Chapter III: Objectives and Research

Methodology

Role stress is a multifaceted and complex phenomenon (Pestonjee, 1992), the understanding of which is critical for ensuring the well-being of employees and functioning of organizations (Pareek, 2002; Anton, 2009). It may be difficult to attribute role stress exclusively to organizations as individuals play a key part in determining the phenomenon (Chauhan & Chauhan, 2005). This makes it important to examine the dynamism of role stress at workplace. The present study aims at making a dent in the existing literature by comprehensively investigating the phenomenon of role stress. In this chapter, the specific objectives of the study and a detailed snapshot of the methodology followed to achieve the objectives have been presented. The chapter has been divided into two sections. Section I throws light on the need for the study, the research questions and objectives, followed by an exhaustive description of the sources of data used to commensurate the objectives of the study. A detailed discussion on the methodology followed for the study is presented in section II.
Section I

3.1 Need for the Study

Stress, an integral part of the human existence, is said to have an immense influence over the lives of individuals and the organizations. In the present era, the nature and intensity of stress is so turbulent that the present age has been named as ‘Age of Anxiety, Stress and Depression’ (Pestonjee, 1992; Horwitz, 2010). As individuals spend most of their time at work, the workplace has been conceived to be a potent contributor and influencer of stress (Carr, 1994). At the workplace, various roles are performed which have to be in synchronization with the roles at home and other places. The stress induced due to roles performed by individuals as employees at workplace, has been one of the most persuasive organizational stressors (Kahn et al., 1964; Srivastava, 2007) the outcomes of which have been found to be costly to the organization (Fisher and Gitelson, 1983). Considering the ramifications of role stress, researchers have applied role-theory to understand stress problems at work and to assess the contribution of role pressures to occupational stress (Gupta and Adhikari, 2008). However, the previous studies in this area of research indicate that the role stress as a phenomenon has hardly been understood in its entirety and comprehensively in case of commercial banks particularly in the Indian
context (Sankpal et al., 2010; Shah, 2003; Ahmad & Shah, 2007). The public and private sector commercial banks have also witnessed relatively lack of efforts to analyze the role stress phenomenon exhaustively. The stress induced by the roles performed by front line employees of commercial banks is a matter of worth attention too, as it is emphasized that role stress occurs in employee jobs that involve direct interaction with customers and such employees are prone to relatively greater level of role stress (Modekurti and Chattopadhyay, 2008; Sankpal et al., 2010; Boles and Babin, 1996; Brown and Peterson, 1993; Kahn et al., 1964). Moreover, while several researchers have studied the linkage between the determinants and role stress, a framework that acknowledges role stressors, its determinants expansively at sectoral level is relatively lacking. Also, the prior work provides some ideas about the determinants of role stress, such as demographic, personality and organizational variables, however, the relevant studies have tended to focus on one or the other area and have not provided a comprehensive understanding of the determinants of role stress. Despite the wealth of information, the application of the research findings to all employees is also not always straightforward.
Considering the above, the present study has been undertaken to add to the existing literature and to explore the unknown or less explored areas of role stress phenomenon.

3.2 Research Questions and Objectives of the Study

Specifically, the study aims at exploring the following research questions for understanding the phenomenon of role stress for the employees of commercial banks.

a) What are the role stress dimensions in commercial banks?

b) Is there any significant difference in the dimensions of role stress across public and private sector commercial banks?

c) What are the coping strategies used by the employees to combat role stress?

d) Is there any significant difference in the role stress coping strategies across public and private sector commercial banks?

e) Whether the employees of commercial banks can be segmented on the basis of their role stress experiences?

f) What are the determinants of role stress based employee segments?

g) What are the antecedents and implications of role stress phenomenon for commercial bank employees?
The research questions of the study, so framed, entail the examination of dynamism of role stress at commercial banks. This is, thus, addressed from the perspective of:

