CHAPTER III

RESEARCH WORK RELIABILITY

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3.1 INTRODUCTION

Chapter three is divided into six sections: (a) the purpose and overview of the study (b) research design (c) participants (d) instrumentation (e) data collection, and (f) data analysis.

In this chapter the main research methods used for this study are described: the research design, research approach, research strategy, sample collection methods, data collection instruments, and data analysis and presentation.

This study examines and identifies if a correlation exists between leadership personality type and organizational character.

The importance of this study comes from it studies a very important two variables (leader and organization). Personality type has a great importance for organizations in the context of change, development, communication, motivation, decision making, selection of employees, career path development, and achieves their objectives and visions.

Much work has been done on the field of personality type and the personality types of leaders but focusing on the impact of personality types of leaders in forming the organizational character has not been attempted.

*The following objectives were investigated to examine this relationship:*
In the Literature Review:

1. To explain personality, leadership, and character of organization.
2. To explain MBTI® as an instrument of personality types.
3. To explain OCI as an indicator of organizational character.

In the Empirical Study:

4. To identify the four dichotomies of Yemeni leaders and the four dichotomies of their organizations.
5. To identify the sixteen personality types of Yemeni leaders and the sixteen characters of their organizations.
6. To identify the four temperaments of personality types of Yemeni leaders and the four temperaments of their organizations.
7. To ascertain, in the light of that explanation, if there is a significant relationship between Yemeni leaders' personality types and characters of their organizations.

Hypotheses are generally developed to find evidences to affirm the ideas proposed through a research. The researcher in this study has identified the following hypothesis:

H1: There is a significant correlation between leader's personality type and character of organization.

There are three sub- hypotheses are included in this study to support the main hypothesis:

H1: There is a significant correlation between the leader's four dichotomies of personality type and the organizational character's four dichotomies.
H2: There is a significant correlation between the 16 personality types of leaders and the 16 organizational characters.

H3: There is a significant correlation between the four temperaments of leaders' personality types and the four temperaments of organizational characters.

3.2 RESEARCH METHODOLOGY AND DESIGNING

The research methodology followed to fulfill the aim of this study using the literature review (to gain theoretical knowledge) and the empirical approach (to gain the experiential knowledge) and an integration of both ways the literature and experiential results to obtain an enriched view of research subject.

For fulfilling the previous objectives and testing hypotheses, the model developed in the flow chart given below was followed:

![Figure 4.3: Research process and design structure](image-url)
According to Mouton (1996), research design refers to the overall plan adopted in the study which provides the guidelines to answer the research questions. It gives a researcher the right directions from the beginning; what are the research assumptions, how the research design is, and how to collect date. It can be the road map or the action plan for the researcher from planning to execution.

The design of this study is based on the descriptive and quantitative methods to ensure maximum accuracy and validity (Aiken, 1996). Descriptive method is a description of what is going on or what it exists at present. It includes survey techniques of all kinds and comparative and correlation methods. On the other hand, the analytical method critically analyzes and evaluation facts or information are already available.

The descriptive phase of this study is to examine Yemeni leaders' types and characters of their organizations. The optimal purpose of this study is to give leaders and decision makers, human resources specialists, and training courses designers a better understanding of how these two markers (leadership's personality and character's organization) are employed for effective leadership and successful organizations. This method aims at studying and analyzing the impact of leader's personality type on organizational character.

The quantitative method, which is used in this study, is based on the measurement of quantity or amount and applicable to phenomena that can be expressed in terms of quantity. So, it uses measurable data to
produce facts and represent the collected data in a structured manner, such as tables, graphs, and diagrams.

Because of its statistical nature, sample size is important for quantitative research. The numerical data are analyzed to describe the variables such as behaviors, opinions, and attitudes, and their relationships to have proved or a disproved hypothesis using different statistic ways such as frequencies, means, or correlations.

According to Robson (1993), survey is designed to gather data from a specific population, or a sample from that population, and typically utilizes a questionnaire or an interview as the survey instrument. In this study a selected sample from a specific population selected from YBC database.

This quantitative study utilized to explore the relationship between leader's personality type and the character of organization. Therefore, research problem was well defined and all the variables related to the study are well established:

a) the independent variable:
   the leaders' personality type as defined by MBTI® instrument;

b) the dependent variable:
   the character of organization as defined by OCI instrument; and

c) demographic variables
   namely job title, gender, years of experience, activity of organization.
3.3 RESEARCH POPULATION AND SAMPLING SELECTION

A population can be defined as including all people or items the characteristic researcher wants to understand. Because there is very rarely enough time or money to gather information from everyone or everything in a population, the goal becomes finding a representative sample (or subset) of that population.

