CHAPTER-4

DEVELOPMENT AND VALIDATION OF RESEARCH INSTRUMENT

Measurement is a set for rules for assigning symbols to objects so that the attributes can be numerically expressed. Getting a reliable and validated measure is difficult, yet one of the most important tasks for the researcher. The relation between two behavioural constructs is difficult to establish without a sound measurement instrument. Some existing measures can be used for the said purpose and if none is available, then the researcher has to construct a fresh measure. The researcher could find a couple of measures of occupational stress, but no measure in itself measured the occupational stress among teachers only. Hence, it was decided to construct a new scale for measuring the occupational stress of teachers.

The present chapter focuses on developing the scale and to test the psychometric properties of the scale. Firstly, the scale developed in the study has been constructed and lately, the reliability and validity of the scale were examined. Thurston and Likert method of scale construction was used. The present research instrument is a multi-item scale. The steps followed for the construction and validation of the research instrument are discussed below.

4.1 SPECIFYING DOMAIN OF CONSTRUCT

Before developing the research instrument, a comprehensive review of the literature related to stress in teaching was undertaken. On the basis of available literature (Caplan et al., 1975), Pareek (1983), Srivastava and Singh (1984), Osipow (1998) and Smith et al., (2000)), the dimensions for teachers’ stress were selected. The statements of teachers stress inventory were written in the nine (9) dimensions. The nine dimensions are as under:

i. **Work Overload (WO):** the extent to which the teaching job demand exceeds human limits and teachers have to do too much work, in too little time, with too few resources.
ii. **Role Uncertainty (RU):** the extent to which the duties, responsibilities, priorities, expectations, and evaluation criteria are clear to the teachers.

iii. **Role Conflict (RC):** the extent to which someone’s loyalties are divided between a particular department and the organisation as a whole, or between personal professional ethics and the demands of the organisation.

iv. **Less Involvement (LI):** the extent to which the individual has, or feels, a deal of involvement in the affairs of the organization and importance paid to the suggestions of an individual.

v. **Impoverished Relations (IR):** the extent to which an individual share relations with other colleagues in the organization.

vi. **Low Status (LS):** the extent to which an individual enjoys social status due to a particular profession.

vii. **Undue Pressures (UP):** the extent to which an individual is pressurized to perform some of the tasks without his will.

viii. **Professional Distress (PD):** the extent to which an individual finds teaching profession extremely stressful that leads to distress.

ix. **Strenuous Working Conditions (SWC):** the extent to which an individual have to work under such environmental conditions that are stressful.

4.2 **GENERATING SAMPLE OF ITEMS**

Initially 80 statements concerning the occupational stress of teachers were framed by consulting number of psychologists, educationists, books, journals and already existing tools. The details of number of statements in each dimension in the first draft of teachers stress inventory is given in Table 4.1.
Table 4.1 Number of statements in each dimension in first draft of teachers stress inventory

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Sub Dimensions</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>Work Overload</td>
<td>10</td>
</tr>
<tr>
<td>ii.</td>
<td>Role Uncertainty</td>
<td>10</td>
</tr>
<tr>
<td>iii.</td>
<td>Role Conflict</td>
<td>07</td>
</tr>
<tr>
<td>iv.</td>
<td>Less Involvement</td>
<td>08</td>
</tr>
<tr>
<td>v.</td>
<td>Impoverished Relations</td>
<td>09</td>
</tr>
<tr>
<td>vi.</td>
<td>Low Status</td>
<td>08</td>
</tr>
<tr>
<td>vii.</td>
<td>Undue Pressures</td>
<td>10</td>
</tr>
<tr>
<td>viii.</td>
<td>Professional Distress</td>
<td>08</td>
</tr>
<tr>
<td>ix.</td>
<td>Strenuous Working Conditions</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

