Chapter – 3

METHODOLOGY

In behavioral sciences, methodology holds an important step in the entire process of research. It describes the efforts given by a researcher to bring out his endeavor in a manner to qualify his work systematically as well as objectively to be more scientific in nature. These efforts given by a researcher require certain methods to be followed properly. Therefore, methodology is the process of research is a total sum of the steps/techniques being carried out by a researcher in order to explore or investigate the ethereal dynamics and potent operating for any problem and behavioral outcome. It is a kind of willing full decision making process opted by a researcher in which he/she has to identify and select appropriate problems, techniques of sampling, measuring instruments and methods for analyses of data suitable for problems selected.

A scientific research gains the objectivity through the accuracy of research methodology adopted by the researcher. It requires careful and suitable implementation of research design, use of standardized tools and tests, appropriate procedures of data collection, tabulation and finally applications of statistical analyses. The steps mentioned above basically enhance the predictive value of research findings which may be generalized to predict the behavior of people from where the sample is drawn.

In the light of above facts and the nature of current research problem, the following steps were taken into consideration for amplifying and strengthening the viability of the present research endeavor. Hence, this chapter covers the step by step process carried out by the investigator. Since it is a quantitative research, the researcher has adopted a logical and data-led approach to elucidate his work. To summarize, this chapter presents objectives of the study, research hypotheses, sample of the study, measures used in the study, pilot study, procedures for data collection and methods of data analyses.
3.0.1. Objectives of the Study:

Following are the objectives of the present research study-

- To investigate the organizational differences if any, on study variable namely abusive supervision, organizational justice, Machiavellianism, ethical ideology, work passion and power distance.
- To investigate the contribution of abusive supervision towards employee’s interpersonal and organizational deviance.
- To investigate the contribution of Machiavellianism towards employee’s interpersonal and organizational deviance.
- To investigate the contribution of organizational justice towards employee’s interpersonal and organizational deviance.
- To examine the moderating role of personal and social buffers like ethical ideology, work passion and power distance towards the relationship between antecedents and employee’s interpersonal and organizational justice.

Figure 2: Theoretical Model Based on Research Hypothesis
3.0.2. Research Hypotheses:

Based on the above mentioned research objectives, the current research is guided by the following hypotheses:

1. There will be difference between organizations with reference to abusive supervision, organizational justice, Machiavellianism, ethical ideology, work passion and power distance.

2. There will be significant contribution of
   (a) Abusive supervision towards employee’s organizational deviance and interpersonal deviance
   (b) Perceived organizational justice towards employee’s organizational deviance and interpersonal deviance.
   (c) Machiavellianism towards employee’s organizational deviance and interpersonal deviance.

3. (a) Ethical ideology will significantly moderate the relation between abusive supervision and employee’s organizational deviance and interpersonal deviance.
   (b) Ethical ideology will significantly moderate the relation between organizational justice and employee’s organizational deviance and interpersonal deviance.
   (c) Ethical ideology will significantly moderate the relation between Machiavellianism and employee’s organizational deviance and interpersonal deviance.

4. (a) Work passion will significantly moderate the relation between abusive supervision and employee’s organizational deviance and interpersonal deviance.
   (b) Work passion will significantly moderate the relation between organizational justice and employee’s organizational deviance and interpersonal deviance.
(c) Work passion will significantly moderate the relation between Machiavellianism and employee’s organizational deviance and interpersonal deviance.

5. (a) Power distance will significantly moderate the relation between abusive supervision and employee’s organizational deviance and interpersonal deviance.
(b) Power distance will significantly moderate the relation between organizational justice and employee’s organizational deviance and interpersonal deviance.
(c) Power distance will significantly moderate the relation between Machiavellianism and employee’s organizational deviance and interpersonal deviance.

