LEADERSHIP STYLES AS PREDICTORS OF DECISION MAKING STYLES: MODERATING ROLE OF DECISION RELATED FACTORS

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CERTIFICATION

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Dedicated to

Prof. Dr. M. Anis-ul-Haque

My respect teacher, exemplary mentor and the great personality behind my success

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Abstract

The present research examined the moderating role of decision-related factors in the relationship between leadership styles and decision making styles. The study was based on Full Range Leadership Theory (Bass & Reggio, 2006) which comprise of three leadership styles including transformational, transactional, and laissez faire style. The study incorporated five decision making styles including rational, intuitive, dependent, avoidant, and spontaneous style. The study comprised of three types of decision-related factors including decision making situations, knowledge management processes and job stress. The overall research comprised of three studies.

Study-I focused on the development and empirical evaluation of Decision Situations Scale. A 27 items scale was constructed by ensuring alpha reliability, factorial, convergent and divergent validity evidences. The scale was comprised of three decision making situations including certainty, risk and uncertainty based on the model of Griffin (2012). For this purpose, a purposive sample of 300 employees from services providing organizations including hospital superintendents, bank managers and head of departments in universities was included in the first study.

Study-II was based on pilot study. The pilot study aimed to achieve three types of objectives including (a) to test the psychometric properties of the scales, (b) to conduct preliminary analyses on the study variables, and (c) to examine the level of job stress in hospitals, banks and universities. For this purpose, a purposive sample of 240 employees from services providing organizations was included in this study. Pilot testing confirmed the reliability and validity of the scales. Pilot testing provided sufficient support to conduct the main study analyses.

The Study-III was based on main study. The first objective of the main study was to examine the moderating role of decision making situations between leadership styles and decision making styles. For this purpose, Moderated Regression analysis was carried out. The findings indicated that certainty moderated between transformational style and rational style. Uncertainty moderated between transformational style and intuitive style. Certainty moderated between transactional and rational style. Uncertainty moderated between laissez faire and avoidant style. The second objective of the main study was to examine the moderating role of knowledge management processes between transformational, transactional leadership style and rational decision making style. The findings indicated that knowledge management processes moderated between transformational, transactional style and rational style. The third objective of the main present study was to examine the moderating role of job stress between laissez faire leadership style and avoidant decision making style. The findings indicated that job stress moderated between laissez faire style and avoidant style.

Summary of the Research

The present study was based on the important factors that influence the decisions of leaders. Leaders make numerous decisions at job that are related to diverse issues and unique situations. Prior researchers mainly concentrated on studying the effect of the different styles opted by the leaders on their subsequent decisions. While studying the leadership-decision association, organizational researchers missed the role of underlying factors that also influence the decisions of the leaders besides their leadership style. Therefore, the current research focused on investigating the role of these factors that influence the decisions of the leaders.

Many factors influence the decisions of the leaders in the modern organization that can be broadly classified as individual, situational and organizational factors. The present study included job stress as an important individual-related factor which influences the decisions of the leaders. The current inquiry also included the role of knowledge management processes of the organizations as organizational factor that influence leaders' decisions. However, while deciding to include the most important factors that influence the decisions of leaders i.e. situational factors, the unavailability of an instrument blocked this process.

At this step it was decided to develop an instrument that can be used to measure the situational factors associated with managerial decisions. Decision literature confirms that decisions are made in three types of situations including certainty, risk and uncertainty. Thus, an instrument measuring these three situations was developed. It was also ensured with multiple parameters that the instrument was valid and reliable. Finally

this instrument was used to investigate the role of decision making situations in the relationship between leadership and decision making.

Thus the inclusion of three types of factors while studying leadership-decision making relationship, makes it more comprehensive and worthwhile. The study integrates many models of modern organizational psychology and it holds theoretical and applied significance. The findings can be beneficial for educational, health and financial institutions alike due to the inclusion of the diverse samples in the study.

LEADERSHIP STYLES AS PREDICTORS OF DECISION MAKING STYLES: MODERATING ROLE OF DECISION RELATED FACTORS

INTRODUCTION

Chapter-I

Introduction

Decision making is the prime responsibility of a manager because the decision quality directly influences his or her career, rewards, and job satisfaction. A managerial decision plays a vital role in the success or failure of an organization (Kreitner & Kinicki, 2004). Today's corporate environment requires managers to be excellent decision makers. Their ability to make fast, smart, widely-supported, and effective decisions will, in large part, shape the performance of their organizations (Certo, Connelly, & Tihanyi, 2008). Due to the importance of decision making in organizations Singh (2001) states that decision making is the total task of a manager. Prior studies mainly concentrated on *style approaches to leadership* and investigating the direct effect of leadership styles in decision making styles. However, while studying leadership-decision making connections, the importance of decision related factors in general and decision making situations in particular is ignored. Contrary to style approaches, *situational and contingency approaches to leadership* focused on investigating the role of situational factors while studying leadership-decision making relationship (Northouse, 2007). The present study is an attempt to bridge this gap. The present study aimed to examine the moderating role of decision related factors in the relationship between leadership styles and decision making styles among employees of services providing organizations.

Leadership

Oxford English Dictionary (1933) notes the appearance of the word "leader" in English language as early as the year 1300. However, the word leadership did not appear

until the first half of the nineteenth century in writing about political influence and control of British Parliament (Lindzey & Aronson, 1985). Leadership, and the study of this phenomenon, has roots in the beginning of civilization. However, with the passage of time, the focus has been shifted from one approach to another (Stone & Patterson, 2005). Historical development of leadership can be categorized into four eras including *Pre-Classical, Classical, Modern,* and *Post-Modern* eras. The latest advancement in the *Post-Modern Era* is known as *New Leadership Approaches.* The Full Range Leadership Theory is also included in *New Leadership Approaches* Leadership, and the study of this phenomenon, has roots in the beginning of civilization. However, with the passage of time, the focus has been shifted from one approach to another (Stone & Patterson, 2005). Historical development of leadership can be categorized into four eras including *Pre-Classical, Classical, Modern,* and *Post-Modern* eras (Devine, 2008).

The main emphasis of Industrial and Organizational Psychology is identifying appropriate leadership characteristics and studying their influence on people. Industrial and Organizational Psychology considers effective leaders confident in making decisions whereas it attributes indecisiveness to leadership incompetence. Thus, decisiveness splits strong leadership from its weak complement (Muchinsky, 2007). In the same manner, social psychology is facing renaissance in exploring organizational practices (Haslam, 2001; Hogg & Terry, 2002; van Knippenberg & Hogg, 2001). Globalization and fast technological changes foster a need for reevaluation of organizational practices (Fulmer, Gibbs & Goldsmith, 2000). Organizations neither work in vacuum nor operate in solitude. Therefore organizational decision making processes require continuous

improvement (Stainer, 2004). In organizations, numerous situations call leaders to make decision regarding various organizational processes (Kamberg, 2001).

Globalization of the business world has changed the scenario for the entire corporate sector. Abrupt changes in the business affairs of national and multinational organizations require excellent leadership skills and accurate decision making practices by executives. The modern concepts of leadership and decision making are well reputed, recognized and renowned into the mainstream of Industrial and Organizational Psychology. In the recent years, scientific investigation of various decision related factors in the relationship between leadership and decision making styles grasp the attention of management and organizational researchers (Northouse, 2007). Organizational success is perceived as a byproduct of remarkable leadership and extraordinary decision making. As for as decision making is concerned, it all depends upon a leader to adopt a particular decision making style according the requirements of the underlying situation which in fact reflects the effectiveness of his or her underlying leadership style. More recently, attention has turned to decision-making competence (Eberlin, & Tatum, 2008; de Bruin, Parker, & Fischhoff, 2007; Finucane, Mertz, Slovic, & Schmidt, 2005). In order to maintain the competence, the leaders must display the desired level of responsibility. In this regard, decision making appears as fundamental responsibility of managers in the organizations (Williams, 2003).

Historical Background of Leadership Styles

Burns (1978) explains the manner in which a leader exerts control over a group is called a leadership style. Studies of the leadership styles stemmed from the onset of the

20th century when Weber (1905) introduced two leadership styles including the bureaucratic leadership style and the charismatic leadership style. Lewin, Lippitt, and White (1939) investigated three leadership styles including the autocratic leadership style, the democratic leadership style, and the laissez-faire style of leadership. Hereafter, the studies continued on the different leadership styles. At first, the political leadership was focused but later on organizational leadership took over.

During the late 1940s and early 1950s researchers at Ohio State University started classical studies on leadership styles in different kinds of organizations and begin to identify the behaviors of the leaders and investigated two leadership styles. Researchers conducted studies at University of Michigan and identified employee centered and job centered leadership style. Blake and Mouton proposed a model known as Managerial Grid (renamed Leadership Grid) was based on five styles of leadership including concern for people and concern for production that were plotted on horizontal and vertical axis respectively (Barron, 2004; Johnson, 2004). OB scholar Fiedler (1967) proposed a situational model of leadership and identified two type of leadership styles including the people oriented leadership style and the task oriented leadership style that was assigned another name deal maker by Robin and Roevens (1999). The servant leadership style was proposed by Greenleaf (1977) in which goal attainment and employees' productivity was based on the fulfillment of their needs.

House and Mitchell (1974) introduced four styles including participative, supportive, directive, and achievement-oriented style based on Path-Goal Theory of Leadership. Burns (1978), the famous political scientist, in his book *Leadership,* introduced transactional and transformational leadership. Transactional leaders establish

leader-follower mutual agreement to attain organizational goals. Transformational leadership inspired value-based mutual stimulation and true concern by the leader to his or her followers' needs that eventually changes the followers into leaders. Bass (1985) applied Burn's (1978) ideas into organizational setting and proposed a very comprehensive theory of leadership and redefined transformational and transactional leadership style.

Bennis and Nanus's (1985) theory of transformational leadership comprise of four elements including vision, meaning, trust and self-development. Kouzes and Posner's (1987) transformational strategies included setting role models, questioning the existing organizational processes, giving inspiration by sharing vision and inspiration the emotional and values of others. Such characteristics were related to learning and practice instead of being considered to be inherited (Kouzes & Posner, 2002). The emerging concepts include spiritual leadership (Fry, 2003), environmental leadership (Carmazzi, 2005), and team leadership (Day, Gronn, & Salas, 2006).

Parry and Bryman (2006) state that approaches to organizational leadership can be arranged into five broader categories including trait approaches, style approaches, situational approaches contingency approaches and the new leadership approaches. In this regard, the New Leadership Approaches are considered the latest advancement in the leadership literature that was developed in late 1990s (Storey, 2004).

Leadership Styles

Avolio and Bass (2002) proposed Full Range Theory of Leadership which comprises of three leadership styles including transformational leadership,

transformational leadership and laissez-faire leadership. Transformational leadership consists of five leadership attributes (see Figure 1). Transactional leadership comprises of three leadership facets (see Figure 1). Laissez-faire leadership consists of no leadership facet. The FRLT (see Figure 1) ranges from one extreme to the other. The model consists of two dimensions. The leadership dimension is active and effective whereas the non-leadership dimension is passive and ineffective. Leadership dimension encompasses four elements of transformational leadership including *idealized influence, inspirational motivation, intellectual stimulation, individualized consideration* and two elements of transactional leadership including *contingent reward and management by exception active*. The non-leadership dimension consists of one element of transactional leadership including *management by exception passive* and *laissez-faire leadership* (Avolio & Bass, 2002).

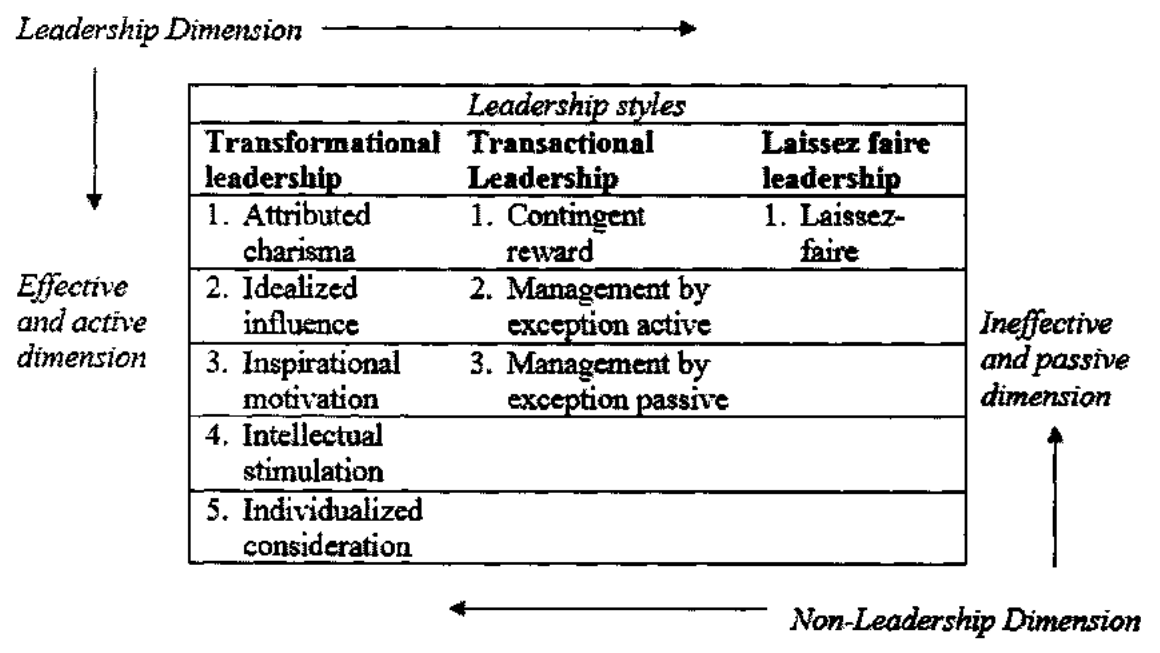

Figure 1. Components of the Full Range Leadership Theory

The main premise of the FRLT is that every leader exhibits each leadership style to some degree. A leader's relative standing on the FRLT indicates which kind of leader he or she is. FRLT (see Figure 2) indicates that as a leader moves form transformational leadership down to the laissez-faire leadership, the leader starts to become passive and ineffective. In the same manner, as a leader starts to move from laissez-faire leadership up to the transformational leadership, the leader becomes active and effective (Bass & Riggio, 2006; Bass & Avolio, 2003).

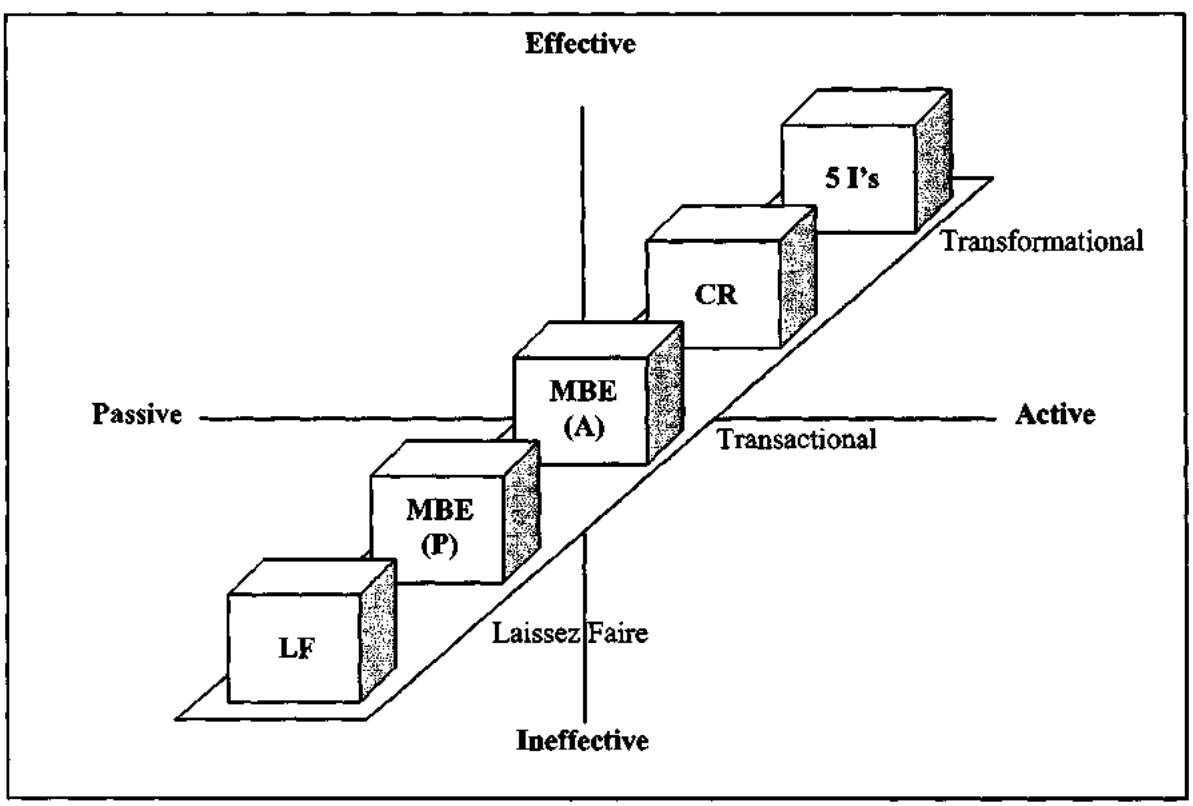

Figure 2. The Full Range Leadership Theory (FRLT)

The relative standing of a leader on FRLT portrays a true picture of a leader's profile. The model consists of three dimensions: (1) Active-passive dimension, (2) effective-ineffective dimension, and (3) the third dimension is depth which portrays the

frequently of exhibiting a specific leadership style. On the horizontal axis, the active-passive dimension is by definition self-evident. On the vertical axis, the effective-ineffective dimension is based on empirical evidence (Bass & Riggio, 2006).

A leader with an optimal profile (see Figure 3) most frequently displays the attributes of transformational leadership (5 I's) and he or she also displays a higher frequency of the two attributes of transactional leaderships including CR and MBE-A. The leader infrequently exhibits LF (laissez-faire leadership style).

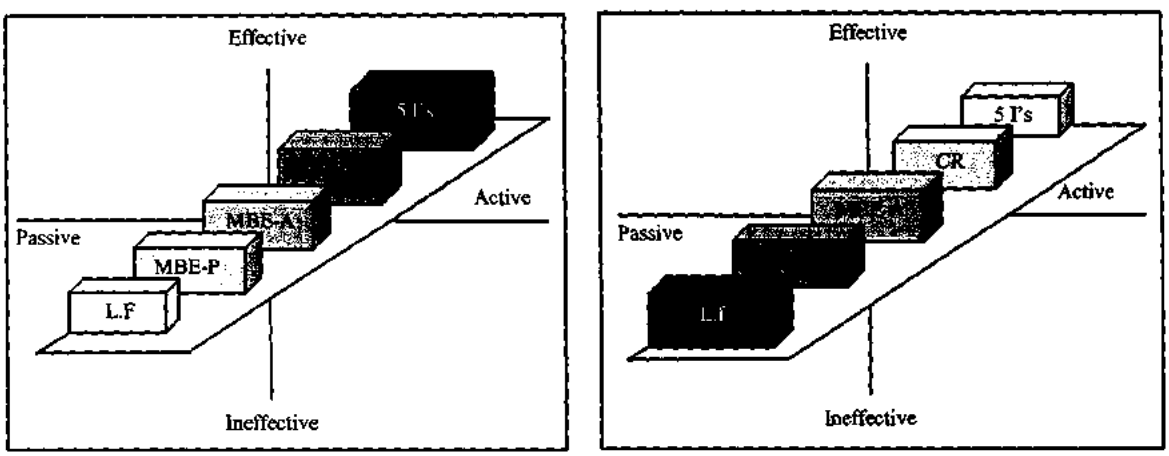

Figure 3. Optimal and sub-optimal profile leader

A leader with sub-optimal profile (see Figure 3) holds LF (laissez faire) more frequently and four attributes of transformational leadership (5I's) least frequently. These leaders are inactive and ineffective in leadership scenarios. A fair share of leadership literature proves that transformational leaders' followers are more satisfied, committed, and loyal. In the same manner performance is positively associated with transformational leadership. Figure 2 displays a hierarchy in which the four components of transformational leadership holds the top positions, then three components precede them and LF stands in the bottom. This hierarchy is research based that depicts a true portrayal

of each leadership style with respect to its effectiveness and ineffectiveness on the FRLT. Depending on the situation, the transactional leadership can also be fairly effective. In some states of affairs, the MBE-A and even MBE-P can work effectively but it depends upon the scenario (Bass & Riggio, 2006).

Transformational Leadership Style

The leadership theory of Bass is recently included in the mainstream leadership literature. Majority of the literature related to this leadership paradigm was published in the last 15 years. No doubt, the conception of transformational leadership is a newly emerging approach in the heart of leadership but its history can be traced into ancient times. The writings of early management theorists also provide some considerable traces that served as building blocks of transformational leadership thought. The previous literature indicates that transformational leadership influences on organizational performance and employees' satisfaction (Humphreys & Einstein, 2003).

Bass (1981) illustrates that principals about the relationship between leader and followers are as old as 1500 years. In the past era, historians, political scientists, and sociologists emphasized that the nature of leader-follower relationship should worth then social exchange. Beside this, economics and psychology introduced contingent reinforcements in the form of rewards and benefits. Both disciplines influenced the creation of FRLT (Bass & Riggio, 2006).

Transformational leadership was extracted from the political researcher MeGrager Burns's (1978) work on political leadership. Burns (1978) proposed transformational and transactional style as two opposite poles of a continuum whereas Bass (1985) disagreed

with this assumption and argued that these styles do not portray two opposite poles of a continuum. Instead, they display an array on the continuum in which relative standing of a leaders on the Full Range Leadership Model reflects his or her effectiveness of ineffectiveness.

The term transformational was imported in English from the Latin word 'transformer' which means "change the nature, function, or condition of, to convert" (The American Heritage Dictionary of English Language, 2000). The word transformation is broad and wide ranged concerning various segments of society including individuals, groups, teams, relationships, communities, organizations, and political system (Stephen & Roberts, 2004). "Organizational transformation refers to the marked change in the nature or functions of organizational systems creating discontinuous, step-function improvement in sought-after result areas" (Stephen & Roberts, 2004, p. 1).

Transformation occurs at three levels including personal, relational, and enterprise level transformation. Individuals form the foundations of organizations. Individual leader stands in the center of the storm whenever the change occurs. In the same manner, the leader's step-function improvement in relationship creates various entities inside the organization that provides energy for an organization at the time of transformation. Finally, the organizations are comprised of various systems. Change in these systems refers to organizational transformation (Stephen & Roberts, 2004).

Transformational leadership approach is built on the premise of leader-follower integration. It attempts to approach the followers' internal motivation. During the development of various strategies, transformational leaders always kept in mind their followers' expectations. Transformational leaders inspire their followers by perceiving

their needs and try their level best to satisfy their followers' needs beyond their expectations rather than simply allocating valued rewards. Transformational leaders enhance followers' commitment with compelling vision and generating wisdom of shared goal (Greenwald, 2008).

These leaders encourage followers for self-sacrifice of interests for the attainment of collective goals and greater cause of the group. Change is the hallmark of effective leadership practices. The leader's ability to produce 'constructive or adaptive change' and taking risks when anarchy and instability provides some opportunities for change is also central to transformational leadership conception. In the same manner, leadership requires providing a fascinating vision, sharing it with followers, and introducing tracks to pursue that goal (Bedeian & Hunt, 2005). Transformational leadership involves creating a comprehensive and persuasive vision, illustrating the way to attain that vision, behaving assertively and positively, expressing trust and assurance in subordinates, emphasizing core values symbolically, practicing exemplary leadership, giving power to people to attain the vision (Yukl, 2002). Transformational leadership facets and their associated functional attributes are as follows:

The first facet of transformational leadership style is idealize influence. Transformational leaders behave like role models and set a personal example. They are well-liked, valued, and relied. Followers love to associate with them and show desires to follow them. Subordinates endow leaders as having amazing potentials, determination, and willpower. There are two types of idealize influence including the leader's behavior and followers' attributions about the leader. These two types of idealize influence jointly form interactional idealized influence. Leaders exhibiting idealize influence most

frequently are ready to take risks, display consistency rather than impulsiveness. They attempts to do right things and try to ensure the superior standards of ethics and morality. Idealize influence attributed is related to the attributions of subordinates that their leader exhibits charismatic characteristics (Bass & Riggio, 2006).

The second facet inspirational motivation shows that leaders motivate and inspire their followers by their behaviors. They add new flavors in the followers' work by providing new meanings and challenges. Team spirit is stimulated. Leader displays passion, confidence, and zeal via modeling. Leaders invite followers to be a part of envisioning striking future states. Leader makes the expectations about the set standards that are openly communicative. Followers like to meet these standards and show dedication to goals and shared vision (Bass & Riggio, 2006).

The third facet is intellectual stimulation. Transformational leaders encourage followers in their work be innovative and creatively by the means of inquiring suppositions, restructuring problems, and dealing old issues in new ways. Leader encourages creativity. Individuals' mistakes are not criticized in the masses. As the followers participate in facing problems and identifying solutions, they generate novel ideas and creative solutions. Followers are motivated and appreciated to test new methods and there is no criticism for the followers' ideas when they are apart from the leader's own ideas (Avoilo & Bass, 2002).

The fourth facet of transformational leadership style is individualized consideration. Transformational leaders behave like mentors and coach. Followers' potentials are developed and raised to higher levels. Through supportive communication climate, new learning opportunities are provided to followers. Individual differences with

respect to needs and desires are acknowledged. Leaders show acceptance of individual differences from their behaviors. Some followers find more support, others get formal standards, and still others receive structured tasks.

Leader encourages 'two way communication' and practices 'management by walking around'. The leader personalizes his or her interactions with followers i.e. keeping in mind the prior conversations and attentiveness to individual needs. The leader keeps an eye on the assigned tasks to notice if followers need any sort of extra help and assistance to run the tasks smoothly. Ideally, the followers never perceived that they are being observed or monitored by the leader (Avoilo & Bass, 2002).