To check the content of the statements, vocabulary and whether they are related with the occupational stress, the statements were evaluated by the experts. In the first draft more number of items were written for each dimension so that there is scope of dropping the items after getting expert views. The questionnaire contained both positive and negative statements about occupational stress. Rating scale was planned in such a way that it could be used as self-administering tool individually or in a group. Likert technique was employed for the construction of Teachers’ stress inventory. The questionnaire was developed in English language. The list of 80 statements was judged by teachers, teacher educators and experts in the field of psychology. They were asked to indicate whether the statements given in the list are positive or negative and also to judge whether each statement judges the identified dimensions of occupational stress. This helped the investigator to eliminate five (05) ambiguous and irrelevant statements from the list.
The list containing 75 statements was further edited on the criterion of relevancy of particular dimension of occupational stress to be measured. For this, the above list of 75 statements of questionnaire was sent to 30 judges as detailed in Table 4.2. As the statements had reference to the occupational stress of teachers, the experts were teachers from school, college as well as doctorate degree holders as judges.

**TABLE 4.2 Table showing institutions for selection of judges**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Institution</th>
<th>No. of Judges</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>Chitkara College of Education for Women</td>
<td>06</td>
</tr>
<tr>
<td>ii.</td>
<td>Govt. Model Sr. Sec. School, Sector- 21, Chandigarh.</td>
<td>03</td>
</tr>
<tr>
<td>iii.</td>
<td>D.S Gurukul college of Education for Women</td>
<td>03</td>
</tr>
<tr>
<td>iv.</td>
<td>Chandigarh college of Education, Landran</td>
<td>05</td>
</tr>
<tr>
<td>v.</td>
<td>Delhi Public School, sec-40, Chandigarh</td>
<td>08</td>
</tr>
<tr>
<td>vi.</td>
<td>Govt. Sr. Sec. School, Sector- 32, Chandigarh</td>
<td>05</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>30</td>
</tr>
</tbody>
</table>

The opinion of 30 experts who responded to the questionnaire on each statement through positive and negative column was recorded on appropriate sheets; Only those statements were selected which got 80% or more unanimity of the responses (Edward, 1957). According to the suggestions given by the experts, statements that seemed repetitive, ambiguous or about which there was disagreement were eliminated.

As such 40 statements were retained, 18 were reworded, 08 new statements were framed on the basis of views given by experts and remaining i.e. 16 were dropped as either no agreement was found or they were labeled as doubtful. Thus, the final draft had 64 items.
4.3 FINAL DRAFT

Revised draft of Teachers stress inventory containing 64 statements was administered to a sample of 50 teachers to locate the inadequacy in the statements of Teachers stress inventory or in the instructions. In the second try out the purpose was to examine the clarity of instructions and language of the statements. On the basis of feedback from the teachers, few statements were modified to make their language simple. Number of items for each dimension in the final version of the research instrument is given in the Table 4.3.

Table 4.3 Number of statements in each dimension in the final draft of teachers stress inventory

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Dimensions</th>
<th>Item No.</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Work overload</td>
<td>1,14,23,31,36,43,49,59</td>
<td>08</td>
</tr>
<tr>
<td>2.</td>
<td>Role uncertainty</td>
<td>4,24,37,53,56,63</td>
<td>06</td>
</tr>
<tr>
<td>3.</td>
<td>Role conflict</td>
<td>2,6,13,22,32,58</td>
<td>06</td>
</tr>
<tr>
<td>4.</td>
<td>Less involvement</td>
<td>3,15,25,30,38,48</td>
<td>06</td>
</tr>
<tr>
<td>5.</td>
<td>Impoverished relations</td>
<td>5,12,16,26,27,44,50,64</td>
<td>08</td>
</tr>
<tr>
<td>6.</td>
<td>Low status</td>
<td>7,11,21,34,39,45,52,55</td>
<td>08</td>
</tr>
<tr>
<td>7.</td>
<td>Undue pressures</td>
<td>8,19,29,33,42,57,60</td>
<td>07</td>
</tr>
<tr>
<td>8.</td>
<td>Professional distress</td>
<td>9,17,40,46,54,62</td>
<td>06</td>
</tr>
<tr>
<td>9.</td>
<td>Strenuous working conditions</td>
<td>10,18,20,28,35,41,47,51,61</td>
<td>09</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>
4.4 VALIDITY ANALYSIS