(a) An exploration of the sources of role stress at commercial banks
(b) Identifying the coping strategies used by the employees of commercial banks
(c) Segmenting the employees on the basis of their role stress experiences
(d) Examining the determinants of role stress based employee segments
(e) Proposing a comprehensive model for role stress phenomenon at commercial banks

3.3 Data Base

Role stress is a psychological state and it differs from individual to individual. On account of this, the study relies on self-reported responses of employees on the various measures used. Self-report is the most popular tool not only in organizational research but also in social and behavioral sciences (Harrison et al., 1996). Accordingly, to meet the objectives of the study, the information has been collected from primary sources.
3.3.1 Primary Sources

Stress is a multidimensional phenomenon emanating from various facets of life encompassing family, work and role demands. However, the present study is narrowed to the role related work stress only.

In order to prepare a micro level and an empirical case for role stress, the present study has been confined to a particular part of the country of India. Specifically, the employees of commercial banks of Jammu and Kashmir State of India have been contacted at their workplace to identify the various aspects of their role stress. The anonymous responses of the commercial bank employees have been taken through a well-constructed questionnaire during the period of November, 2009 – May, 2010.

3.3.1.1 Sample Design

Employee has been considered as the sampling unit for the study. Participants comprise of employees engaged in frontline work with customers in commercial banks. Frontline employees are organizational representatives that directly interact with the customers and perform the role of boundary spanning (Beony, 1996). The underlying reason for focusing on this set of employees is that one of the major challenges faced by the banks is meeting the ever increasing customer expectations (FICCI, 2010) which are forcing the employees to routinely engage in
highly demanding interactions with customers. Such interactions with customers engender demanding, repetitive and stressful work roles. An attempt to meet such demands at work often leads to role stress (Wetzels et al., 2000), which impacts customer orientation of these employees and their job performance (Flaherty et al., 1999). Further, Modekurti and Chattopadhyay (2008), Sankpal et al. (2010), Boles and Babin (1996), Brown and Peterson (1993), Kahn et al. (1964) have also highlighted that role stress occurs in employee jobs that involve direct interaction with customers and such employees experience relatively greater level of role stress.

Taking the base of the definition given by Beony (1996) who said that the frontline employees represent their organizations by directly interacting with the customers, the employees of commercial banks who interacted with the customer were regarded as front line employees. In order to give due representation to public and private sector commercial banks, it was planned to get responses from an equal number of employees i.e. 300 from both sectors who were selected using simple random sampling technique. However, of the total sample of 600 respondents approached, 50 could not be surveyed due to disinterestedness at their end or on account of their reluctance to give time and positive response to the survey. Due to this, responses from a
sample of 550 employees of public and private sector banks could be collected finally. The banks have been chosen depending on the spread of their network by including the banks with at least 7 branches in the state. It is due to the insights from the preliminary analysis which indicated that employees of main offices of public and private sector banks with small network, i.e. less than 7 branches was different for their experience of role stress phenomenon than those from banks with at least 7 branches. Based on this judgment and in order to have representative sample, main offices of public and private sector banks with at least 7 branches have been covered for data collection. The public sector banks covered are State Bank of India, Punjab National Bank, UCO Bank, Central Bank of India, Canara Bank, Punjab and Sind Bank, Oriental Bank of Commerce, and Bank of India. The private sector banks covered include Jammu and Kashmir Bank, ICICI Bank, and HDFC Bank. The Table 3.3.1.1 shows the number of employee response collected from each bank.

