CHAPTER FOUR

METHODOLOGY

4.1 METHOD

Descriptive method of Research was used for the conduct of the present study. Descriptive Research is concerned with hypothesis formation and testing the analysis of the relationships between non-manipulated variables, and arriving at some generalizations. Descriptive method employs careful sampling procedures so that generalizations may be extended to other individuals, groups or settings. Since the objective of the present investigation was to study relationship of Role stress in organisational setup with various indices of Psychological Well-Being, Coping Strategies with various indices of Psychological Well-Being, nature and magnitude of the relation of Organisational Role Stress with Coping styles, the organisation selected was Banking Organisation.

4.2 SAMPLE

The sample for present study comprised of 200 male Bank Officers from two Nationalised Banks i.e., Punjab National Bank (PNB) and United Commercial Bank (UCO). Out of the total of 200 Officers, 100 were drawn from these two Nationalised Banks at Shimla (H P.) and 100 were from the same two Nationalised Banks at Delhi. The age range for the entire sample was from 25 to 55 years. Minimum educational qualification level of the entire sample was Graduation.

<table>
<thead>
<tr>
<th></th>
<th>DELHI</th>
<th>SHIMLA</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNB</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>UCO</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>200</td>
</tr>
</tbody>
</table>
4.3 TOOLS USED

4.3.1 Organisational Role Stress Scale (ORS) [Pareek, 1981, 1983]

(APPENDIX-1)

The Organisational Role Stress scale is a 5-point scale, indicating how true a particular statement is for the role. The following stresses are assessed by this instrument: Self-role Distance (SRD), Inter-role Distance (IRD), Role Stagnation (RS), Role-ambiguity (RA), Role-overload (RO), Role-isolation (RI), Role-erosion (RE), and Role-inadequacy (RIn). Originally, the instrument was named as “Your Feelings About Your Role” which consisted of 40-items (5 for each of the eight role stresses mentioned above). Later, this instrument was named as Organisational Role Stress Scale. In the light of findings of factor analysis two stresses were split into four. Role-ambiguity was split into role-ambiguity (i.e., lack of clarity) and role-expectation conflict (or conflicting expectation). Role inadequacy was split into personal-inadequacy (i.e., inadequacy of internal or personal resources) and resource inadequacy (i.e., lack of external resources for effective performance of the role). Thus, the new instrument, i.e., the Organisational Role Stress Scale has 50-items. The score of each role stress may range from 0 to 20, and the total Organisational Role Stress score may range from 0 to 200. The answer sheet is given separately to facilitate quick calculations of the role stress scores. The ratings of the respondents can be added row-wise to give the scores on 10 role stress dimensions. Retest reliability coefficients were calculated for the group of about 500 employees from three Banks (Sen, 1982). Retest reliability was obtained for the eight stresses, and the total role stress score. The reliability coefficients except one are significant at .001 level, one coefficient was significant at .003 level. The scale has acceptable reliability (Pareek, 1981, 1983). Some evidences about validity is provided by a measure of self-consistency of an instrument. Such items are correlated with the total score on the instrument for about 500 respondents. All but two correlations were significant at the .008 levels. The result shows high internal consistency of the scale (Pareek, 1981, 1983).
4.3.2 **Organisational Role Pics (O)** | Pareek, 1983 | (Appendix 2)

The Organisational Role Pics (O) is a semi-projective instrument for the assessment of various coping strategies employees adopt to deal with Organisational Role Stress. Pics is a short form of Projective Instrument for Coping Styles. Role Pics has three forms --- Forms E, G, and O. Role Pics (E) is meant for use with entrepreneurs to assess their coping styles in relation to stresses experienced in the entrepreneurial role. Role Pics (G) has been developed for assessment of coping styles in relation to general role stress experienced by people in their lives. Role Pics (O) assess coping styles in relation to organisational roles. This instrument consists of 24 pictures or situations in which a role occupant is involved in conversation with another person, and the role occupant or the other person makes a statement about a role stress situation. To maximize projection these are presented in cartoon like pictures. A respondent is required to write down what the person to whom a statement has been made would respond. It is presumed that the responses will be a projective expression of the way the respondent would cope with a particular stress.