In this study, the target population was the private sector organizations in Republic of Yemen. Republic of Yemen is a country located in the southern part of the Arabia Peninsula between latitude 12°-20° degrees, north of the equator and longitude 41°-54° degrees, east of Greenwich. Yemen is bounded in the north by Saudi Arabia, to the south by the Gulf of Aden and the Arab Sea, to the east by Oman, and to the west by the Red Sea. The area of Yemen is 555,000 square Kilometers. North and South Yemen were merged in 1990 to be the only united Arab country in the region with a population of 22 million people.

As an Arab country, Yemen shares common cultural values, language, religion and other social customs with other Arab countries. Like other Arab countries, Yemeni society is classified as highly collectivistic (Hofstede, 1991). In collectivistic society, people have an extremely strong belief in unity as a basic value of Islamic society which starts from the family and extend to reach the nation.

A sample is a finite part of a statistical population whose properties are studied to gain information about the whole (Webster, 1985). When dealing with people, it can be defined as a set of respondents (people) selected from a larger population for the purpose of a survey. Many
advantages are gained from selecting a sample. It saves time, money, and efforts more that if a researcher collects data from a large group of individuals. When we choose a representative sample, we have to make sure that this sample has similar characteristics to the population under study. This similarity allows the researcher to generalize the findings and results to the large population.

In quantitatively studies when the aim is selecting a relatively large number of units from a population, or from specific subgroups (strata) of a population, in a random manner including every member of the population is determinable, the probability sampling technique is used (Tashakkori & Teddlie, 2003a).

In a quantitative research designs, the large samples is required and recommended to have a considerable representative sample that allows reducing errors. However, there is no specific rule about the sample size, researchers (Burns and grove, (2001) argue that a sample should have at least 30 respondents. In this study, a sample of (72) respondents was used and it is an acceptable sample size.

This study used a random simple sample (RSS). Moore, David S. and George P. McCabe (2006) defined the simple random sample (SRS) as follows:

"The simple random sample (SRS) of size n consists of n individuals from the population chosen in such a way that every set of n individuals has an equal chance to be the sample actually selected."

Random sampling is the best single way to obtain a representative sample. No technique, not even random sampling, guarantees a
representative sample, but the probability is higher for this procedure than for any other (Gay, 1987).

The sample of this study was drawn from the database of Yemeni Business Club (YBC). It is a more homogenous sample. The sample was composed of 127 leaders and 127 organizations members in (YBC) before 2014. The leaders' sample (n=127) consists of executive directors & middle management of both genders male and female. All the respondents were full-time employees who had completed at least two years in service with their present organizations. The organizations' sample (n=127) consists of private sector organizations and had representation of variety of business (Industry, Trading, Services).

YBC a non-profit organization established in 2003. YBC is formed by many Yemeni educated, young, and successful businessmen. YBC plays an important role in supporting the national economy. It has a positive impact in bringing together business people, strengthens their relations, and helps sharing experiences and unites their efforts. In addition it helps raising their efficiency and increase the effectiveness of their institutions. The club has organized a variety of activities, conferences, forums and workshops, and produced an annual economic report.

The significance of YBC Associations and alliances nowadays are some of the features of the modern age, where social groups, business, service and financial entities get together serving common interests and concerns.
The club is working to improve its members’ professionalism by enhancing organizational development and through many activities and cooperation programs between its members. In short, it contributes to the development of the Yemeni business environment and society.

3.4 COLLECTION OF PRIMARY AND SECONDARY DATA METHODS

To become familiar with the context of the research problem and fulfill the study objectives, both primary and secondary sources of data collection were tapped, the details of which are under:

Primary data

The researcher adopted two instruments to collect primary data for the study. There were three phases in the research process for this study. These are described briefly below:

Firstly, the conceptual phase was characterized by formulation of the research question, the objectives and the purpose of the study. Then a literature review was done to become familiar with the content of the literature. Secondly, this involved the research design and planning of the study. The researcher used the data collection instruments, and the sample was the participants who met the eligibility criteria.

A random sampling was used. Thirdly, the empirical part of the study focuses on data gathering, tabulation, analysis, interpretation, and presentation. Data collection was occurred using the two instruments the MBTI® and OCI. Data analysis started as soon as data had been obtained.
Tow tools were employed for collecting data: (MBTI®) to map out the leaders' personality types and (OCI) to map out the character of their organizations.