Table 3.3.1.1: Number of Employee Response Collected from Banks

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bank</th>
<th>No. of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>State Bank of India</td>
<td>43</td>
</tr>
<tr>
<td>2.</td>
<td>Punjab National Bank</td>
<td>40</td>
</tr>
<tr>
<td>3.</td>
<td>UCO Bank</td>
<td>30</td>
</tr>
<tr>
<td>4.</td>
<td>Central Bank of India</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Bank</td>
<td>Score</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>5</td>
<td>Canara Bank</td>
<td>33</td>
</tr>
<tr>
<td>6</td>
<td>Punjab &amp; Sind Bank</td>
<td>31</td>
</tr>
<tr>
<td>7</td>
<td>Oriental Bank of Commerce</td>
<td>33</td>
</tr>
<tr>
<td>8</td>
<td>Bank of India</td>
<td>33</td>
</tr>
<tr>
<td>9</td>
<td>Jammu &amp; Kashmir Bank</td>
<td>135</td>
</tr>
<tr>
<td>10</td>
<td>ICICI Bank</td>
<td>70</td>
</tr>
<tr>
<td>11</td>
<td>HDFC Bank</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: Unpublished Records of Banks

3.3.1.2 Measurement

A combination of approaches including questionnaire, interviews and observation have been used in order to collect the primary data. Principally, the primary data has been collected from the employees of sample units with the help of well-structured and pre-tested questionnaire. The sectoral requirements of the commercial banks have been taken into consideration while preparing the questionnaire covering a number of facets of role stress, its correlates and other information. Considerable time and effort has been devoted to the preparation of questionnaire for sample units for which previous studies on stress, in general, and role stress, in particular, have been reviewed exhaustively. Further, in order to make the questionnaire more relevant to the employees of commercial banks of J&K state, face-to-face meetings with the employees of the banks have also been undertaken. During the preparation of draft of questionnaire, online discussions and telephonic
interactions with researchers and academicians on the topic of the study have also taken place which has helped in refining the instrument. Some of the experts in this area, namely, Prof. Udai Pareek from Indian Institute of Health Management and Research, Jaipur; Dr. Abhilasha from Institute of Management Technology, Dubai, UAE; Prof. H.S. Sandhu from Guru Nanak Dev University, Amritsar; Dr. Susan from School of Communication and Management Studies, Cochin, Kerala; Prof. Sakaguch from Northern Kentucky University, Campbell County; Prof. Colin G. DeYoung from Yate University, New Heaven and Dr. Nikolaos Panagopoulos from Athens University of Economics and Business, Greece were consulted and their viewpoints have been given due consideration. Various aspects and segments of the questionnaire have also been discussed with them. Moreover, as a member of National Human Resource Development Network, the opinion of other members on the structure and contents of the questionnaire have also been invited and incorporated.

After giving due consideration to the various comments, suggestions and view-points of the employees and the experts, a draft questionnaire after self-review was later sent to a few employees and the experts, to ensure its validity. Based upon their observations, a few additions and deletions were made. In order to ascertain the reliability of
the questionnaire, a pilot survey of 100 employees of commercial banks was conducted. A few changes in some portions of questionnaire were recommended and with those changes, the final questionnaire was developed which is given in Annexure I.

Various variables underlying the dynamics of role stress namely, organizational variables (organizational climate, peer stress, type of bank, number of additional work held), socio-economic variables (age, salary, work experience, gender, nativeness, marital status, working status of spouse, family type, education), personality dispositions (stress propensity, locus of control, behavioural strain, coping style) have been assessed in the study. Additionally, indicators for performance like number of promotions, number of rewards received, number of times appreciation received and number of increments received for good performance have also been included in the study. A brief description of the measures is made in the following paragraphs.