Internal consistency of the scale has been tested by split-half and even-odd methods. Values of correlation coefficient for 52 respondents was found to be .71 for split-half and .93 for even-odd method, which are significant at .001 level. The data has been analyzed to see consistency amongst the various coping styles. For each category (consisting of 3 situations or items), the score of 52 respondents on 8 styles were rank ordered, for frequency, and rank order correlations were calculated. The results indicated high internal consistency of the instrument. There is a similar pattern of ranks of the various coping styles, as in the entire test. The results further showed that there is less similarity of responses amongst some stress categories.

In order to get some insight into the nature of coping styles in the Indian organisations, and to have some indicator of "meta" strategies, data from about 500 employees from banks (Sen, 1982) were factor analysed. Principal components analysis was used. The factors were rotated with varimax method. The 8 variables of coping styles gave 4 factors viz., Defensive Externalisation, Problem Solving,
Dependent Persistence and Collaborative Internalisation, explaining 100 percent variance of coping styles.

4.3.3 **State-Trait Anxiety Inventory STAI [Spielberger, Sharma & Singh, 1973]**

*APPENDIX A*

The General (or trait) anxiety is measured by A-Trait scale of the Hindi version of State-Trait Anxiety Inventory (Spielberger, Sharma & Singh 1973). This version has been empirically demonstrated to provide internally consistent reliable and valid scale for measuring general anxiety. This inventory has also been translated into 22 languages the world over and hence reliable cross cultural comparisons can be made.

The STAI A-Trait Scale consists of 20 statements that ask people to describe how they generally feel. Subjects respond to each item by rating themselves on the following four point scale

1. Almost Never,
2. Sometimes,
3. Often,
4. Almost Always

Individual items were selected for the STAI A-Trait Scale on the basis of the concurrent validity of each item as determined from correlations with two widely accepted A-Trait measures - the Taylor MAS and IAPT Anxiety Scale. Each A-Trait item was also determined to be impervious to situational stress and relatively stable over time. Cross language equivalence of the Hindi and English versions has been amply demonstrated in the samples of bilinguals. In order to determine test-retest reliability of the Hindi STAI, a sample of 72 graduate students was retested under more or less similar class room conditions after periods of 30, 50, and 90 days. The Hindi STAI A-Trait scale was stable over time as indicated by high test-retest correlations for the this scale, which ranged from .77 to .83 over the 30 to 90 days periods. The concurrent validity of the Hindi STAI A-Trait scale was evaluated for a sample of 100 Indian graduate students to whom the scale was administered along with the following measures

(a) an Indian adaptation of the Taylor (1953) Manifest Anxiety Scale (Krishnan 1966),
(b) the IAPT Anxiety Scale (Cattle & Scheir, 1961); and
(c) the Sharma Manifest Anxiety Scale (Sharma, 1970).

The Hindi STAI A-Trait Scale correlated .80, .71, and .61 respectively with the Sharma scale, the IAPT Anxiety Scale, and the Taylor Manifest Anxiety Scale. These moderate to high correlations provide evidence of the concurrent validity of the Hindi STAI A-Trait Scale.

4.3.4 Anger Expression (AX) Scale [Spielberger et al. 1985; Krishna, 1988]

The AX Scale is comprised of 24 items. The three sub-scales assess individual differences in the tendency to:
(a) express anger toward other people or objects in the environment (AX/Out),
(b) experience but hold in (suppress) angry feelings (AX/In), and
(c) control the experience of expression of anger (AX/Con).

The loading of these items on Anger/In factor ranged from .58 to .72 (median = .665); the loading on Anger/Out ranged from .16 to .17 (median = -.045). The content of these items (‘control my temper’, ‘keep my cool’, ‘calm down faster’) appears to be related to the control of anger, which logically cuts across both modes of anger expression. The internal consistency of Anger Expression (AX) scale and 8 items Anger/In and Anger/Out subscales were evaluated by computing alpha-coefficients and item-remainder correlations. The AX/In and AX/Out item-remainder correlations were based only on the items comprising these subscales. The alphas ranged from .73 to .84, and were highest for the AX/In subscales. Although somewhat lower, the alphas for the AX/Out subscales were nevertheless reasonably satisfactory for a brief 8-item inventory. The item remainders for the AX/Ex items were heterogeneous, ranging from .14 to .56, with a median of .33.