The researcher sent out an email that contained a website link to the phase one assessment to 127 leaders registered in the YBC data accompanied by a cover letter (Appendix A). In addition, the researcher requested that participants forward the email to others who might be interested in finding out more about their personality and leadership style. After two months, when there was an insufficient number of participants, the researcher sent out the two instruments as a soft copy by email to the same sample, who were also asked to forward the email to others members who might be interested in participating, but with no success.

After a month, the researcher meet three groups of participants in three separated workshops organized by the YBC in Sana'a and distributed the two questionnaires during the meetings. The instructions and guidelines of the research samples and how to fill out the questionnaire were explained. This time it was a successful chance.

Researcher collected his study data between January and August, 2014. He obtains profiles of middle, senior, and top management and the profiles of their organizations and their answers would be confidential.

The researcher collected and analyzed the profiles of leaders and their organizations to examine the relationship between leaders' personality types and characters of organizations and the impact of that relationship positively or negatively.
Secondary data

Many previous studies, journals, books and electronic articles data based about leadership, personality types and characters of organizations were reviewed. This review helped in explanation of the links between leaders' personality type of and organization's character.

In this literature review, leadership (definitions, theories, importance, styles, and effectiveness) and the personality (definitions, theories, the MBTI®), and the character of organizations (culture, DNA, personality, and character) were studied and presented.

The researcher faced a problem that is the lack of such studies. Previous studies related to the subject of the study mentioned leadership, personality type, and organizational culture the in a separate way. Therefore, the study is fundamental study of such kind that focuses on the relationship between leader's personality type and character of organization.

So, the literature study attention was given to:

- A conceptual framework about leadership: importance, theories, styles, effectiveness, and personality and leadership.
- A conceptual framework about personality:
  - An analysis of Myers-Briggs Type Indicator (MBTI®)
  - A conceptual framework about the character of organization.
  - A description and analysis of Organizational character Index (OCI)
  - Conceptualization of the relationship between personality preferences of leaders and preferences of organizations.
3.5 THE INSTRUMENTS OF THE STUDY (Test Battery)

This research adopted the quantitative techniques using pre-tested questionnaires for data-gathering. The advantage of using such an approach was that both forms of data collected complemented each other. For example, interviews could not be rigorously analyzed as quantitative data. However, they offered possible interpretations to trends found within the numbers. Likewise, questionnaires provided a large amount of nominal data to highlight the major trends and empirical findings.

In order to establish a possible connection between leadership personality type preferences and organizational character preferences, two self-reported instruments mainly used in this study. The first instrument was Myers-Briggs Type Indicator (MBTI®), Form M, to identify the personality type of leader. The second was the Organizational Character Index (OCI) to identify the organizational character. The two instruments used in this study were backed by presenting the theoretical and conceptual framework of the study field and by studying their validity and reliability.

The popularity of the MBTI® with practitioners involved in leader development is rooted in its accessible presentation of personality-related preference, based on Jungian theory of personality, and the ease in which it can be related to work preferences and leadership style (Michael, 2003; Van Velsor & Fleenor, 1997). It examines fundamental differences in the way people approach the world and take in information and make decisions.
1- Myers-Briggs Type Indicator (MBTI®) Form M

Development of the MBTI®

The MBTI® Form M was used to assess the personality types of the study participants. Form M is the newest revision of the MBTI®. The indicator consists of 93 forced-choice items, and takes about 15 to 25 minutes. It has been published by Consulting Psychologists Tests, Inc. from 1943 to 1998.

Form M is typically administered to a group and can be taken on a computer or hand-written. There is an array of methods in which it can be. Each response is worth one point. The poles of the four dichotomies (Extroversion vs. Introversion, Sensing vs. Intuition, Thinking vs. Feeling, and Judging vs. Perceiving) that receive the most points are the letter scores they receive. These eight letter scores combine for a possible sixteen scores. An individual's preferences are presented in a four-letter type.

Form M has self-scorable four sections. The first section 26 items, second section 32 items, third section 20 items, and fourth section 15 items. Sections one and three are force-choice between types of behavior and reaction in different life situations and sections two and four are force-choice between word pairs. No right or wrong choice but the first respond from both choices indicates the most right one preferred preference.
The Rational of the MBTI®

_The Extraversion - Introversion (E-I) index:_

It indicates that a person focuses on outside or inside perceptions as a means of gathering information. The energy of extraverts (E) is outward, towards people and things. The energy of introverts (I) is inward toward concepts and ideas.

