CHAPTER THREE

METHODS AND PROCEDURES

3.1 Methodology of the study

Methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically in it we study the various step are generally adopted by a researcher in studying this research problem along with the local behind them.

The present study is concerned with problems of overall job satisfaction workers’ of garment industries in Bangladesh. The approach adopted is basically analytical and interpretation in nature considering the objective of the study and review of literature. It way decided to imply quantitative descriptive method of analysis and related to overall job satisfaction of workers’ in garment industries of Bangladesh.

3.2 Sampling

The Garment Factories are mostly concentrated within the city limits of Dhaka, Narayanganj, and Gazipur. Presently three types of garment factories are running in Bangladesh such as Woven Garment, Knit Garment, and Sweater Garment. To select the sample factories for the present study, two lists of total Garment Factories will be collected from the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and Bangladesh Knit Manufacturers and Exporters Association (BKMEA). From these lists 25 Garment Factories will be selected randomly as sample covering 10 Woven Garments, 12 Knit Garments, and 3 Sweater Garments factories from Dhaka, Narayanganj, and Gazipur districts. Generally there are three sections in Garment Factories such as cutting, sewing, and finishing. To make the sample representative total 350 employees including 114 supervisors and 236 workers will be selected from 25 factories considering three sections of each.
The Garment Factories are mostly concentrated within the city limits of Dhaka, Chittagong, Narayangangj, and Gajipur. Presently three types of garment factories are running in Bangladesh such as Woven Garment, Knit Garment, and Sweater Garment. To select the sample factories for the present study, two lists of total Garment Factories were collected from the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and Bangladesh Knit Manufacturers and Exporters Association (BKMEA). From these lists 25 Garment Factories were selected randomly as sample covering 10 Woven Garments, 12 Knit Garments, and 3 Sweater Garments factories from Dhaka, Narayanganj, and Gazipur districts.

Generally there are three sections in Garment Factories such as cutting, sewing, and finishing. To make the sample representative total 350 employees including 114 supervisors and 236 workers were selected from above 25 factories considering three sections of each.

The distribution of the total selected sample according to type of organisations and level of employees are show in the table-1.

**Table-1: Sample distribution according to type of organisations and level of employees (N=350)**

<table>
<thead>
<tr>
<th>Type of organizations</th>
<th>Level of employees</th>
<th>Total (N=350)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisor</td>
<td>Worker</td>
</tr>
<tr>
<td>Woven</td>
<td>51</td>
<td>109</td>
</tr>
<tr>
<td>Knit</td>
<td>55</td>
<td>105</td>
</tr>
<tr>
<td>Sweater</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>236</td>
</tr>
</tbody>
</table>

Table-1 shows that 67.4 percent of respondents were workers and the remaining 32.6 percent were supervisors. On the other hand, 45.7 percent of the respondents were working in Woven Garment Factory and the rest 45.7 percent and 8.6 percent respondents were working in Knit and Sweater Garment Factories respectively.
The basis of payment of the total selected sample according to level of employees is show in the table-2.

**Table-2: The basis of payment of the different category of respondents (N=350)**

<table>
<thead>
<tr>
<th>Basis of Payment</th>
<th>Level of employees</th>
<th>Total (N=350)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisor</td>
<td>Worker</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Time basis</td>
<td>114</td>
<td>100</td>
</tr>
<tr>
<td>Piece basis</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100</td>
</tr>
</tbody>
</table>

Table-2 shows that 77.4% of the respondents were paid on time rate basis and the rest 22.6% were paid on piece rate basis. On the other hand, among the workers 66.5% were paid on time rate basis and the rest 33.5% were paid on piece rate basis. It may be mentioned here that, the basis of payment of all the supervisors was time basis which means payment of piece rate basis was absent for supervisors in Garment Factories.

The range and mean of age, education, experience, and income of the respondents according to level of employees are show in the table-3.