3.0.3 Sample of the Study

In every field of investigation, particularly in behavioral sciences, researchers encounter some sort of issues in drawing the samples and the sample size because of its significance in scientific investigation. It is not possible for a researcher to cover the whole population of interest in his research. Therefore, a portion which is considered to represent the whole population is selected for research investigation. Sample is a subset of population. It is a process through which a researcher selects units, for instance, organizations, people etc. from a given population. As a result, it becomes easy for a researcher to generalize those results to that population from where it is chosen. One of the essential things about sample is that, it should possess all the characteristics of the population or universe selected for the investigation. The present study was carried out in four different IT and software organizations namely HCL, WIPRO, Accenture and Hewlett Packard situated at Delhi. The respondents were randomly selected from different organizations. Permission to collect data was sought from HR managers of the concerned organizations. Questionnaires were administered to 300 mid-level managerial employees including both male as well as female employees. Data were collected from both male and female employees working in these service sectors of Delhi. Questionnaires were given to employees who were at least 25 years of age. Those employees who could read and understand English well were included in this study. Also the employees who had the work experience of minimum 05 years were the part of this study. Data were collected from private IT and software companies of Delhi only.
For the purpose of data collection prior appointment was fixed by the investigator with HR managers and in person met with all the HR managers of the concerned organizations and established a rapport. The purpose of the research was explained to them. When assured for the study, the investigator sought the list of mid-level managerial employees. He then randomly ticked every third name in the list of employees and approached to him/her for his study. After establishing rapport with them questionnaires were administered and asked to fill it and return in time. In order to obtain adequate responses the investigator assured them about the privacy of their responses and were told that it would be used for the research purpose only. The study was carried out in four different IT and software organizations namely HCL, WIPRO, Accenture and Hewlett Packard situated at Delhi. In HCL 90 questionnaires were administered and 77 (Male- 40; 44.4%, & Female- 37; 41.1%) were returned. In WIPRO 80 questionnaires were administered and a total of 78 (Male- 52; 65% & Female- 23; 32.5%) were returned. In Accenture 80 questionnaires were administered and 70 were returned (Male- 47; 58.7% & Female- 23; 28.7%). In HP, a total of 70 questionnaires were administered and only 31 were returned (Male- 20; 28.5% & Female- 11; 15.7%). The respondents in this investigation were made confident of complete anonymity of their feedback. The responses to the questionnaires were collected personally by the researchers. The researcher obtained a whole of 256 filled questionnaires, resulting in a response rate of 85.3%.

3.0.4. Measures Used

In behavioural sciences measurements are considered to be an important task and inevitable means to understand human behaviour and experiences. In the present investigation seven important psychological measures namely Abusive Supervision scale, Machiavellian Personality Scale, Organizational Justice scale, Ethics Position Questionnaire, Work Passion scale, Power Distance scale and Workplace Deviance scale with a Personal Data Sheet were used. Responses for each measure were recorded and obtained on 5 point Likert type scale ranging from 1 to 5, where 1 depicts never and 5 depicts always. The obtained raw scores were transformed in to standard scores with the help of manual. Details of these measures are given below:
Abusive Supervision: Tepper’s (2000) abusive supervision scale was adapted to measure respondents’s perception of supervisory treatment. This was a one-dimensional scale originally consisting of 15 items. Response description against each item was obtained on 5-point Likert-type scale- *never* (1), *rarely* (2), *sometimes* (3), *most of the time* (4), *always* (5). Confirmatory factor analysis of this scale with 14 items depicts better fit model as compared to original scale. Values of various fit measures are found as: GFI= .92, CFI= .92, NFI= .96, RMSEA= .05. Construct reliability of the scale is found as 0.83 which signifies the high reliability of the scale.

Organizational Justice: A multidimensional measure developed by Colquitt (2001) was used for measuring procedural, distributive, interactional and interpersonal justice that consist seven, four, four and five items. Using 5-point Likert type scale response was obtained. Examples of sample item is: ‘Does your outcome reflect the effort you have put into your work?’ Confirmatory factor analysis of this scale produced better fit model with 19 items as compared to original scale. Following are the values of fit measures: GFI= .90, CFI= .95, NFI= .91, RMSEA= .05. Construct reliability of the scale is found as 0.85, 0.79, 0.82 and 0.75 respectively for all the four constructs.

Machiavellianism: Machiavellian Personality Scale (MPS) developed by Dahling et al., (2009) was used for measuring Machiavellian orientation of individuals. This scale consists of 16 items and is one-dimensional. Response description against each item was obtained on 5-point Likert-type scale. Confirmatory factor analysis with 11 items gives better fit model as compared to original scale. Values of different fit measures are as follow: GFI= .94, CFI= .96, NFI= .93, RMSEA= .06. Construct reliability of the scale is found as 0.91.