_Sensing-Intuition (S-N) index:_

It marks the procedure of data perceiving and collection. Sensing people (S) use one or more of five senses. They live at the present and past and focus on concrete facts and details. Intuition people (N) live at the future and focus on ideas, summery, possibilities, meanings, and connections.

_Thinking-Feeling (T-F) index:_

It defines an individual's way of processing for perceived information. Thinking (T) comes to a conclusion based on logical process, but feeling (F) drawing conclusion on the basis of personal values and objective facts.

_Judgment-Perception (J-P) index:_

It reveals the attitude a person takes toward outside world. Judging (J) prefer living in a planned, structured, and orderly environment. Perception (P) prefer living in a more spontaneous and flexible environment.

The Scoring of the MBTI®

Form M was derived using Item Response Theory (IRT) to provide better information about the individual's preferences and more precise scoring from the selected items. IRT nearly excludes the chance of tied
preference scores, and improves the precision of preference identification at the midpoint by including items that better distinguish between preferences.

The scoring of Form M is divided as below:

- **The Extroverted-Introverted Items:**
  
  \( (4,8,12,14,18,19,22,23,26,27,34,35,42,48,54,60,62,66,67,72,77) \).

- **The Sensing-Intuition items:**
  
  \( (3,5,13,15,24,29,32,13,44,50,55,51,74,79,82,83,86,87,90,93,98 ) \).

- **The thinking-Feeling items:**
  
  \( (6,16,30,31,38,39,45,46,51,52,56,57,69,64,75,78,80,81,84,85,88,89,91,92) \).

- **The Judging- Perceiving items:**
  
  \( (1, 2, 7, 10,11,17,20,21,25,28,33,36,41,43,49,59,65,68,70,71,76) \).

**The Reliability and Validity of the MBTI®**

Throughout its 50 year history, the MBTI® has been revised many times to improve its reliability and validity, and the revised the MBTI®: Form M has no scales with different weights for men and women (Myers et al., 2003).

Form M, was developed in 1998 in order to address the psychometric weaknesses noted in these studies on the earlier versions of the MBTI®. Researchers have noted that the reliability of Form M is over the reliability of Form G, as denoted by the samples that have been collected thus far (Myers, McCaulley, Quenk, & Hammer, 2003).
Split-half reliability for the MBTI® Form M was examined using the Spearman-Brown formula and found to be high ranging from .89 to .93 on the continuous scores (Myers, et al., 2003). The national sample (n=3,300) was identified as a stratified random sampling procedure to collect data in 1996 with an attempt to be representative of the US population.

The internal consistency reliability of the MBTI® Form M assessment is examined across several different samples based on common demographics, such as individuals’ employment status, ethnicity, age, and country or region of origin. The results are considered to be superior when they show similar degrees of internal consistency across diverse samples of participants.

The reliability coefficients of the educated U.S. adult population samples are consistently +.80 that indicates an excellent reliability (Myers et al., 2003). Michael (2003) also reported on a 1997 study conducted by Carlyn and a 1996 study that type scores are relatively stable. Split-half and test-retest reliabilities may be found in the MBTI® Manual (Myers et al., 2003). For the

As the Myers-Briggs Type Indicator personality inventory was designed to implement Carl G. Jung’s type theory, its validity is determined by its ability to demonstrate relationships and outcomes predicted by theory. The test –retest reliabilities of Form M are improved over those of Form G. According to CPP, MBTI trade mark, the test-retest of dichotomies shows .84 to .96 and the test-retest of continuous scores shows .83 to 97.
A factor analysis was conducted using the 93 Form M items and shows that the MBTI® Form M items are measuring what they were supposed to measure.

In term of validity, there is no other personality instrument in use today that is as psychometrically sound as the MBTI® Form M, (De vito, 1985). McRae and Costa say the MBTI® is unusual because it explains an individual’s personality preferences not only to employers, but to the individual themselves.

2- Organizational Character Index (OCI)

The development of OCI

The Organizational Character Index (OCI) questionnaire was developed by William Bridges based on the Myers-Briggs Personality Type Indicator MBTI®. Bridges provides a useful way of thinking about organizational styles and tries to understand the nature of departments within organizations.

The original (OCI) consists of 36 Items and allows people to register the degree or strength of choice between the two opposites. Using a four-point scale, it allows one to go beyond "A" or "B": 1= Distinctly (or usually) A, 2= Somewhat (or often) A, 3= Somewhat (or often) B, 4= Distinctly (or usually) B.