**Table-3: Range and mean of age, experience, income, and education of the respondents are shown according to their level of employees (N=350)**

<table>
<thead>
<tr>
<th>Level of employees</th>
<th>Statistics</th>
<th>Age (in years)</th>
<th>Education (in years)</th>
<th>Experience (in years)</th>
<th>Income (in Taka)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>i) Range</td>
<td>15 to 55</td>
<td>Illiterate to Master Degree 9.44</td>
<td>2 to 17</td>
<td>1200 to 8900</td>
</tr>
<tr>
<td></td>
<td>ii) Mean</td>
<td>27.15</td>
<td>6.16</td>
<td></td>
<td>3392.54</td>
</tr>
<tr>
<td>Worker</td>
<td>i) Range</td>
<td>14 to 52</td>
<td>Illiterate to Higher Secondary 5.31</td>
<td>2 to 18</td>
<td>1100 to 14000</td>
</tr>
<tr>
<td></td>
<td>ii) Mean</td>
<td>23.14</td>
<td>6.85</td>
<td></td>
<td>3236.02</td>
</tr>
<tr>
<td>Total</td>
<td>i) Range</td>
<td>14 to 55</td>
<td>Illiterate to Master Degree 6.66</td>
<td>2 to 18</td>
<td>1100 to 14000</td>
</tr>
<tr>
<td></td>
<td>ii) Mean</td>
<td>24.45</td>
<td>6.63</td>
<td></td>
<td>3287.00</td>
</tr>
</tbody>
</table>

It is revealed from Table-3 that the mean age, education, experience, and income of the supervisors were 27.15 years, 9.44 years, 6.16 years, and TK.3392.54 respectively. On the
other hand, mean age, education, experience, and income of the workers were 23.14 years, 5.31 years, 6.85 years, and TK.3236.02 respectively. The table also shows that mean age, education, and income of the supervisors were higher than those of the workers.

The range and mean of age, education, experience, and income of the respondents according to sex are show in the table-4.

**Table-4: Range and mean of age, experience, income, and education of the respondents are shown according to their sex (N=350)**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Statistics</th>
<th>Age (in years)</th>
<th>Education (in years)</th>
<th>Experience (in years)</th>
<th>Income (in Taka)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>i) Range</td>
<td>15 to 55</td>
<td>Illiterate to Master Degree 7.75</td>
<td>2 to 18</td>
<td>1200 to 14000</td>
</tr>
<tr>
<td></td>
<td>ii) Mean</td>
<td>25.80</td>
<td></td>
<td>7.26</td>
<td>3993.11</td>
</tr>
<tr>
<td>Female</td>
<td>i) Range</td>
<td>14 to 45</td>
<td>Illiterate to Higher Secondary 5.27</td>
<td>2 to 8</td>
<td>1100 to 13500</td>
</tr>
<tr>
<td></td>
<td>ii) Mean</td>
<td>22.72</td>
<td></td>
<td>6.12</td>
<td>2388.31</td>
</tr>
<tr>
<td>Total</td>
<td>i) Range</td>
<td>14 to 55</td>
<td>Illiterate to Master Degree 6.66</td>
<td>2 to 18</td>
<td>1100 to 14000</td>
</tr>
<tr>
<td></td>
<td>ii) Mean</td>
<td>24.45</td>
<td></td>
<td>6.63</td>
<td>3287.00</td>
</tr>
</tbody>
</table>

It is revealed from Table-4 that the mean age, education, experience, and income of the male were 25.80 years, 7.75 years, 7.26 years, and TK.3993.11 respectively. On the other hand, mean age, education, experience, and income of the female were 22.72 years, 5.27 years, 6.12 years, and TK.2388.31 respectively. The table also shows that mean age, education, and income of the male respondents were higher than those of the female respondents.

Sex wise distribution of the total selected sample according to level of employees is show in the table-5.

**Table-5: Sex wise sample distribution of the respondents according to level of employees (N=350)**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Level of employees</th>
<th>Total (N=350)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisor</td>
<td>Worker</td>
</tr>
</tbody>
</table>
It is revealed from Table-5 that 56.00 percent of the respondents were male and the rest 44.00 percent were female. Among the supervisors, 73.68% were male and the remaining 26.32% were female. On the other hand, among the workers 47.46% were male and rest of the 52.54 were female.

Marital status of the total selected sample according to level of employees is show in the table-6.

**Table-6: Distribution of different category of respondents according to their marital status (N=350)**

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Level of employees</th>
<th>Total (N=350)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisor</td>
<td>Worker</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Married</td>
<td>63</td>
<td>55.26</td>
</tr>
<tr>
<td>Unmarried</td>
<td>51</td>
<td>74.44</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100</td>
</tr>
</tbody>
</table>

Among the total respondents, 52.3 % were unmarried and the remaining 47.7 percent were married. Among the supervisors, 55.26% were married and rest of the 44.74% were unmarried. On the other hand, among the workers 55.93% were unmarried and the remaining 44.07 % were married.