The development of the research instrument for assessing role stress in the present empirical work is inspired by the Organizational Role Stress (ORS) Scale developed by Pareek (1983) and Role Stress Scale by Rizzo et al. (1970) because of their wider acceptability (Aziz, 2004; Dubinsky et al., 1990). However, to take into consideration the sectoral requirements of commercial banks, a 30-item scale has been
designed to tap the role stress of the individuals in the organizations. The consideration for sectoral requirements has been made after interviewing a total of 100 employees before the final designing of questionnaire. Responses on the scale have been collected via the use of five-point likert type scale ranging from ‘Never’ to ‘Always’. Codes 1, 2, 3, 4, 5 have been assigned to all the positive statements whereas the negative statements have been coded reversely. The designed role stress scale has been subjected to further review by inviting comments from researchers in the area of stress and employees of the banks. On the basis of suggestions given, the scale items were rephrased and few vague and ambiguous items were deleted. This helped in ensuring the face validity of the scale. An assessment of the reliability of the scale, using inter-item Cronbach Alpha, resulted into the retention of 22 statements assessing the role stress. The estimated value of Cronbach Alpha of the scale is found to be 0.805 which is far above the desired prescribed limit of 0.6 (Nunnally and Bernstein, 1994; Donio et al., 2006) and establishes its reliability. The reliability of role stress scale has also been estimated using the split-half method on a sample of 100 employees which is found to be reliable. Furthermore, construct validity measures the extent to which items in a single scale measures the same construct (Flynn et al., 1991) and in order to ensure the same, factor
analysis has been used (Sabharwal et al., 2010) in which one statement is loaded on one factor/construct only ensuring the unidimensionality of each construct. All the constructs have an average variance extracted more than 0.40 (Hair et al., 2006) and thus all the items have been retained.

The coping style has been determined by presenting before the respondent an inventory of 20 coping strategies of approach as well as avoidance nature designed by referring to the studies of Hariharan and Rath (2008), Sharma and Sharma (2008), Holahan and Moos (1987), Koeske et al. (1993), Lang and Markowitz (1986), Billings and Moos (1981). Responses on the scale are measured via the use of five-point scale ranging from ‘highly used’ to ‘never used’. The total score on coping style ranges from 20 to 100 which provides an array of coping style from approach to avoidance. The estimated value of Cronbach Alpha is found to be 0.811 which establishes the reliability of the scale. Furthermore, the extent to which items in a single scale measure the same construct (Flynn et al., 1991) assesses the construct validity of the scale. In order to do the same factor analysis has been applied (Sabharwal et al., 2010) in which one statement is loaded on one factor/construct only, ensuring the unidimensionality of each construct.
All the constructs have been found to extract more than 0.40 of average variance (Hair et al., 2006) and hence, all the items have been retained.

Locus of Control (LOC) is an important variable describing individual differences and predicting behaviour in organizational settings (Spector, 1982). It has been assessed using the standardized inventory of Rotter (1966) which has been widely used to explain employee behaviour (Renn and Vandenberg, 1991; Ferrando et al., 2011). Rotter has seen LOC as a relatively stable trait and believed that once formed, these beliefs can be difficult to change (Lawrence and Winschell, 1975). This inventory is a measure of individual differences in the tendency to believe that environmental events are within one’s control as opposed to being outside one’s control. Using a forced choice format, this scale pairs internal statements with external statements and consequently segregates individuals into two categories, namely, ‘Internals’ and ‘Externals’. The ‘Internals’ are motivated by a desire to gain mastery over the environment and ‘Externals’ believe that the events are outside their control. However, the original LOC inventory of Rotter (1966) was truncated after retaining only those items which are more of a personal nature rather than of general nature. The reliability of adapted version of LOC inventory has been estimated using parallel forms method wherein employees are presented the original as well as
the adapted version of the scale for examining whether the employees score same on both the types of the scale or not. The parallel forms approach to reliability assumes that the two scales have equal correlation with true score, plus equal observed score variances and means (Cudeck, 2001) and it has been found that the adapted version is reliable.

The instrument for assessing perceived organizational climate attempts to identify the features of the work environment which may influence the experience of role stress. Organizational climate depends on the perception of the employees of the organization about its working (Pareek, 2002). Taking cues from the studies of Pelz and Andrews (1976); Sen (1981); Abbey and Dickson (1983), the climate of the organization has been assessed through the indicators of work-group contact, task orientation, achievement oriented and rewards and recognition of individual merit. Besides, peer stress has been considered for an ascertainment of employee narration of the role stress experienced by the colleagues. It has been made in order to make the respondent project the experiences at work in giving an account of the peer stress.