Transactional Leadership Style

The political scientist McGregor Burns (1978) is credited for introducing the term transactional into the mainstream leadership literature. Burns's (1978) theory was extended by Bass (1985). This style involves leaders-follower transaction process. These leaders make it clear for the followers that their needs will be satisfied on meeting the standards of the organization and fulfilling their duties. Rewards are adjacent to the job performance. Subordinates complete tasks, fulfill job responsibilities and get rewards in return (Daft & Lane, 2002). Transactional leadership consists of three elements.

The first facet of transactional leadership style is contingent reward. The practical and productive leader-follower exchange has been resulted in the peak performance and superior quality achievements. It is worth effective then laissez faire style and relatively less productive then transformational leadership style. Contingent reward involves leader-subordinate mutual agreement to effectively complete assigned tasks and get the

promised rewards in return. Mostly exchange is transactional but it can be transformational when the nature of reward is psychological like praise (Antonakis, Avolio, & Sivasubramaniam, 2003).

The second facet is management-by-exception active (MBE-A). This corrective transaction is relatively less effective than contingent reward and the five elements of the transformational leadership. It can be active or passive. MBE (A) is a proactive dimension. The leader keenly monitors before the standards are deviated and followers make mistakes or commit errors in the assigned tasks. The leader takes corrective actions before the issue becomes problematic (Bass & Riggio, 2006).

The third facet of transactional leadership style is management-by-exception passive (MBE-P). MBE-P is a reactive dimension of transactional leadership. The leader passively looks for problems to arise, mistakes to occur, and errors to be committed before taking a corrective action. In health and safety related issues, leaders should display MBE (A). Leaders should also employ MBE (P) especially when they have to lead a large number of followers directly reporting the leader (Bass & Riggio, 2006).

Laissez Faire Leadership Style

Laissez faire is a French term (means leave it alone or let do) that emerged to express political economic policies suggesting that the things should be given total freedom to take their own course. Laissez faire doctrine advocated that government should not intervene in marketplace (Sheffrin, 2003). In 1774, the classical economists George Whatley and Benjamin Franklin made first known use of the term laissez faire in their book *Principles of Trade* (Usher, 1931).

In the leadership literature, the laissez-faire factor emerged from an experimental study conducted on a boys' club by Lewin et al. (1939). Such leaders showed indifference, postponed, and avoided decisions (Bass, 2000). Laissez faire activities are based on postponing decisions and withdrawing responsibilities. It is characterized as a 'hand off' leadership mode in which no feedback and assistance is provided to subordinates (Northouse, 2004).

Laissez faire leadership style is the deficit and escaping from leadership. It is by definition passive in nature and most ineffective according to a fair share of research conducted on FRL Model. It involves non-transaction and avoidance of leadership responsibilities. Power is no longer utilized. Indifference is shown toward leadership tasks by avoiding important decisions (Bass & Riggio, 2006).

In fact, laissez faire leaders not at all lead the organization. They call the team to seize the responsibilities. They neither give any guidance to their subordinate nor do they enforce them to comply with any order or commitment (Shamir, Zaky, Breinin, & Popper, 2000). Laissez faire leaders are inclined toward suspending leadership duties, are not present when required, do not follow suit when requested for support, and say no when asked to share their views on important matters (Bass, 1998). In the same manner, the avoidant decision style is related to problems in taking initiatives in decisional scenarios. Such people are unable to act upon their intentions (Scott & Bruce, 1995).

Gardner and Stough (2002) discovered the salient characteristics of laissez faire leaders. They were incapable of recognizing and expressing their personal and others feelings and emotional states. This style is considered as the most unproductive style in which the leader intentionally ignores his or her responsibilities of supervising

subordinates (Bass & Avolio, 1994). Individuals opting laissez faire leadership provide miner assistance to their subordinates, are inattentive when their presence is vital for task completion. Female are less likely to adopt laissez faire leadership style (Eagley & Johannessen-Schmidt, 2001).

Decision Making

Decision making is an ancient art. In the middle of the 20th century, telephone executive Chester Bernard published *Functions of the Executive* and introduced the term *Decision Making* into the business world after acquiring it from public administration and gave a comprehensive analytical picture of decision making in organizations (Buchanan & Connell, 2006). Decision making is a multidimensional and multifaceted phenomenon (Riaz, 2009). The construct of decision making style can be viewed as an individual (Tversky & Kahneman, 1974), group (Schweiger, Sandberg, & Ragan, 1986) or organizational-level phenomenon (Miles & Snow, 1978). The scope of decision making is encompassing numerous diverse disciplines including philosophy which involves ethics and values. Economics analyzes utilities and probability. Sociology and social psychology concentrate on group processes. Law, anthropology and political science focus on society and environmental issues. Mathematics involves models and simulations. Finally, psychology focuses on the understanding of individual differences, personality, changing behaviors, and the role of perceptions in decision making (Harrison, 1999).

Driver (1979) and Harren (1979) state that usual habits of people to interpret the information related to a decision and responding to a situation requiring decision refers to

his or her decision making style. Several researchers (Rayner & Riding, 1997; Sternberg, 1997) defined decision making style in terms of cognitive style that is related to information processing aspect of mind. However, Scott and Bruce (1995) suggested that decision making styles has broader spectrum than a simple cognitive style. Driver (1979) has explained that a decision style is just a habitual response of an individual in decisional scenarios. Harren (1979) explains that first individuals perceive a decision situation and then give response through decisive actions.

The empirical work on decision making styles is broad in scope ranging from routine life consumer decision making styles (Park, 2007) to the most important foreign policy related decisions that determine the destiny of the nations (Driggers, 1997). Similarly career related decisions (Di Fabio, Palazzeschi, Peretz, & Gati, 2012) and mate selection decisions also hold great importance in real life scenarios (Shiloh & Shenhav-Sheffer, 2004). During the last century, decision researchers proposed different styles in different contexts.

Historical Background of Decision Making Styles

Decision researchers (Scott & Bruce, 1995) defined decision making style as "the learned, habitual response pattern exhibited by an individual when confronted with a decision situation" (p. 820). Carl Jung is honored for pioneering the scientific investigations on decision making styles. Jung's (1923) work left enormous influences on management research. Jung (1923) proposed that people solve problems by using four modes including sensing (perception via senses), thinking (it provides understanding and meaning), feeling (it makes assessments and judgments), and intuition (which informs

regarding futuristic possibilities). Management researcher Keegan (1984) worked on the same lines and explained managerial decision making from Jung's (1923) perspective.

Riaz (2009) states that researches on decision making styles have long history occupying a century (see Annexure J). Jung (1923) pioneered this work in early 1900s. Mitroff and Kilmann (1975) identified two styles including sensing-intuition and thinking-feeling. Johnson (1978) proposed dual processes for collecting and analyzing the decisional information. Decision researchers (Arroba, 1977; Harren (1979) identified three styles including rational (decision based on logic, reasoning, and rationality), intuitive (decisions governed through feelings, emotions, and hunches), and dependent decision making styles (consultative and participative decision in which other's opinions and expectations are considered). Phillips, Pazienza, and Ferrin (1984) identified another style known as avoidant decision making style (indecision, avoidance, and postponement of the decision scenario).

On the basis of the cognitive complexity and values orientation, decision researchers (Rowe & Mason, 1987) proposed four styles including behavioral (friendly and sociable), conceptual (insightful, flexible, intuitive, adaptive and elastic), analytical (control-oriented, intellectual, rational, logical, and consistent), and directive (power-oriented, practical, realistic, and authoritarian). Mann, Harmoni, and Power (1989) identified two broader categories of decision making styles including adaptive (self-confidence, watchfulness, alertness, and careful attention) and maladaptive style (dread, ambiguousness, and arrogance). Mann et al. (1989) introduced five styles including vigilant, self-confident, evasive, complacent and panicked. Hunt, Krzystofiak, Meindl, and Yousry, (1989) appeared with analytic, intuitive, and mixed type.

Decision researchers (Driver et al., 1990; McKenney & Keen, 1974) conceptualized decision making styles in terms gathering and processing the decision making information. The first dimension comprised of two types of behaviors including receptive and perceptive behaviors. In the same manner, the second dimension also consisted of two types of behaviors including intuitive and systematic behaviors. Driver et al. (1990), in their decision style model combined two dimensions including the degree of information used and solution focus and proposed five decision making styles including decisive (satisfier and multifocus), hierarchic (maximiser and multifocus), flexible (satisfier and unifocus), integrative (maximiser and multifocus), and systemic (combination of integrative and hierarchic).

Scott and Bruce (1995) based their model on the work of Driver (1979) and Driver et al. (1990) and introduced five decision making styles. Scott and Bruce (1995) realized a deficiency in existing model and explained that theoretical skeleton of research on decision making style was unclear. One of the many reasons for this ambiguity resided in the unavailability of appropriate tools to analyze research data on these styles. Scott and Bruce (1995) bridged this gap by developing a well-designed instrument which measures five decision making styles including rational, intuitive, dependent, avoidant, and spontaneous decision making style. Mann et al. (1997) proposed six decision making styles including vigilance, hyper-vigilance, buck-passing, rationalization, procrastination, and defensive avoidance. Yousef (1998) while working on participative decision making appeared with five distinct decision making styles including autocratic style, participative style, delegatory style, and consultative style. Nygren and White (2002) discovered three decision making styles including analytical, regret-based, and intuitive. Finally,

Lizarraga, Oliver, and Baquedano (2005) proposed ten decision making styles (see Annexure J).

Thus the literature on decision making styles is multidimensional in nature and many researchers developed many scales to measure these decision making styles or related factors (see Annexure K) but no attention was focused to develop instruments to measure decision making situations. Thus in the present study—contrary to the traditional trends—attention is focused to develop an instrument to measure decision making situations in the modern organizations.

Decision Making Styles

A century of research work on decision making styles shared valuable insights that help to draw and understand a broader picture about the nature, forms, functions, and outcomes of decision making styles. A fair share of literature on decision making styles (see Annexure J) is evident that most of the people opt two styles including rational and intuitive decision making style (Arroba, 1977; Nygren & White, 2002; Harren, 1979; Hunt et al. 1989; Mitroff & Kilmann, 1975; Scott & Bruce, 1995). Decision researchers also suggestive that some other strategies of decision making are also used by the people including dependent (Arroba, 1977; Harren, 1979; Scott & Bruce, 1995), avoidant (Johnson, 1978; Mann, Burnett, Radford & Ford, 1997; Phillips et al., 1984; Scott & Bruce, 1995), and spontaneous style (Johnson, 1978; Scott & Bruce, 1995). Scott and Bruce (1995) integrated these five styles and the decision making styles proposed by Scott and Bruce (1995) appeared as the well-researched styles in behavioral decision research (see Annexure L). Decision styles and related researches are as follows:

Rational Decision Making Style

Rational decisions are connected with objectives in a logical manner. Solutions obtained from rational analysis follow a sensible sequence for the decision maker. Rational decision making is based on the deliberate analysis and evaluation of alternatives to reach at an ideal goal through most effective means (Gross, Crandall, & Knoll, 1980). Numerous researchers (Chartrand, Rose, Elliott, Marmarosh, & Caldwell, 1993; Mau, 1995; Mau & Jepsen, 1992; Harren, 1979) suggest that it is an ideal style of decision making. It is linked with numerous individual, group, and organizational outcomes. A good deal of literature advocates the prominent assumption about the decision making is that it must be rational. Thus "the rationality assumption has come to constitute perhaps the most common and pivotal assumption underlying theoretical accounts of human behavior in various disciplines" (Shafir & LeBoeuf, 2002, p. 492).

While studying the role of personality in rational choices Hough and Ogilvie (2005) discovered that it is positively associated with sensing-feeling dimension of MBTI and constructive personality dimensions of the Big Five Personality Model including agreeableness and conscientiousness (Nygren & White, 2005). Watt (2000) revealed that many types of positive behaviors are also positively related to rational style. In the same manner, people having internal locus of control make rational choices in decision making (Nygren & White, 2005; Scott & Bruce, 1995; Thunholm, 2004). Researchers (Smith, 2005; Nygren & White, 2002) discovered that learning and performance based goal orientations are positively related to rational style of decision making. Left mode of thinking which is related to logical decision making was positively related to rational

outcomes (de Bruin et al., 2007). Mau (2000) discovered decision making self-efficacy is positively correlated with rational style. Although rational decision makers effectively handle the entire decisional scenarios and related issues but evidences for the superiority of rational decision style are inconsistent (Philips et al., 1984; Phillips & Strohmer, 1983). It is related to low levels of innovativeness, high ratings of social desirability (Scott & Bruce, 1995; Thunholm, 2004), low risk seeking (Barber, 2005; Nygren & White, 2002), and high groupthink (Johnson, 2001).

Intuitive Decision Making Style

Intuitive style is characterized by reliance upon hunches, gut feelings, instincts, experience, and impressions (Scott & Bruce, 1995). Affect and intuition were neglected in the judgment and decision related literature for a long period of time. Judgment was considered as risk perception and decision making as a cognitive process which depends upon rational analysis and careful evaluation of alternatives. The scene went on transition in the beginning of 1980s when decision researchers shift their focus from rational analysis to intuitive and from cognitive processes to emotional side of decision making (Bohm & Brun, 2008). Now-a-days researchers rely on intuition which was explained by recently advanced neuroscience and psychology as an experimental phenomenon governed by tactic knowledge. Affect and emotions are considered 'hot topics' in decision literature (Peters, Vastfjall, Garling, & Slovic, 2006) that were regarded 'neglected topics' in the past (Bohm & Brun, 2008). Intuitive style gained increased fame in the past years (Hogarth, 2001).

This style is related to complex rule based, knowledge based and rule based behaviors (Watt, 2000). Novicevic, Hench, and Wren (2002) illustrates that intuition in decision making is the brainchild of Chester Bernard (1938). His work related to tactic knowledge was principally inspired by Pareto (a sociologist in Italy) and by Gestalt psychology. Now-a-days researchers rely on intuition which was explained by recently advanced neuroscience and psychology as an experimental phenomenon governed by tactic knowledge. Interplay of cognitive and affective processes results in intuition (Sinclair & Ashkanasy, 2005). Intuition is rapid, mechanical and effortless (Kahneman, 2003). Thus, without involving in minute things, intuitive decision makers look for overall context. They focus on futuristic potentials; imagine possibilities; welcome opportunities by perceiving them innovative and creative; and like transformational; and attempt to design overall plan.

Intuitive style is linked with intuitive/thinking dimension of MBTI (Hough & Ogilvie, 2005) and positively rated to personality dimension of NEO-PI including agreeableness and conscientiousness (Nygren & White, 2005). It is positively correlated with internal locus of control (Nygren & White, 2005; Scott & Bruce, 1995; Thunholm, 2004), innovativeness, low social desirability (Thunholm, 2004), high self-esteem (Nygren & White, 2005), and more risk seeking (Barber, 2005; Nygren & White, 2005). Self-regulation among bank managers (Hassan, Hayye, & Riaz, 2009), self-efficacy among students (Batool, 2006), earning self-esteem among military officers (Thunholm, 2008), and belief in personal control among air force personnel (Batool, 2003). Researchers (Bergstrand, 2001; Callan & Proctor, 2000; Kuypers, 1997) suggested that it is more desirable in military settings characterized by risk, uncertainty and ambiguity. In

the same manner, transactional (Riaz, 2009) and transformational leadership style (Downey, Papageorgiou, & Stough, 2006) among male and female managers respectively were positively associated with this style.

It is marked by increased self and environmental awareness (Singh & Greenhaus, 2004) and leaders using this style usually accept the self-responsibility of their choices (Harren, 1979). Experience assists in intuitive decision making but it is not a byproduct of experience (Tasdelen, 2001). Intuitive decision makers conceptualize risk as a whole instead of analyzing components of risk. Another important strength of this style is emotional self-awareness (Hablemitoglu & Yildirim, 2008). Intuitive decision making leads to effective decisional choices. Its benefits include quickness, inventiveness, patience for uncertainty, capability to visualize the issues and their probable answers (Bergstrand, 2001). Intuitive decision style is positively associated with sensation seeking (Baiocco et al., 2008), while investigating the attitude toward thinking and learning. Galotti et al. (2006) illustrate that this style is linked with connected knowing, right thinking approach involving intuitions and feelings, and negatively correlated with left thinking approach which is based on logical and analytical processes.

Intuitive decision making style positively predicts job satisfaction and process (job search) satisfaction (Crossley & Highhouse, 2005). Intuitive style in interaction with rational and dependent decision style leads to person-job fit (Singh & Greenhaus, 2004). Non-significant results are found about intuitive decision making style with respect to negative stress (Thunholm, 2008), competence in decision making (de Bruin et al. 2007), decision planning, and approaches in the direction of learning and thinking (Galotti et al., 2006). Similarly, decision related difficulties are positively associated with intuitive style

(Shiloh & Shenhav-Sheffer, 2004). However intuitive decision making style has significant positive correlation with decision outcomes (de Bruin et al., 2007). Intuitive decision makers have high personal need for structure (Blais et al., 2003), high in groupthink (Johnson, 2001), and high in social loafing (Henningsen, Cruz, & Miller, 2000). This decision making style is prominently present among collectivist cultures (Brew, Hesketh, & Taylor, 2001).

Dependent Decision Making Style

Dependent style is defined in terms of a quest for advice and guidance prior to make a worthy decision. Dependent strategy is based on consultation and participation of other individuals' opinions and making a consensual choice (Scott & Bruce, 1995). In career decision making, dependent strategy involves getting assistance form others before making a decision (Harren, 1979). In organizations, superior decisions are made by individual decision makers merely, by consultation with others, and by functioning collectively (Nutt, 1999). The qualities of the persons invited for suggestions and the nature of participation determines that effectiveness or ineffectiveness of the resultant decisions. In this regard, the most important factors are decision quality and decision acceptance (Vroom & Yetton, 1973). Williams (2003) argues that the core feature of leader's productive decision making style resides in the leader's ability to produce a chance for a conversation that could bring a shared understanding of the problem. Such sharing makes the issues, solutions and resultant choices a collective responsibility.

To some extent, almost all the decisions are influenced by other people, their opinions, advices, and expectations. It is important for realistic assessment in decisional

choices (Phillips et al., 2001). Nevertheless, the quality of information, reliability of suggestions and support is based on the capability and limitations of the individuals invited for assistance. The possibility exists that information provided by people is inconsistently reliable and accurate that may be less likely to benefit in the understanding of self and decisional scenario. Thus, too much reliance of dependent decision making style results in decreased validity of the information, decline in accuracy of awareness, and downfall in decisional effectiveness (Singh & Greenhaus, 2004). Phillips (1997) and his colleagues (Phillips et al., 2001) while working on the extended conception of participation in decision making proposed that in relationally oriented decision making, too much reliance on others' information and guidance (i.e. increased use of others) leads to relatively less effective choices.

Scott and Bruce (1995) illustrates that this style stems from the trouble in performing the 'thoughtful intellectual process' which means being preoccupied by troubling thoughts while making a decision. Dependent decision makers are unwilling and lacks in ability to take personal responsibility of a decision. Contrary, they act upon the opinions, expectations, and desires of their peers and authority in order to overcome the fear of failure and rejection. Dependent decision makers are compliance, have high need for approval, and feel their environment incapable of providing limited alternative solutions (Harren, 1979). Scott and Bruce (1995) explain that it is positively associated with external locus of control (Scott & Bruce, 1995). In this way, dependent decision makers try to get rid of responsibility. But whatever the outcomes are, they are accounted accountable for their decisions (Argyropoulou & Sidiropoulou, 2003). Generally,

dependent decision making style is negatively evaluated in the literature (Scott & Bruce, 1995; Fischhoff, 1992; Blustein & Phillips, 1988).

Nature of the decision dependency determines its usefulness and uselessness. Dependence on others for the sake of getting their participation results in constructive reactions by followers and superiors but dependence for learning results in unfavorable outcomes (Hablemitoglu & Yildirim, 2008). Foels, James, Mullen, and Salas (2000) found that giving permission to the members of a work group to participle in decisions increased their satisfaction. The consultation of others can be more appropriate when it is integrated either with rational or intuitive decision making style (Singh & Greenhaus, 2004). Driver et al. (1993) illustrate that people are inclined toward using more than one decision-making style in spite of the fact that one style is dominant. Beside all this, dependent style is negatively evaluated because it is considered a byproduct of insufficient awareness regarding self and the environment of the decision maker (Philips et al., 1984). Dependent decision making style is positively associated with perceived stress (Batool, 2003).

Furthermore, it is associated with transformational leadership style (Tambe & Krishnan, 2000), transactional leadership style (Riaz, 2009), basic and earning self-esteem (Thunholm, 2004), self-efficacy (Batool, 2006), and belief in personal control (Batool, 2003). In interaction with rational and intuitive style, it leads towards person-job fit (Singh & Greenhaus, 2004). Non-significant findings were found on dependent decision making styles with respect to decision making competence and decision outcomes (de Bruin et al., 2007), attitudes toward thinking and learning, decision

planning (Galotti et al., 2006) and negative stress (Thunholm, 2008). Dependent decision style is negatively related to self-regulation (Hassan, Hayye, & Riaz, 2009).

Avoidant Decision Making Style

Avoidant style is defined as an attempt of avoiding decisions whenever possible. It involves indecisiveness, deferring, evading, and postponing decisions and keeping oneself away from decision scenarios (Scott & Bruce, 1995). Russ, McNeilly, and Comer (1996) found negative correlations between avoidant decision making style and first level managers' effectiveness. Loo (2000) discovered that positive correlation exits between the avoidant style of decision making and avoidant style of conflict management which shows that people involved in decision avoidance are also inclined toward avoiding conflicts. Riaz (2009) revealed that avoidant laissez faire style positively predicted avoidant style of decision making among top, middle, and lower level bank managers. In the same manner, Hassan, Hayye, and Riaz (2009) discovered that self-regulation among the bank managers is negatively correlated with avoidant decision making this style.

Scott and Bruce (1995) illustrated that people opting this style actually face difficulties while taking decisional initiatives and they are unable when they have to act upon their intentions. It is ineffective in nature and outcomes. It is ineffectiveness is attributed to deficits in the decision maker regarding awareness about of self and the environment (Philips et al., 1984). It was positively connected with external locus of control demonstrating that individuals with avoidant style are controlled by the external factors rather than their internal control orientation (Scott & Bruce, 1995). Decision researchers (Blais et al., 2003) illustrated that persons having high personal fear of

invalidity are reluctant decision makers who feel frustrated when errors occur, are uncomfortable regarding the costs of errors, hesitant while evaluating alternatives, and mostly delay and postpone decisions. Thus, researchers demonstrate that such individuals with high PFI are avoidant decision makers.

de Bruin et al. (2007) found that it is negatively connected with decision making competence, satisfactory decision outcomes, and decision making planning (Simons & Galotti, 1992). While investigating the action state orientation among the military officers, Thunholm (2004) discovered that hesitation vs. initiative dimension is negatively related to avoidant decision making style. Similarly, Leiter (1991), has observed among mental health workers that their levels of reduced personal accomplishment are positively related with "escapist coping "i.e. withdrawal and avoiding. Avoidant style is more frequently observed among the collectivist cultures as compared to individualistic cultures where rationality is the prime assumption (Brew, Hesketh, & Taylor, 2001).

Increased levels of stress and personality factors are two major causes of opting avoidant decision strategies. Thunholm (2008) illustrates that increased level of negative stress leads to avoidant decision making style. Batool (2006) observed that avoidant decisional strategy is positively correlated with the stress among the university students. Diagnostic and Statistical Manual-IV (2012) illustrates that people with avoidant personality disorder are unable to make decisions, avoid social situations and risk taking because of the fear of rejection and preoccupation with the feelings of incompetence. Among the public, 0.5% or 1% individuals appear with the symptoms of avoidant personality disorder. Similarly, it is inversely related to social desirability (Thunholm,

2004). Avoidant style of decision making is characterized by low self-esteem and external locus of control (Nygren & White, 2005; Scott & Bruce, 1995; Thunholm, 2004). Smith (2005) observed that both types of goal orientations including learning and performance goal orientation are negatively related to avoidant style.

Avoidant decision style has negative correlation with self-efficacy among students (Batool, 2006), belief in personal control among armed personnel (Batool, 2003), and transformational leadership (Riaz, 2009). This style displayed non-significant findings with sensation seeking (Baiocco et al., 2008), perception of risk (Hablemitoglu & Yildirim, 2008), and styles of learning and thinking (Golotti et al., 2006; Gambetti, Fabbri, Bensi, & Tonetti, 2008). Finally, it is inversely correlated with action control and types self-esteem including basic and earning self-esteem among military officers (Thunholm, 2004). Finally, Higgins (2002) illustrates that the cognitive focus of avoidant individuals is related to prevention focus instead of promotion focus.

Spontaneous Decision Making Style

Spontaneous style is defined in terms of emergency, and aspiration to complete decisional process in speedy manner. Attempts are made to take at the spot decisions involving a moment. Such judgments are impulsive in nature (Scott & Bruce, 1995). Spontaneous decision making style involves 'thought chunking' and the concentration is focused on the information as a whole instead of analyzing the information in parts (Coscarelli, 2007). Spontaneity is considered as a feature of intuition (Scott & Bruce, 1995). Positive correction between spontaneous and intuitive decision making style indicate that intuitive decision makers are programmed to make decisions in short time spans. Negative relationship between spontaneous and rational style shows that rational

decisions are not made quickly because they involve time taking processes of information in a logical order (Riaz, 2009). This discussion indicates that such individuals are prone to miss some important information in haste whereas rational decision makers are more likely to involve in too much processing. Consequently, a balanced approach in decision making can be more appropriate for effective decision making (Spicer & Sadler-Smith, 2005).

Transformational, transactional, and laissez faire leadership style (Riaz, 2009), learning and thinking related attitudes (Galotti et al., 2006), perception of risk (Hablemitoglu & Yildirim, 2008) and conflict management styles (Loo, 2000) exhibited non-significant findings in relation to spontaneous decision making style. Self-regulation (Hassan, Hayye, & Riaz, 2009) and earning self-esteem is positively correlated with spontaneous style of decisiveness. It is negatively related to competence in decision making, satisfactory decision outcomes (de Bruin et al., 2007), decision planning (Galotti et al., 2006), social desirability and negative stress (Thunholm, 2004). Individuals opting spontaneous decision making style are less innovative and have external locus of control (Scott & Bruce, 1995; Thunholm, 2004). Self-efficacy, stress among students (Batool, 2006), and belief in personal control among armed personnel (Batool, 2003) are negatively correlated with spontaneous decision making style.