### 3.3 Brief descriptions and nature of the Garment Factories

#### i) Woven Garment:

Woven Garment means that type of garment industry which receives various woven products (Shirts, Pants, Shorts, Jackets, Parka, Overall, Skirts, Jogging- suite, and Rain-coat etc.) orders from the foreign buyers, then imports fabrics and some other accessories, and finally produces and then exports to the actual buyer in specific time schedule. Ten Woven
Garments were selected on a random basis for the purpose of the present study. In Woven Garment factory, the number of employees varied from 200 to 2000. The capital investment in such industries varied from 30 lacks to 400 lacks. Woven Garment industries production capacity varied from 15,000 to 2,00,000 pieces per month. They, generally export their products to U.S.A., Canada, and European Countries. Woven Garment contributes earns 74.25% of the total garment export earning of the country (BGMEA, 2000).¹

ii) Knit Garment:

Knit Garment means that type of garment industry, which receives various knitted products (T-shirts, Polo-shirts, Jogging-suit etc.) orders from the foreign buyers and imports only yearns, then produces and dyes knitted fabrics, and produces knitted products and then exports to the actual buyers in specific time schedule. Knit Garments include Sweater Garments also.

iii) Sweater Garment

Sweater Garment is another type of knit garment. Sweater garment means that type of garment which receives both wool and production order from the buyer at-a-time or only receives production orders and then imports wool, and produces woolen goods, and exports to the actual buyers in a specific time schedule. Sweater garment products are Jumper, Pullover, Jersey etc.

Twelve Knit and three Sweater Garments were selected on a random basis for the purpose of the present study. In Knit and Sweater Garment factories number of employees varied from 150 to 1000. Their capital investment varied from 20 lacks to 200 lacks (without composite knitting unit). The production capacity of the Knit and Sweater Garment varied from 1,00,000 to 5,00,000 pieces per month. Knit and Sweater Garments contribute 25.76% of the total garment export earning of the country.

(Knit 18.99% and Sweater 6.76%) of the total garment export earnings of the country. (BGMEA, 2000)²

3.4 Instruments Used for Data Collection

The information collected from the area under discussion of present study fall under the following groups;

a) Job Satisfaction and its significance on job performance, job stress, and relative importance of job facets, and satisfaction/dissatisfaction with specific sectors of job.

b) Foremost problems faced by the respondents and important causes of job satisfaction and job stress as supposed by the respondents.

c) Performance, absenteeism, accidents, turnover and job stress of the respondents.

The following instruments were administered to the workers in the sugar industry in Bangladesh at five sample sugar mills selected for the study.

i) Brefield-Rothe Scale

To measure the workers’ job satisfaction, Bengali version of 18 items job satisfaction scale was used (Khaleque, 1995)³. This 18-item scale contains 9 positive and 9 negative items. For

² Ibid.
positive item, score 1 indicates ‘strongly disagree’, score 2, ‘disagree’, score, 3 ‘undecided’ score 4, ‘agree’ and score 5, ‘strongly agree. For negative items scoring was in reverse order. The sum of scores of all items was total score of the scale for an individual. The slowest score is 18, highest score is 90 and neutral point is 45. Higher score indicates more satisfaction with their job. The reliability and of this scale is very high. The value of reliability and validity of Brayfield Rothe scale (1951)\(^4\) are .87 and .93 respectively.

Job satisfaction, the dependent variable of this study, was operationalized using the 18 items from Brayfield and Rothe’s Index of Job Satisfaction (1951). Originally, scale construction was a class project for a group of personnel psychology students who were members of a United States Army specialized training program (Miller, 1991)\(^5\). Because a general measure of job satisfaction was desired, any item that referred to specific job characteristics was eliminated from the scale.

A Likert scoring system of five categories, Strongly Agree to Strongly Disagree, with a Neutral response in the center, was adopted. The revised scale was implemented as part of a study of 231 office employees (Miller, 1991). Although the Brayfield and Rothe Index (1951) was developed 50 years ago, it continues to be used in research investigations that require a measure of general job satisfaction

### ii) Measuring Need Satisfaction Deficiencies

To assess the deficiencies in execution of needs for each phase of the respondents’ job, two questions were asked about each facet of the job (Porter, 1961\(^6\); Porter and Lawer, 1968\(^7\)).