The AX/In and AX/Out subscales were moderately to highly correlated with AX/Ex scores, which would be expected, of course, given the overlap of the subscale items with the total anger expression scores. This scale has been validated by West-Berry (1980) who found it to be correlated with BDHI total scores ranging from .66 to 0.73.
4.3.5 Jenkins Activity Survey Form -B [Jenkins et al., 1978]

(APPENDIX-5)

Form-B of the Jenkins Activity Survey (JAS) to identify Type-A and Type-B individuals was developed in 1976. Sood (1988) used its Hindi version which was prepared by personally contacting three eminent scholars of Hindi and two eminent teachers of English. On the basis of suggestions by these persons a tentative Hindi translation was prepared by keeping the same format and instructions that were used in the English version of the JAS Form B. While preparing the translation, efforts were made to maintain the essential content of the original JAS Form-B items and at the same time advantage was taken of some special psycholinguistic characteristics of Hindi language.

The second phase in the development of Hindi version of the JAS Form-B involved obtaining evaluations of the Hindi translation from 6 Psychologists, 5 University teachers of Hindi, and 5 University teachers of English. More than two thirds of the respondents rated the translations of most items as good or satisfactory. Some of the items were improved by an addition of modified terms in them which fit well. Also some items were rejected which were not suited in the Indian culture and were not translatable in Hindi language. Hence this finally consists of 42 items.

4.3.6 S.D. Employees Inventory(SDEI) | Pestonjee, 1973, 1981 |

(APPENDIX-6)

Job Satisfaction has been assessed by satisfaction - Dissatisfaction (SD) Employee’s inventory. This inventory has been developed and standardized by Pestonjee (1973, 1981). The inventory is based on the interaction model (Vroom, 1964) of job satisfaction with a number of on-the-job and off-the-job factors. Job-satisfaction is viewed as a “summation of employee’s feelings in four important areas”.

These are:

1. Job Nature of work, Hours of work, Fellow workers, Opportunities on the job for promotion and advancement (prospects), over-time regulations, interest in work, physical environment, machines and tools, etc.
(2) Management  Supervisory treatment ; Participation , Rewards and Punishments , Praise and Blame , Leave policy , Favoritism , etc.
(3) Personal Adjustment  Emotionality , Health , Home and living conditions , Finances , Relations with family members , etc
(4) Social Relations  Neighbors , Friends and Associates , Attitudes towards people in community , Participation in social activity , Sociability , Cast barriers , etc

Job and management together constitute on-the-job factors , and personal adjustment and social relations comprise off-the-job factors A factor analytic study of the questionnaire of on-the-job and off-the-job factors separately has yielded ten independent dimensions on-the-job aspect and eleven independent factors in off-the-job area (Pestonjee, 1981 ) These are:

On-the-Job  Supervisory treatment / consideration , equality regarding work load and pay , supportive function , interest in work , rules and regulations , intrinsic satisfaction ; regard for the organisation , working conditions , cooperation of the co-workers ; supervision nurturance of subordinates

Off-the-Job  Relation with family members ; emotionality ; neuroticism , perception of people in society ; anxiety about health , sociability ; extraversion , neighborhood , intrapsychic factors , trust , isolation , and living conditions

The items are framed in the form of interrogatory statements These are 20 items in each area , i.e. , job , management , personal adjustment , and social relations Each item can be responded in terms of “YES” or “NO” Thus , there are 80 items in the total inventory The area-wise split-half reliability has been found to be  99 for job , 99 for management , 98 for personal adjustment , and 90 for a social relations The construct validity by using the ‘known Groups’ and ‘item-test correlation technique’ (Pestonjee, 1973 ) as well as factorial validity have also been established (Pestonjee, 1981 )
4.3.7 **Multidimensional Personality Questionnaire (MPQ)** [Tellegen 1982] (APPENDIX - ?)