Risk management, nuanced understanding of human behavior, supporting technological advancements, and overwhelming progress in cognitive science initiated new opportunities for better, faster, and smarter decision making in real life scenarios. The famous book *Blink* suggests that decision as quick as a blink are more better in the fast paced current corporate environment than prolonged rational evaluations (Buchanan

& Connell, 2006). Positive relationship between intuitive and spontaneous style (Riaz, 2009) indicates that similarity between these two styles of decision making whereas inverse relationship between rational and spontaneous style shows that individuals opting rational style avoids impulsivity in decision making (Galotti et al., 2006). Similarly this style was positively correlated with the right dimension (characterized by logical and analytical processes) and negatively related with left dimension (related to intuition and feelings) of the styles of learning and thinking (Galotti et al., 2006). Spontaneous decision making style is positively associated with sensation seeking which indicates that spontaneous decision makers are impulsive and sensation seekers (Baiocco et al., 2008).

Dual Dimensional Model of Decision Making

Decision research shows that only few people opt one dominant decision making style. Most of the people are inclined toward opting two or three decision making styles (Rowe & Mason, 1987). The majority of individuals are predisposed to adopt a dominant style of decision making which is known as primary style other then they employ backup style by adjusting their styles according to situational demands. The level of pressure experienced by managers at the time of decision making determines when they will take a shift from dominant to backup style (Driver et al., 1993). Singh and Greenhaus (2004) found that decision makers are not limited and they must not limit their selves to one strategy while making important decisions. Continually involving in multiple decisional strategies is pretty effective. Combining rational and intuitive styles with dependent decision making style increases awareness which is a byproduct of integrating these styles. In this way, the decision maker can overcome the limitations of the dependent style. Moreover, Williams (2003) illustrates that through brainstorming both left (rational) and right (intuitive) sides of the brain functions can be integrated which leads to creative problem solving and decision making.

Individuals have one primary, one secondary and one least prefer style. There exist one or more than one points of convergence between all the decision making styles (Riaz, 2009). It is one of the many reasons that most individuals employ decision styles in conjunction (Driver et al., 1993). Both intuitive and spontaneous styles rely on hunches and in both styles the information is analyzed as a whole instead of analyzing its bits. Both styles are speedy in nature (Scott & Bruce, 1995). Rational decision making is passive and time consuming, involving the mean-end analysis into a rigidly defined hierarchical rational order which neither portrays a

holistic picture of decision making nor does it remain always possible due to time constraints and the conflicts frequently arise in the ultimate objectives selection processes (Simon, 1957). Avoidant style is another passive style of decision making where decisions are postponed or avoided (Scott & Bruce, 1995). Both rational and avoidant styles are passive but the rational passiveness is due to too much deliberation and avoidant passiveness is due to withdrawing the decision responsibility with not or too less deliberation (Riaz, 2009).

This discussion implies that intuitive and spontaneous styles are active in nature whereas rational and avoidant styles are passive in nature. This activeness and passiveness resides in the underlying theory behind these styles of decision making. Another important thing to note regarding decision making styles is that the consistent research evidence shows that rational and intuitive style are effective in outcomes whereas avoidant and spontaneous style are ineffective in outcomes (see Figure 4). Therefore effectiveness and ineffectiveness of the decision making styles is driven the consistent research findings of these decision making styles and their various correlates. Thus active-passive dimension is theory based and effective-ineffective dimension is research based. These two dimensions based on the in-depth analysis of the theoretical background of the decision styles and extensive literature review of the century of research on of decision styles leads to the establishment of the Dual Dimensional Model of Decision Making (see Figure 4).

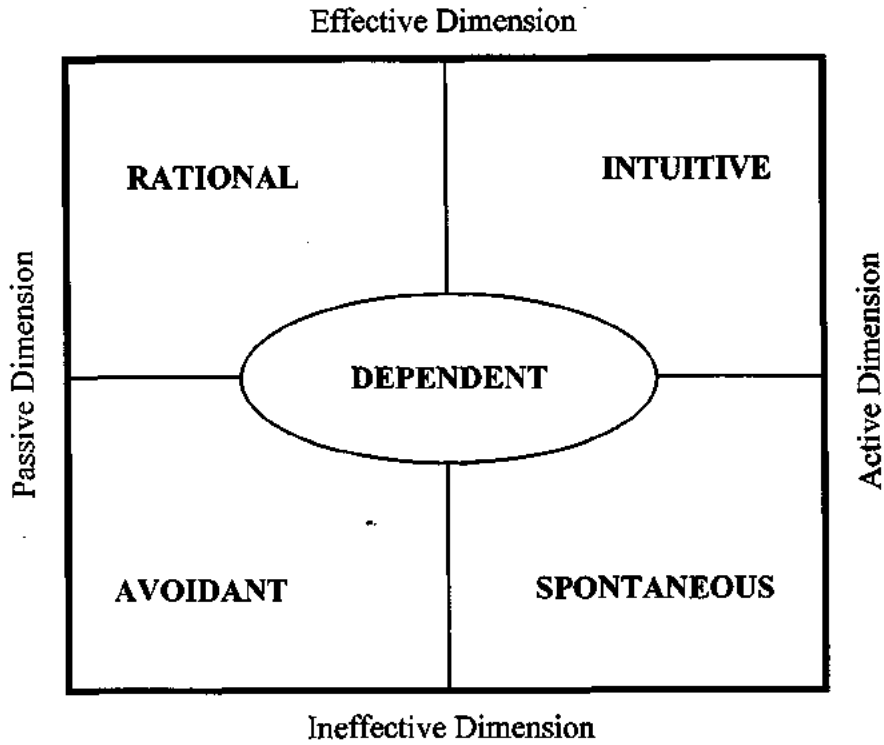

Figure 4. Dual Dimensional Model of Decision Making

Figure 4 indicates that the Dual Dimensional Model is carrying two dimension including theory based active-passive dimension and research based effective-ineffective dimension respectively. The active dimension comprise of intuitive and spontaneous style whereas the passive dimension consists of rational and avoidant style. The effective dimension contains rational and intuitive style while the ineffective dimension is encompasses avoidant and spontaneous style. In the center most of Dual Dimensional Model is dependent style which is neither active nor passive in nature. It is neither effective nor ineffective by outcomes. The utility of the dependent decision making style determines its nature and outcomes. On the active side, if it is integrated with intuitive decision making style, it helps in integrating the shared intuitions, impressions, and feelings of the people related to decisions. If it is integrated with spontaneous style, it results in impulsive consensual choices. On the passive side, if it is integrated with rational style, its outcomes are shared rational

choices. If it is integrated with avoidant style, it adds the avoidance and dependence in choices which eventually results in indecisiveness.

It can be easily understood, the integration of dependent decision making style to effective dimension (rational and intuitive style) makes is effective and its integration with ineffective dimension (avoidant and spontaneous style) makes it ineffective. This is why Singh and Greenhaus (2004) stress on the integration of dependent style with rational and intuitive style as it results in increased self-awareness. The question arises about the utility of dependent decision making style while standing alone in the model i.e. not being integrated with any dimension in the Dual Dimensional Model. In this regard, nature of dependency in the decisional process determines its effective and ineffectiveness. According to the underlying theory behind decision making styles, dependence for the sake of participation results in constructive outcomes whereas dependence for learning results in unfavorable outcomes (Hablemitoglu & Yildirim, 2008).

The preceding literature was an integration of the literature of decision making styles accompanying a century. The in-depth analysis of the above mentioned researches resulted in the integration of decision styles on two dimensions on the bases of which a Dual-Dimensional Model of Decision Making was constructed. The dimensions in the model included: (1) theory based active-passive dimension and (2) research based effective-ineffective dimension. Active dimension comprised of intuitive and spontaneous style whereas the passive dimension is related to rational and avoidant style. The effective dimension comprises of rational and intuitive style whereas the ineffective dimension consists of avoidant and spontaneous style. In the center of the model is dependent style. Nature of dependence by standing alone and the integration of dependent style to decision making style on effective and ineffective

dimensions determine the effectiveness and outcomes of dependent style of decision making. The review of literature on decision making styles was an initiative to compile a century of research on decision making styles which eventually resulted in the creation of Dual-Dimensional Model of Decision Making.

Factors Influencing Decision Making Styles

Decision styles in organizations are influenced by multiple factors. The most prominent factors include personal, situational and organizational factors. The present study incorporates all these factors in a single investigation. Decision making situations are included as situational factors, knowledge management processes are taken as organizational factors, job stress and leadership styles are taken as personal factors.

(a) Leadership Styles and Decision Making Styles

Transformational decision making is visible in a variety of organizational settings including teams, unions, departments, and institutions etc. Transformational leaders base their decisions in the greater benefit of their organizations. The present-day leaders should behave decisively and with confidence, by keeping in mind that all the decisions are being made for 'right reasons'. Even great leaders putt their best efforts to make difficult decisions. Transformational decision making is aimed at providing leaders the knowledge essential to make continually successful decisions (Brower & Balch, 2006). Creativity, innovation, change, ethics, consultation, rationality, intuition, and participation are the salient characteristics of transformational decision making.

Leadership comprises of both rational and emotional sides of human psyche. Leaders engage in behaviors and influence process which depends upon logic and reasoning. On the contrary, they based their decisions on passion and inspiration. Because people are both rational and emotional at the same time, the leader must employee rational and emotional appeals to exert influence over subordinates. At the same time, the leaders should also analyze the outcomes of the rational and emotional approaches. It is completely appreciable to integrate both sides of human nature. Successful leaders approach the feelings and emotions of their followers. Thus, emotions play a vital role in leadership (Gar, 2009).

The general idea that emerges into vision from extensive discussions of decision making styles is that they are primarily based either on logic and reasoning or they stem from gut feelings and instincts. Transformational leaders make combined use of rational and intuitive style in spite of the fact that they represent 'two ends of a continuum' which is empirically evident (Tambe & Krishnan, 2000) and distinctiveness of these two styles is by definition self-evident and shows opposite sides of a pole. In this way, transformational leaders integrate head and heart in decision making.

Tambe and Krishnan (2000) investigated that transformational style is positively associated with rational style. Transformational leaders use rational and dependent decision making style in conjunction instead of employing them separately. Transformational leadership was also significantly negatively related to avoidant style. Transformational leadership involves encouraging intellect, reasonableness, rational thinking, and vigilant problem resolving. They motivate followers to explore innovative solutions of the longstanding issues of the past (Avolio & Bass, 1988). Transformational leaders are rational and intuitive in the same time. They approach

feelings and emotions to make decisions in different situations. Researchers in a study consisting of female managers found that use of transformational style was positively associated with emotional intelligence (Downey et al., 2006).

Intuitive decision making involves emotions, feelings, instincts, passions, and impressions (Scott & Bruce, 1995). Today's organizations in the modern economic scenario are facing omnipresent, constant, and dynamic changes prevailing everywhere. These changes which are reflective of new corporate realities of work and collaboration are yielding pressures to redefine the nature of leader-subordinate ties in which emotions hold more importance. Nature of these relations may fuel, energize, spoil or block the process of change or innovation. Thus the change process is either improved or impaired just because of emotions (Kiefer, 2002).

Researchers (Andersen, 2000; Hansson & Andersen, 2001) suggest that managers employing intuitive decision making style are more likely to make effective decisions when the organizations are under a pressure for change. In a study, it was found that the principals having intuitive type were more prospective in taking good decisions during change as compared to other principals with different styles (Hansson & Andersen, 2007). Intuition is characterized as ability to sense messages from the decision maker's 'internal store of emotional memory i.e. from the inner lake of insight and judgment (Agor, 1989; Carlson & Kaiser, 1999; Chapman, 2000).

Intuition makes important contribution in successful leadership and management, mainly at top level management (Bass, 1990). Agor (1989) demonstrate that in modern organizational climate, managers are consistently working in the environment which is rapidly changing, complex, and uncertain. Such conditions necessitate that inclusion of intuition in decision making. Quinn (1980) illustrates that at times when there is ambiguity, seasoned managers are able: to size up the scenario

via intuitive synthesis, to integrate and incorporate outsized information, and handle missing information effectively.

Mood states and emotional states play a vital role in routine behaviors and work related decisions (George, 2000). Organizational personnel can be motivated for peak performance by intuitively employing these emotions (Goleman, 2000; Reed-Woodard & Clarke, 2000). Bass (1999) illustrates that "leadership is as much emotional and subjective as rational and objective in effect" (p. 18). Incorporating emotions in judgments is absolutely related to inquisitiveness, intuition, innovation, and creativity. Transformational leaders change followers' negative and destructive feelings of disappointment and helplessness into positive and constitutive feelings of taking the work as challenge by proposing substitute ways to solve problems (Avolio & Bass, 1988). George (2000) argues that leadership effectiveness in organizations is added by the ability to recognize and direct feelings, emotions, and moods in the self and others.

The transformational leadership emphasizes the significance of the leaders' ability to approach followers' emotional states and stresses the establishment of a specific emotion-laden leader-follower relationship (Humphrey, 2002; Bass & Avolio, 1994). Transformational style was found to be positively related to 'feeling' rather than 'thinking' style (Roush & Atwater, 1992). Transformational leadership can be understood as a route to magnetize and attract the great feeling of enthusiasm (Bass, Waldman, Avolio, & Bebb, 1987) and working to develop subordinates' emotional understanding of handling various scenarios. For this, transformational leaders are renowned for employing emotions for introducing vision and getting responses from subordinates (Ashkanasy & Tse, 2000; Lewis, 2000). These leaders motivate

followers by appealing their emotions in order to achieve the results that are even beyond their own anticipations (Bass, 1985).

Allinson and Hayes (1996) illustrate that individuals opting intuitive style also prefer a work climate which is dynamic, providing novel exposures, offering chances for establishing new relationships, surrounding great flexibility and openness for change. In the same manner, transformational leaders are spontaneous decision makers. Whenever the crisis knocks the organizational and the leaders are required to quickly make decisions, transformational leaders act spontaneously. The high positive correlation between intuitive and spontaneous styles reflects that the later mentioned style can be regarded as a speedy intuitive style which is employed by managers in the scenarios involving time pressures (Thunholm, 2004).

Independent use of intuitive style is not considered more effective. Thus it is considered more desirable to combine this style with rational style in order to enhance the understanding of the decisions through collecting information. By combing these two styles, head (rationality) and heart (intuition) are actually integrated which ensures competent decisions because both generate distinctive insights and consequently one style reduces the limitation of the other style (Singh & Greenhaus, 2004). Researchers (Hoch & Schkade, 1996) found that via consistently employing both head and heart, it is likely to compensate the inbuilt limitations in each style which maximizes the strengths of the individual in decision making. It is because these two styles represent 'two ends of a continuum' and are different is associated attributes (Tambe & Krishnan, 2000).

Singh and Greenhaus (2004) argue that emotions and feelings provide a valuable platform to analyze the factual information that had been collected and to test the validity of emotions and feelings related information. Consequently, the

combined use of data collected through rational style and incorporating internal feeling through intuitive styles ensures competent decisions. Researchers (Phillips, Christopher-Sisk, & Gravino, 2001; Krieshok, 1998) recommend combined use of rational and intuitive style for the sake of ensuring excellent decisions. Singh and Greenhaus (2004) discovered that people making extensive use of rational and intuitive styles in combination make successful career decisions because they attain greater levels of self and environmental awareness. It is because rationality gives environmental information whereas intuition provides self-knowledge to the decision maker.

Decision making of the transformational leaders is a collective enterprise based on information sharing. Such sharing is for the sake of followers' participation in decision making rather than learning. Transformational leadership facets idealized influence and inspirational motivation form a united single factor of charismatic-inspirational leadership. The charismatic-inspirational factor is alike the behaviors portrayed in charismatic leadership theory (Bass & Avolio, 1994; House, 1977). Participative decision making is the prime assumption of charismatic leadership (House, 1977). Leader shares risks with followers and participation is constant rather than skewed (Avolio & Bass, 2002). Thus, transformational decision making refers to thinking and acting in a manner that mirrors the common good as the leadership essential, not the individual sake (Brower & Balch, 2006).

Avolio and Bass (2002) state that "transformational leaders can be directive or participative, as well as participative or authoritarian, elitist or leveling" (p. 7). Bass and Riggio (2006) illustrate that "transformational leaders could share the building of vision and ideas that could be collective and democratic enterprise. They could encourage follower participation in the change process involved" (p. 11). High quality

advice adds effectiveness of the choices. Sharing may distort the efficacious decisions by promoting impractical suggestions, concentrating on hastily computed conclusions, and enlightening conflicting recommendations (Fischhoff, 1992). Transformational leaders are proactive to emerging problems and show willingness to make decisions under high risk (Bass, 1994).

The above discussion provides a comprehensive picture of the decision making of transformational leaders indicating that such leaders use numerous decision making strategies including rational, intuitive, and spontaneous style. Transformational leaders do not adopt dependent and avoidant style. Singh and Greenhaus (2004) illustrate that integrating various decision making styles leads to effective results. Decision researcher Driver (1979) illustrates that effectiveness of a decision making style depends upon the scenario.

Transactional leader encourage followers to execute his or her decision through reward, punishment, and use of necessary force. In the same manner, transactional decisions are employed by the means of pay, benefits, and promotions at job. Exchange of valued things keeps followers motivated (Greenwald, 2008). Transactional leadership is based on the mutual agreement to follow rules. Thus rule abiding transactional leadership is more appropriate for upholding stability in the organizations rather than promoting and instilling change (Daft & Lane, 2002).

Transactional leaders are rational, problem solvers, and decision makers. They employ logic in making decisions. They are extrinsically motivated and depend upon the subordinates' cognitions to make decisions. Passive leaders look for problems to arise in order to take decisive actions (Barbuto, Fritz, & Max, 2000). Such leaders tend to concentrate on rational thinking processes (Maddock & Fulton, 1998). Researchers (Wooten, Barner, & Silver, 1994; McKinney & Keen, 1993; Taggart &

Valenzi, 1990; Robey & Taggart, 1981) suggest that individuals preferring rational decision making style also have a preference toward a work setting which is cool, classified, stationary, inclined toward cautious routines, led by logic, planned and controlled. In the same manner, the center of attention of the transactional leaders is keep in mind the present and to try their level best to operate the organizations in 'smoothly and effectively'. Transactional leadership is more appropriate for the 'traditional management practices' like careful planning and the central focus is given to those aspects of job performance which are impersonal in nature (Daft & Lane, 2002).

Transactional leadership is economic in nature which purposively prefers rational choices to maximize benefits. Researchers (Eisenhardt & Zbaracki, 1992) suggest that "in its most basic form, the rational model of choice follows the everyday assumption that human behavior has some purpose." Additionally, rational decision making is not limited in scope to economics. In fact "the rationality assumption has come to constitute perhaps the most common and pivotal assumption underlying theoretical accounts of human behavior in various disciplines" (Shafir & LeBoeuf, 2002, p. 492).

Transactional leadership focuses more on present than future (Daft & Lane, 2002). The underlying assumption of the rule-based rational decision making also do not follows the predictions about the futuristic consequences of the decisional choices rather it focuses on the current choices in decision making (Amir & Ariely, 2003; Prelec & Herrnstein, 1993; Simonson & Nowlis, 2000). The dyadic relationship between rational and intuitive decision making style depicts that individuals making rational decisions do not involve in opting the intuitive strategies of decision making (Loo, 2000).

Career decision researchers (Blustein, 1987; Holland, 1985; Harren, 1979) argue that the key reason behind the usefulness of rational style is increased level of self and environmental awareness produced by rational choices. The inverse relationship between rational and avoidant style indicate that decision rationalists face decisional scenarios and do not withdraw decisional responsibilities (Loo, 2000; Phillips, Pazienza, & Farrin, 1984). It is because, self and environmental awareness in the byproduct of rational choices as opposed to avoidant decision making which is characterized by lack of self and environmental awareness.

It is important to note that "transactional leadership can be directive or participative, as well as participative or authoritarian" (Bass & Riggio, 2006, p. 11). It all depends on the situation that which kind of leadership style will be opted by a leader. Transactional leadership is participative and dependent as the transactional leaders depend upon the subordinates' cognitions to make decisions (Barbuto et al., 2000). Similarly, dependent decision making is characterized as the quest for others' approval and making decisions according the peoples' expectations. Such choices are not based on execution self-interests rather they attempt to satisfy others (Singh & Greenhaus, 2004).

Dependent decision making style is considered ineffective because it is based on the decision dependence. Dependent style is more effective and appropriate when it is integrated either with rational or intuitive decision making style. When analysis and intuitions are added by others' advice, they create effective solutions of the problems and decreases the impacts of dependency (Phillips, 1997). Finally, transactional leaders are considered as problem solvers and decision implementers. They mostly engage in planning, organizing and making decisions. In order to

maintain the stability in organization, transactional leadership appropriate (Leavitt, 1987).

Laissez-faire style was found to be inversely connected with emotional intelligence which indicates that deficits in the emotional intelligence leaders to the avoidance and absence of leadership (Gardner & Stough, 2002). Due to the deficits in emotional intelligence, laissez faire leaders ignore responsibilities, are not present when required, fail to entertain the requests for support, and do not express their issues on critical issues (Bass, 1998). Laissez-faire leadership style is characterized as non-leadership. Laissez faire leaders are avoidant, irresponsible, reluctant, ignorant, inexpressive, and indecisive. Laissez faire leaders shift mass control to subordinates during the process of decision making. Laissez-faire leaders never offer guidance and support (Jones & Rudd, 2007).

In the decision making process, laissez faire leaders are totally dependent upon their follower (Shamir et al., 2000). Decision researchers Scott and Bruce (1995) negatively evaluate dependent decision making style. People opting dependent style in decision making have deficits in self-confidence, are unsure about their abilities to fulfill decisional responsibilities. Dependence of laissez faire leaders is completely for the sake of learning or transferring self-responsibilities over others which is negative in outcomes. Finally, Loo (2000) illustrates that people adopting avoidant decision making style do not make rational decisions.

(b) Decision Making Situations and Decision Making Styles

Managerial decision style is prominently influenced by decision making situations. Bass and Reggio (2006) explain that decision making of the leaders exclusively dependents on the situation. Brunswick (1957) illustrates that psychology

should consider individual and context as two equal partners while understanding a specific human behavior. Thus, the decision making style is an outcome of person-situation interaction. Researchers use multiple nomenclatures to describe decision situations including decision making environments (Schermerhorn, Hunt, & Osborn, 2005), decision making contexts (Griffin, 1997), and decision making situations (Cooke & Slack, 1984; Elbing, 1978; Griffin, 1997; Huber, 1980; Natale, O'Donnell, & Osborne, 1990). Beside these terminological differences, the researchers' main aim is to describe the scenarios of decision making in organizations. Decision making situations can be broadly classified into three categories (see Figure 8) including certainty, risk and uncertainty (Huber, 1980).

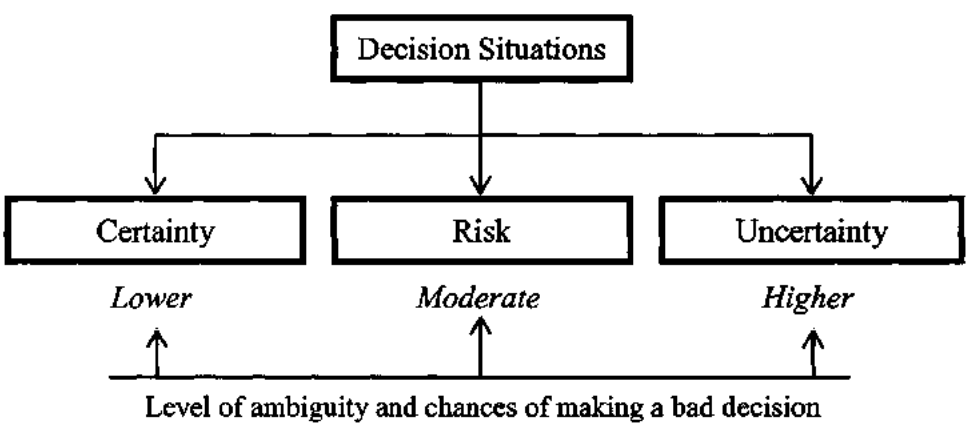

Figure 5. Model of Decision Making Situations and Associated Attributes: Adopted from Griffin (2012)

Certainty. In decision making situations involving certainty the leader has complete knowledge of all possible alternatives and their associated consequences. Not only the possible options related to a specific decision are known, instead, the outcomes of every option are also predictable and known (Cook & Hunsaker, 2001). Decision certainty involves low ambiguity and consequently the tendency of making a bad decision is reasonably low (Griffin, 2012). Most of the managers try to reduce

uncertainty and ensure certainty in order to make a better decision (Greenberg & Baron, 1993). Thus certainty is more appropriate for making important decisions in organizations (Greenberg & Baron, 1993). Individual have a general tendency to prefer an outcome which is more certain as compared to an outcome which is less certain (Kahneman & Tversky, 1981). The decision making certainty can be differentiated from decision making risk and uncertainty on following bases:

1. Decision Structure: Decision situations involving certainty are well-structured, well-organized, pre-planned, routine, repetitive, and based on simple tasks. Decisions are made with the help of pre-established rules, policies and procedures (Greenberg & Baron, 1993; Harrison, 1987; Moorhead & Griffin, 1998).
2. Decision Resources: Enough time and complete information required for decision making is available in decision situations involving certainty (Moorhead & Griffin, 1998). Due to the repetitive nature of decisions, the decision maker already had the experience of similar decisions.
3. Decision Outcomes: Decisions involving certainty are based on predictable and known outcomes (Cook & Hunsaker, 2001). The decision maker is already familiar with every alternative and the outcomes of a specific course of action (Griffin, 1211).

Cook and Hunsaker (2001) argue that "certainty is the exception rather than the rule in most managerial decision making situations—complete information and guaranteed outcomes are rare" (p. 422). Due to ambiguity and rapidly changing business scenarios, only a limited number of organizational decisions are made under certain situations (Huber, 1980). Most of the important decisions are made under the situations of risk and uncertainty (Griffin, 2011).