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\(^4\) Brayfield, A. H, and Rothe, H. F., (1951), op.cit.,307-311


Firstly, the respondents were asked, how much of the desired aspect of the job there should be in the work situation, and secondly, how much of the desired aspect of the job existed in the work situation. The scale (see Appendix-** and D**) consists of twelve items, concerning twelve aspects of the respondents’ job. An example (as it appeared in the scale) is given below:

**a) Job Security**

i) What is the importance of job security for your job satisfaction?

(Minimum) 1 2 3 4 5 (Maximum)

ii) How much are you satisfied in your present condition of job security?

(Minimum) 1 2 3 4 5 (Maximum)

For each of the twelve items, the respondents were asked to answer two questions by giving tick marks on a number on a rating scale ranging from 1 to 5, were 'low numbers' represent 'minimum magnitude' and 'high numbers' represent 'maximum magnitude'. Deficiencies in fulfillment of the desired aspect of the job were assessed by subtracting the responses of specific question-i (How much important your job security for your job satisfaction?) from the responses to the question-ii (How much are you satisfied in your present condition of job security?) of each item. With this method, the larger of the difference between responses ii and i, the greater the perceived deficiency.

The scale was developed partially on the basis of review of literature (Porter, 1961\(^8\); Porter and Lawer, 1968\(^9\); and Habibullah, 1974\(^10\)) and partially on the basis of a pilot survey.

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\(^8\) Porter, L. W., (1961), op. cit., 1-11.


of opinion of the respondents. Experts’ opinion was also sought in this regard. Test retest reliability coefficient was \( r=0.75 \) which was highly significant (\( p<0.001 \)).

**iii) Questionnaire for Measuring Satisfaction with Job Facets**

A questionnaire was constructed to measure satisfactions with 11 specific aspects of the job (see Appendix-** and E-**). These items were included in the questionnaire for covering different but representative areas, which have been suggested by several investigators to affect employee attitudes (Herberg et al., 1957\(^{11}\); Vroom, 1964\(^{12}\); Locke, 1976\(^{13}\)). The respondents would indicate their satisfaction or dissatisfaction with each of these specific aspects by checking either “Yes” or “No” response.

**iv) Job Stress**

To measure the perceived job stress of the respondents, a single itemed 5-point scale consisting of simple statement (‘Is your job stressful?’) was used (see Appendix-F and F-1). The respondents would indicate their feeling of stress by checking any one of the five categories of proposed precoded answers ranging from “not at all stressful” (1) to “Heavy stressful” (5). Higher scores indicate higher stress and the vice-versa.

**v) Open Ended Questions**

Open ended questions (see Appendix-** and **) were asked to mention the two major work related problems, two major illness, two major diseases, two major social problems, two major causes of dissatisfaction, duration of daily overtime duties with rate, frequency of changing job, and two major causes of changing previous job, present job changes and causes of changing present or perception not changing present job, and three major sources of job stress.


\(^{12}\) Vroom, 1964, op. cit.

\(^{13}\) Locke, 1976, op. cit.
vi) Job Behavior Information

a) Performance

Regarding the performance of the supervisors, the immediate boss of each respondent was requested to give his/her rating of performance of each respondent in terms of one hundred. Here, subjective judgment was taken because of the absence of objective criterion to measure the performance of garment supervisors. Performance ratings were taken in a separate sheet from the immediate boss, after filling the questionnaire from the subjects.

Performance of the worker denotes the actual units produced by the individual worker expressed in terms of hundred set by the management of the concerned garment factory.

b) Absence and accident

The absence and accident of each respondent were collected in a separate sheet from the official records of the selected factories during the period of January to December 1999.

c) Turnover

The information of turnover of the respondents was collected from the questionnaire of propensity to quit the job.

3.5 Statistical Techniques Used for Data Analysis

The statistical analysis was carried out on the data collected in order to test the hypotheses framed. Both descriptive and inferential statistical methods were used to analyze the data. All data will process by using Statistical Package for Social Science, (SPSS), for analyzing data suitable statistical tools such as two-way ANOVA, z-test, Chi-square test, Pearson’s product moment correlation, stepwise multiple regression and descriptive statistics will be used.
Descriptive statistics such as mean, standard deviation, percentages and Pearson's Coefficient of Correlation was used. The inferential statistics included students’-test and multiple linear regression analysis. These statistical techniques were used to test the hypotheses of the study. Mean was used to obtain the average score of a range of scores, and thus used as a basis for comparison.