A measure or a scale is valid to the extent that it measures what it intended to measure. More specifically, validity can be defined as a degree to which a concept and its measure achieve theoretical and empirical meaning within the overall structure of one’s theory. According to Malhotra (2004), the validity of scale may be defined as the extent to which differences in observed scale scores reflect true differences among objects on the characteristics being measured, rather than systematic or random error. A variety of methods for validation have been suggested by experts in the field of test construction, i.e. Thorndike and Hegan (1962), Guilford (1965), Anastasi (1976) and many others with variations of nomenclature in the terminology used. But in the standardization of educational and psychological test, these procedures have been classified under three main categories: content, criterion related and construct validity. Fundamentally all these procedure are concerned with the relationship between performances on the test and other independently observable facts about the behaviour characteristics under consideration. Different types of validity established in the research instrument are:

4.4.1 Content Validity

Content validity is the degree to which the instrument provides an adequate representation of the conceptual domain that it is designed to cover. It is the only type of validity for which the evidence is subjective and logical rather than statistical. If the items representing the various constructs of an instrument are substantiated by a comprehensive review of the relevant literature, content validity can be ensured. The present instrument has been developed based on the detailed analysis of the prescriptive, conceptual, practitioner and empirical literature. Moreover, the content validity of the instrument was also ensured through a thorough review by experts (both academia and school teachers) in the field.
4.5 RELIABILITY ANALYSIS

The reliability of a test is its ability to yield consistent results from one set of measures to another; it is the extent to which the obtained test scores are free from internal defects of measurement inherent in the items and their standardization, as in every psychological test there is possibility of chance error. Reliability has been defined by many workers in the field of education and psychological testing. Ross and Stanley (1964) consider reliability as the degree to which the testing gives the same results with the same sampling on different occasions. The term ‘reliability’ has two closely related but somewhat different connotations in psychological testing.

First, it refers to the extent to which a test is internally consistent, i.e. the consistency of results obtained throughout the test when administered once. In other words, how accurately is the test measuring at a particular time? Second, reliability refers to the extent to which a measuring device yields consistent results upon testing and re-testing i.e. how dependable is it for predictive purpose?

According to Churchill (1979), the recommended measure of the internal consistency of a set of items is provided by Coefficient alpha. This coefficient alpha varies from 0 to 1, and a value of 0.6 or less generally indicates unsatisfactory internal consistency reliability. An important property of coefficient alpha is that its value tends to increase with an increase in the number of scale items. If alpha is low, it suggests that some items do not share equally in the common core and should be eliminated.

The different types of reliability are test–retest reliability, split half, equivalent or parallel forms, Kunder- Richardson formulae and analysis of variance. Singh (1998) explains that correlation techniques have been frequently employed as the measures of the index of item discrimination. In such situations each item is correlated against the internal criterion of the total score, i.e., each item is validated against the internal criterion of the total score. This is called item-total correlation.
When the correlation between the total score and the individual item score is computed as a measure of the discriminative power of the item, it shows how well the item is measuring that function which the test itself is measuring. Item-total score correlation is regarded by most of the experts as the best index of discrimination. Churchill (1979), states that items which produce a substantial or sudden drop in the item-to-total correlations should be deleted.

Sekaran (2005) states that all correlations above 0.6 are desirable. Cronbach’s $\alpha$ (alpha) is a coefficient of reliability. It is commonly used as a measure of the internal consistency or reliability of a psychometric test score for a sample of examinees. The measure can be viewed as an extension of the Kuder-Richardson Formula 20 (KR-20), which is an equivalent measure for dichotomous items. Alpha is not robust against missing data. Cronbach’s alpha will generally increase as the intercorrelations among test items increase, and is thus known as an internal consistency estimate of reliability of test scores. Because intercorrelations among test items are maximized when all items measure the same construct, Cronbach’s alpha is widely believed to indirectly indicate the degree to which a set of items measures a single unidimensional latent construct.