Risk. Decision making under the conditions of risk involves known probabilities (Wu, Zhang, & Gonzalez, 2004). Cook and Hunsaker (2001) illustrate that during the evaluation of the alternatives, the probability of success and the associated risk of negative outcomes must be taken into consideration. Situations involving risk encompass moderate level of ambiguity and moderate probability of making bad decision (Froot, Scharfstein, & Stein, 1994). Most of the organizational decisions involve some degree of risk (Greenberg & Baron, 1993). The decision making risk can be differentiated from decision making certainty and uncertainty on following bases:

1. Decision Structure: The situations are relatively less structured and decisions are made under the conditions of doubt, confusion and moderate ambiguity (Griffin, 1211; Wu et al., 2004).
2. Decision Resources: Decision situations involving risk are based on limited time and a little information required for making decisions (Williams, 2003).
3. Decision Outcomes: Decisions involving risk are based on probability of costs, benefits, success, and failure. Chance factors determine the effectiveness and ineffectiveness of a decision. The results of decision are based on known probabilities (Cook & Hunsaker, 2001).

Wu et al. (2004) illustrate that most of the time important organizational decisions involve uncertainty rather than risk. Griffin (1997) illustrates that majority of the organizational decisions in the current corporate environment are made under the situations of uncertainty.

Uncertainty. In decision making, uncertainty is viewed as the absence of certainty (Hubbard, 2010). Decision making under the conditions of uncertainty

involves unknown probabilities (Wu et al., 2004). The decision maker is unfamiliar with the alternatives and the outcomes associated with every alternative (Cyert & DeGroot, 1984). Situations involving uncertainty encompass high level of ambiguity and high probability of making a bad decision (Griffin, 2012). The decision making uncertainty can be differentiated from decision making certainty and risk on following bases:

1. Decision Structure: Decisions under uncertainty comprise of unclear, uncertain, complex, ill-defined, unique, novel, unusual, abstract, subjective, vague, disorganized, ambiguous, and unstructured problems (Cooke & Slack, 1984; Greenberg & Baron, 1993; Moorhead & Griffin, 1998).
2. Decision Resources: Limited information required for making decisions is available and the decisions are made under extreme time pressure (Moorhead & Griffin, 1998).
3. Decision Outcomes: The outcomes of decision under uncertainty are unknown and unpredictable (Cook & Hunsaker, 2001).

Along with risk and uncertainty, an extreme form of uncertainty is known as turbulence which is mostly faced in crisis and emergencies with complete absence of the understanding regarding alternatives and associated consequences (Natale, O'Donnell, & Osborne, 1990).

Decisions of the leaders are situation specific (Bass & Reggio, 2006). It is worth noticing that choice of a decision making style is directly linked with the decision making situation (Scott & Bruce 1995) because decisions are just responses to the situations requiring managers to react in terms of decisive actions. Thus one i.e. decision making style cannot be separated from the other i.e. decision making situation. An appropriate match between the decision making style and decision

making situation determines managerial decision effectiveness. Managers use primary, secondary and least preferred decision making style across three decision making situations. Only few people limit themselves to a single style of decision making. Most of the people use two or three decision making styles (Rowe & Mason, 1987). Decision researchers also favor the use of many styles in decision making instead of sticking to one rigid style (Singh & Greenhaus, 2004). In fact by definition, the style-shift from one to the other splits a style from the traits which are relatively more stable and long lasting (McCrae & Costa, 1990). Thus managers have a dominant style of decision making which they most frequently use in their decisions. The dominant style is also known as primary style of decision making. Beside the dominant style, the managers use other styles of decision making as backup styles. Thus managers have a secondary style of decision making which they use when primary style is not effective. Similarly the managers have a least preferred style of decision making which they use most infrequently (Driver et al., 1993).

In certainty the leader has complete knowledge of all possible alternatives and their associated consequences. Thus clear information and low levels of ambiguity makes it ideal to use rational style as primary style (Scott & Bruce 1995). In certainty managers usually make competent decisions can be made by using rational style. Thus in times of certainty, using high speed intuitive or spontaneous style is neither needed nor appropriate. Managers have to take decisions under risk and uncertainty in spite of the fact that certainty is ideal for making decisions (Greenberg & Baron, 1993). Thus in the beginning, it is more appropriate to change the risk and uncertainty into certainty before making a decision. Risk and uncertainty can be converted into certainty by collecting relevant information (Griffin, 2011). Usually two types of decision making styles can be used as dominant style while converting the risk and

uncertainty into certainty. Information can be collected either from relevant people or from the other sources. Thus rational decision making style can be used as a primary style for collecting relevant information. Similarly, dependent decision making style can be used as dominant style in order to collect information from the relevant people.

Risk and uncertainty require prompt decisions in limited time. Thus it is more appropriate to use intuitive decision making style to make a speedy decision because. Although spontaneous style also helps in making speedy decisions but it is viewed negatively because, managers miss important information while making decisions in haste (Spicer & Sadler-Smith, 2005). Thus a better alternative is intuitive style which also involves high speed decisions. Researchers (Bergstrand, 2001; Callan & Proctor, 2000; Kuypers, 1997) suggest that under the conditions of risk and uncertainty, it is more suitable to make use of intuitive style.

(c) Knowledge Management Processes and Decision Making Styles

Decision making of transformational leaders is aimed at providing leaders the knowledge essential to make continually successful decisions (Brower & Balch, 2006). Similarly, transactional leaders are rational problem solvers and decision makers. They employ logic while making important decisions (Barbuto et al., 2000). Rationality is an important aspect of leadership in organizations (Gar, 2009). Rational decisions involve objectively collecting, analyzing, evaluating information before making final choices (Scott & Bruce, 1995). The rational decisions of transformational and transactional leaders are assisted by knowledge management processes in the modern organizations.

Knowledge management involves the processes of creating, modifying, using, archiving, transferring, translating, accessing and disposing the knowledge in the

organizations (Bergeron, 2003). Knowledge management has gained much popularity in the current decade although its existence can be traced back in the history (Kucza, 2001). Knowledge exists in multiple forms including human, consumer and structural capital—broadly labeled as intellectual capital of an organization (Bergeron, 2003). Knowledge management helps in the excellent utilization of these organizational resources (Bollinger & Smith, 2001). Leadership plays a central role in knowledge management (Bryant, 2003). The association between leadership and knowledge management is well-researched (Bryant, 2003; Johnson, 2002; Politis, 2001). Leaders deals with knowledge in organizations at three levels including individual, group and organizational level (Bryant, 2003). Gowen, Henagan, and McFadden (2009) state that transformational leaders make improvements in overall knowledge management processes in health care institutions. Crawford (2005) discovered that transformational leadership contributed 19.5% variance in knowledge management. While investigating the role of leadership styles in knowledge management, Politis (2001) found that leaders having behavioral and interpersonal skills were more effective in knowledge management process. These skills are integral part of transformational and transactional leadership (Avolio & Bass, 2002).

Knowledge management is directly linked with decision making (Skyrme, 2002). Both knowledge management and decision making involves three levels including individual, group and organizational levels (Bryant, 2003; Harrison, 1999). Similarly, both knowledge management and rational decision making involves step by step procedures (Bergeron, 2003; Hellreiegel, Slocum, & Woodman, 2001; Hendry, 2000; Harrison, 1987; Wedley & Field, 1984). Nutt (1984) illustrate that rational decision making involves identifying problems, defining objectives, making pre-decision, generating alternatives, evaluating alternatives, selecting alternatives,

implementing choice and follow up. Other researchers (Chater, Oaksford, Nakisa, & Redington, 2003; Mangalindan, 2004) limit rational decision making processes to some few steps. However in the entire process, knowledge-oriented managers objectively process entire information to make a decision. Holsapple (1995) illustrates that knowledge management processes not only influences overall process of the decision making but also influences different steps involved in the process of making decisions (Nicolas, 2004). Different processes of knowledge management incorporate decision support tools which help in the decision making processes (Bergeron, 2003). The present study also aims to investigate the moderating role of knowledge management processes between transformational, transactional style and rational style.

(d) Job Stress and Decision Making Styles

Past research (Batool, 2007, Thunholm, 2008) illustrates the direct and indirect effect of perceived and actually experienced stress on decision making styles. Stress effects on the problem framing and decision making of the managers (Miller, Fagley, & Casella, 2009). Avoidant decision making style is an outcome of the higher levels of perceived stress (Batool, 2007; Thunholm, 2008). Thus, most of the decision makers in organizations perceives or experiences certain level of stress during decision making—in spite of the fact that the level of stress very across occupations (Keil, 1999; The Independent, August 7, 2000).

The more chronic affect triggers more impairment in decision making process. This explanation is consistent with clinical literature suggesting that individual's negative emotions distort the cognitive capacities and interrupt the cognitive processing which is involved in decision making (Raghunathan & Pham, 1999). It is

believed that process of information is interfered by negative emotions such as anxiety, depression and stress (Ellis & Ashbrook, 1988; Eysenck, 1982). People experiencing negative emotions possess narrow attention span therefore unable to explore unique alternatives resulting in impairment of decision making (Fiedler & Forgas, 1988).

Researchers demonstrated that behavior toward events is strongly dependent upon person's cognitive appraisal regarding that event. Moreover one event is differently interpreted by different individuals and their behavior is always consistent with their cognitive appraisal regarding events not related to the event itself (Raghunathan & Pham, 1999). For instance anxious people appraise negative consequences before indulging in any behavior (Lerner & Keltner, 2000; Maner & Schmidt, 2006). This negative appraisal leads toward decision making difficulties and decisional avoidance.

Stress is associated with the strategy used in decision making process (Rassin, 2007). Evidences suggested that individuals involve in pathological affects such as depression, anxiety take decision making more difficult because they lose the ability to concentrate. Such individuals cannot process the information in more organized and critical manners that results in avoidant decision making or failure in decision making (Ellis & Ashbrook, 1988; Eysenck, 1982; Heppner & Hendricks, 1995).

Moreover, Allen, and Badcock (2003) also suggested that anxious and stressful people always avoid decision because of anticipated risk involve in them. People who possess neurotic personality always tend to avoid decision scenario because of having fear of rejection (Johnson, 1997). According to Blais et al. (2003) people having fear of personal inadequacy involve in avoidant decision making.

Neuroticism is marked with negative emotions and negative emotions are related to avoidant decision making (Batool, 2007; Shoemaker, 2010; Thunholm, 2008).

Individuals experiencing negative emotions perceive possible threats involving in decision that leads them to avoid the decision making situation (Shackelford, LeBlanc, & Drass, 2000, Maner et al., 2006). People evaluate future events pessimistically while experiencing negative affectivity (Shepperd, Grace, Cole, & Klein, 2005). This negative appraisal leads toward avoidance (Lerner & Keltner, 2000). The present study also aims to investigate the moderating role of job stress between laissez faire leadership style and avoidant decision making style.

Rationale

Leadership development is divided into four eras including pre-classical, classical, modern and post-modern era (Devine, 2008). In the post-modern era, the most recent advancements in the leadership literature are known as "new leadership approaches". Full Range Leadership Theory (Avolio & Bass, 2002; Bass & Reggio, 2006) is one of the most important theories of "new leadership approaches". Full Range Leadership Theory (FRLT) covered three leadership styles including transformational, transactional and laissez-faire leadership style. Leadership styles in this theory are well-researched. A meta-analytic study suggested that one third of the empirical studies published in the Leadership Quarterly—a renowned journal of leadership—were solely based on transformational leadership (Lowe & Gardner, 2001). Beside this substantial research, some aspects remained less researched and were considered in the recent years e.g. decision making styles of transformational, transactional and laissez-faire leaders. However, the researchers (Khan & Rehman,

2011; Riaz, 2009; Tambe & Krishnan, 2000) investigating the decision making of the FRLT reported inconsistent and contradictory findings.

This inconsistency is due to the reason that that decision making styles of leaders in the organizations are influenced by multiple factors (Rowe & Boulgarides, 1992; Yukl, 1994). The most prominent factors include personal, situational and organizational factors (Certo, Connelly, & Tihanyi, 2008; Griffin, 2012; Minett, Yaman, & Denizci, 2009; Petrides & Guiney, 2002). The present study incorporated all these factors in a single investigation. Decision making situations are included as situational factors, knowledge management processes are taken as organizational factor and job stress is taken as personal factor influencing decisions. Thus the present study is based on investigating the moderating effect of decision related factors on the relationship between leadership styles and decision making styles. The most prominent reason behind the inconsistent results of the prior studies on the decision making of the Full Range Leadership Theory is explained by the theory itself. The theorists (Bass & Reggio, 2006) suggested that the decision making styles of the transformational and transactional leaders are situation specific and therefore varying across contexts. Thus the present study is an attempt to bridge this gap. The present study focused on the moderating role of decision making situations in the relationship between leadership styles and decision making styles—contrary to the past research which solely concentrated on investigating the role of leadership styles in the prediction of decision making styles.

Matching leadership styles with specific situations has been well-recognized in the past literature in terms of contingency theories and leadership match theories (Fiedler & Chemers, 1974; Fiedler & Garcia, 1987). Even in the current decade, the role of situational factors in the relationship between leadership and decision making

(Bass & Reggio, 2006; Griffin, 2012; Northouse, 2007; Rahim, 2001) is fairly recognized in the literature. The situational approaches to leadership are based on the premise that an effective leader should adjust his or her style according to the demands of the situation. More specifically "in a given situations, the first task for a leader is to determine the nature of the situation" (Northouse, 2007, p. 95). Thus, "leaders cannot use the same styles in all the contexts; rather, they need to adopt their style to their unique situations" (p. 96). Due to the unavailability of an instrument, it was not feasible to study the role of decision making situations in leadership-decision making relationship. Thus firstly a scale measuring decision making situations is developed by following the model of Griffin (2012) which explains that decisions are made in three type of situations including certainty, risk and uncertainty.

The prior researches conducted on leadership styles and its relationship with decision making styles were based on "style approach to leadership" and therefore were more descriptive in nature. However, the present study is based on "situational approach to leadership" which is prescriptive or even more specifically it is based on "contingency approach to leadership" which is more practical in nature. The contingency approach integrates "styles and situations" and suggests that leaders should be flexible and before using a style they must understand the nature of situations. Thus leader's style should be contingent with the demands of the situation (Northouse, 2007). In more general terms, transformational and transactional leaders change their decision making styles while facing different decision making situations (Avolio & Bass, 2002). Poor decision making is the result of lack of match between a leader's decision making style and the needs of the situation (Fiedler, 1995). Therefore, leaders should opt unique decision making styles in unique situations (Northouse, 2007).

Besides investigating the effect of decision making situations on leadership-decision continuum, role of knowledge management processes on rational choices of transformational and transactional leaders is also being investigated. The theorists (Avolio & Bass, 2002) illustrated that knowledge management processes in the organizations are essential for making rational decisions by leaders. Similarly, the avoidant decisions of laissez faire leaders are greatly influenced by the perception of stress. Such leaders perceives leadership and decision responsibilities as stressful tasks and thus avoid decisions (Bass & Reggio, 2006).

The present study has targeted employees of services provoking organizations. Besides convenience in accessibility, the decision to select the employees of services proving organizations as sample was taken due to many reasons. First, these organizations are under the current interest of the researchers (French, 2007) whereas past research focused on manufacturing industries. Secondly, these organizations are considered the most frequently visited organizations in Pakistan and all over the world. Every individual visits these organizations at least once in life. Thirdly, stress was an important variable in the present study and occupations differs at level of stress faced by their employees. Therefore the samples targeted in the present study i.e. hospital superintendents, bank managers and head of departments in universities are also characterized as high, medium and low stress occupations respectively (McShane & Travaglione, 2004). Finally, due to the specific nature of job, most of the decisions at educations institutions are made in certainty, at banks are made in risk whereas at hospitals are made in uncertainty.

Conceptual Framework

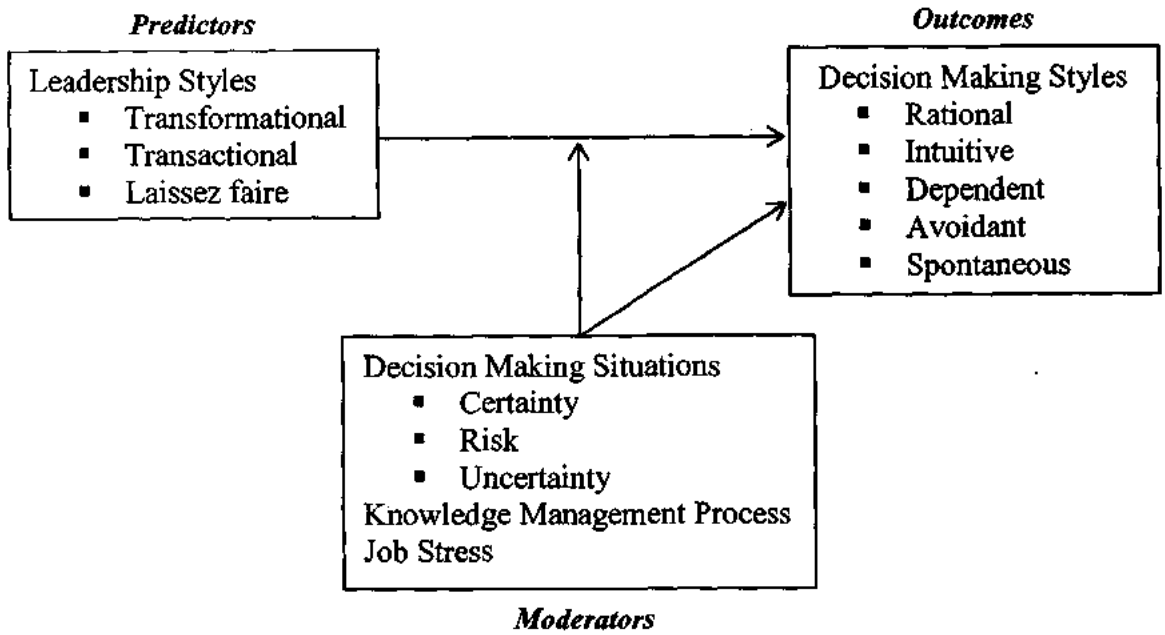

Figure 6. Schematic representation of predictors (leadership styles), moderator (decision related factors) and outcomes (decision making styles) relationship

The current study is grounded in a latest theory on leadership styles i.e. Full Range Leadership Theory. However, it is the first ever attempt to investigate the role of decision making situations in leadership-decision making relationship. The underlying research question in this study is based on the assumption that decisions of leaders are influenced by many factors out of which three important and most relevant factors are focused in the current inquiry. The theorists suggested that decisions of the leaders on FRLT are situation specific. However, any instrument to measure these decision making situations was not available. Thus, in the first step a scale was developed to measure the decision making situations including certainty, risk and uncertainty. Subsequently, role of decision making situations, knowledge management processes and job stress was investigated.

DEVELOPMENT AND EMPIRICAL EVALUATION OF DECISION SITUATIONS SCALE

METHOD

Chapter-II

Method

The present research comprised of three studies i.e. development and validation of the scale, pilot study, and main study. The Study-I of the present research is based on the development of the scale to measure decision making situations in the service providing organizations. Study-I aims to achieve the following objectives:

Objectives

1. To develop a scale for measuring decision making situations in service providing organizations.
2. To test the psychometric properties of the scale including reliability and validity examinations.

Phase-I: Development of the Items

The main objectives of the Study-I was achieved into two phases. Phase I was based on the item development process for the scale measuring decision situations. Literature on the decision making styles acknowledges that the choice of a specific decision making style depends upon the situation (Scott & Bruce, 1995). For this purpose, extensive literature review was carried out in order to understand the nature and major attributes of the decision making situations faced by leaders in the organizations. Phase-I was completed into four steps.

Step-I: Identification of Theoretically Consistent Decision Situations

In the first step, conceptually consistent theoretical descriptions of the managerial decision making situations in the organizations were identified. Broadly classified three

types of decision situations were documented and researched by the decision theorists and researchers. The decision making situations included certainty, risk and uncertainty. Beside some terminological differences, almost all of the decision theorists and researchers agreed upon these three decision making situations (Cooke & Slack, 1984; Elbing, 1978; Griffin, 2010; Huber, 1980; Natale, O'Donnell, & Osborne, 1990; Schermerhorn et al., 2005).

Step-II: Identification of Underlying Factors in Decision Situations

In the second step, after identifying the broad classifications of the decision making situations, further literature review was carried out to study the major characteristics of these three decision making situations (see Figure 10). The underlying factors that split these three decision making situations were identified. According to past literature, each decision making situation can be differentiated from the other two decision making situations on the basis of three factors including decision structure, decision resources, and decision outcomes (Cook & Hunsaker, 2001; Greenberg & Baron, 1993; Griffin, 2010; Moorhead & Griffin, 1998). Decision structure refers to the nature of the decision making task. It can be a familiar or programmed decision or a non-programmed decision. Decision structure in the decision certainty, risk and uncertainty were characterized as well-structured, less-structured, and unstructured decision situations respectively. Decision resources refer to the availability of time and the amount of relevant information available in a given time to make a decision. Decision resources in the decision certainty, risk and uncertainty were characterized as no time and information, less time and inconsistent information, and full time and complete

information respectively. Decision outcomes refer to the consequences or the results of a specific decision. Sometimes the outcomes are predictable other times are unpredictable. Decision outcomes in the decision certainty, risk and uncertainty were characterized as known outcomes, outcome based on probabilities and unknown outcomes respectively.

Step-III: Items Writing and the Selection of Rating Scale

In the third step, initial items pool was generated for all three decision making situations by reviewing the literature on the Griffin's (2012) model and through semi-structured interviews from (Subject Matter Experts). Due to the specific theoretical nature of the decision situations, ta committee comprising of three experts was devised to decide the general layout of the scale. The committee suggested constructing the items by considering three underlying factors in all decision situations. However, along with the suggestions of the committee, decision structure was given more weightage while formulating interview guidelines and writing items. In this step thorough literature review was again carried out to examine the decision structure, decision resources, and decision outcomes in the decision situations involving certainty, risk and uncertainty. Besides this, an interview guideline was developed in order to conduct interviews from hospital superintendents, bank managers and head of departments in order to confirm that whether the decision making situations being faced by the supervisors in services providing organizations of Pakistan were consistent with the decision situations reported in the decision literature. The interview guideline was constructed on the basis of exiting literature on decision situations, more specifically on the theory of Griffin (2012).

Identification of the similar features of decision making situations in above mentioned three types of organizations were more focused.

Initially 33 items were generated out of which 11 items were measuring each decision making situation. Because of the diverse nature of these three types of jobs, general statements on the perception of decision making situations i.e. certainty, risk and uncertainty were included in the scale instead of developing items on job specific decision situations. All the items were positively worded as because in recent years researches provide that negatively phrased items leads toward misinterpretation of items, mistaken response by user and miscoding by researcher, careless responding and measurement error (Sauro & Lewis, 2011; Merritt, 2012; Sonderen, Sanderman, & Coyne, 2013). The items were written in English language because the targeted sample is highly educated. General linguistic concerns and grammatical errors in items were corrected with the help of an English expert. In this step, a five point Likert-type scale was selected for the rating of every item for the rating of every item because it is widely used scaling method in survey research design to provide individual with opportunity to select their level of agreement. Moreover they are simple to construct, easy to be completed and produce highly reliable results (Bertram, 2012; Tittle & Hill, 1967). The response categories were selected as 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The scale was named "Decision Situations Scale".

Step-VI: Selection of the Items for the Final Version of the Scale

In the fourth step, after generating the items, a committee approach was conducted for the final selection of the items. Thus with the assistance of the 3 experts,

all the redundant, misleading, and doubled-barrel items were discorded from the scale. Many items were excluded, rephrased, modified, and merged. Some items looking more job specific were discorded by keeping in view the diverse nature of the targeted population. Only those items were retained that were truly reflecting the common broad domains of decision making situations being faced in the service providing organizations including medical superintendents in the hospitals, managers in the banks, and head of departments in the universities. A final scale of 27 items was selected out of which 9 items were measuring each decision making situation including certainty, risk and uncertainty. The 9 items in the every decision making situation were further divided into three categories including 5 items for decision structure, 2 items for decision resources, and 2 items for decision outcomes.