MPQ is a 25 items scale, in which 14-items assess Negative Emotionality (NEM) and 11-items assess Positive Emotionality (PEM). The NEM focuses on the experience of negative affect and contains no somatic complaint or health related items. Like other measure of NA, NEM ii internally consistent (coefficient of alpha = .82 , n = 872 ) and demonstrates high test-retest reliability (12-week retest , r = .72, n = 109 ). Factor analyses of the NEM items reveal a single general factor. Trait PA is measured by 11-items of Positive Emotionality contained in MPQ. High PEM scores describes themselves as happy and enthusiastic, and leading as an interesting and exciting life. PEM is also internally consistent (coefficient of alpha = .80 ), reliable over time ( 12-week retest , r = .77, n = 109 ), and unifactorial.

4.4 **ADMINISTRATION**

All these “Measures” together in the form of questionnaire were administered to Bank Officers individually and it was assured that all information given by them will be kept confidential and will be used only for the research purpose. The respondents were asked not to write their name anywhere in the questionnaire. A cover sheet was used to elicit the demographic data, age, education, place of residence, background etc. The questionnaire were administered according to standard instructions and arranged in the following order:

- Organisational Role Stress Scale, Anger Expression (AX) Scale, General Temperament Survey, State-Trait Anxiety Inventory, Jenkins Activity Survey Form-B, S.D. Employees Inventory, Organisational Role Pics (0).

4.5 **SCORING**

4.5.1 **Organisational Role Stress Scale (ORS)** [Pareek, 1981,1983] (APPENDIX - ?)

There are 50 items in “Organisational Role Stress” Scale for which scores are obtained on a 5-point scale i.e., the respondent indicates his response by writing
0, 1, 2, 3 or 4 on the answer sheet, supplied with the questionnaire against the serial number of each item as given in the questionnaire. The following abbreviations in the last column of the answer sheet stand for the following role stresses:

1. IRD Inter Role Distance
2. RS Role Stagnation
3. REC Role Expectation Conflict
4. RE Role Erosion
5. RO Role Overload
6. RI Role Isolation
7. PI Personal Inadequacy
8. SRD Self-Role Distance
9. RA Role Ambiguity
10. RN Resource Inadequacy

By adding the scores for each role stress (row-wise), their summation provide the total Organizational Role Stress score. Each individual has eleven scores (10 scores on role stresses and one overall role stress). The total Organisational Role Stress score ranged from 0 to 200.

4.5.2 Organisational Role Pics (0) [Pareek, 1983] (Appendix 2)

After the responses to the 24 situations in the Role Pics are scored, the scores are entered on the score sheet (Appendix-) which is completed for various aspects according to standard instructions contained in the manual (Pareek, 1983). In the score sheet, the portion “Item Scores” is divided into two parts: one for Avoidance and the other for Approach scores. At the end there is a space for GCR scores. The number of responses agreeing with the GCR criteria are counted to give the total GCR score. Generally GCR score is an index of the person’s adjustment to a normal group. This score is entered at the bottom of item scores which is converted into percentile with the help of standard table contained in the Role Pics manual.

Next step in the scoring of Role Pics is the calculation of Trends. Trends are calculated by comparing the response patterns in the first half (12-situations) of Role...
Pics, with the second half (situations 13 to 24). The formula for calculating the value of a trend is \( \frac{a-b}{a+b} \) in which ‘a’ is the amount of the style in the first half [No. 1 to 12] of the test and ‘b’ is the amount of the style in the second half [No. 13 to 24]. These respective amounts can be read out from the profile of the Score Sheet. To facilitate calculation of trends, space is provided in the answer sheet for noting down the amount of each of the 8 styles and two broad styles [Avoidance and Approach] in the first and second half of Role Pics.