Two types of reliability were calculated by the researcher:

a) Coefficient alpha (internal consistency)

b) Test-retest

The coefficient alpha and item to total correlations obtained for various dimensions of the inventory are given in tables below. The value of cronbach’s alpha of teachers stress inventory was 0.921.
Table 4.4 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Work Overload’. It can be seen from the Table 4.4, cronbach’s alpha obtained for the dimension was 0.872 and all item-to-total correlations are above 0.61. As all the results were acceptable, it was decided to use the ‘Work Overload’ dimension in the final study questionnaire.

**Table 4.4 Cronbach’s alpha and item-to-total correlations of ‘Work Overload’ dimension**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I am expected to do a lot of things in little time.</td>
<td>.746</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I have to handle a lot of projects and assignments.</td>
<td>.862</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>I’m so busy with my work that I’m not able to devote sufficient time to my family and friends.</td>
<td>.736</td>
<td>.872</td>
</tr>
<tr>
<td>4.</td>
<td>I have to attend too many teacher research and study seminars.</td>
<td>.619</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I am so busy with my work that I’m not able to take meals at proper time.</td>
<td>.774</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I have to dispose off my work hurriedly owing to excessive workload.</td>
<td>.645</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>It is easy to complete the syllabus in prescribed time.</td>
<td>.637</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I have too much subject matter to teach.</td>
<td>.772</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.5 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Role Uncertainty’. It can be seen from the Table 4.5, cronbach’s alpha obtained for the dimension was 0.722 and all item-to-total correlations are above 0.60. As all the results were acceptable, it was decided to use the ‘Role Uncertainty’ dimension in the final study questionnaire.

Table 4.5 Cronbach’s alpha and item-to-total correlations of ‘Role Uncertainty’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel certain about how much authority I have.</td>
<td>.722</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I am clear about the behaviour expected of me by the authorities.</td>
<td>.671</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>There are clear, planned goals and objectives for my job.</td>
<td>.683</td>
<td>.722</td>
</tr>
<tr>
<td>4.</td>
<td>I am not provided with clear instructions regarding my work.</td>
<td>.601</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I am clear about the type of work expected of me by the authorities.</td>
<td>.660</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I know exactly what is expected of me.</td>
<td>.613</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.6 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Role Conflict’. It can be seen from the Table 4.6, cronbach’s alpha obtained for the dimension was 0.779 and all item-to-total correlations are above 0.60.

As all the results were acceptable, it was decided to use the ‘Role Conflict’ dimension in the final study questionnaire.

**Table 4.6 Cronbach’s alpha and item-to-total correlations of ‘Role Conflict’ dimension**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The head institution often gives contradictory instructions regarding my work.</td>
<td>.756</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Higher authorities ask for one thing at a time but really want another.</td>
<td>.857</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Higher authorities don’t interfere in my methods and techniques of teaching.</td>
<td>.615</td>
<td>.779</td>
</tr>
<tr>
<td>4.</td>
<td>Official instructions and rules and regulations are followed by the staff members.</td>
<td>.680</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I have to perform tasks for which I have never been trained.</td>
<td>.652</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I have to focus more on clerical work and co-curricular activities than teaching.</td>
<td>.609</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.7 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Less Involvement’. It can be seen from the Table 4.7, cronbach’s alpha obtained for the dimension was 0.720 and all item-to-total correlations are above 0.679. As all the results were acceptable, it was decided to use the ‘Less Involvement’ dimension in the final study questionnaire.

Table 4.7 Cronbach’s alpha and item-to-total correlations of ‘Less Involvement’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>My suggestions are sought in modifying the working system of the institution.</td>
<td>.683</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>My suggestions are sought in organizing co-curricular activities in the institution.</td>
<td>.694</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>My views are sought for selecting students for various competitions.</td>
<td>.738</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I’m not involved in important decisions of the institution.</td>
<td>.679</td>
<td>.720</td>
</tr>
<tr>
<td>5.</td>
<td>My suggestions are implemented in the institution.</td>
<td>.682</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Most of my suggestions are listened by the authorities.</td>
<td>.695</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.8 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Impoverished Relations’. It can be seen from the Table 4.8, cronbach’s alpha obtained for the dimension was 0.836 and all item-to-total correlations are above 0.62. As all the results were acceptable, it was decided to use the ‘Impoverished Relations’ dimension in the final study questionnaire.

