psychological stress on all of its parameters under-study.

(5) There existed a significant difference between the means of pupils studying at two terminal grades i.e. class XI and post-graduate classes, on all the components as well as on the global measure of psychological stress.

(6) Pupils offering science and arts courses did not show any significant difference between the means on various parameters of psychological stress except on the measure of anxiety.

(7) Socio-economic status has been found to be potential factors that contribute much to generate psychological stress. Extremely significant difference on all the measures of psychological stress has been obtained between \( H_S - H_E \) and \( L_S - L_E \). The differences between the means of \( H_S - H_E \) and \( H_S - L_E \), \( H_S - L_E \) and \( L_S - H_E \), and \( H_S - L_E \) and \( L_S - H_E \) have also been found significant on all measures except on fixation.
There existed a significant difference between means of different caste groups on various measures of psychological stress inherent in them.

Psychological stress is independent of caste-hierarchy.

The difference between means of urban and rural pupils have been found highly significant on all parameters of psychological stress whereas the urban and tribal pupils differed significantly on all measures except on global psychological stress. The difference between means of rural and tribal pupils on fixation and motor behaviour reactions have not been found significant; however on all remaining measures, there existed significant difference between them.

SUGGESTIONS:

On the strength of the results obtained and conclusions drawn, we propose the following measures which could be employed for improving the lot of the pupils. It is evident that achievement motivation, plays very crucial role in determining not only the educational and vocational aspiration, but largely govern the creation and regulation of psychological stress, under the conditions of anticipation of threat to the
self or thwarting of motives or fear of failure or blocking of goal attainment. Ability to set higher goal, and more to it with a view to attain it largely depends upon the level of achievement motivation. It is, therefore, recommended that -

(1) great precautions should be observed in developing healthy competitive environmental settings in schools societies and at home which activate and actualize them to generate high level of achievement motivation.

(2) parents and leaders of various disciplines should encourage pupils to accept problems of life with a rare sense of challenge. A competitive spirit should prevail in educational institutions and social settings.

(3) Parents and leaders should stand before students as ideal models in terms of setting a life goal. Higher goals in educational attainments and prestigious professional goals in occupational placement should be invariably aimed at. Seniors should participate actively in the process of setting different goals of life and work. They should put forth correct perspective of educational and occupational goal setting process and point out measures and ways and means of attaining them. The problem of identification should be effectively solved by seniors.
(4) Such measures should be made available and norms should be developed in educational and occupational and occupational settings that may promote hopes of success, and avoid fear of failure among the pupils.

(5) In all familial environments educational fields, social settings and vocational institutions, such a socio-emotional climate should interact with the developmental process of pupils, that on one hand they may develop high level of achievement motivation and set higher goals in educational accomplishment and vocational placement; and on the other hand, promotive and corrective measures should be taken to inhibit and eliminate all psychological stress generating conditions. Democratic permissive social environment should be created which may regulate competitive norms and values of 'Achieving Society' and at the same time, safeguarding them from all such conditions and circumstances which help in generating greater amount of psychological stress. A minimum amount of psychological stress is, of course, essential for a successful life.

V: 40 FOLLOW UP STUDIES:

In view of the fact that psychological structure and social environment largely govern the regulation of psychological stress among individuals, scientific
studies on normal individuals would be of great importance. Though numerous studies have been conducted in clinical settings, absolutely no attempt has been made to study psychological stress under different educational, industrial, social and vocational settings. Conduct of experimental studies under spontaneous or induced conditions of generating psychological stress would set a new direction in research. Further, greater applications of electro-physiological indicators would promote confidence and dependability in research findings.