Standard Deviation was used to assess the degree of dispersion of the values around its mean, and also for assessing the error to which the mean of a sample was subject to, when estimating the mean of the population from which the sample was taken.

Pearson's Coefficient of Correlation is the statistical analysis, which measures an analyses the degree or extent to' which two variables fluctuate with reference to each other. In this study, there are two variables, labour welfare and job satisfaction. Pearson's Coefficient of Correlation is used to indicate whether there is any significant relationship.

Multiple Regression Analysis is a multivariate analysis where we express one dependent variable as a function of many other independent variables. When we continue to add more explanatory influences, regressing the dependent variable upon many variables (more that two independent variables) this is multiple regression. In the present study the dependent variable is job satisfaction and the dimensions of labour welfare are the independent variables. The regression coefficients express the extent to which a one-unit increase in the independent variables (dimensions of labour welfare) will influence the dependent variable (job satisfaction).

**Z-test**

Z-test is a statistical test where normal distribution is applied and is basically used for dealing with problems relating to large samples when \( n \geq 30 \).
There are different types of Z-test each for different purpose. Some of the popular types are outlined below:

1. **z test for single proportion** is used to test a hypothesis on a specific value of the population proportion.

   Statistically speaking, we test the null hypothesis $H_0: p = p_0$ against the alternative hypothesis $H_1: p \neq p_0$ where $p$ is the population proportion and $p_0$ is a specific value of the population proportion we would like to test for acceptance.

2. **z test for difference of proportions** is used to test the hypothesis that two populations have the same proportion.

3. **z-test for single mean** is used to test a hypothesis on a specific value of the population mean.

   Statistically speaking, we test the null hypothesis $H_0: \mu = \mu_0$ against the alternative hypothesis $H_1: \mu \neq \mu_0$ where $\mu$ is the population mean and $\mu_0$ is a specific value of the population that we would like to test for acceptance.

   Unlike the t-test for single mean, this test is used if $n \geq 30$ and population standard deviation is known.

4. **z test for single variance** is used to test a hypothesis on a specific value of the population variance.

   Statistically speaking, we test the null hypothesis $H_0: \sigma = \sigma_0$ against $H_1: \sigma \neq \sigma_0$ where $\sigma$ is the population mean and $\sigma_0$ is a specific value of the population variance that we would like to test for acceptance.
In other words, this test enables us to test if the given sample has been drawn from a population with specific variance \( \sigma_0 \). Unlike the chi square test for single variance, this test is used if \( n \geq 30 \).

5. **Z-test for testing equality of variance** is used to test the hypothesis of equality of two population variances when the sample size of each sample is 30 or larger.

When sample size is more than 30 and mean differences between two groups are tested, than z-test is applicable. Z-ratios were applied to find out whether there were significant differences:

a) between mean scores of job satisfaction according to the level of employees of the respondents;

b) between mean scores of job satisfaction according to some personal factors (age, education, income, experience, types of organisation, sex, and marital status of the respondents;

c) between mean scores of the overall satisfaction of the respondents according to the degree of satisfaction and dissatisfaction with some of the specific job factors;

d) between mean scores of performance absence, accident, job stress, and propensity to quit the job according to the degree of job satisfaction of the respondents;

e) between mean scores of job satisfaction, absence, accident, job stress according to the basis of payments of the respondents;

f) between mean scores of need fulfillment deficiencies for each of the specific job factors of the respondents;
g) between mean scores of mean need deficiencies regarding job related job related factors according to basis of payments of the respondents;

**Two-way ANOVA**

A Two-Way ANOVA is useful when we desire to compare the effect of multiple levels of two factors and we have multiple observations at each level.

There are two versions of the Two-Way ANOVA.

a. The basic version has one observation in each cell - one occupational stress score from one employee in each of the six cells.

b. The second version has more than one observation per cell but the number of observations in each cell must be equal. The advantage of the second version is it also helps us to test if there is any interaction between the two factors.

When more than two means are involved in analysis, under these circumstances the most commonly used procedures for testing the significance of the difference among the several means; F-test (ANOVA) is applicable.

Two-way ANOVA was computed to find out the main effects and interactions, if any, between types of organization and level of employees, and types of organization and basis of payment on job satisfaction, performance, absence, accident, propensity to quit the job, and job stress of the respondents.

**Chi-square test**

Any statistical test that uses the chi square distribution can be called chi square test. It is applicable both for large and small samples-depending on the context.
There are different types of chi square test each for different purpose. Some of the popular types are outlined below.