Ethical Ideology: Ethical ideology was measured using the Ethics Position Questionnaire developed by Forsyth (1980) on 5 point Likert scale. The scale consists of two dimensions that measures relativism and idealism of employees. Both the dimensions include 10-items each. After performing confirmatory factor analysis the model reduced to one dimension only i.e. idealism having nine items with all the fit measures. Sample items involve: ‘People should make certain that their actions never intentionally harm others even to a small degree’, ‘One should never psychologically or physically harm another person’, and ‘No rule concerning lying can be formulated;
whether a lie is permissible or not totally depends on the situations’. Fit measure’s values are found as: GFI = .98, CFI = .99, NFI = .98, RMSEA = .02. Construct reliability of the scale is found as 0.91.

**Work Passion:** This scale for measuring employee’s passion for work was developed indigenously with the help of experts. Work passion was assessed on 5 point Likert scale and is a one dimension scale consists of 10 items. Sample items include: ‘I am doing a meaningful work’, ‘Career growth opportunities are properly catered at my workplace’, and ‘I receive prompt feedback regarding my performance’. After performing CFA, fit measures values are found as: GFI = .94, CFI = .96, NFI = .94, RMSEA = .07. Construct reliability of the scale is found as .90.

**Power Distance:** Power distance was assessed using power distance orientation scale by Kirkman et al. (2009). This scale comprised of 8 items. Response description against each item was obtained on 5-point Likert-type scale. Sample items include ‘There is nothing wrong in manager/authority making decision without consulting subordinates’ and ‘If employees often question authority, it will make the authority ineffective’. Model fit is obtained through CFA and items were reduced to 5 showing better fit model. Various fit measures are as follows: GFI = .98, CFI = .97, NFI = .99, RMSEA = .04. Construct reliability of the scale is found as 0.82.

**Workplace Deviance:** this construct was evaluated using the scale developed by Bennett & Robinson (2000). This measure assessed two dimensions: (i) interpersonal deviance and (ii) organizational deviance. The response description against each item was obtained on 5-point Likert-type scale ranging from never (1) to always (5). Sample items include, ‘Publicly embarrassed someone at work’ and ‘Discussed confidential company information with an unauthorized person’. Higher scores on this dimension explains more favorable checking of that dimension. Model fit is obtained through CFA. The values of various fit measures includes GFI, CFI, NFI and RMSEA. Corresponding values of this fit measure includes .91, .93, .97 and .05 respectively. Construct reliability of the scale is found as 0.87 and 0.92 respectively for both the constructs.
3.0.5. Personal Data Sheet

Personal data sheet comprises information regarding age, gender, religion, marital status, educational qualification, tenure of job, work experience in the present organization and languages known.

3.0.6 Procedure

**Ethics Committee:** In every research institute the ethics committee is an independent body of certain members comprised of healthcare professionals and non-medical members. The accountability of these experts is to safeguard the well-being, rights and comfort of human subjects who are about to be a part in an experiment. Besides they give assurance of that protection and finally express their opinion on the experiment to be carried out. They further suggest fitting suitability of the researchers involved in the experiment and about the facilities involved these experts additionally assess the methods and the documents to be used to inform the subjects in the trial and get back their informed consent.

Therefore, before going for final data collection, the researcher sought permission from ethics committee members to conduct his research. The committee members, after going through the proposal gave clearance to the researcher to conduct his research and final data collection.

**Pilot Study:** A pilot study or pilot experiment is a maiden analysis performed in order to test the feasibility, time, cost and effect size in an endeavor and effort to gather information about a particular research instrument such as a research questionnaire or interview schedule. After getting the permission the researcher went for data collection and collected the data from 60 individuals. The administration of data was individual. Average time taken by the subjects to fill the questionnaire was 2 to 3 hours. Data were scored and the results of the pilot survey were analyzed to see whether this small set of sample is giving the same result which the researcher is expecting. It was found that the results supported the objectives set by the researcher for his research. It predicts an
appropriate sample size and improve upon the study design. Therefore, the researcher proceeded further to perform his data analyses.

**Data Processing**

The obtained data were scrutinized, coded, scored and transformed to standard scores. The responses given by each subject were checked for wrong markings, omissions, double markings, unattempted items etc. The response sheets filled completely in all respect were retained and considered for analysis, rest were rejected. Each response sheet was hand scored as per the instructions given in the manuals of the respective scale.