Table 4.8 Cronbach’s alpha and item-to-total correlations of ‘Impoverished Relations’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I work with persons whom I like.</td>
<td>.663</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>There is mutual co-operation and understanding among the employees of our institute.</td>
<td>.683</td>
<td>.836</td>
</tr>
<tr>
<td>3.</td>
<td>I enjoy working with my co-workers.</td>
<td>.794</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I’m often in conflict with my colleagues.</td>
<td>.671</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>There exists healthy competition among teachers for better performance.</td>
<td>.667</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I feel isolated in the staffroom.</td>
<td>.693</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>My peers do co-operate with me in completing the work assigned to me.</td>
<td>.628</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Some of my colleagues try to portray me as an unsuccessful teacher.</td>
<td>.622</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.9 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Low Status’. It can be seen from the Table 4.9, cronbach’s alpha obtained for the dimension was 0.775 and all item-to-total correlations are above 0.62.

As all the results were acceptable, it was decided to use the ‘Low Status’ dimension in the final study questionnaire.

Table 4.9 Cronbach’s alpha and item-to-total correlations of ‘Low Status’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>My self -respect is taken care of by the higher authorities.</td>
<td>.745</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I’m proud of my teaching profession.</td>
<td>.765</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>This job has enhanced my social status</td>
<td>.858</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Teaching profession is considered as a low profile job as compared to other professions.</td>
<td>.702</td>
<td>.775</td>
</tr>
<tr>
<td>5.</td>
<td>I’m paid less as compared to my qualifications.</td>
<td>.881</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>The higher authorities give due recognition to my post and work.</td>
<td>.651</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I’m rewarded for my hard work and efficient performance.</td>
<td>.770</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Annual increments in teaching are at par with cost of living.</td>
<td>.625</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.10 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Undue Pressures’. It can be seen from the Table 4.10 cronbach’s alpha obtained for the dimension was 0.760 and all item-to-total correlations are above 0.62. As all the results were acceptable, it was decided to use the ‘Undue Pressures’ dimension in the final study questionnaire.

Table 4.10 Cronbach’s alpha and item-to-total correlations of ‘Undue Pressures’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Owing to political/group pressures, I have to promote failures to the next class.</td>
<td>.643</td>
<td>.760</td>
</tr>
<tr>
<td>2</td>
<td>Higher authorities pressurize me to do other teachers work also.</td>
<td>.713</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Due to group/ political pressures, I have to do the work I dislike.</td>
<td>.688</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Political pressures play an important role in my promotion and transfers.</td>
<td>.621</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I’m overstretched because of number of unfilled vacancies or staff on long-term sick leaves.</td>
<td>.643</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I’m pressurized to complete the attendance of the students.</td>
<td>.714</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I’m forced to attend outstation camps and trips.</td>
<td>.768</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.11 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Professional Distress’. It can be seen from the Table 4.11, cronbach’s alpha obtained for the dimension was 0.888 and all item-to-total correlations are above 0.65. As all the results were acceptable, it was decided to use the ‘Professional Distress’ dimension in the final study questionnaire.