Further, the individual propensity to stress has been determined on account of propensity to time deadlines, supervision, quantity of work, difficulty, predictability and stability which have been identified as stress propensity indicators by Caplan (1985). The behavioural strain
has been measured through indicators like angry, worry, depressed, relaxed, exhausted, etc. reported in the works of Akinnusi (1994), Blanc et al. (2008), Wofford (2002), Cooper (1981), Vaez and Laflamme (2008). The Cronbach Alpha of all the aforementioned measures has been found to be more than 0.6 which establishes their reliability (Nunnally and Bernstein, 1994; Donio et al., 2006). The final instrument so developed, assessing all the above variables, is then used for the survey which has been personally administered by the researcher.

Section II

3.4 Methodology

The detailed discussion on methodology followed for the achievement of the objectives is presented below:

3.4.1 Data Analysis

The study uses various econometric and statistics tools to arrive at the results. The various tools applied in the present study are two-independent-samples t-test, one-way analysis of variance, factor analysis, cluster analysis, multinomial logit regression analysis, and path analysis. SPSS version 14, E-views version 6.1, and AMOS have been used to estimate the results.

However, before conducting the data analysis, the data collected from the sample of 550 employees has been subject to data refinement
which led to the identification of missing values and outliers. Cases with values more than 3 standard deviations below or above the mean (Shaufeli et al., 2009) on the instrument were considered as outliers. In view of that 49 responses got eliminated which resulted into 501 usable bank employees’ responses. The responses of 501 employees have then been subjected to various tools and techniques for arriving at results.

3.4.1.1 Reliability of the Scales

The extent to which measures are free from random errors ($X_R$) defines the reliability of the scale. The measure is found to be reliable if $X_R=0$. Applying the test-retest approach, same scales were administered to the respondents at two different times under as nearly equivalent conditions as possible for assessing the reliability of the scales. A higher degree of correlation coefficient indicated greater degree of reliability of the scales. In order to assess the internal consistency reliability of the scales, cronbach alpha was estimated. Dissatisfactory internal consistency reliability is indicated by a value of 0.6 or less.

$$\alpha = \frac{K \overline{\sigma}}{\overline{v} + (K - 1) \overline{\sigma}}$$

Where, $K$ is the number of components (items), $\overline{v}$ equals the average variance for the current sample of individuals and $\overline{\sigma}$ is the average of all
covariance between the components across the current sample of individuals.

3.4.1.2 Factor Analysis

Factor analytical approach has been used to condense the statements to determine broad dimensions of role stress and coping strategies for it. In this study, principal component analysis method with varimax rotation is used to arrive at the results. The decision for arriving at the number of factors to be retained is made on the basis of Latent Root Criterion, i.e. variables having eigen values greater than 1, and scree plot.

3.4.1.3 Two Independent Sample t-test

Two sample independent t-test has been applied to test whether public and private sector commercial banks show significant differences in the experience of various dimensions of role stress and coping strategies.

\[
t = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{X}_1 - \bar{X}_2}}
\]

\[
S_{\bar{X}_1 - \bar{X}_2} = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2} \left( \frac{n_1}{n_1 + n_2 - 2} + \frac{n_2}{n_1 + n_2} \right)}
\]

Where,
\( \overline{X}_1 \) = mean of first sample, \( \overline{X}_2 \) = mean of second sample, \( s_i^2 \) = variance of first sample, \( s_2^2 \) = variance of second sample, \( n_i \) = number of observations of first sample, \( n_2 \) = number of observations of second sample

3.4.1.4 One Way Analysis of Variance

This tool has been employed for examining the differences among means for three segments of the employees segregated on the basis of the role stress experience.