4.5.3 State-Trait Anxiety Inventory STAI [Spielberger, Sharma & Singh, 1973]

The State-Trait Anxiety Inventory Hindi Version consists of 20 items for which responses are obtained on a 4-point Likert-type scale. For items numbered 1, 6, 7, 10, 13, 16, and 19 the ratings are considered in reverse order to ratings on other items e.g., if a respondent encircled the figure 4 on any one of the mentioned items (1,6,7,10,13,16,19) then the score fetched for that item is 1. The scores on all the items are summed up to obtain a total score.

4.5.4 Anger Expression (AX) Scale [Spielberger et al. 1985; Krishna, 1988]

The Anger Expression (AX) Scale comprises of 24-items and yields four different scores. The Anger Expression (AX/Ex) score, which is based on all 24-items, provides a general index of how often anger is aroused and expressed or suppressed. The three AX sub-scales assess the individual differences in the tendency to: (1) express anger toward other people or objects in the environment (AX/Out); (2) experience but hold in (suppress) angry feelings (AX/In); and (3) control the experience and expression of anger (AX/Con). The 8 items comprising each of the three AX sub-scales are:

- **Anger-Out (AX/Out)**: 2,7,9,12,14,19,22,23
- **Anger-In (AX/In)**: 3,5,6,10,13,16,17,21
- **Anger-Con (AX/Con)**: 1,4,8,11,15,18,20,24
The scores on these three sub-scales were counted separately. The range of possible scores for the three sub-scales varies from a minimum of 8 to a maximum of 32. In computing AX/Ex scores, a constant (C=16) is added to eliminate negative scores. AX/Ex scores, which range from 0 to 72, can be calculated by the following equation:

\[
AX/Ex = \{1/Ax-Out\} + \{1/Ax-In\} - \{1/AX-Con\} + 16.
\]

With the help of the median (mid-point) the higher and lower anger expression (anger-in, anger-out, anger-control) groups are formed.

4.5.5 **Jenkins Activity Survey Form B. [Jenkins et al., 1978]** (Appendix 5)

There are 42-items in Hindi Version of Jenkins Activity Survey Form B. The subjects are classified as Type-A and Type-B individuals on the basis of scores on the JAS. As suggested by Evans et al. (1987) un-weighted scoring was preferred in this cross-cultural context because investigators has validated criteria only in the United States. Out of 42-items, the scoring of 23-items have been done in reverse order while of 19-items have been done in the same order and then the score for the total items have been summed up to obtain total scores for each respondent. The subjects were classified as Type-A in case their score 55 and above ( \( M \pm 1/2 \ SD = 50 \pm 5 \) ). Similarly, the subjects were classified as Type-B when their score was 45 or below on the JAS ( \( M \pm 1/2 \ SD = 50 \pm 5 \) )

4.5.6 **S.D. Employees Inventory [Pestonjee, 1973, 1981]** (Appendix 6)

Scoring of the S.D. Employee’s Inventory is done with the help of the standardized scoring key. The scores are obtained by arithmetic summation of True-keyed and False-keyed endorsements for each area of the inventory. The maximum score is 80 for the total inventory and 20 for each area. By adding the scores of job and management area, the score for on-the-job facet of Job satisfaction is obtained. By adding the scores on personal adjustment and social relations, the score for off-the-job
facet of Job satisfaction is obtained. Summation of all the scores together provide the total Job satisfaction scores.

4.5.7 Multidimensional Personality Questionnaire (MPQ) [Tellegen, 1982]

MPQ is a 25-items scale, in which 14-items assess Negative Emotionality (NEM). Item numbers 1, 2, 4, 6, 8, 10, 11, 13, 14, 17, 18, 20, 22 and 24, are Negative Emotionality (NEM) or Negative Affectivity items. Remaining 11-items i.e., 3, 5, 7, 9, 12, 15, 16, 19, 21, 23, and 25 are Positive Emotionality (PEM) or Positive Affectivity items. All items are true keyed. To score each scale, simply add up the number of "TRUE" responses to the indicated items.

4.6 STATISTICAL TECHNIQUES USED:

(1) The scores on the measure of Organisational Role Stress (ORS), Jenkins Activity Survey (JAS), State Trait Anxiety Inventory (STAI), Anger Expression (AX), SD-Employees Inventory (SDEI), Multidimensional Personality Questionnaire (MPQ) (N=200) have been normalized (at M = 50 and SD = 10) by converting the raw score into T-scores.