The researcher modified the questionnaire by dividing each statement into two statements to have a clear option of the two dichotomies. The 72-item instrument gives the profile of organizational ethos in the eight variables of preferences- 18 questions for each-
Introversion (I) vs. Extraversion (E), Sensing (S) vs. Intuition (N), Thinking (T) vs. Feeling (F), Judging (J) vs. Perceiving (P) - as well as the four function pairs (SJ, NT, NF, SP). It does force people to come down on one side or the other of the middle point, however.

Also, the researcher used a 5-point and modified Likert scale type questionnaire including the frequency: Strongly Agree, Agree, Neutral, Not agree, and Strongly Not Agree. Likert Scale is balanced on both sides of a neutral option, creating a less biased measurement.

Likert Scale is an ordinal psychometric measurement of attitudes, beliefs and opinions. In each question, a statement is presented in which a respondent must indicate a degree of agreement or disagreement in a multiple choice type format.

The advantageous side of Likert Scale is that it is the most universal method for survey collection, therefore it is easily understood. The responses are easily quantifiable and subjective to computation of some mathematical analysis. Since it does not require the participant to provide a simple and concrete yes or no answer, it does not force the participant to take a stand on a particular topic, but allows them to respond in a degree of agreement; this makes question answering easier on the respondent.

Also, the responses presented accommodate neutral or undecided feelings of participants. These responses are very easy to code when accumulating data since a single number represents the participant’s response. Likert surveys are also quick, efficient and inexpensive methods
for data collection. They have high versatility and can be sent out through mail, over the internet, or given in person.

A professional translation was used to translate the instruments from English to Arabic before applying them to be suitable for the nature of the research sample.

The administration of OCI

Organizational Character Index (OCI) is a self-administered one. However, the researcher gave the respondents the necessary instructions that may assist those who have difficulty in understanding the items, or the mode of responding to the items. Instructions are printed at the beginning as follows:

Response space is provided against each item, and the respondent is required to put the tick mark (✓) in the appropriate column. The responses are always, very often, sometimes, rarely and never.

Anyone who takes the OCI should not agonize too much about his or her answers. If in doubt, go with the first thought you had when you read the question. And to remember: no questions blank. The respondents should answer the questions in terms of actuality, not professed ideals, as are presently and is trying to become.

Rating Score for OCI

Scoring the Organizational Character Index (OCI) is very easy. The scores for the responses are:

5= Strongly Agree,
4= Agree
The sum of the scores for all the items constitutes the total score on the scale. All the items are positive.

- **Items (1 to 18):**
  what is the organization's orientation in the world (Extraversion-Introversion)?

- **Items (19 to 36):**
  how does the organization gather information (Sensing-Intuition)?

- **Items (37 to 54):**
  how does organization process information (Thinking-Feeling)?

- **Items (55 to 72):**
  how does the organization deal with its external environment (Judging-Perceiving)?

The Organizational Character Index (OCI) was developed to explore the department's or organization's character into one of 16 different groupings. It was sent with the introductory information about it and the instructions on what to do with The Organizational Character Index (OCI).

Instead of focusing on how individuals of a certain type function or how individuals of different types interact in an organizational setting, The Organizational Character Index (OCI) focuses on the organizational setting itself.
Using the familiar dichotomies of Extraversion (E) and Introversion and Sensing (S) and Intuition (N), Thinking (T) and Feeling (F), Judging (J) and Perceiving (P), the Organizational Character Index (OCI) sorts organizational characteristics into 16 characters using the same familiar four-letter designations (ESTJ, INFP, and so on) that the MBTI® tool uses.

The Reliability and Validity of the OCI

The Organizational Character Index (OCI) was given to a panel of experts in the field of management to review (1) clarity of directions; (2) clarity of questions; (3) relevancy of the question as an important aspect of a major issue; and (4) narrowness or constraint of response. The Instrument survey panel list is given at the end of this research (annexure (a)).

The Organizational Character Index (OCI) questionnaire was pre-tested by participants in many training courses to check the clarity of questions and identify vague or non-acceptable questions. Adjustments were made based on the outcome of the pre-test results. The data collected during the pre-test was not part of the study.

Weaknesses detected in the instruments during the pre-testing were corrected in order to refine them so as to enhance validity. In cases of any flaws and bias, the instruments were modified for more clarity and accuracy.