**3.0.7. Statistical Analyses**

Once the data is collected and fed in the software package it requires certain kinds of techniques to perform statistical treatment toanalyse the scores and verify the set hypotheses. As Kerlinger (1983) rightly pointed out that “statistics via its power to reduce data to manageable forms and its power to study and analyse variance enable scientist to attach probability estimates to the inferences they draw from data”. Statistics makes a process more exact using probability theory and mathematics. Therefore it won’t be wrong to state that through statistics drawing inferences and proving hypotheses becomes easy on the basis of statistical reasons. An intelligent move in this direction would be to select accurate techniques.

At first Confirmatory factor Analyses (CFA) were performed on each measure to test their validity. CFA helps us to check how good the measured variables characterize the constructs. It also provides a test of confirmation on measurement theory. This theory explains how variables measured in the test signify the constructs which are involved in a theoretical model systematically and logically. In addition to this, the researcher also looked for convergent and discriminant validity of the constructs which were also verified and established by confirmatory factor analysis. The purpose of this stage of the analysis was to detect and remove poorly performing
items. Moreover, besides descriptive statistics, different kinds of fit measures of comparative fit index (CFI), normed fit index (NFI), goodness-of-fit index (GFI) and root mean square error of approximation (RMSEA) for the scales were procured and sought. Besides the validity of the items, the inter-item consistency of all construct was also described (Cronbach alpha > 0.60). For this present analyses, IBM AMOS 4.0 software was used to obtain the answers. Moreover, as the title of the present study “Deviant Workplace Behaviour: Examining the Role of Some Antecedents and Moderators” suggests, Moderated Regression Analysis method was found best suited for analysing the data further and obtaining the appropriate results. The researcher checked moderated regression analysis using IBM SPSS 20 package.

Regression analysis is a technique used in statistics which is widely used by the social science researchers to examine the relationship between a criterion variable and several predictor variables. The purpose and intention of applying multiple regression analysis is to use the predictor variables whose values are known to expect the single dependent value carefully chosen by the researcher in his/her investigation. Furthermore, this technique relates each individual factor of independent variable to the dependent variable in a manner which also takes interactive effects in to accounts. It forms linear composite of explanatory variables in such a way that it has maximum correlation with the criterion variable (Kothari, 1987).

Moderated regression analysis is a particular application of multiple linear regression analysis, where the regression equation comprises an interaction term. An equation for the multiple regression of a dependent variable \( Y \) on two independent variable \( X_1 \) and \( X_2 \) is presented in Eq. (1):

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon
\]  

(1)

On the other hand a typical regression equation used in MRA has the format of Eq. (2):

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 \times X_2 + \varepsilon
\]  

(2)

Equation 2 is different from Equation 1 by the addition of the product of the two independent variables \( X_1 \) and \( X_2 \). The product term mentioned above is said to represent the moderating effect of variable \( X_2 \) on the relationship between \( X_1 \) and \( Y \).
Likewise, the other terms in the equation ($X_1$ and $X_2$) are said to denote the main effects of variables $X_1$ and $X_2$ on $Y$. The meaning of this product term in establishing a moderating effect can be explained by taking the partial derivative of Equation (2) with respect to $X_1$ ($\partial Y / \partial X_1$), which has the format expressed by Equation (3):

$$\frac{\partial Y}{\partial X_1} = \beta_1 + \beta_3 X_2$$

(3)

As Equation 3 elucidates, the term demonstrating the partial derivative ($\partial Y / \partial X_1$) is a function of $X_2$. This simply connotes that the kind of association between $Y$ and $X_1$ is a function of $X_2$, in short, that variable $X_2$ moderates the type of the association between $X_1$ and $Y$. A moderator variable is explained as one that methodically changes either the type and/or strength of the association between an independent and a dependent variable. The use of regression procedures to detect moderating effects is generally classified as moderated regression (Stone & Hollenbeck, 1984).

As part of the validity assessment the convergent and discriminant validity of all the scales were confirmed by confirmatory factor analysis. Results shows the loadings of each indicator considerably on its intended factor ($p < .05$), thus this supports the convergent validity. Furthermore, the present analyses uses IBM Amos 4.0 software to analyze the responses. The researcher chose to remove items with a factor loading less than 0.5. on the variable. The identification and elimination of poorly fit items served our objective of this stage of analysis. Few items were deleted under each construct. Besides descriptive statistics, different fit measures of comparative fit index (CFI), goodness-of-fit index (GFI), normed fit index (NFI) and root mean square error of approximation (RMSEA) for the scales were obtained. Apart from items validity, the inter-item consistency of each construct was assessed (Cronbach alpha > 0.60).

The present study used the revised scales after performing confirmatory factor analysis.