1. *Chi square test for testing goodness of fit* is used to decide whether there is any difference between the observed (experimental) value and the expected (theoretical) value.

2. *Chi square test for independence of two attributes.* Suppose N observations are considered and classified according two characteristics say A and B. We may be interested to test whether the two characteristics are independent. In such a case, we can use Chi square test for independence of two attributes.

3. *Chi square test for single variance* is used to test a hypothesis on a specific value of the population variance. Statistically speaking, we test the null hypothesis $H_0: \sigma = \sigma_0$ against the research hypothesis $H_1: \sigma \neq \sigma_0$ where $\sigma$ is the population mean and $\sigma_0$ is a specific value of the population variance that we would like to test for acceptance.

Chi-square test is applied to examine whether a significant difference exists between the observed number of respondents in each category and the expected number for each category. Chi-square test was applied:

a) to examine whether the mean age, education, income, experience, of the supervisors were significantly higher than those of the workers;

c) to examine whether the satisfied number of the supervisors were significantly higher than those of the workers who were not satisfied;

d) to examine whether the satisfied number of the respondents of time rate basis were significantly higher than those of the respondents of piece rate basis who were not satisfied;
e) to examine whether the satisfied number of the respondents among described mills were significantly higher than those of the respondents of among described mills who were not satisfied.

In other words, this test enables us to test if the given sample has been drawn from a population with specific variance $\sigma_0$. This is a small sample test to be used only if sample size is less than 30 in general.

**Correlation**

Statistical correlation is a statistical technique which tells us if two variables are related. Correlation is the most commonly used techniques for investigating the relationship between two quantitative variables.

The goal of a correlation analysis is to see whether two measurement variables co vary, and to quantify the strength of the relationship between the variables, whereas regression expresses the relationship in the form of an equation.

Correlation can tell you something about the relationship between variables. It is used to understand:

1. whether the relationship is positive or negative
2. strength of relationship.

   a. Statistical correlation is measured by what is called coefficient of correlation ($r$). Its numerical value ranges from +1.0 to -1.0. It gives us an indication of the strength of relationship.
b. In general, \( r > 0 \) indicates positive relationship, \( r < 0 \) indicates negative relationship while \( r = 0 \) indicates no relationship (or that the variables are independent and not related). Here \( r = +1.0 \) describes a perfect positive correlation and \( r = -1.0 \) describes a perfect negative correlation.

c. Closer the coefficients are to +1.0 and -1.0, greater is the strength of the relationship between the variables.

As a rule of thumb, the following guidelines on strength of relationship are often useful (though many experts would somewhat disagree on the choice of boundaries).

<table>
<thead>
<tr>
<th>Value of r</th>
<th>Strength of relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.0 to -0.5 or 1.0 to 0.5</td>
<td>Strong</td>
</tr>
<tr>
<td>-0.5 to -0.3 or 0.3 to 0.5</td>
<td>Moderate</td>
</tr>
<tr>
<td>-0.3 to -0.1 or 0.1 to 0.3</td>
<td>Weak</td>
</tr>
<tr>
<td>-0.1 to 0.1</td>
<td>None or very weak</td>
</tr>
</tbody>
</table>

Correlation is only appropriate for examining the relationship between meaningful quantifiable data (e.g. air pressure, temperature) rather than categorical data such as gender, favorite color etc.

When a researcher wants to examine whether a significant relation between the two variables, in this situation correlation test is used. Pearson’s product moment coefficients of correlation were computed to find out:
a) the relationship among some selected major variables (age, education, total income, work experience, job satisfaction, performance, absence, accident, job stress, and propensity to quit the job) of the respondents;

b) the relationship among some selected major variables (age, education, total income, work experience, job satisfaction, performance, absence, accident, job stress, and propensity to quit the job) of the supervisors;

c) the relationship among some selected major variables (age, education, total income, work experience, job satisfaction, performance, absence, accident, job stress, and propensity to quit the job) of the workers;

**Stepwise multiple regression**

Multiple regression analysis is a powerful technique used for predicting the unknown value of a variable from the known value of two or more variables- also called the predictors.

By multiple regressions, we mean models with just one dependent and two or more independent (exploratory) variables. The variable whose value is to be predicted is known as the dependent and the ones whose known values are used for prediction are known independent (exploratory) variables.