SS for total variance = \( \sum (X_{ij} - \overline{X})^2 \)

Where \( i = 1, 2, 3 \) and \( j = 1, 2, 3 \)

Sum of Squares (SS) for total Variance = SS between and SS within

SS between = \( n_1 (\overline{X}_1 - \overline{X})^2 + n_2 (\overline{X}_2 - \overline{X})^2 + \ldots + n_k (\overline{X}_k - \overline{X})^2 \)

SS within = \( \sum (X_{ii} - \overline{X})^2 + \sum (X_{ji} - \overline{X})^2 + \ldots + \sum (X_{ki} - \overline{X})^2 \)

Where, \( i = 1, 2, 3 \)

3.4.1.5 Cluster Analysis

Cluster analysis or clustering is the task of assigning a set of objects into groups (called clusters) so that the objects in the same cluster are more similar (in some sense or another) to each other than to those in other
clusters. The resulting clusters of objects should, thus, exhibit high internal (within-cluster) homogeneity and high external (between-cluster) heterogeneity. Wards Method, a hierarchical clustering procedure, in which the similarity is used to join clusters has been used and is calculated as the sum of squares between the two clusters summed over all variables. This method has the tendency to result in clusters of approximately equal size due to its minimization of within-group variation. Non-hierarchical procedure that produces only a single cluster solution for a set of cluster seed has also been used to cross validate the results.

3.4.1.6 Multinomial Logit Analysis

While estimating Multinomial Logit model for dependent variables with categories m, the calculation of m-1 equations are desired, one for each category relative to the reference category, to describe the relationship between explanatory variables and dependent (explained) variable. For each category of the dependent variable except the reference category, the equation can be written as (Menard, 2001 and Hosmer & Lameshow, 2000):

\[ Y = g_h(x_1, x_2, x_3, \ldots, x_k) = e^{(a_h b_{k1} X_1 + b_{k2} X_2 + \ldots + b_{k(k-1)} X_k)} \]

Where, \( h = 1, 2 \)
The subscript k refers to specific explanatory variables X and subscript h refers to specific values of the explained variable Y. For reference category, \( g_0 (X_1, X_2, X_3, \ldots, X_k) = 1 \) (Menard, 2001) the probability of Y is equal to any value h except \( h_0 \) is:

\[
P(Y = h / X_1, X_2, \ldots, X_k) = \frac{e^{a_1 b_{h_1} X_1 + b_{h_2} X_2 + \ldots + b_{h_k} X_k}}{1 + \sum_{i=1}^{k} e^{a_i b_{h_1} X_1 + b_{h_2} X_2 + \ldots + b_{h_k} X_k}}
\]

Where,

\( h = 1, 2 \)

and for \( h_0 \) category

\[
P(Y = h_0 / X_1, X_2, \ldots, X_k) = \frac{1}{1 + \sum_{i=1}^{k} e^{a_i b_{h_1} X_1 + b_{h_2} X_2 + \ldots + b_{h_k} X_k}}
\]

Where, \( h = 1, 2 \)

In this way, the two logit functions can be defined as:

\[
\ln \left( \frac{P(Y = h / X)}{P(Y = 0 / X)} \right) = a_h + b_{h_1} X_1 + b_{h_2} X_2 + \ldots + b_{h_k} X_k
\]

Where, \( h = 1 \)
\[
\ln \left( \frac{P(Y = h|X)}{P(Y = 0|X)} \right) = a_h + b_{h1}X_1 + b_{h2}X_2 + \ldots + b_{h_k}X_k
\]

Where, \( h = 2 \)

### 3.4.1.7 Path Analysis

Path analysis is used to describe the directed dependencies among a set of variables. Also known as causal modeling, it focuses on examining the web of relationships among measured variables. It employs simple bivariate correlations to estimate the relationships in a system of structural equations. The method is based on specifying the relationships in a series of regression-like equations that can be estimated by determining the amount of correlation attributable to each effect in each equation simultaneously (Hair et al., 2006).