Sr	Decision making situations and underlying attributes	Related literature
	Certainty	Cooke and Slack (1984), Elbing (1978), Griffin (1997), Huber (1980), Natale, O'Donnell, and Osborne (1990), Schermerhorn et al. (2005), Griffin (2012)
1	I deal with structured and organized decisional issues	Harrison (1987), Moorhead and Griffin (1998), Simon (1977)
2	I have enough time for making decisions	Moorhead and Griffin (1998)
3	My decisions are simple, pre-planned, repetitive and routine	Hill and Jones (1989), Moorhead and Griffin (1998), Simon (1977)
4	I solve problems with pre-established rules, policies and procedures	Harrison (1987), Moorhead and Griffin (1998), Simon (1977)
5	I know in advance the outcomes of my decisions	Natale, O'Donnell, and Osborne (1990)
6	I make decisions without any stress	Hofstede (2001)
7	I am certain about the consequences of my decisions	Griffin (1211)
8	I have clear understanding about the nature of my decisions	Moorhead and Griffin (1998),
9	I have complete information required for making decisions	Cohen, March, and Olsen (1972), McKenna (2003), Natale, O'Donnell, and Osborne (1990)
	Risk	Cooke and Slack (1984), Elbing (1978), Griffin (1997), Huber (1980), Natale, O'Donnell, and Osborne (1990), Schermerhorn et al. (2005), Griffin (2012)
10	I make decisions in extreme time pressure	Moorhead and Griffin (1998), Nutt (1993), Simon (1957), Simon and Newell (1971)
11	I face unique, novel, and unusual problems	Cohen, et al., (1972), Cooke and Slack (1984), Moorhead and Griffin (1998), Simon (1977)
12	My decisions involve high level of stress and tension	Hofstede (2001)
13	My decisions become successful or unsuccessful, depending on the situation	Amit and Wernerfelt (1990)
14	I have limited time for making decisions	Williams (2003), Nutt (1993), Simon (1957), Simon and Newell (1971), Harrison (1987)
15	I have a little information required for making decisions	Amit and Wernerfelt (1990), Cohen et al. (1972), Parsons (1988)
16	My decisions involve costs and benefits	Kahneman and Tversky (1981)
17	My decisions revolve in between success and failure	Cohen et al. (1972), Natale, O'Donnell, and Osborne (1990)
18	I often make decisions in tense situations	Hofstede (2001)
	Uncertainty	Cooke and Slack (1984), Elbing (1978), Griffin (1997), Huber (1980), Natale, O'Donnell, and Osborne (1990), Schermerhorn et al. (2005). Griffin (2012)
19	My decisions comprise of disorganized, ambiguous and unstructured problems	McKenna (2003), Moorhead and Griffin (1998)
20	I leave my decisions at the altar of fate to determine their success	Cohen et al. (1972), Griffin (1211)
21	I have very limited time and information required for making decisions	Cohen et al. (1972), Parsons (1988)
22	My decisions incorporate unclear, uncertain and ill-defined problems	Cooke and Slack (1984), Simon (1977)
23	I am uncertain about the outcomes of my decisions	Griffin (1211), Nutt (1993), Simon (1957), Simon and Newell (1971)
24	My decision making incorporates with abstract, subjective, and vague issues	Griffin (1211), Harrison (1987), Moorhead and Griffin (1998),
25	I make decisions in doubt and confusion	Griffin (1211), Wu et al. (2004)
26	Outcomes of my decisions are based on chance factors	Cohen et al. (1972), Griffin (1211)
27	My decisions involve risks as I have no set rules to apply	Ivancevich and Matteson (2002)

Figure 7. Decision making situations, underlying items and related literature

Phase-II: Empirical Evaluation of the Scale

The Phase-II is based on the examination of the validity and reliability of the Decision Situations Scale (DSS). Furthermore, Phase-II is aimed to achieve the following objectives:

Objectives

1. To examine the factorial validity of the Decision Situations Scale (DSS) in services providing organizations.
2. To examine the construct validity of the Decision Situations Scale (DSS) in services providing organizations.
3. To examine the reliability of the Decision Situations Scale (DSS) and its subscales in services providing organizations.

Sample

The sample was based on 300 participants from service providing organization including medical superintendents from hospitals (n = 100, 33.33%), branch managers from banks (n = 100, 33.33%) and head of departments from universities (n = 100, 33.33%) situated in the province of the Punjab and federal capital Islamabad. The sample was selected through purposive sampling technique.

Instruments

Decision Situations Scale (DSS)

The Decision Situations Scale (DSS) comprised of 27 items and three subscales including certainty, risk and uncertainty. Every subscale consisted of 9 items

respectively. The scale is based on 5-point Likert type response pattern. The response categories included 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The score on a subscale ranges from 9 as minimum scores and 45 as maximum scores. All the items are positively worded. Three is no cutoff scores in the scale, therefore high scores on a subscale indicates high certainty, risk or uncertainty and low scores on a subscale indicate low certainty, risk or uncertainty. This is the subjective description of the scale subject to empirical evaluation.

Hofstede's Culture in the Workplace Questionnaire (HCWQ)

The Hofstede's Culture in the Workplace Questionnaire (HCWQ) was originally developed by Hofstede (2001). The scale comprised of 20 items and four subscales including individualism, power distance, uncertainty avoidance, and achievement. The uncertainty avoidance subscale based on 5 items was used in the present study. It is based on 5-point Likert type response pattern. The response categories were selected as 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The minimum and maximum scores on the scale can be obtained as 5 to 25 respectively. Three is no cutoff scores in the scale, therefore high scores indicate high uncertainty avoidance and low scores on the scale indicate low uncertainty avoidance. The reliability of the original scale is reported as .88.

Procedure

In this study, three different samples were selected. The sample was collected from service providing organizations including hospitals, banks and universities by keeping in view the full time job experience of one year in the respective organizations. For the selection of the sample, written permission was obtained from the concerned

authorities in the targeted organizations and informed consent was obtained from the immediate participants. Data was collected during working hours. No time limits were fixed for the completion of the questionnaires.

RESULTS

Results

The first part of the present study was based on (a) generation of items pool for a scale to measure decision making situations and the second objective was to (b) examine the psychometric properties of the scale. For this purpose the data was subjected to various statistical analyses:

1. Item total correlation and corrected item-total correlation was computed to examine the relationship of every item with the total scores on the subscales.
2. Exploratory factor analysis was computed to analyze the factorial validity of the scale.
3. Descriptive statistics were computed to explore the salient trends in the items, subscales, and the overall scale.
4. Alpha reliability coefficients were computed to examine the internal consistency of the scale.
5. Inter-subscale correlation was computed to examine the construct validity of the scale and its subscales.

Table 1

Item-total correlation and corrected item-total correlation for the items of Decision Situations Scale (N = 300)

Uncertainty				Risk				Certainty			
Sr. No.	Item No.	Item total correlation	Corrected item total correlation	Sr. No.	Item No.	Item total correlation	Corrected item total correlation	Sr. No.	Item No.	Item total correlation	Corrected item total correlation
1	1	.56***	.40	10	10	.30***	.41	19	19	.48***	.31
2	2	.51***	.43	11	11	.30***	.37	20	20	.53***	.35
3	3	.62***	.57	12	12	.37***	.42	21	21	.49***	.31
4	4	.59***	.49	13	13	.49***	.40	22	22	.52***	.37
5	5	.58***	.54	14	14	.53***	.50	23	23	.58***	.42
6	6	.58***	.43	15	15	.57***	.38	24	24	.60***	.43
7	7	.46***	.59	16	16	.46***	.36	25	25	.65***	.52
8	8	.43***	.55	17	17	.51***	.42	26	26	.63***	.50
9	9	.41***	.53	18	18	.56***	.44	27	27	.58***	.43

***$p < .001$

Decision Situations Scale (DSS) was validated by computing the item total correlation for all the items of the scale. Corrected item total correlation was also computed due to the limited number of items in all factors i.e. 9 items in each factor. While computing the solution, the criterion suggested by Nunnally and Bernstein (1994) —that item having a correlation coefficient of .30 and greater with the total scores should be retained—was strictly followed. The criterion is for the corrected item total correlation. The item total correlation for the items of uncertainty ranged from .41 to .62 ($p < .001$). The item total correlation for the items of risk ranged from .30 to .57 ($p < .001$). The item total correlation for the items of certainty ranged from .48 to .65 ($p < .001$). The coefficients of the corrected item-total correlation were also greater than .30 which provided an additive support for retaining the items extracted through factor analysis—indicating the satisfactory degree of homogeneity of the items with the underlying constructs.

Table 2

Factor loadings for the items of Decision Situations Scale (N = 300)

Items.	Factor I	Factor II	Factor III
U1	.43		
U2	.50		
U3	.72		
U4	.64		
U5	.63		
U6	.48		
U7	.73		
U8	.59		
U9	.61		
R10		.58	
R11		.51	
R12		.46	
R13		.59	
R14		.61	
R15		.31	
R16		.52	
R17		.51	
R18		.53	
C19			.44
C20			.50
C21			.49
C22			.63
C23			.62
C24			.58
C25			.66
C26			.61
C27			.54
Eigen value	4.18	3.01	2.94
Percentage variance	15.48	11.15	10.90
Cumulative variance	15.48	26.63	37.53

For testing the based dimensionality of the DSS, Exploratory Factor Analysis (EFA) was carried out and a principal component solution was obtained. A total of three factors with eigenvalues greater than 1.00 were extracted by using varimax rotation—because the factors were theoretical independent. The extraction of the factors was not solely based on eigenvalues (Raise, Waller, & Comrey, 2000) instead, scree plot was also used to make the final decision related the extraction (see Figure 11) which is considered more appropriate for extracting factors (Reise et al., 2000). Beside this, during the extraction, numbers of the factors were fixed to 3 because of the theoretical basis of the scale—the items of the scales were constructed on three dimensions (Griffin, 2011) including certainty, risk and uncertainty—that were taken into consideration while writing the scale items. The eigenvalues were computed as 4.18, 3.01, and 2.94 for the first, second and the third factor respectively. The three factors accounted for a total variance of 15.48%, 11.45%, and 10.90% respectively which is greater than 9% and therefore appropriate. Finally, three factors were extracted including certainty, risk and uncertainty. Kline's (1993) criterion was used for the extraction of the items. Thus items having the factor loadings of .30 and above were extracted for the final scale. For uncertainty, the factor loadings ranged from .43 to .72. For risk, the factor loadings ranged from .31 to .61. For certainty, the factor loadings raged from .44 to .63. All three factors retained 9 items; however, the factor loadings of the some of the items were overlapped on two factors. Thus, the theatrical relevance of the items with a specific factor, and the factor loading greater than .30 was used as a criterion for the decision in case of the overlapping of the items on two factors. The finally extracted three factors solution confirmed the model of Griffin (2010) on decision making situations.

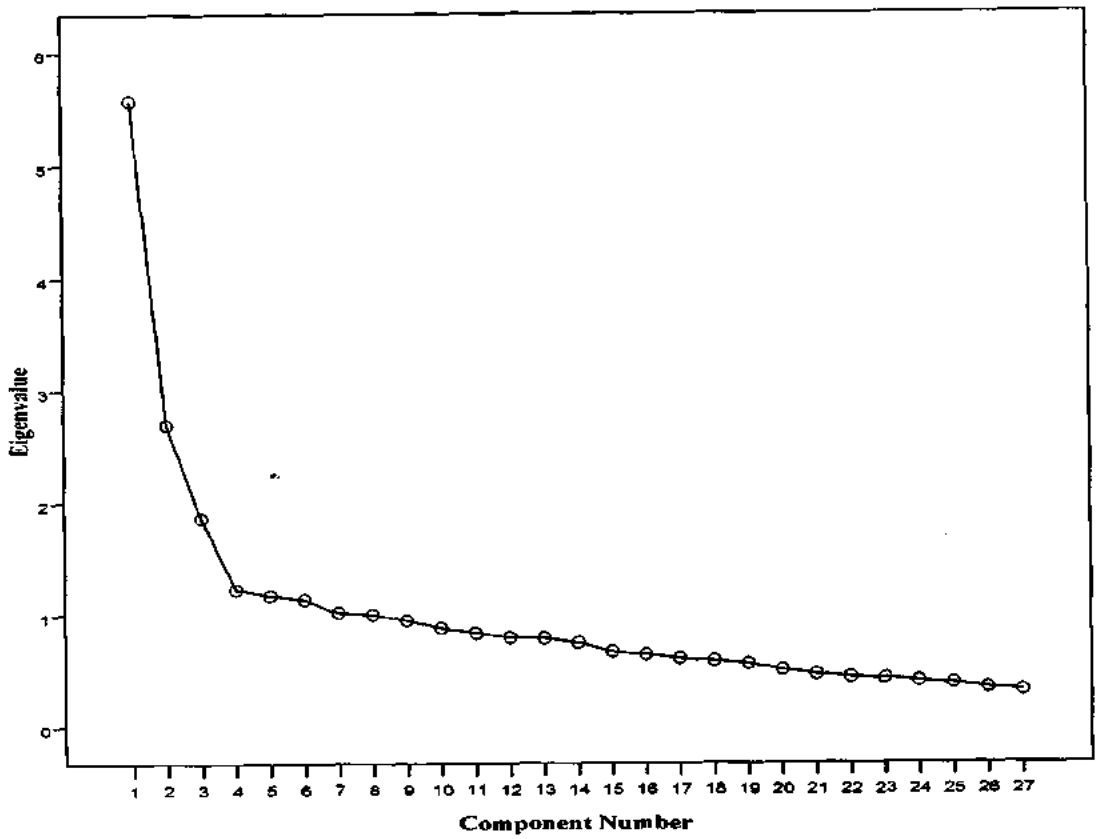

Figure 8. Scree plot showing the factor structure of Decision Situations Scale

Table 3

Psychometric properties of Decision Situation Scale (N = 300)

Decision Situations Scale	Items	α	*M*	*SD*	Ranks	Range	
						Potential	Actual
Uncertainty	09	.81	22.24	5.93	3rd	9-45	09-41
Risk	09	.74	26.81	5.69	2nd	9-45	09-41
Certainty	09	.73	31.32	4.75	1st	9-45	17-45
Total	27	.75	80.38	10.23		27-135	48-116

Alpha reliability coefficients for the decision making situations were computed as .73, .74, .81, and .75 for certainty, risk, uncertainty and the overall scale respectively. Reliability coefficients indicate satisfactory internal consistency for all subscales of Decision Situations Scale (DSS). The mean scores indicate that certainty was the most prominent decision situation as perceived by the participants of services providing organizations (M = 31.32, *Rank* = 1). Risk was the secondary important decision making situation (M = 26.81, *Rank* = 2) whereas uncertainty was the least observed decision situation as perceived by the participants (M = 22.24, *Rank* = 3). Rang statistics indicate that 17 to 45 were the minimum and maximum scores on certainty. Minimum and maximum scores for risk were from 9 to 41. Minimum and maximum scores for uncertainty were from 9 to 41. Minimum and maximum scores on DSS were from 48 to 116.

Table 4

Inter-subscales correlation for Decision Situation Scale (N = 300)

Decision Situations Scale	1	2	3	4
1. Uncertainty	-	.55***	-.52***	.77***
2. Risk		-	-.15**	.80***
3. Certainty			-	.23***
4. Overall Scale				-

**p< .01. ***p< .001

Pearson correlation was computed to study the relationship between subscales of Decision Situations Scale. Certainty has significant negative correlation with risk r (298) = -.15, p < .01 and uncertainty r (298) = -.25, p < .001. Certainty has significant positive correlation with DSS r (298) = .23, p < .001. Risk has significant positive correlation with uncertainty r (298) = .55, p < .001 and DSS r (298) = .80, p < .001. Uncertainty has significant positive correlation with DSS r (298) = .77, p < .001.

Table 5

Correlation between Decision Situation Scale and Uncertainty Avoidance subscale of Hofstede's Culture in the Workplace Questionnaire (N = 300)

Decision Situations Scale	*r*
Uncertainty	-.39***
Risk	-.45***
Certainty	.16**
Overall Scale	-.50***

**$p<.01$. ***$p<.001$

In order to test the construct validity of Decision Situations Scale (DSS), DSS and its subscales were correlated with uncertainty avoidance subscale of the Hofstede's Culture in the Workplace Questionnaire (HCWQ). Results show that certainty has significant positive correlation with uncertainty avoidance r (298) = .16, $p < .01$. Risk has significant negative correlation with uncertainty avoidance r (298) = -.45, $p < .001$. Uncertainty has significant negative correlation with uncertainty avoidance r (298) = -.39, $p < .001$. Decision Situations Scale (DSS) has significant negative correlation with uncertainty avoidance r (298) = -.50, $p < .001$.

DISCUSSION

Discussion

The purpose of the Study-I was twofold i.e. development of the scale and its empirical evaluation. The main aim of the present study was to construct a valid and reliable scale measuring decision making situations based on the model of Griffin (2012). Consistent research evidence exists on the situational nature of various management functions in general whereas leadership (Bass & Reggio, 2006; Rahim, 2001) and decision making (Scott & Bruce, 1995) in particular. Thus choice of a leadership style and a decision making style depends upon the situation. Although importance of situational factors in leadership and decision making has been recognized (Avolio & Bass, 2002; Fiedler & Chemers, 1974; Fiedler, 1993, 1995) but still less research has been conducted so far to understand the role of decision situations in the decisions made by the leaders in organizations. One of the prominent reasons was unavailability of a sound instrument to measure the nature of decision situations while making a decision. In this regard, the present study is in part an attempt to bridge this gap.

Decades before Huber (1980) suggested that decisions are made in three types of situations including certainty, risk and uncertainty. Keeping in view the decision situations suggested by Huber (1980), Griffin (2012) proposed a comprehensive model on decision situations and their varying nature. During this long era, even a single scale was not constructed to measure these decision making situations. Thus by reviewing the literature on these decision making situations and by incorporating the suggestions of the subject matter experts, a scale of twenty seven items was constructed to measure these situations faced by managers while making the decisions in the modern organizations. Every situation was measured by nine items in the scale. The decision making situations

had sound theoretical bases therefore content validity was ensured. Scott and Bruce (1995) illustrate that "content validity exists when the items tap the construct of interest and are representative of the content area" (p. 927). For Decision Situations Scale (DSS), the items were generated on the basis of the thorough analysis of the theoretical and empirical literature. The services providing organizations were the target of the present study. Franch (2008) argues that manufacturing industries were the choice of past researchers whereas service providing organizations are the priority of current research.

The scale development was based on a systematic sequence in which, (1) theoretically consistent decision making situations were identified i.e. certainty, risk and uncertainty, (2) underlying assumptions in the literature behind these decision situations were identified i.e. decision structure, decision resources, and decision outcomes, (3) interviews were conducted with subject matter experts and finally (4) items were generated on every decision making situation by keeping in view the underlying theoretical assumptions behind decision making situations and the insights shared by SMEs. Every item was independently evaluated by the experts of the committee approach to check their relevance with the construct being measured and other related concerns. Thus, the scale has been keenly evaluated for content validity as well as the face validity. The face validity was ensured because the participants were professionals and the study has direct relevance with their practices at job.

After the construction of the scale and collecting information from 300 employees of services providing organizations, the data was subjected to various types of statistical analyses in order to establish the validity and reliability of the scale. Item-total correlation and corrected item total correlation was computed in order to obtain further evidence

regarding the homogeneity of the scale items. The correlation coefficients for all 27 items of Decision Situations Scale (DSS) were greater than .30 indicating satisfactory association of the items with the overall scale (Nunnally & Bernstein, 1994). Factorial validity was established by conducting principal component analysis. Exploratory Factor Analysis (EFA) resulted in a three-factor solution measuring theoretically distinct decision making situations. The items were loaded on their theoretically relevant factor. The items loadings were greater than .30 and therefore satisfactory according to Kline's (1993) criterion. All three factors explained 37.53% of total variance.

Beside factorial validity, construct validity was also established. Construct validity refers to whether the scale measures the same construct for which it was developed (Schotte, Maes, Cluydts, Doncker, & Cosyns, 1997). The construct validity is further divided into two parts including convergent validity and divergent validity (Schotte et al., 1997; Reeve & Sickenius, 1994). In order to measure the construct validity of the scale, inter-scale correlations were computed. The Decision Situations Scale (DSS) was correlated with Uncertainty Avoidance Scale of the Hofstede's Culture in the Workplace Questionnaire (HCWQ). Uncertainty avoidance was negatively associated with risk and uncertainty indicating divergent validity evidence whereas positively correlated with certainty showing convergent validity evidence.

The relationship between three decision making situations of Decision Situations Scale (DSS) also provides further support for the construct validity of the scale. Certainty has significant negative correlation with risk and uncertainty. Certainty is characterized as the absence of uncertainty (Hubbard, 2010). In decision making situations certainty and uncertainty stands on the opposite poles of a continuum (Griffin, 2011). Certainty is

based on well-structured, resourceful and predictable decision situations (Cook & Hunsaker, 2001; Greenberg & Baron, 1993; Harrison, 1987; Moorhead & Griffin, 1998) whereas uncertainty is the breakthrough of unstructured, resource-less and unpredictable situations (Cooke & Slack, 1984; Greenberg & Baron, 1993; Harrison, 1987; Moorhead & Griffin, 1998). Similarly both are characterized by low and high level of ambiguity respectively (Griffin, 2011). Thus negative relationship between certainty and uncertainty provides divergent validity evidence for both of the decision situations.

Risk and uncertainty are positively correlated. Both involve probabilities (Wu, et al., 2004). Risk encompasses known whereas uncertainty incorporates unknown probabilities. Similarly, both involve ambiguity ranging from moderate to high level (Griffin, 2011). More specifically, the heighten level of risk is regarded as uncertainty (Natale, O'Donnell, & Osborne, 1990). Thus the positive relationship between risk and uncertainty provides further evidence for the convergent validity of the both scales. Similarly, high negative correlation between risk and certainty also provides evidence for divergent validity of the both subscales. Divergent validity is based on high inverse relationship between opposite constructs (Schotte et al., 1997). Certainty, risk and uncertainty have significant positive correlation with Decision Situations Scale (DSS). The positive association of three decision situations with the overall scale confirms their relevance with the underlying construct being measured with the help of the scale construction. Thus sufficient evidence exists to claim that Decision Situations Scale (DSS) is a construct valid instrument to measure decision making situations in the services providing organizations.

Reliability proceeds validity. In order to test the internal consistency of the Decision Situations Scale (DSS) and it subscales, alpha reliability coefficients were computed. For unstandardized items, alpha reliability is based on covariance among the items (Coakes & Steed, 2003). Alpha reliability coefficients for the decision making situations ranged from .73 to .81. Alpha reliability coefficients were computed as .73, .74, .81, and .75 for certainty, risk, uncertainty and the overall scale respectively. Reliability coefficients indicate satisfactory internal consistency for all subscales and the overall Decision Situations Scale (DSS). For a reliable behavioral measure, the reliability coefficient must be at least .70 or greater (Kline, 1999). Thus on the basis of the reliability coefficients, it can be claimed that the scale is a reliable instrument for measuring decision making situations in services providing organizations.

Finally, the decision making situations were ranked on the basis of their mean scores. Mean scores were computed as 31.32 for certainty, 26.81 for risk and 22.24 for uncertainty—indicating that certainty is the primary, risk is the secondary and uncertainty is the third decision making situation as perceived by the employees of services providing organizations. These findings are inconsistent with the past literature suggesting that certain situations are exceptional in managerial decision making (Cook & Hunsaker, 2001; Huber, 1980). Rather, most of the decisions in the modern organizations are made under the conditions of risk (Greenberg & Baron, 1993) or uncertainty (Griffin, 1997). Rapidly changing environment of the corporate sector has limited the certain scenarios for making decisions (Huber, 1980). On the contrary, the findings of the present study illustrate that certainty was the most prominent condition of decision making whereas uncertainty was least observed decision situation. Such counter intuitive findings may be

due to the reason that supervisors only rated their past perceptions of facing decision situations on the self-report measures—instead of rating actual experiences. As a whole Decision Situations Scale (DSS) is a valid and reliable instrument to measure decision situations in modern services providing organizations.

PILOT STUDY

METHOD

Chapter-III

Method

The Study-II of the present research is based on pilot study. In the present study, pilot study aims to achieve the following objectives:

Objectives

1. To examine the psychometric properties and the pre-testing of the instruments being used in the forthcoming main study.
2. To conduct the preliminary analysis on study variables in order to see the trends of findings and directions of the relationship among variables.
3. To find out the level of job stress among employees of health institutions (medical officers and medical superintendents), financial institutions (bank officers and bank managers) and educational institutions (lecturers and heads).

Sample

A purposive sample employees of services providing organizations (N = 240) including supervisors (n = 60, 25%) and subordinates (n = 180, 75%) with age range from 30 to 60 years (M = 45.50, SD = 8.93) was collected from services providing organizations (see Figure 12). A total sample of 60 supervisors including medical superintendents from hospitals (n = 20, 33.33%), managers from banks (n = 20, 33.33%), and head of departments from universities (n = 20, 33.33%) was selected. Similarly, every medical superintendent, bank manager, and head of department was cross-rated by his or her three subordinates on leadership styles. Thus a total sample of 180 subordinates participated in the study. Medical officers in the hospitals (n = 60, 33.33%), officers in

the banks (n = 60, 33.33%), and lecturers in the educational departments (n = 60, 33.33%) rated their supervisors' leadership styles on the questionnaires. The subordinates also provided the information on the knowledge management processes in the respective organizations. The sample was collected form the province of the Punjab and the federal capital Islamabad. Informed consent was obtained in written form from the supervisors and the subordinates. During the selection of the sample from the supervisors, full time job experience of at least one year and supervision of five employees was ensured (Riaz, 2009). Similarly, it was ensured the every subordinate rating his or her supervisor has worked under his or her supervision for a time period of six months. At least four to six months of job experience are necessary for culture learning and socialization (Ashforth, Sluss, & Saks, 2007). On this sample overall pilot study was conducted.

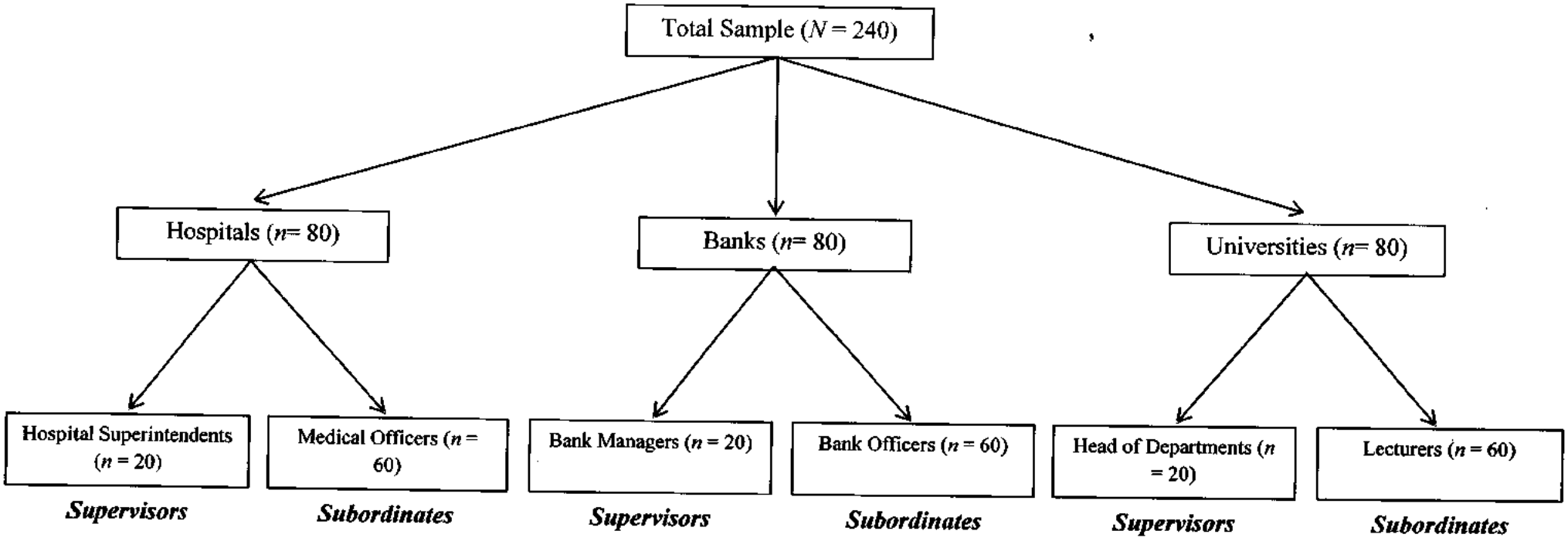

Figure 9. Sampling plan and division of sample for the pilot study

Instruments

Five self-report measures were used in the present study. Multifactor Leadership Questionnaire (Bass & Avolio, 2000) is a 36 items scale which measures transformational, transactional and laissez-faire leadership style. Decision Situations Scale (DSS) is a 27 items scale which measures certainty, risk and uncertainty. Job Stress Scale (Parker & DeCottis, 1983) is a 13 items scale which measures overall stress at a job. Knowledge Management Processes Scale (Tayyab, 2008) is a 29 items scale which measures overall processes of knowledge management in an organization. General Decision Making Style Questionnaire (Scott & Bruce, 1995) is a 25 items scale which measures rational, intuitive, dependent, avoidant and spontaneous decision making style. Likert type five-point rating scale is used in all scales and the scores are interpreted in terms of low and high scores. Reverse items are not included in these scales.