In general, the multiple regression equation of \( Y \) on \( X_1, X_2, \ldots, X_k \) is given by:

\[
y = b_0 + b_1 X_1 + b_2 X_2 + \ldots \ldots \ldots + b_k X_k
\]

When a researcher wants to find out the individual contribution of different independent variables to a dependent variable, under this situation Stepwise Multiple Regression is applicable. Stepwise Multiple Regression was computed to find out the relative contribution of different independent variables to a dependent variable:

a) the relative contributions of some selected independent variables (age, education, total income, and work experience) on dependent variable job satisfaction;
b) the relative contributions of some selected independent variables (age, education, total income, work experience, and job satisfaction) on dependent variable performance.

**Descriptive Statistics**

Descriptive statistics is applicable when researcher just wants to find out the response pattern of the selected subjects on a particular question.

Descriptive statistics is applicable when a researcher just wants to find out the response patterns of the selected subjects on a particular question. Descriptive statistics was applied to find out:

- a) major sources of job stress, and job dissatisfaction as perceived by of the respondents;
- b) major work-related and social problems faced by the respondents;
- c) major illness and diseases frequently attacked the respondents;
- d) hours of overtime duties performed and rate of overtime received by the respondents;
- e) frequency and causes of changing the previous job changes; and
- f) causes of changing or not changing the present job.

**3.5 Formulation of Hypotheses**

On the basis of the review of literature and objectives of the study, the following specific hypotheses were formulated for verification through empirical investigation:

Since some investigators found that age, education, experience, and income of the garment employees were very low, so it was hypothesized that: (Ho)
1. There is no difference between the age, education, experience, and income of the employees of garment sector and the employees of any other industrial sectors of Bangladesh.

As some investigators found that level of education and occupation of the garment employees’ parents and husband/wives were very poor, so it was hypothesized that: (Ho)

2. There is no difference in the levels of education, and occupations of the respondents’ parents and husbands/wives with that of the garment industry average.

Since some studies revealed that majority of the garment employees had joint families with a large number of dependents with a very poor family income, it was hypothesized that: (Ho)

3. There is no difference in the size of family, number of dependent, and levels of family income of the respondents with that of the garment industry average.

It was found from the past studies that most of the garment employees were rural background having no direct linkage with agriculture and were unemployed before getting garment job, so it was hypothesized that: (Ho)

4. There is no difference between rural/urban background, having direct linkage with agriculture, and employed before joining in garment factories.

It was found from the past studies that socio-economic background of the higher level employees was better than that of the lower level employees, it was hypothesized that: (Ho)

5. There is no difference between the socio-economic background of the supervisors and the workers.
It is observed from the past studies that job satisfaction was significantly higher among the higher level employees than that of the lower level employees, it was hypothesized that: (Ho)

6. There is no significant difference between the job satisfaction of the supervisors and the workers.

As findings of different studies showed that there was a significant influence of personal factors on the overall job satisfaction of the respondents, it was hypothesized that: (Ho)

7. There is no significant influence of the personal factors (such as age, education, experience, income, sex, marital status, and basis of payment) on the overall job satisfaction of the respondents.

Since some studies found that there was a significant influence of specific job factors on the overall job satisfaction of the respondents, so it was hypothesized that: (Ho)

8. There is no significant influence of the specific job factors (such as: pay, job security, behaviour of boss, promotional opportunity, job status, autonomy in work, recognition for good work, participation in decision making, communication with boss, working hours, and working environment) on the overall job satisfaction of the respondents.

Since some investigators found that there was a significant positive influence of job satisfaction on performance, and negative influences on absenteeism, accident, and propensity to quit the job, so it was hypothesized that: (Ho)

9. There is no significant influence of job satisfaction on job behaviour such as: performance, absence, accident, and propensity to quit the job.
As some investigators reveal that job satisfaction has negative impact on job stress, it was hypothesized that: (Ho)

10. There is no significant influence of job satisfaction on job stress.

It is observed from the past studies job stress was significantly higher among the female employees than that of the male employees so it was hypothesized that: (Ho)

11. There is no significant difference between job stress of the male and female employees.

As the findings of different studies show that employees have need deficiency regarding job-related factors, it was hypothesized that: (Ho)

12. There is no need deficiency regarding job-related factors of the respondents (both the groups).

From the review of literature, it was observed that deficiencies in need fulfillment of job related factors were significantly higher among the higher level employees than that of the lower level employees, it was hypothesized that: (Ho)

13. There is no significant difference between the need deficiency of the supervisors and workers.