The survey instruments were circulated to participants in many training courses presented by the researcher. Participants are asked to give their feedback as well regarding the layout, wording, clarity, coherence,
internal consistency, factor analysis, and ease of understanding of the measurement items as a whole in the revision of the questionnaires.

The Organizational Character Index (OCI) questions were designed in such a way that it was able to capture both nominal and ordinal data. The questionnaire was designed to take no longer than 20 minutes to complete, in order to encourage as many people as possible to participate. The layout of the questions, which predominantly involved choosing from a list of options also made the questionnaire easy to respond to. Provision for additional responses was made where appropriate so as not to restrict people's responses unduly. The identical survey was used in both high and low risk levels.

The researcher has a very good background in using MBTI® which is the base of the Organizational Character Index (OCI). The researcher introduces so many training courses and lectures for hundred of participants from different countries, such as United Arab Emirates, Saudi Arabia, Egypt, Yemen, and India. He passed the requirements of MBTI® course which was held in USA, 2008 and organized by the American Management Association (AMA).

The researcher's knowledge and experience gave the research the capability to use the two instruments MBTI® and OCI and get the feedback from participants about them in every course sin term of their construction, easiness, timing, and interpretation. The researcher also based on his background in MBTI® and leadership could analyze the collected data and profiling the personality types of the Yemeni leaders and the Yemeni organizations.
The validity of the Organizational Character Index (OCI) was analyzed using the Statistical Package for Social Sciences (SPSS® Statistics V21.0) to find Cronbach alpha values of internal consistency, that is, how closely related a set of items are as a group.

The final reliability score of OCI stands at alpha coefficient .924, suggesting that the items have relatively high internal consistency which is within the acceptable good test score range of .6 to .9.

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### 3.6 DATA ANALYSIS METHODS

Data analysis is considered to be important step and heart of the research in research work. After collection of data with the help of relevant tools and techniques, the next logical step, is to analyze and interpret data with a view to arriving at empirical solution to the problem by testing the hypothesis and answer the research questions.

The leaders' preferences and organizations' characters on four dichotomous scales or dimensions would be analyzed. All questions offer choices between the poles of the same dichotomy (Extroversion vs. Introversion, Sensing vs. Intuition, Thinking vs. Feeling, and Judging vs. Perceiving) and results in a four-letter type. The interaction of these four preferences result in 16 distinct leaders' personality types and 16 characters of organizations.

The obtained data by the two instruments of the study will be manipulated quantitatively according to the nature of the research
objectives. Quantitative analysis is necessary to identify significant relationships between the two variables.

With a close scrutiny into the research objectives, one can clearly find out that these objectives are of descriptive and quantitative nature. The first three objectives of the study were to explain the personality, leadership, and character of organization, to explain the MBTI® as an instrument of personality types testing, and to explain OCI as an indicator to organization character.

To achieve these three goals, a large amount of theoretical literature is made as a secondary data. Many studies, books, journals, and articles have been reviewed to have a comprehensive theoretical framework of the main elements of the study under investigation.

The fourth and fifth objectives were to identify various types of leaders (using the MBTI®) and characters of organizations (using OCI) in Yemen to explain the personality, leadership, and character of organization. The collected data by the MBTI® and OCI from respondents were tabulated and tested.

The data analysis for the present research was done quantitatively with the help of both descriptive statistics and inferential statistics using SPSS® Statistics V21.0 and Microsoft office Excel – 2010 to conduct various statistical analyses.

The data analysis is presented in form of frequencies and percentages. Frequency tables, percentages, bar graphs, and descriptive statistics were constructed to display results with respect to each of the
three research questions. As a result, the leaders' personality types and the character of organizations are identified.

The sixth objective seeks to examine whether there is any significant relationship between the leaders' personality types and the organizational characters. Having the statistical process established, the researcher sought to examine the relationship between the leaders' types and their organizations' characters. This involves a certain amount of quantitative research in that the results identified in the statistical tests can be interpreted contextually.

Spearman’s rho correlation test, and Pearson correlations coefficient are used to examine the correlation between the two variables. Chi square test ($\chi^2$ test) and T-Test are used to examine the significance relationship between the two variables. Descriptive statistics was used to analyze continuous and categorical data.

3.7 SUMMERY

The purpose of this chapter was clearly to define the research methods used to conduct the study. The researcher explained how the necessary data and information to address the research objectives and questions was collected, presented and analyzed. Reasons and justifications for the research design, research instruments, data sources, data collection techniques, data presentation techniques and analytical techniques used were given.