Procedure

In the first step it was decided that the data will be collected from the services providing organizations of federal capital and the province of the Punjab and federal capital Islamabad. List of banks from State Bank of Pakistan, list of universities from Higher Education Commission Pakistan and list of hospitals from Ministry of Health Punjab and Federal Ministry of Health Islamabad was obtained. The researcher personally approached the targeted organizations for data collection. After entering in the organizations, the researcher at first introduced himself and then introduced the nature, purpose and importance of the study. Confidentiality of the information was ensured before the participants by stating that the study is an academic research and all the information obtained from the participants will solely be used for research purpose. Brief

instructions were given to the participants and informed consent was obtained in written form. After obtaining the informed consent, questionnaires were distributed. The researcher remained attentive and vigilant during the completion of the scales and assisted the participants when they faced some problems in understanding some questions. After the completion of the scales, the researcher checked the questionnaires in order to conform that information was not missing and questions were not left blank either intentionally or unintentionally. In case, if some questions were left blank, the researcher requested the participant to provide the missing information. In the end, the researcher thanked the concerned authorities and the immediate participants in the organizations for their cooperation in the study.

RESULTS

Results

The pilot study was carried out to test the suitability of the scales for the further analysis and to conduct preliminary analysis in order to understand the trends in the results of the study. For the pilot study, following analyses were carried out:

1. Descriptive statistics i.e. mean and standard deviation was computed for all the scales used in the study (see Table 6).
2. Alpha reliability coefficients were computed for all scales and subscales to test the internal consistency of the scales (see Table 6).
3. Pearson correlation was applied to study the relationship between variables and to examine the construct validity of the scales used in the study (see Table 6).
4. One-Way ANOVA was computed to examine the level of job stress among the employees of health (medical superintendents and medical officers), financial (bank managers and bank officers) and educational institutions (head of departments and lecturers) (see Table 7 and 8).
5. Hierarchical regression analysis was applied to study the moderating effect of decision making situations between leadership style and decision making styles (see Table 9).

Table 6

Psychometric properties of study variables (N = 240)

Variables		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Transformational	(.94)	.86***	-.29*	.92***	.19	.10	.18	.08	.19	.30*	.30*	.41**	.02	-.02	.19	.10
2	Transactional		(.71)	-.44**	.94***	.18	.14	.20	.01	.17	.27*	.50**	.14	.10	.14	.17	.17
3	Laissez-faire			(.77)	.13	-.08	.19	-.03	.14	.15	-.29*	.12	.33**	.41**	.41**	.18	.41**
4	MLQ				(.92)	.18	.17	.20	.09	.23*	.22*	.11	.20	.16	.16	.23**	.25**
5	Job Stress Scale					(.86)	-.51***	.34**	.42**	.43**	.16	.17	.04	.07	.09	.24*	.17
6	Certainty						(.71)	-.60***	-.40**	.82***	.14	.29*	.22	.35**	.48***	-.32*	.45**
7	Risk							(.71)	.25*	.76***	.19	-.01	.30*	.24	.19	.41**	.31*
8	Uncertainty								(.78)	.38**	.17	-.47**	.28*	.24	.14	.35**	.40**
9	DSS									(.78)	.25	.31*	.33*	.41**	.40**	.54***	.57***
10	KMPS										(.92)	.30*	.12	.03	.11	.29*	.24
11	Rational											(.76)	-.35**	.49***	-.28*	-.33*	.69***
12	Intuitive												(.75)	.59***	.35**	.48***	.79***
13	Dependent													(.70)	.44**	.26*	.79***
14	Avoidant														(.76)	.31*	.62***
15	Spontaneous															(.71)	.64***
16	GDMSQ																(.75)
M		150.93	088.60	027.63	296.23	038.78	024.20	026.60	031.17	081.91	303.10	017.77	017.70	016.93	015.08	017.25	084.73
SD		18.83	10.21	08.48	30.84	08.91	05.12	05.42	05.92	10.85	31.29	02.65	02.71	02.76	02.64	02.99	09.68

Note. Alpha reliability coefficients are given in diagonals; MLQ = Multifactor Leadership Questionnaire; DSS = Decision Situations Scale; LMPS = Knowledge Management Processes Scale; GDMSQ = General Decision Making Style Questionnaire

*p< .05. **p < .01. ***p < .001

Alpha coefficients for the subscales of MLQ ranged from .71 to .94 indicating satisfactory internal consistency. Alpha coefficient for MLQ was .92 indicating very high internal consistency. Alpha coefficient for Job Stress Scale (JSS) was .86 indicating high internal consistency. Alpha coefficients for the subscales of DSS ranged from .71 to .78 indicating satisfactory internal consistency. Alpha coefficient for DSS was .78 indicating satisfactory internal consistency. Alpha coefficient for KMPS was .92 indicating very high internal consistency. Alpha coefficients for the subscales of GDMSQ ranged from .54 to .67. Alpha coefficient for GDMSQ was .75 indicating satisfactory internal consistency.

The correlation coefficients among study variables were computed (a) to address the construct validity issues among the scales comprising of multiple dimensions and (b) to study the direction of the association between the study variables. In the present study, three scales were consisting of multiple dimensions including MLQ, DSS and GDMSQ. In MLQ, transformational style has significant positive correlation with transactional style r (238) = .88, $p < .001$ whereas significant negative correlation with laissez-faire style r (238) = -.29, $p < .05$. Transactional style has significant negative correlation with laissez-faire style r (238) = -.44, $p < .01$. In DSS, certainty has significant negative correlation with risk r (238) = .60, $p < .001$ and uncertainty r (238) = -.40, $p < .01$. Risk has significant positive correlation with uncertainty r (238) = .25, $p < .05$. In GDMSQ, rational style has significant negative correlation with intuitive r (238) = -.35, $p < .01$, avoidant r (238) = -.28, $p < .05$, and spontaneous style r (238) = -.33, $p < .05$ whereas significant positive correlation with dependent style r (238) = .49, $p < .001$. Intuitive style has significant positive correlation with dependent r (238) = .59, $p < .001$, avoidant r

(238) = .35, $p < .05$, and spontaneous style r (238) = .48, $p < .01$. Dependent style has significant positive correlation with avoidant r (238) = .44, $p < .01$ and spontaneous style r (238) = .26, $p < .05$. Avoidant style has significant positive correlation with spontaneous style r (238) = .31, $p < .05$.

The second objective was to study the direction of the association among the study variables. Transformational style r (238) = .30, $p < .05$ and transactional style r (238) = .27, $p < .05$ has significant positive correlation with knowledge management processes whereas laissez-faire style r (238) = -.29, $p < .05$ has significant positive correlation with knowledge management processes. Hence the findings are in line with the hypotheses. Transformational style has significant positive correlation with rational r (238) = .30, $p < .05$ and intuitive style r (238) = .41, $p < .01$. Transactional style has significant positive correlation with rational style r (238) = .50, $p < .01$. Laissez-faire style has significant positive correlation with avoidant style r (238) = .41, $p < .01$. Job stress has significant negative correlation with certainty r (238) = -.51, $p < .001$ whereas significant positive correlation with risk r (238) = .34, $p < .01$ and uncertainty r (238) = .42, $p < .01$. Decision making certainty has significant positive correlation with rational style r (238) = .29, $p < .05$ whereas significant negative correlation with spontaneous style r (238) = -.32, $p < .05$. Risk has significant positive correlation with intuitive r (238) = .30, $p < .05$ and spontaneous style r (238) = .41, $p < .01$. Uncertainty has significant negative correlation with rational style r (238) = -.74, $p < .05$ whereas significant positive correlation with intuitive r (238) = .28, $p < .05$ and spontaneous style r (238) = .45, $p < .01$. DSS has significant positive correlation with rational r (238) = .31, $p < .05$, intuitive r (238) = .33, $p < .05$, dependent r (238) = .41, $p < .01$, avoidant r (238) = .40, $p < .01$,

and spontaneous style r (238) = .54, $p < .01$. This indicates that the decision situation is directly associated with the choice of a decision style. Knowledge management process has significant positive correlation with rational style r (238) = .30, $p < .05$. The findings are in anticipated directions.

Table 7

Mean, Standard Deviation and F-values for employees of services providing organizations on Job Stress Scale (N = 180)

	University lecturers (n = 60)		Bank officers (n = 60)		Medical officers (n = 60)				
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	*Post-Hoc*
Job Stress	36.82	9.94	41.66	11.12	44.64	7.91	8.19	.000	1<2<3

Table 7 shows mean, standard deviation and *F*-values for university lecturers, bank officers and medical officers on Job Stress Scale. The findings show significant mean differences on job stress with F (2, 177) = 8.91, $p < .001$. The results indicate that medical officers (M = 44.64, $p < .001$) significantly scored high on job stress as compared to bank officers (M = 41.66, $p < .001$) and university lecturers (M = 36.82, $p <$ .001). Post-hoc comparisons indicate significant between group differences.

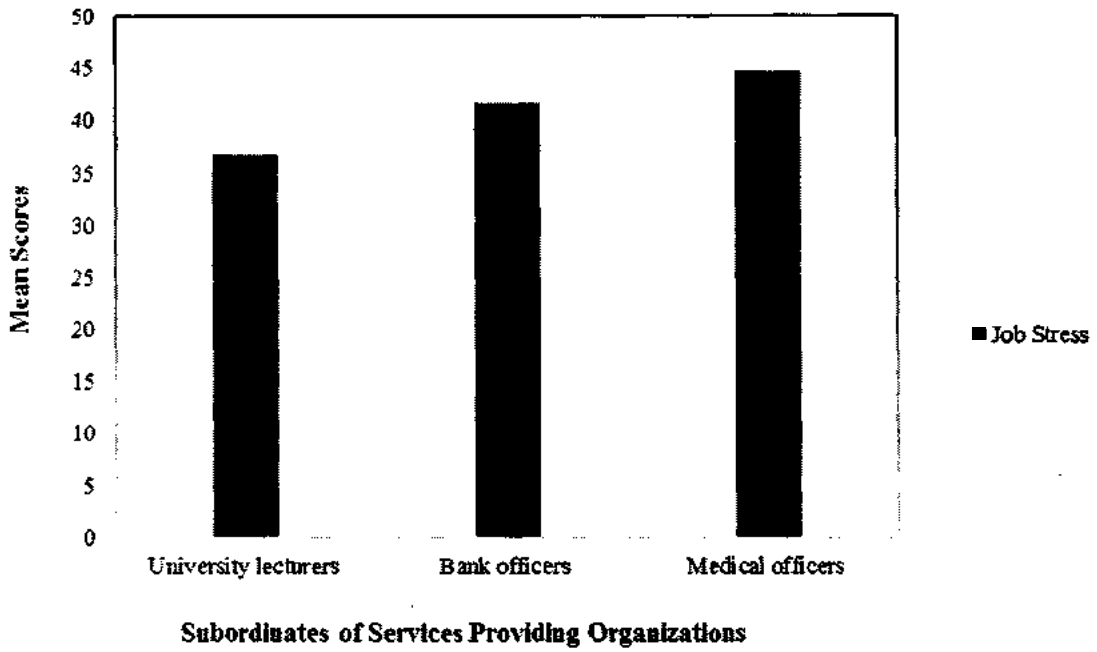

Figure 10. Level of job stress among medical officers, bank officers and lecturers

Table 8

Mean, Standard Deviation and F-values for employees on leadership positions of services providing organizations on Job Stress Scale (N = 60)

	Head of departments (n = 20)		Bank managers (n = 20)		Medical superintendent (n = 20)				
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	*Post-Hoc*
Job Stress	35.32	7.43	36.93	7.87	41.48	9.90	3.69	.029	1<2<3

Table 8 shows mean, standard deviation and *F*-values for university head of departments, bank managers and medical superintendents on Job Stress Scale. The findings show significant mean differences on job stress with F (2, 57) = 3.69, $p < .05$. The results indicate that medical superintendent (M = 41.48, $p < .05$) significantly scored high on job stress as compared to bank managers (M = 36.93, $p < .05$) and university head of departments (M = 35.32, $p < .05$). Post-hoc comparisons indicate significant between group differences.

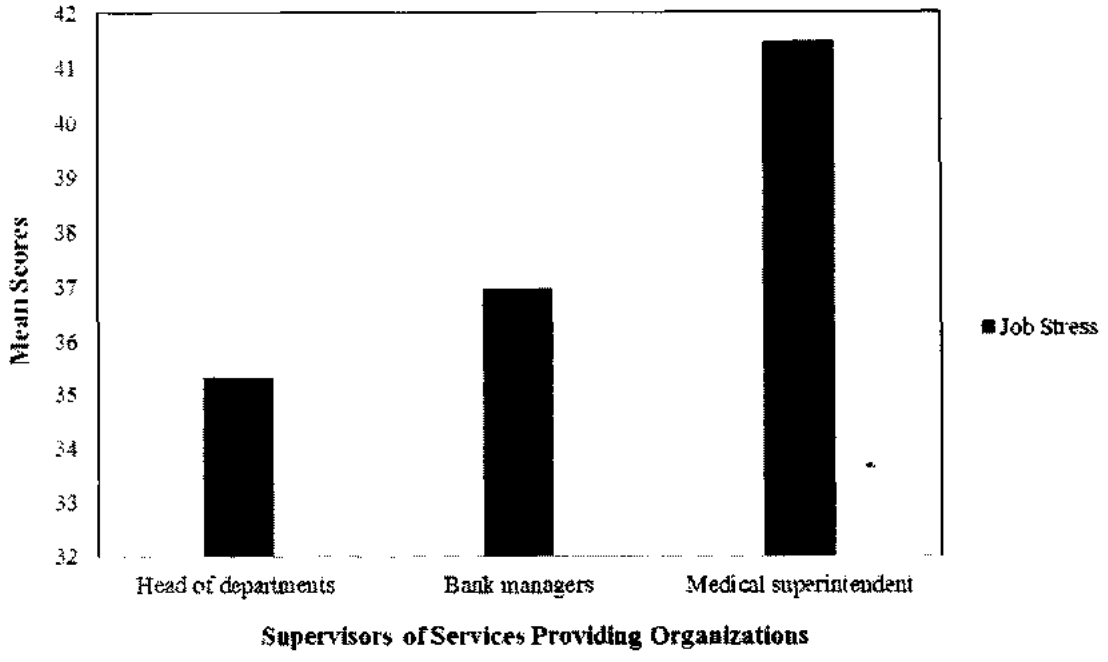

Figure 11. Level of job stress among hospital superintendents, bank managers and head of departments

Table 9

Hierarchical Regression showing the effect of decision making situations between leadership and decision making (N = 240)

Predictors	Outcome: Decision making styles		
	ΔR^2	ΔF	β
Leadership styles	.114	11.76***	2.68**
Decision making situation			-2.99**
Leadership styles x decision making situation			5.00***

**p<.01, ***p<.001

Table 9 shows the moderating effect of decision situations measured on the relationship between leadership styles and decision making styles. The ΔR^2 value of 114 indicates that 11.4% variance in the dependent variable can be accounted for, by the predictors with ΔF (3, 56) = 11.76, $p < .001$. The findings indicate that leadership has significant positive effect on decision (β = -2.68, $p < .01$). Situation has significant positive effect on decision (β = -2.99, $p < .01$). Leadership x situation has significant positive effect on decision (β = 5.10, $p < .01$). The resultant model has been given in Figure 2. In Figure 2, the model supports the research question that decision is an outcome of the interaction between leadership and situation [leadership x situation = decision]. This preliminary moderation analysis provides the basis for the further moderation analysis.

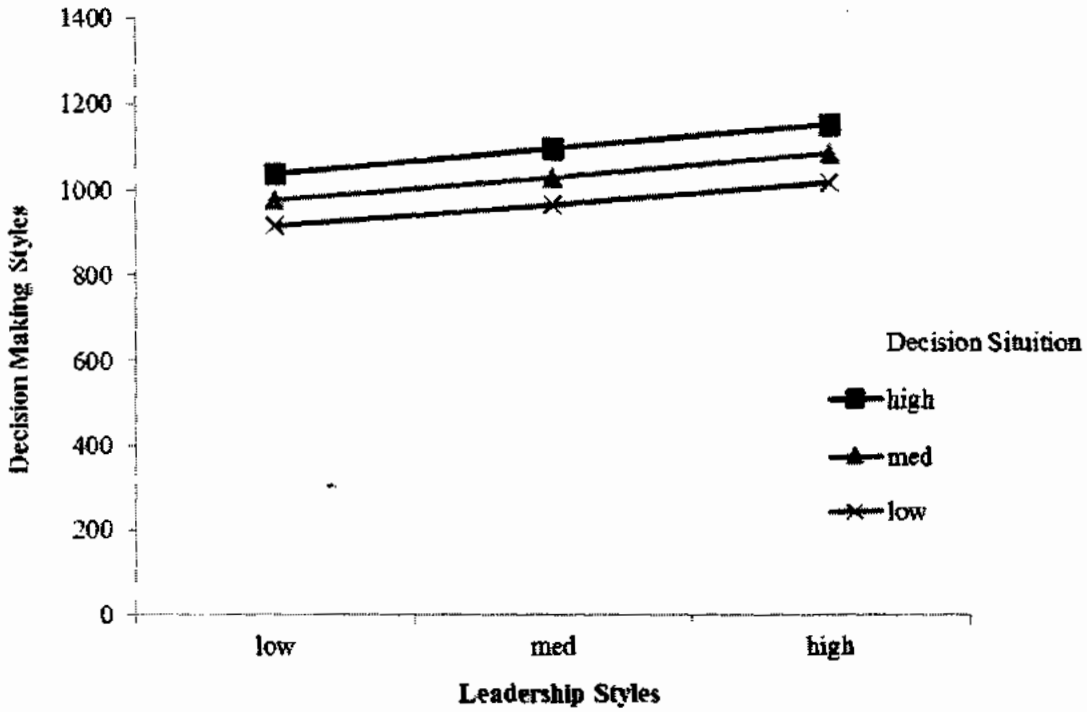

Figure 12. Mod-graph showing the moderating role of decision making situations between leadership styles and decision making styles

DISCUSSION

Discussion

Literature regarding social sciences defined the term pilot study in different ways. The pilot study is considered an abbreviated version of research project in which the researcher practices or tests procedures to be used in the subsequent full scale project (Dane, 1990). It can also be referred as "small scale version(s), or trial run(s), done in preparation for the major study" (Polit et al., 2001, p. 467). De Vaus (1993) suggested that "do not take the risk, pilot test first" (p. 54). The pilot study aimed to examine the psychometric properties and the pre-testing of the tools used in the upcoming main study. The pilot study also aimed to conduct the preliminary analysis on study variables in order to see the trends of findings and directions of the relationship among variables.

For pilot study, data of 240 participants was collected from services providing organizations. Five scales were used to collect the information from different samples from services providing organizations. The psychometric properties of the scales were computed by conducting various statistical analyses including descriptive statistics, alpha reliability coefficients and inter-subscale correlation. The results revealed that all the scales and subscales used in the present study have reliability coefficients greater than .70 indicating satisfactory internal consistency (Kline, 1999). Construct validity of the scales was examined by computing correlation coefficients among subscales of every scale. Five assumptions were tested to examine the construct validity of the three multidimensional scales used in the present study. The multidimensional scales used in the present study included Multifactor Leadership Questionnaire (MLQ), Decision Situations Scale (DSS) and General Decision Making Style Questionnaire (GDMSQ).

The first assumption that transformational style will be positively correlated with transactional style whereas negatively correlated with laissez-faire style was supported by the findings. Both transformational and transactional leadership style comprised of five and two higher order leadership facets respectively and both are placed on the active and effective dimensions of the Full Range Leadership Theory (Bass & Reggio, 2006). Contrary to the transformational style, the laissez faire leadership style stands on opposite dimension characterized by passive and ineffective leadership according to underlying theory and research respectively (Avolio & Bass, 2002; Bass, 2000). The direction of the correlation coefficients among the leadership styles is also in line with the original scale (Bass & Avolio, 1995) and studies on the services providing organizations conducted in the indigenous context (Khan, 2009; Riaz, 2009). Thus, MLQ is a construct valid measure of leadership styles.

The second assumption that decision certainty in services providing organizations will be negatively correlated with risk and uncertainty and the third assumption that risk will be positively correlated with uncertainty in services providing organizations was supported in the present study. The results are according to the Griffin's (2011) model of decision making situations. Hubbard (2010) illustrates that certainty and uncertainty stands on the opposite poles. The former is characterized by low level of ambiguity whereas the latter encompasses high level of ambiguity. Tendency of making a bad decision also ranges from low to high level as one move from certainty to uncertainty (Griffin, 2011). Therefore, risk and uncertainty have multiple associated features and are associated on many underlying attributes (Griffin, 1997). Similarly, the direction of the relationship among decision situations is also in line with the original scale developed in

the study one. Thus, Decision Situations Scale is a construct valid instrument to measure decision making situations in the services providing organizations.

The fourth assumption that rational decision making style will be positively correlated with dependent and avoidant style whereas negatively correlated with intuitive style and the fifth assumption that intuitive style will be positively correlated with spontaneous style was supported in the present study. Prior studies (Baiocco, Laghi, & D'Alessio, 2008; Galotti et al., 2006; Schoemaker 2010; Thunholm, 2004) confirms these findings—either partially or completely. Besides this, validation studies on the scale also report more or less similar results (Gambetti et al., 2008; Loo, 2000). Along with these studies, researches in the indigenous context (Batool, 2003; Hayie, 2009; Iqbal, 2011; Jameel, 2009; Riaz, 2009; Riaz, Riaz, & Batool, 2012) also displayed fairly similar findings. Finally, the direction of the correlation coefficients among decision making styles is also in line with the original scale (Scott & Bruce, 1995). Thus, it can be concluded that GDMSQ is a construct valid measure of decision making styles in the services providing organizations.

After addressing the reliability and construct validity related concerns of the scales questionnaires used in the present study, preliminary analyses were carried out to examine the salient trends in the results and to investigate the direction of the relationship among variables. The decision to conduct the preliminary analysis was made in the light of the research questions being addressed in the forthcoming main study. The main study focuses on three objectives including (a) moderating effect of decision making situations in the relationship between leadership styles and decision styles, (a) moderating effect of knowledge management processes between leadership styles and rational style, and (c)

moderating effect of job stress between laissez faire style and avoidant style. Besides the interaction effect, studying the direct effect of knowledge management processes, decision making situations and job stress on decision styles was also included among objectives. Thus keeping in view these objectives, three assumptions were formulated, which are primary related to these three areas of investigation in the imminent main study and each addresses one of above mentioned three objectives respectively.

The assumption that decision making situations will moderate between leadership styles and decision making styles was supported in the present study. The model explained 11.4% variance—indicating that decision making style is an outcome of leadership-situation interaction. Leadership styles, decision making situations, and decision making styles were computed with total scores on Multifactor Leadership Questionnaire, Decision Situations Scale and General Decision Making Style Questionnaire respectively. The situational approaches to leadership are based on the premise that an effective leader should adjust his or her style according to the demands of the situation. More specifically "in a given situations, the first task for a leader is to determine the nature of the situation" (Northouse, 2007, p. 95). Thus, "leaders cannot use the same styles in all the contexts; rather, they need to adopt their style to their unique situations" (p. 96). These findings are in line with the underlying assumptions of the Full Range Leadership Theory (Bass & Reggio, 2006) stating that choice of a decision making style is situation specific. The current findings also provide support for further analysis on the moderating role of decision making situations in the relationship between leadership styles and decision making styles.

The assumption that transformational style will be positively correlated with knowledge management processes was supported in the present study. The findings are in line with the past research (Crawford, 2005; Crawford & Strohkirch, 2004; Bryant, 2003). Bryant (2003) studied the role of transformational and transactional leadership and discovered that leaders play central role in expertly creating, sharing and exploring knowledge in the modern organizations. Effective leaders are principally committed and motivated in taking knowledge management initiatives in the organizations. The current epic is based on the knowledge based economy in which knowledge sharing is the backbone of the business in the corporate sector (Baker & Badamshina, 2002). In the current era, modern organizations are focusing on the massive developments and flourishing the business with the help of knowledge management (Daft, 2001). Beside the considerable importance of knowledge management, it is worth noticing that it is the responsibility of the leaders to share knowledge and enables subordinates in managing knowledge in the organizations (Holowetzki, 2002). Thus leadership plays a vital role in overall knowledge management processes. The current findings also provide support for further analysis on the knowledge management processes between transformational style and rational style.