Table 4.11 Cronbach’s alpha and item-to-total correlations of ‘Professional Distress’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>My professional skills are underused.</td>
<td>.801</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I get ample opportunities to enhance my teaching skills.</td>
<td>.702</td>
<td>.888</td>
</tr>
<tr>
<td>3.</td>
<td>My profession requires a great deal of concentration.</td>
<td>.824</td>
<td>.888</td>
</tr>
<tr>
<td>4.</td>
<td>The subject /class taught by me does not fit my abilities.</td>
<td>.730</td>
<td>.888</td>
</tr>
<tr>
<td>5.</td>
<td>I feel that my career is progressing as I hoped.</td>
<td>.673</td>
<td>.888</td>
</tr>
<tr>
<td>6.</td>
<td>I find teaching a monotonous job.</td>
<td>.652</td>
<td>.888</td>
</tr>
</tbody>
</table>
Table 4.12 exhibits the results of cronbach’s alpha and item-to-total correlation of the items comprising of dimension ‘Strenous Working Conditions’. It can be seen from the Table 4.12, cronbach’s alpha obtained for the subscale was 0.832 and all item-to-total correlations are above 0.60.

As all the results were acceptable, it was decided to use the ‘Strenous Working Conditions’ dimension in the final study questionnaire.

Table 4.12 Cronbach’s alpha and item-to-total correlations of ‘Strenous Working Conditions’ dimension

<table>
<thead>
<tr>
<th>S.No.</th>
<th>ITEMS</th>
<th>Item to Total Correlation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel that I am discriminated against because of my marital status/sex/disability/religion.</td>
<td>.849</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>The temperature of my work area during summer/Winter is usually comfortable.</td>
<td>.701</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Students pay adequate attention towards classroom task.</td>
<td>.735</td>
<td>.832</td>
</tr>
<tr>
<td>4.</td>
<td>There is lack of adequate instructional material and teaching resources in our institute.</td>
<td>.675</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>The classrooms are awfully crowded.</td>
<td>.713</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>The level of lighting in the area in which I work is usually comfortable.</td>
<td>.768</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I’m concerned about aggressive parents.</td>
<td>.673</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Students often misbehave with me.</td>
<td>.606</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Our rest facilities are comfortable.</td>
<td>.746</td>
<td></td>
</tr>
</tbody>
</table>
Test- Retest Reliability of Teachers Stress Inventory

Final form of the test was administered to the same subjects twice with some interval of time. The sample used for collecting data is shown in Table 4.13.

TABLE 4.13 Table showing break- up of the sample

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the School</th>
<th>No. of teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Govt. Model Sr. Sec. School, Sector- 21, Chd.</td>
<td>15</td>
</tr>
<tr>
<td>2.</td>
<td>Govt. Model Sr. Sec. School, Sector- 32, Chd.</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>Govt. Model Sr. Sec. School, Sector- 21, Chd.</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>50</td>
</tr>
</tbody>
</table>

This would provide two scores obtained on the first and second administration. The two scores were correlated to determine test- retest reliability coefficient. The reliability coefficient of teachers stress inventory through test- retest method is entered in Table 4.14.

Table 4.14 Reliability coefficient of teachers stress inventory through test- retest method

<table>
<thead>
<tr>
<th>Method</th>
<th>Sample</th>
<th>Interval</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test- Retest</td>
<td>50</td>
<td>1 MONTH</td>
<td>0.89</td>
</tr>
</tbody>
</table>

The value of test- retest reliability (r= 0.89) is quite high.
4.6 SCORING

The format of inventory was a five point rating scale. The subject was required to read each statement and give his/her feelings on five-point scale. The cut points used were ‘Strongly Disagree’, ‘Disagree’, ‘Undecided’, ‘Agree’, ‘Strongly Agree’.

For positive statements (1, 2, 6, 8, 9, 10, 14, 19, 23, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 42, 43, 44, 46, 47, 51, 53, 57, 58, 59, 60, 62, 64) a maximum score of five (5) was given to ‘Strongly Agree’ and one (1) to ‘Strongly Disagree’.

For negative statements (3, 4, 5, 7, 11, 12, 13, 15, 16, 17, 18, 20, 21, 22, 24, 25, 27, 37, 38, 41, 45, 48, 49, 50, 52, 54, 55, 56, 61, 63) a maximum score of five (5) was given to ‘Strongly Disagree’ and one (1) to ‘Strongly Agree’.

The results validate the teachers stress inventory and it can be said that the present teachers stress inventory developed by the investigator is a reliable measure of occupational stress of teachers in Indian context.