(2) Pearson's Product Moment Coefficient of correlations have been computed to find out the relationships of Organisational Role Stress, JAS (Type-A/B behaviour pattern) Anxiety, Anger Expression (Total and sub scores), Job Satisfaction, Negative Affectivity and Positive Affectivity.

(3) Biserial (r) coefficient of correlation have been computed to find out the relationship of Coping (dichotomized into Avoidance and Approach) with various indicators (positive and negative) of Psychological Well-Being.
(4) *Partial correlations* have been employed to determine the moderating role of Type of personality (Type-A/B) and Coping styles (Avoidance/Approach) on the relationship of Organisational Role Stress with various positive and negative indicator of Psychological Well-Being. The term moderated variable is used to describe the notion of “population control” and “sub grouping” variable (Zedeck, 1971) and it is argued that moderating variables influence the direction or strength of the relationship between the independent variables and the dependent variables. (See Barron & Kenny, 1986) *Mediating variable*, on the other hand, address the question of *HOW* and *WHY* such effects occur. Separate analysis have been accomplished for those with Type-A Behaviour and Type-B Behaviour; and those with Avoidance coping and Approach coping.

Partial correlation between two variables is one that nullifies the effect of a third variable (or a number of other variables) upon both variations been correlated. When one variable is held constant, it is called first order Partial Correlation. In this study first order partial correlation was employed. Higher and lower group (i.e Type-A and Type-B) were identified on the basis of Mean ± 1/2 S.D. i.e., the mean and standard deviations on each variables were determined for the total sample of Bank Officers (N=200). Then the values of Mean +1/2 S.D. and Mean -1/2 S.D. were calculated for these groups and were used as cutting points. However, for Avoidance coping and Approach coping categorization above mentioned method (i.e. M±1/2 S.D.) was not employed. This is because Role Pics (Pareek, 1982) itself confirm the dominant style of coping (Avoidance or Approach).

The significance of differences between two correlations were determined by converting “r” scores in to *Fisher’s Z function* (Garrett, 1960, pp. 241-242).

(5) *Analysis of variance* (2x2x2) has been used to study the main and interactional effect various independent variables/factors included in this study on various negative and positive indicator of Psychological Well-Being. The
three independent variables/factors in the present study are Organisational Role Stress, TypeA/B behaviour pattern and Coping styles (Avoidance/Approach).

(6) **Hierarchical Multiple Regression Analysis** has been performed to find out the contributions of Organisational Role Stress, TypeA/B and Coping (Avoidance/Approach) in explaining the variance in various negative and positive indicators of Psychological Well-Being.

Multiple regression is an extension of the use of the bi-variate correlation coefficient multivariate analysis. Step-wise multiple regression analysis can be done with selection of the variable that by itself has the highest correlation with the dependent variable. The procedure then selects by computational steps the variable that would make the large gain in prediction. In this technique independent variables are ranked according to their ability to reduce the variation in the dependent variable at each step. Then total effect of independent variable is determined by coefficient of multiple correlation. In the words of Guilford and Fruchter (1978, p. 37), “The coefficient of multiple correlation indicates the strength of relationship between one variable and two or more others combined with optimal weights. The multiple correlation is related to inter-correlation between independent variables as well to their correlation with the dependent variables.”

Regressi on coefficient (β), on the other hand, indicates the relative importance of independent variables in the prediction of dependent variable Beta coefficient is called standard partial regression coefficient. The coefficient of multiple determination (R²) associated with each predictor variable gives the variance that is accounted for by the variables under consideration. Multiple regression eliminates the effect of correlations among predictor variables and any common method variance in effect.

A “t” regression coefficient, if significant, indicates that the regression weight differs significantly from zero, which means that the variable with which is associated contributes significantly to the regression, the other variables being taken into account.
$R^2_{\text{change}} (\Delta R^2)$ represents how much variance came with the addition of new variables. The F-ratios shows the significance of $R^2$ change in the stepwise multiple regression analysis.