The assumption that stress will be positively correlated with avoidant style was supported in the present study. The findings are in line with the past research (Batool, 2007; Thunholm, 2008). Maner et al. (2006) illustrated that dispositional anxiety is positively related to risk avoidant. Stress is positively associated with multiple avoidant management functions including avoidant leadership style (Wager, Feildman, & Hussey, 2003), avoidant decision making style (Thunholm, 2008), and avoidant conflict

management style (Moberg, 2001). Stress was an important variable of the present study; therefore, the decision of the data collection from three services providing organizations including hospitals, banks and departments was in part based on the classification of organizations according to different levels of stress. Jobs in health, financial and educational institutions are classified as high, medium and low levels of stress respectively (McShane & Travaglione, 2004). The current findings also provide support for further analysis on the interaction effect of laissez faire style and job stress on avoidant style.

After conducting the preliminary analyses, the level of job stress in three occupations was identified. The classification of the occupations on the basis of job stress was evident in the individualistic contexts. Thus dual evidence was collected from the indigenous context to confirm the individualistic trends in the organizations of a collectivistic context. For this purpose, level of job stress was examined among the supervisors and the subordinates by formulating two assumptions. The first assumption anticipating that medical officers will significantly score higher on job stress as compared to bank officers and lecturers and the second assumption that medical superintendents will significantly score higher on job stress as compared to bank managers and head of departments in universities was supported in the present study. The findings are consistent with the past evidence (McShane & Travaglione, 2004) in the individualistic context. Both type of employees in hospitals (medical superintendent and medical officers) primarily scored higher on job stress as compared to employees in banks (bank managers and bank officers) and universities (head of department and lecturers). Similarly, employees in banks (bank managers and bank officers) significantly scored

high than universities (head of department and lecturers). The findings confirmed that some jobs are comparatively more stressful than the others (Keil, 1999; The Independent, August 7, 2000).

Overall the objectives of the pilot study were twofold i.e. testing the psychometric properties of the scales and conducting preliminary analysis. Different statistical analyses indicated that all five scales are reliable and valid instruments to measure their underlying constructs. Therefore these scales are appropriate for further use in the main study. The preliminary analyses confirmed the (a) moderating role of decision making situations in the relationship between leadership styles and decision makings styles, (b) role of leadership in knowledge management processes, and (c) role of stress in decision making. Thus on the basis of the preliminary analyses, further analysis in main study can be carried out in the desired direction. Finally, the findings also supported the decision to include the employees of hospitals, banks and departments in the universities as high, medium and low stress occupation respectively. Overall the pilot study provides sufficient evidences to formulate and test the hypotheses in the forthcoming main study.

MAIN STUDY

METHOD

Chapter-IV

Method

After the development of the Decision Situations Scale (DSS) and the pilot testing of the instruments, the main study was conducted in order to test the hypotheses. Furthermore, the main study aims to achieve the following objectives:

Objectives

1. To examine the effect of leadership styles in the prediction of decision making styles in service providing organizations.
2. To investigate the effect of decision making situations on the prediction of decision making styles.
3. To study the moderating role of decision making situations in the relationship between leadership and decision making styles.
4. To examine the effect of knowledge management processes in the prediction of rational decision making style.
5. To examine the moderating role of knowledge management processes in the relationship between leadership and decision making styles.
6. To find out the effect of job stress on the prediction of avoidant decision making style in service providing organizations.
7. To investigate the moderating role of job stress in the relationship between laissez faire leadership style and avoidant decision making style.
8. To identify the level of certainty, risk, uncertainty and job stress among hospital superintendents, bank managers and head of departments.

Hypotheses

H1. Transformational leadership style will positively predict rational decision making style in services providing organizations.

H2. Certainty will positively predict rational decision making style in services providing organizations.

H3. Certainty will moderate the relationship between transformational leadership style and rational decision making style.

H4. Knowledge management processes will positively predict rational decision making style in services providing organizations.

H5. Knowledge management processes will moderate the relationship between transformational leadership style and rational decision making style.

H6. Transformational leadership style will positively predict intuitive decision making style in services providing organizations.

H7. Risk will positively predict intuitive decision making style in services providing organizations.

H8. Risk will moderate the relationship between transformational leadership style and intuitive decision making style.

H9. Transformational leadership style will positively predict spontaneous decision making style in services providing organizations.

H10. Uncertainty will positively predict spontaneous decision making style in services providing organizations.

H11. Uncertainty will moderate the relationship between transformational leadership style and spontaneous decision making style.

H12. Transactional leadership style will positively predict rational decision making style in services providing organizations.

H13. Certainty will moderate the relationship between transitional leadership style and rational decision making style.

H14. Knowledge management processes will moderate the relationship between transitional leadership style and rational decision making style.

H15. Laissez-faire leadership style will positively predict dependent decision making style in services providing organizations.

H16. Uncertainty will positively predict dependent decision making style in services providing organizations.

H17. Uncertainty will moderate the relationship between laissez faire leadership style and avoidant decision making style.

H18. Laissez-faire leadership style will positively predict avoidant decision making style in services providing organizations.

H19. Uncertainty will moderate the relationship between laissez faire leadership style and avoidant decision making style.

H20. Job stress will positively predict avoidant decision making style in services providing organizations.

H21. Job stress will moderate the relationship between laissez faire leadership style and avoidant decision making style.

H22. Head of departments will significantly score higher on certainty as compared to bank managers and hospital superintendents.

H23. Hospital superintendents will significantly score higher on risk as compared to bank managers and head of department in universities.

H24. Bank managers will significantly score higher on risk as compared to hospital superintendents and head of department in universities.

H25. Hospital superintendents will significantly score higher on job stress as compared to bank managers and head of departments in universities.

Operational Definitions

Leadership Styles

Transformational Leadership Style

Transformational leaders are visionary, courageous, inspiring, intellectually stimulating, and considerate of their followers' present and futuristic needs. Instead of following the static principles they appear with unique and creative solutions of problems in hand. They view intra and extra-organizational factors from a holistic perspective (Bass & Reggio, 2006). Scores on the subscale of MLQ (Bass & Avolio, 2000) representing transformational leadership style was used to measure this style of leadership. High scores indicate high transformational leadership styles and vice versa.

Transactional Leadership Style

Transactional leadership involves an exchange process involving contingent reinforcement in terms of job rewards dependent on the execution of the expected tasks and job performance. In order to meet the performance standards, the transformational leader identify goals, clarify tasks, and provides directions (Bass & Reggio, 2006). Scores on the subscale of MLQ (Bass & Avolio, 2000) representing transactional leadership

style was used to measure this style. High scores indicate high transactional leadership styles and vice versa.

Laissez-faire Leadership Style

Almost all research conducted on laissez-faire leadership styles indicates that it is the most ineffective leadership styles. This style portrays the avoidance and absence of the leadership with abdication of responsibility and avoidance and dependence in the decision making (Bass & Reggio, 2006). High scores on the subscale of MLQ (Bass & Avolio, 2000) representing laissez faire leadership style was used to measure this style. High scores on the subscale indicate high laissez fairer leadership styles and vice versa.

Decision Making Situations

Certainty

Certain decision making situations involves well-structured decisions, low level of ambiguity, complete information and known outcomes (Cook & Hunsaker, 2001; Greenberg & Baron, 1993; Moorhead & Griffin, 1998). A subscale in Decision Situations Scale measures decision making certainty. High scores on this subscale indicate high decision certainty and low scores indicate low certainty.

Risk

Decision making situations involving risk are based on less structured decisions, moderate ambiguity, inconsistent information and outcomes based on probabilities (Cook & Hunsaker, 2001; Griffin, 1211; Williams, 2003). A subscale in Decision Situations Scale measures decision making risk. High scores on this subscale indicate high decision risk and low scores indicate low decision making risk.

Uncertainty

Decision uncertainty involves unstructured decisions, high ambiguity, unknown outcomes and unavailability of information (Cook & Hunsaker, 2001; Griffin, 1211; Moorhead & Griffin, 1998). A subscale in Decision Situations Scale measures decision making uncertainty. High scores on this subscale indicate high decision uncertainty and low scores indicate low uncertainty in decision making.

Knowledge Management Processes

Knowledge management processes is defined as "a set of processes directed at creating-capturing-storing-sharing-applying-reusing knowledge" (Sydanmaanlakka, as cited in Baker & Badamshina, 2002). In the present study, knowledge management processes of the services providing organizations are measured with Knowledge Management Processes Scale (Tayyab, 2008). Organizations scoring high on the scale have efficient knowledge management processes and vice versa.

Job Stress

Job stress in an individual's adoptive response to a stressor in the job setting which is perceived threatening for well-being (MsShane & Travaglione, 2004) in the present study, Job Stress Scale (Parker & De Cottis, 1983) was used to measure the job stress among the participants. High scores indicate high job stress and low scores indicate low job stress among the participants.

Decision Making Styles

Rational Decision Making Style

It is characterized by realistic reasoning and a thorough analysis for a logical evaluation of alternatives (Scott & Bruce, 1995). A subscale in GDMSQ measures rational style. High scores on this subscale indicate high rational style of decision making and low scores indicate low rational style.

Intuitive Decision Making Style

It is characterized by a reliance on hunches, gut feelings, impressions, emotions, experience, and wisdom is employed to make decisions (Scott & Bruce, 1995). A subscale in GDMSQ measures intuitive style. High scores on this subscale indicate high intuitive style and vice versa.

Dependent Decision Making Style

Dependent decision making style is characterized by search for advice, direction from others, excessive consultation, and guidance in decision making (Scott & Bruce, 1995). A subscale in GDMSQ measures dependent style. High scores on this subscale indicate high dependent style and vice versa.

Avoidant Decision Making Style

It is defined as an attempt to postpone, delay, withdraw, and avoid decisions by keeping away from the decision scenarios (Scott & Bruce, 1995). A subscale in GDMSQ measures avoidant style. High scores on this subscale indicate high avoidant style and low scores indicate low avoidant style.

Spontaneous Decision Making Style

The spontaneous decision making involves making impulsive, hasty, and at the spur of the moment decisions (Scott & Bruce, 1995). A subscale in GDMSQ measures spontaneous style. High scores on this subscale indicate high spontaneous style and low scores indicate low spontaneous style.

Sample

In the main study, a purposive sample of 1200 employees (300 supervisors and 900 subordinates) was collected from services providing organizations (see Figure 16). Supervisors were further divided into medical superintendents from hospitals (n = 100, 33.33%), managers from banks (n = 100, 33.33%), and head of departments from universities (n = 100, 33.33%) was selected. Similarly, every medical superintendent, bank manager, and head of department was cross-rated by his or her three subordinates on leadership styles. Thus a total sample of 900 subordinates participated in the study. Medical officers in the hospitals (n = 300, 33.33%), officers in the banks (n = 300, 33.33%), and lecturers in the educational departments (n = 300, 33.33%) rated their supervisors' leadership styles on the questionnaires. The present study is based on cross-sectional survey research design. The data collection plan was designed by keeping in view the concerns of common method variance. The sample was collected form the province of the Punjab and the federal capital Islamabad. Informed consent was obtained in written both from the supervisors and the subordinates. During the selection of the sample from the supervisors, full time job experience of at least one year and supervision of five employees was ensured. Similarly, it was ensured the every subordinate rating his or her supervisor has worked under his or her supervision for a time period of six months.

At least four to six months of job experience are necessary for culture learning and socialization (Filstad, 2004; Ashforth et al., 2007).

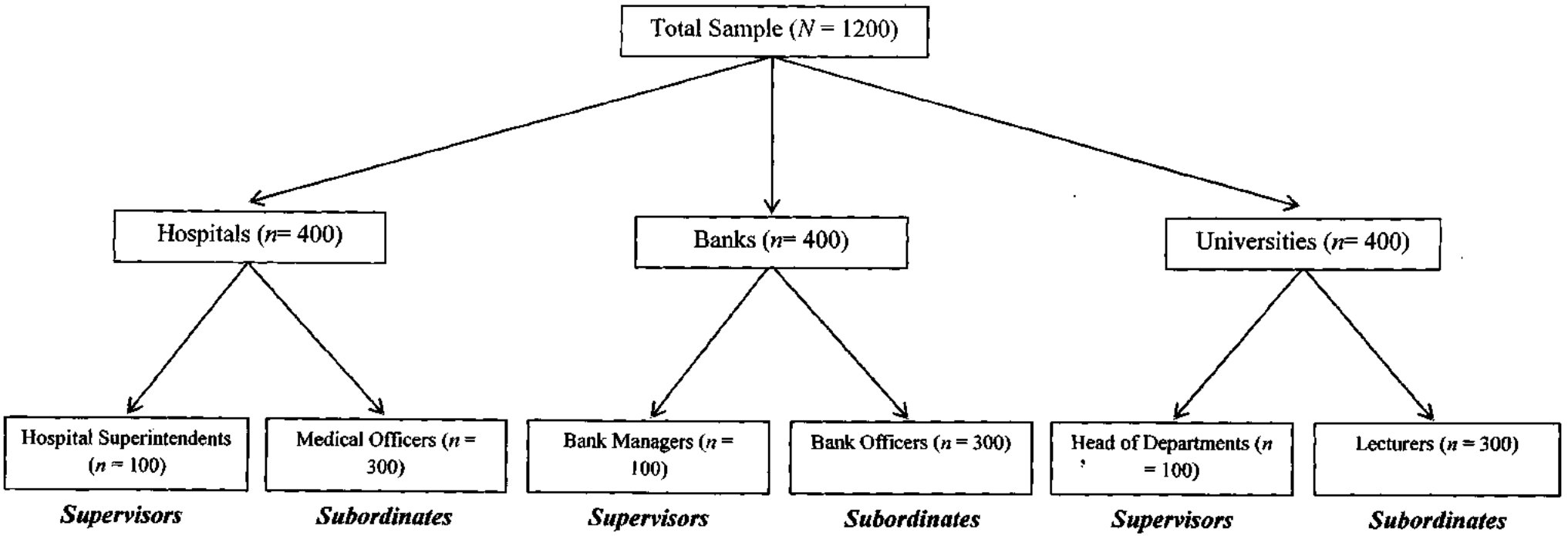

Figure 13. Sampling plan and division of sample for the main study

Instruments

In the main study, along with the demographic information sheet, five instruments were administered on the participants.

Multifactor Leadership Questionnaire (MLQ)

The Multifactor Leadership Questionnaire was developed by Bass and Avolio (2000). The scale comprised of 36 items and three subscales including transformational, transactional and laissez faire leadership style. These subscales are measured by 20, 12 and 4 items respectively. It is based on 5-point Likert type response pattern. The response categories were selected as 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The minimum and maximum scores on the scale can be obtained as 36 to 180 respectively. All the items are positively scored. Three is no cutoff scores in the scale, therefore high scores indicate high transformational, transactional and laissez faire leadership style and vice versa. The alpha reliability coefficients for the subscales were computed as .94, .77, and .71 for transformational, transactional and laissez faire leadership style respectively. The scale is used in the indigenous setting and reported to be a construct valid instrument to measure decision making styles in Pakistani organizations (Almas, 2007; Khan, 2009; Khan & Waheed, 2012; Riaz, 2009).

Decision Situations Scale (DSS)

The Decision Situations Scale comprised of 27 items and three subscales including certainty, risk and uncertainty. Every subscale consisted of 9 items respectively. The scale is based on 5-point Likert type response pattern. The response

categories included 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The score on a subscale ranges from 9 as minimum scores and 45 as maximum scores. All the items are positively worded. Three is no cutoff scores in the scale, therefore high scores on a subscale indicates high certainty, risk or uncertainty and low scores on a subscale indicate low certainty, risk or uncertainty. The alpha reliability coefficients for the subscales were computed as .73, .74, and .81 for certainty, risk and uncertainty respectively. Thus all the subscales are reliable.

Job Stress Scale (JSS)

The Job Stress Scale was developed by Parker and DeCottis (1983). The scale comprised of 13 items. It is based on 5-point Likert type response pattern. The response categories were selected as 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The minimum and maximum scores on the scale can be obtained as 13 to 65 respectively. All the items are positively scored. Three is no cutoff scores in the scale, therefore high scores indicate high job stress and low scores indicate low levels of job stress. The alpha reliability of the original scale is computed as .86 indicating high internal consistency. The scale is used in the indigenous setting and reported to be a reliable and construct valid instrument to measure job stress in Pakistani organizations.

Knowledge Management Processes Scale (KMPS)

The Knowledge Management Processes Scale was developed by Tayyab (2008) by the adaptation and validation of Knowledge Circulation Process Scale by Lee et al.,

(2005) and Knowledge Application subscale by Gold et al., (2001). The scale comprised of 29 items. It is based on 5-point Likert type response pattern. The response categories were selected as 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The minimum and maximum scores on the scale can be obtained as 29 to 203 respectively. All the items are positively scored. Three is no cutoff scores in the scale, therefore high scores indicate high knowledge management processes and low scores indicate low knowledge management processes. The alpha reliability of the original scale is computed as .92 indicating high internal consistency. The scale is used in the indigenous setting and reported to be a reliable and construct valid instrument to measure knowledge management processes in Pakistani organizations (Akhtar, 2008; Tayyab, 2008).

General Decision Making Style Questionnaire (GDMSQ)

The General Decision Making Style Questionnaire was developed by Scott and Bruce (1995). The scale comprised of 25 items and five subscales including rational, intuitive, dependent, avoidant and spontaneous decision making style. Every style is measured by five items. It is based on 5-point Likert type response pattern. The response categories were selected as 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The minimum and maximum scores on a subscale can be obtained as 5 to 25 respectively. All the items are positively scored. Three is no cutoff scores in the scale, therefore high scores on a subscale indicate high rational, intuitive, dependent, avoidant and spontaneous decision making style and vice versa. The alpha reliability of the original scale is computed as .56, .65, .54, .56, and .67 for rational,

intuitive, dependent, avoidant and spontaneous decision making style respectively. The scale is used in the indigenous setting and reported to be a construct valid instrument to measure decision making styles in Pakistani organizations (Hayee, 2009; Batool, 2007; Riaz, 2009; Riaz, Riaz, & Batool, 2012; Riaz, Batool, & Riaz, 2012; Jamil, 2009).

Procedure

Hospitals, banks and universities were personally visited by the researcher for collecting information. Concerned authorities in the targeted organizations were instructed regarding the nature, objectives and importance of the study. After providing a brief introduction and necessary instructions, written informed consent was obtained from the respondents. Data was collected from dual sources in the targeted organizations i.e. supervisors and subordinates. A booklet containing information regarding decision making situations, job stress, and decision making styles was given to the hospital superintendents, bank managers, and head of the departments. Similarly, two questionnaire measuring leadership styles and knowledge management processes were given to the medical officers, bank officers, and lecturers to rate their supervisors on leadership styles and to rate the knowledge management processes of their organizations. A single supervisor was rated by three subordinates on leadership styles.

The anonymity of the respondents' identity was insured because of the direct relevance of the information with their present jobs. Participants were informed to be confident as all the information will be kept highly confidential and will only be used for research purpose. Thus data was given to the subordinates in envelops. Neither the supervisors were informed that which type of data is collected from his or her

subordinates nor the subordinates were informed that which type of data is collected from their supervisors. The objectives of the research were openly discussed with the respondents and nothing important about the research was intentionally hided or camouflaged. Researcher effectively handled the respondents' quires before, during, and after the form completion in order to raise their confidence and build their interest in the study in hand. Questionnaires were administered during the working hours and no time limits were settled. In the end, administration and research participants were thanked for their valuable cooperation.

RESULTS

Results

The main study was carried out to examine the moderating role of decision related factors (decision situations, knowledge management processes, and job stress) in the relationship between leadership styles (transformational, transactional and laissez faire) and decision making styles (rational, intuitive, dependent, avoidant, and spontaneous) among employees of services providing organizations.

6. Descriptive statistics i.e. mean and standard deviation was computed for all the scales used in the study (see Table 10).
7. Skewness and kurtosis were computed to test the univeriate normality of the scales.
8. Alpha reliability coefficients were computed for all scales and subscales to test the internal consistency of the scales (see Table 10).
9. Pearson correlation was applied to study the relationship between study variables (see Table 10).
10. Hierarchical regression analysis was applied to study the moderating role of decision related factors between leadership style and decision making styles (see Table 2, 3, 4, 5, 6, 7, 8, 9, and 10).
11. Mean and scale mean scores were computed to rank the leadership styles, decision making situations and decision making styles (see Table 11)
12. One-Way ANOVA was computed to examine the level of certainty, risk and uncertainty among medical superintendents, bank managers and head of departments (see Table 12).

13. One-Way ANOVA was computed to examine the level of job stress among medical superintendents, bank managers and head of departments (see Table 13).

Table 10

Psychometric properties of study variables (N = 1200)

Variables		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Transformational	(.71)	.83***	-.28***	.97***	-.06	.15**	-.17**	-.16**	.43***	.19***	.18**	.18**	.03	.01	.21***	.03
2	Transactional		(.71)	-.10	.92***	-.04	.43***	.16**	.02	-.03	.17**	.15**	.12*	-.07	-.01	-.10	.03
3	Laissez-faire			(.77)	-.07	.17**	.02	.17**	.17**	.19***	-.22***	-.09	.18***	.16**	.30***	.07	.17**
4	MLQ				(.93)	-.04	.04	-.03	.01	-.01	.43***	.18**	.05	.04	-.05	-.01	.06
5	Job Stress Scale					(.84)	-.08	.37***	.46***	.43***	-.04	.01	.15**	.11	.24***	.19***	.23***
6	Certainty						(.75)	-.21***	-.14*	.24***	.11	.41***	.13*	.18**	-.24***	-.20***	.23***
7	Risk							(.77)	.56***	.80***	.02	-.08	.13*	.10	.24***	.21***	.21***
8	Uncertainty								(.79)	.80***	.03	-.12*	.17*	.16**	..32***	.25***	.27***
9	DSS									(.79)	.08	.31*	.22***	.23***	.34***	.30***	.39***
10	KMPS										(.93)	.28***	.06	.08	.07	-05	.16**
11	Rational											(.76)	-.20**	.22***	-.05	-.05	.42***
12	Intuitive												(.80)	.18**	.28***	.67***	.77***
13	Dependent													(.72)	.28**	-.10	.61***
14	Avoidant														(.76)	.18**	.55***
15	Spontaneous															(.70)	.55***
16	GDMSQ																(.77)
	M	220.24	109.47	27.14	356.86	37.50	35.28	27.25	22.45	79.55	300.55	18.72	17.27	17.17	14.11	15.81	83.09
	SD	37.48	16.22	8.26	50.50	8.32	6.22	5.77	5.42	9.79	32.97	2.86	3.49	3.86	3.26	3.84	10.66
	Range	101-188	87-144	12-46	215-354	20-56	11-38	09-40	18-43	55-116	207-352	12-25	13-23	11-22	09-23	10-25	68-111
	Skewness	-.48	-.51	.17	-.57	-.30	.03	-.52	-.28	-.07	-.86	.16	.27	-.06	.56	.28	.54
	Kurtosis	.22	-.09	-.44	.31	-.65	.35	.83	.44	1.38	.95	.19	-.85	-.73	.83	.35	.14

Note. Alpha reliability coefficients are given in diagonals; MLQ = Multifactor Leadership Questionnaire; DSS = Decision Situations Scale; KMPS = Knowledge Management Processes Scale; GDMSQ = General Decision Making Style Questionnaire

*p< .05. **p< .01. ***p < .001

Alpha coefficients for the subscales of Multifactor Leadership Questionnaire (MLQ) ranged from .71 to .77. Alpha coefficient for MLQ was .93 indicating very high internal consistency. Alpha coefficient for Job Stress Scale (JSS) was .84 indicating high internal consistency. Alpha coefficients for the subscales of Decision Situations Scale (DSS) ranged from .75 to .79. Alpha coefficient for DSS was .79 indicating satisfactory internal consistency. Alpha coefficient for Knowledge Management Processes Scale (KMPS) was .93 indicating very high internal consistency. Alpha coefficients for the subscales of General Decision Making Style Questionnaire (GDMSQ) ranged from .70 to .80. Alpha coefficient for GDMSQ was .77 indicating satisfactory internal consistency.

The normal distribution is characterized by symmetric distribution of data around the center of the curve—majority of the scores lie in the center. The symmetrical bell-shaped normal distribution deviates from the normal in two ways including lack of symmetry and pointiness—also known as skewness and kurtosis respectively (Field, 2005, p. 8). In the skewed distribution, the scores cluster either on the right tail (positively skewed) or on the left tail (negatively skewed) of the curve (Cisar & Cisar, 2010; Miles & Shevlin, 2001). Similarly the normal curve is neither leptokurtic (having more scores in the center) nor platykurtic (having more scores on the tails) (Cisar & Cisar, 2010; Field, 2005). Therefore, the values of skewness and kurtosis were computed for all scales and subscales. It is recommended that the values of skewness and kurtosis must be less than +2 and -2. The items or scales exceeding this limit are considered problematic and should be excluded from the data (Muthen & Kaplan, 1985). The findings show that the values of skewness and kurtosis are less than 2 for all 27 items, 3

subscales and the overall scale. Thus, the data does not contain the problems with univariate normality.

The correlation coefficients among study variables were computed (a) to address the construct validity issues among the scales comprising of multiple dimensions and (b) to study the direction of the association between the study variables. In the present study, three scales were consisting of multiple dimensions including MLQ, DSS and GDMSQ. In MLQ, transformational style has significant positive correlation with transactional style r (1198) = .88, $p < .001$ whereas significant negative correlation with laissez-faire style r (1198) = -.29, $p < .05$. Transactional style has significant negative correlation with laissez-faire style r (1198) = -.44, $p < .01$. In DSS, certainty has significant negative correlation with risk r (1198) = .60, $p < .001$ and uncertainty r (1198) = -.40, $p < .01$. Risk has significant positive correlation with uncertainty r (1198) = .25, $p < .05$. In GDMSQ, rational style has significant negative correlation with intuitive r (1198) = -.35, $p < .01$, avoidant r (1198) = -.28, $p < .05$, and spontaneous style r (1198) = -.33, $p < .05$ whereas significant positive correlation with dependent style r (1198) = .49, $p < .001$. Intuitive style has significant positive correlation with dependent r (1198) = .59, $p < .001$, avoidant r (1198) = .35, $p < .05$, and spontaneous style r (1198) = .48, $p < .01$. Dependent style has significant positive correlation with avoidant r (1198) = .44, $p < .01$ and spontaneous style r (1198) = .26, $p < .05$. Avoidant style has significant positive correlation with spontaneous style r (1198) = .31, $p < .05$.

The second objective to compute the correlation coefficients was to study the direction of the association between the study variables. Transformational style r (1198) = .30, $p < .05$ and transactional style r (1198) = .27, $p < .05$ has significant positive

correlation with knowledge management processes whereas laissez-faire style r (1198) = -.29, $p < .05$ has significant positive correlation with knowledge management processes. Hence the findings are in line with the hypotheses. Transformational style has significant positive correlation with rational r (1198) = .30, $p < .05$ and intuitive style r (1198) = .41, $p < .01$. Transactional style has significant positive correlation with rational style r (1198) = .50, $p < .01$. Laissez-faire style has significant positive correlation with avoidant style r (1198) = .41, $p < .01$. Job stress has significant negative correlation with certainty r (1198) = -.51, $p < .001$ whereas significant positive correlation with risk r (1198) = .34, $p < .01$ and uncertainty r (1198) = .42, $p < .01$. Certainty has significant positive correlation with rational style r (1198) = .29, $p < .05$ whereas significant negative correlation with spontaneous style r (1198) = -.32, $p < .05$. Risk has significant positive correlation with intuitive r (1198) = .30, $p < .05$ and spontaneous style r (1198) = .41, $p < .01$. Uncertainty has significant negative correlation with rational style r (1198) = -.74, $p < .05$ whereas significant positive correlation with intuitive r (1198) = .28, $p < .05$ and spontaneous style r (1198) = .45, $p < .01$. Decision Situations Scale (DSS) has significant positive correlation with rational r (1198) = .31, $p < .05$, intuitive r (1198) = .33, $p < .05$, dependent r (1198) = .41, $p < .01$, avoidant r (1198) = .40, $p < .01$, and spontaneous style r (1198) = .54, $p < .01$. This indicates that the decision situation is directly associated with the choice of a decision making style. Knowledge management process has significant positive correlation with rational decision makings style r (1198) = .30, $p < .05$. Hence the correlation coefficients are in desired directions.

Table 11

Hierarchical Regression analysis showing the moderating effect of certainty between transformational style and rational style (N = 1200)

	Outcome: Rational decision making style		
Predictors	ΔR^2	ΔF	β
Transformational leadership style	.052	26.55***	1.90***
Certainty			2.72***
Transformational leadership x certainty			3.77***

***$p < .001$

Table 11 shows the moderating effect of certainty between transformational style and rational style. The ΔR^2 value of .052 indicates that 5.2% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 26.55, $p < .001$. The findings indicate that transformational style has significant positive effect on rational style (β = 1.90, $p < .001$). Certainty has significant positive effect on rational style (β = 2.72, $p < .001$). Transformational style x certainty has significant positive effect on rational style (β = 3.77, $p < .001$).

Table 12

Hierarchical Regression analysis showing the moderating effect of knowledge management processes between transformational style and rational style (N = 1200)

	Outcome: Rational decision making style		
Predictors	ΔR^2	ΔF	β
Transformational leadership style	.028	12.85***	1.40***
Knowledge management processes			1.82***
Transformational leadership style x knowledge management process			2.27***

***$p < .001$

Table 12 shows the moderating effect of knowledge management processes between transformational style and rational style in services providing organizations. The ΔR^2 value of .028 indicates that 2.8% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 12.85, $p < .001$. The findings indicate that transformational style has significant positive effect on rational style ($\beta = 1.40, p < .001$). Knowledge management processes has significant positive effect on rational style ($\beta = 1.82, p < .001$). Transformational style x knowledge management processes has significant positive effect on rational style ($\beta = 2.27, p < .001$).

Table 13

Hierarchical Regression analysis showing the moderating effect of risk between transformational style and intuitive style (N = 1200)

	Outcome: Intuitive decision making style		
Predictors	ΔR^2	ΔF	*B*
Transformational leadership style	.026	11.90***	1.62***
Risk			1.21**
Transformational leadership x risk			2.12***

***p<.001

Table 13 shows the moderating effect of risk between transformational and intuitive style. The ΔR^2 value of .026 indicates that 2.6% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 11.90, $p < .001$. The findings indicate that transformational style has significant positive effect on intuitive style ($\beta = 1.62, p < .001$). Risk has significant positive effect on intuitive style ($\beta = 1.21$, $p < .01$). Transformational style x risk has significant positive effect on intuitive style ($\beta = 2.12, p < .001$).

Table 14

Hierarchical Regression analysis showing moderating effect of uncertainty between transformational style and spontaneous style (N = 1200)

	Outcome: Spontaneous decision making style		
Predictors	ΔR^2	ΔF	β
Transformational leadership style	.011	4.86*	1.33***
Uncertainty			1.84**
Transformational leadership x uncertainty			1.55**

***p<.001

Table 14 shows the moderating effect of uncertainty between transformational style and spontaneous style. The ΔR^2 value of .011 indicates that 1.1% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 4.86, p < .05. The findings indicate that transformational style has significant positive effect on spontaneous style (β = 1.33, p < .001). Uncertainty has significant positive effect on spontaneous style (β = 1.40, p < .01). Transformational style x uncertainty has significant positive effect on spontaneous style (β = 1.55, p < .01).

Table 15

Hierarchical Regression analysis showing the moderating effect of certainty between transactional style and rational style (N = 1200)

	Outcome: Rational decision making style		
Predictors	ΔR^2	ΔF	β
Transactional leadership style	.014	6.57**	.89***
Certainty			1.44*
Transactional leadership x certainty			1.55**

*p< .05. **p< .01. ***p< .001

Table 15 shows the moderating effect of certainty between transactional style and rational style. The ΔR^2 value of .014 indicates that 1.4% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 6.57, p < .01. The findings indicate that transactional style has significant positive effect on rational style (β = .89, p < .01). Certainty has significant positive effect on rational style (β = 1.44, p < .05). Transactional style x certainty has significant positive effect on rational style (β = 1.55, p < .01).

Table 16

Hierarchical Regression analysis showing the moderating effect of knowledge management processes between transactional style and rational style (N = 1200)

	Outcome: Rational decision making style		
Predictors	ΔR^2	ΔF	β
Transactional leadership style	.017	7.80**	1.40***
Knowledge management processes			.98*
Transactional leadership style x knowledge management process			1.73**

*p< .05. **p< .01. ***p< .001

Table 16 shows the moderating effect of knowledge management processes between transactional style and rational style. The ΔR^2 value of .017 indicates that 1.7% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 7.80, $p < .01$. The findings indicate that transactional style has significant positive effect on rational style (β = 1.40, $p < .01$). Knowledge management processes has significant positive effect on rational style (β = .98, $p < .05$). Transactional style x knowledge management processes has significant positive effect on rational style (β = 1.73, $p < .01$).

Table 17

Hierarchical Regression analysis showing the moderating effect of uncertainty between laissez faire style and dependent style (N = 1200)

	Outcome: Dependent decision making style		
Predictors	ΔR^2	ΔF	β
Laissez faire leadership style	.026	11.90***	1.62***
Uncertainty			1.21**
Laissez faire leadership style x uncertainty			2.12***

***p<.001

Table 17 shows the moderating effect of risk between laissez-faire style and dependent style. The ΔR^2 value of .026 indicates that 2.6% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 11.90, $p < .001$. The findings indicate that laissez faire style has significant positive effect on dependent style (β = 1.62, $p < .001$). Uncertainty has significant positive effect on dependent style (β = 1.21, $p < .01$). Laissez faire style x uncertainty has significant positive effect on dependent style ($\beta = 2.12, p < .001$).

Table 18

Hierarchical Regression analysis showing the moderating effect of uncertainty between laissez faire style and avoidant style (N = 1200)

	Outcome: Avoidant decision making style		
Predictors	ΔR^2	ΔF	β
Laissez faire leadership style	.009	4.31*	1.32***
Uncertainty			1.26*
Laissez faire leadership style x uncertainty			1.76*

***p< .001

Table 18 shows the moderating effect of uncertainty between laissez-faire style and avoidant style. The ΔR^2 value of .009 indicates that 0.9% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 4.31, $p < .005$. The findings indicate that laissez faire style has significant positive effect on avoidant style ($\beta = 1.26, p < .001$). Uncertainty has significant positive effect on avoidant style ($\beta = 1.26, p < .05$). Laissez faire style x uncertainty has significant positive effect on avoidant style ($\beta = 1.76, p < .05$).

Table 19

Hierarchical Regression analysis showing the moderating effect of job stress between laissez faire style and avoidant style (N = 1200)

	Outcome: Avoidant decision making style		
Predictors	ΔR^2	ΔF	β
Laissez faire leadership style	.024	10.67***	1.53***
Job stress			1.61***
Laissez faire leadership style x job stress			2.29***

***$p < .001$

Table 19 shows the moderating effect of job stress between laissez faire style and avoidant style. The ΔR^2 value of .024 indicates that 2.4% variance in the dependent variable can be accounted for, by the predictors with ΔF (1, 296) = 10.67, $p < .001$. The findings indicate that laissez faire style has significant positive effect on avoidant style (β = 1.53, $p < .001$). Job stress has significant positive effect on avoidant style (β = 1.61, $p <$ .001). Laissez faire style x job stress has significant positive effect on avoidant style (β = 2.29, $p < .001$).

Table 20

Mean, scale mean and ranking of leadership styles, decision makings situations and decision making styles (N = 1200)

MLQ	Items	*M*	*SM*	*Rank*	DSS	Items	*M*	*Rank*	GDMSQ	Items	*M*	*Rank*
Transformational	20	220.24	11.01	1st	Certainty	9	31.32	1st	Rational	5	18.72	1st
Transactional	12	109.47	09.12	2nd	Risk	9	25.81	2nd	Intuitive	5	17.27	2nd
Laissez-faire	04	027.14	06.79	3rd	Uncertainty	9	23.48	3rd	Dependent	5	17.17	3rd
									Avoidant	5	14.11	5th
									Spontaneous	5	15.81	4th

Note. SM = Scale Mean; MLQ = Multifactor Leadership Questionnaire; DSS = Decision Situations Scale; GDMSQ = General Decision Making Style Questionnaire

Table 20 shows the mean, scales mean and ranking of the subscales of Multifactor Leadership Questionnaire, Decision Situations Scale and General Decision Making Styles Questionnaire respectively. The results show that transformational leadership style was the primary leadership style (M = 220.24, SM = 11.01, $Rank$ = 1). Transactional leadership style (M = 109.47, SM = 9.12, $Rank$ = 2) was the secondary whereas laissez faire leadership style (M = 27.14, SM = 6.79, $Rank$ = 3) was the least preferred leadership style in services providing organizations of Pakistan. The results show that certainty was the primary decision making situation in the services providing organizations of Pakistan (M = 31.32, $Rank$ = 1). Risk was the secondary (M = 25.81, $Rank$ = 2) whereas uncertainty was the least observed decision making situation (M = 23.48, $Rank$ = 3). The results show that rational decision making style was the primary style of decision making in services providing organizations of Pakistan (M = 18.72, $Rank$ = 1). Intuitive decision making style was the secondary decision making style (M = 17.27, $Rank$ = 2) whereas avoidant decision making style (M = 14.11, $Rank$ = 3) was the least preferred style of decision making in services providing organizations.

Table 21

Mean, standard deviation and F-values for hospital superintendents, bank managers, and head of departments in universities on Decision Situations Scale (N = 300)

	Hospital superintendents (n = 100)		Bank Managers (n = 100)		Head of Departments (n = 100)				
DSS	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	*Post-Hoc*
Certainty	31.12	4.84	30.75	4.73	32.10	4.56	2.19	.114	*ns*
Risk	25.29	5.60	27.18	7.53	24.34	5.65	5.07	.007	1<2>3
Uncertainty	24.24	5.39	24.04	6.80	22.16	4.62	4.09	.018	1>2>3

Note. DSS = Decision Situations Scale

Table 21 shows mean, standard deviation and *F*-values for hospital superintendents, bank managers, and head of departments in universities on Decision Situations Scale. The findings and non-significant on certainty with F (297, 2) = 2.19, $p >$ .05. The findings indicate significant mean differences on risk with F (297, 2) = 5.07, $p <$ .01. Results show that bank managers (M = 27.18, $p < .01$) significantly scored higher on risk as compared to hospital superintendents (M = 25.29, $p < .01$) and head of departments in universities (M = 24.34, $p < .01$). The findings indicate significant mean differences on uncertainty with F (297, 2) = 4.09, $p < .05$. The findings indicate that hospital superintendents (M = 24.24, $p < .05$) significantly scored higher on uncertainty as compared to bank managers (M = 24.04, $p < .05$) and head of departments in universities (M = 22.16, $p < .05$). Post-Hoc test indicates significant mean differences between all groups on risk and uncertainty.

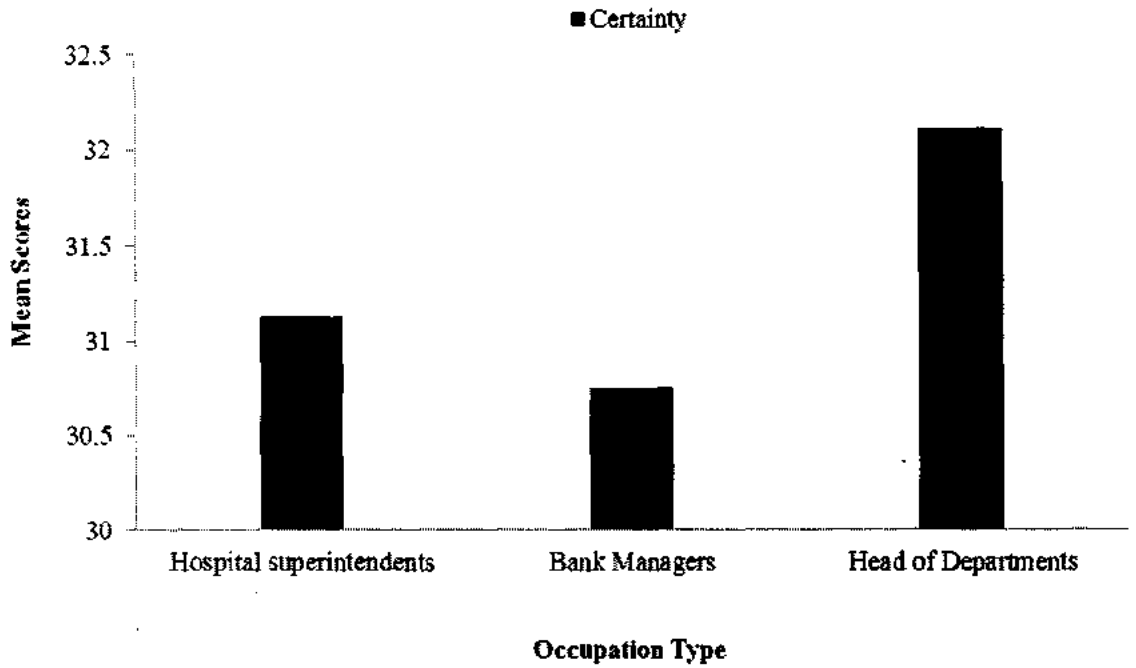

Figure 14. Level of certainty among hospital superintendents, bank managers and head of departments

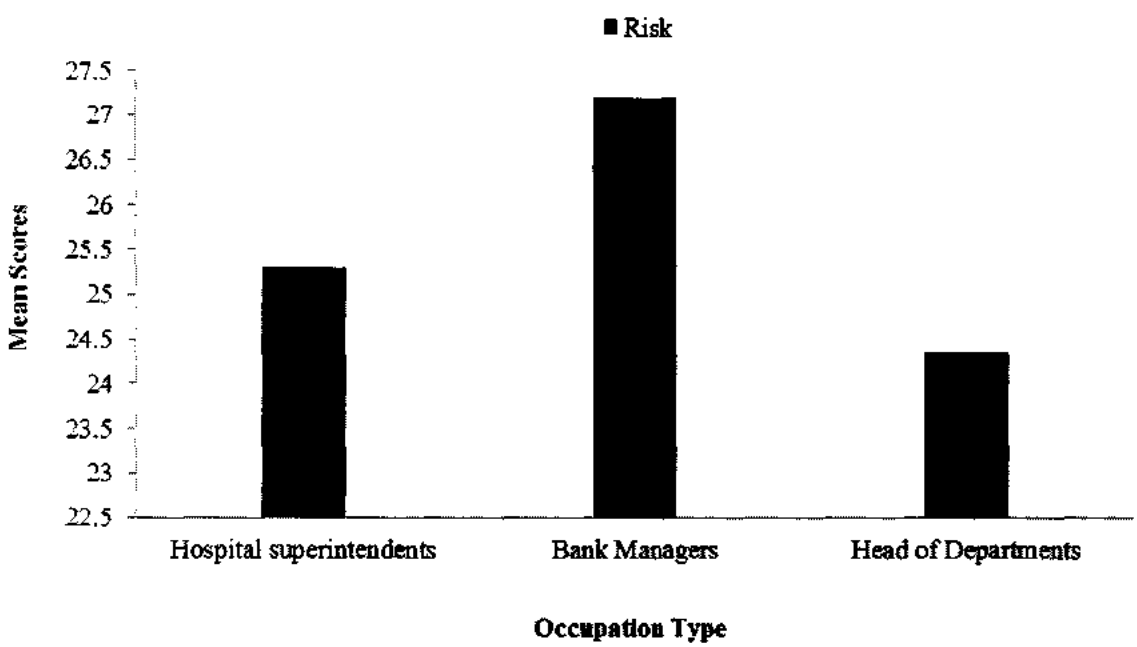

Figure 15. Level of risk among hospital superintendents, bank managers and head of departments

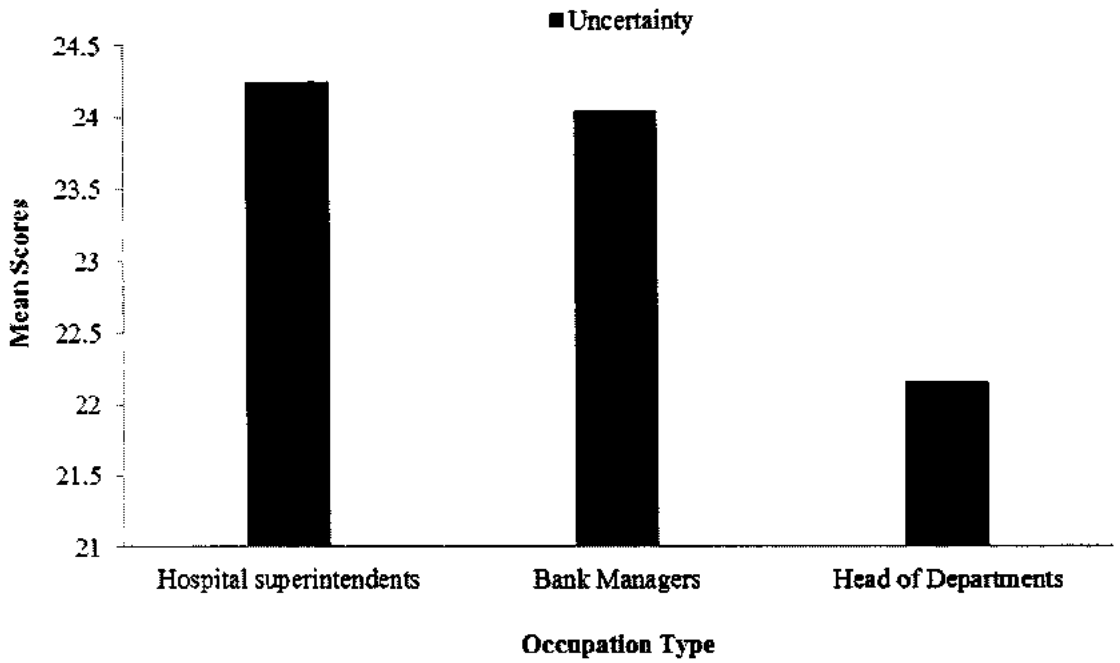

Figure 16. Level of uncertainty among hospital superintendents, bank managers and head of departments

Table 22

Mean, Standard Deviation and F-values for employees on leadership positions of services providing organizations on Job Stress Scale (N = 300)

	Head of departments (n = 100)		Bank managers (n = 100)		Medical superintendent (n = 100)				
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	*Post-Hoc*
Job Stress	35.32	7.43	36.93	7.87	41.48	9.90	3.69	.029	1<2<3

Table 22 shows mean, standard deviation and *F*-values for university head of departments, bank managers and medical superintendents on Job Stress Scale. The findings show significant mean differences on job stress with F (2, 82) = 3.69, $p < .05$. The results indicate that medical superintendents (M = 41.48, $p < .05$) significantly scored high on job stress as compared to bank managers (M = 36.93, $p < .05$) and university head of departments (M = 35.32, $p < .05$). Post-hoc comparisons indicate significant between group differences.

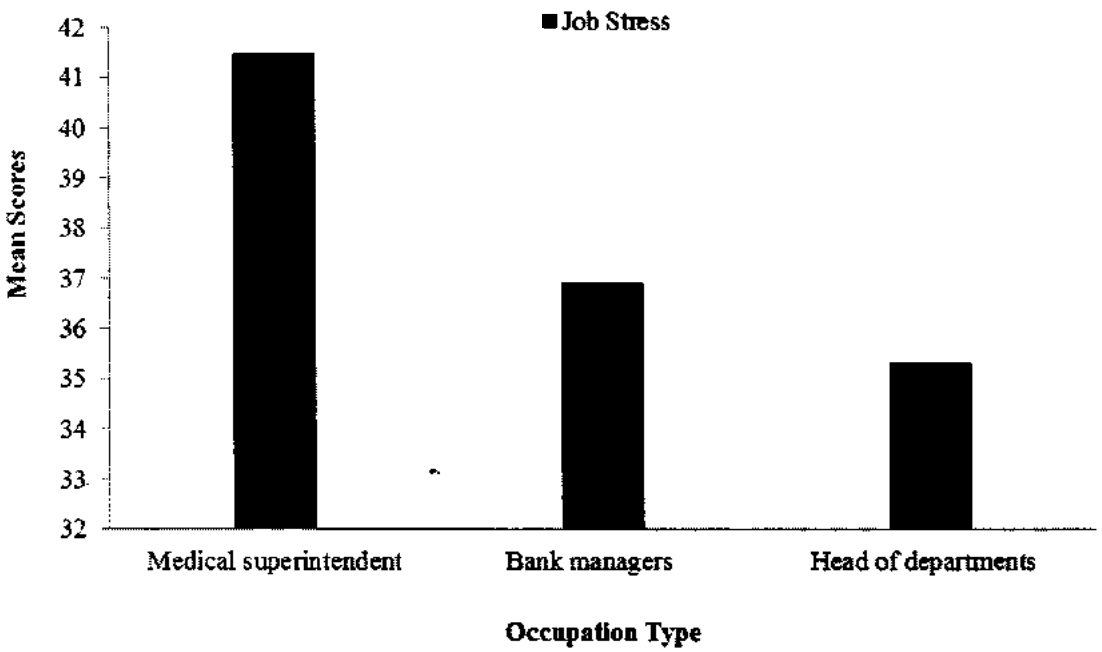

Figure 17. Level of job stress among hospital superintendents, bank managers and head of departments

DISCUSSION

Discussion

The present study was based on the Full Range Leadership Theory (Bass & Reggio, 2006). The study was related to the extension of the past research on the relationship between leadership styles and decision making styles (Khan & Rehman, 2011; Riaz, 2009; Russ et al., 1996; Tambe & Krishnan, 2000). The research comprised of three parts. Part-I was based on the development and empirical evaluation of the scale to measure decision making situations. Part-II was based on pilot testing of the instruments and preliminary analysis. Finally Part-III is based on the main study. In the main study, reliability, validity and normality of the data was ensured before conducting further analyses. All the scales have alpha coefficients of equal to or greater than .70 which indicates that the scales are reliable to use in the main analyses. Secondly, the zero-order correlation among study variables were found to be in the desired directions that were sufficient to address construct validity related issues. Thirdly, the values of skewness and kurtosis confirmed that data was normally distributed. After addressing these concerns, main study analyses were carried out.

The present study focused on investigating the moderating role of decision related factors in the relationship between leadership styles and decision making styles. Past research (Riaz, 2009; Tambe & Krishnan, 2000) clearly depicts direct association between leadership styles and decision making styles. However the present study investigated the effect of situational (decision making situations), organizational (knowledge management processes) and personal factors (job stress) on the leadership decision association. In this regard, the availability of an instrument to measure decision making situations created hindrances in studying the role of decision making situations in

the leadership-decision making continuum. Thus in Part-I, Decision Situations Scale was developed to measure decision situations in the services providing organizations. The scale was constructed on the model of Griffin (2011) which suggested that decisions are made in three types of situations including certainty, risk and uncertainty. The concept of decision situations is brainchild of Huber (1980) however, till now, not a single scale was constructed to measure these decision situations. After constructing the scale measuring decision situations, the pilot testing was carried out. The pilot testing confirmed that all the scales were reliable and valid to use in the main study. The preliminary analyses also provided sufficient support to formulate the hypotheses according to the underlying theory.

The objectives of the main study were threefold. The first objective was to examine the moderating role of decision making situations in the relationship between leadership styles and decision making styles. The second objective was to investigate the moderating role of knowledge management process in the relationship between leadership styles (transformational and transactional) and decision making styles. The third objective was to find out the moderating role of job stress in the relationship between laissez faire leadership style and avoidant decision making style. Past research on association between leadership styles and decision making styles (Khan & Rehman, 2012; Riaz, 2009; Tambe & Krishnan, 2000) showed inconsistent findings. The justification of these contradictory findings exists in the theory itself. The theorists (Avolio & Bass, 2002) of FRLT suggested that decision making styles of the transformational and transactional leaders are situation specific. Thus the present study

bridged this gap and incorporated the role of decision making situations while investigating the role of leadership styles in the prediction of decision making styles.

Usually managers face three type of situations in which decisions are made. The decision making situations include certainty, risk and uncertainty. These three decision situations are characterized by low, moderate and high level of ambiguity respectively (Griffin, 2012). Each situation requires unique decision making style because every style—due to its unique nature—is not suitable for all three types of decision situations. For that reason, transformational and transactional leaders shift their decision making styles according to the demands of the situation (Bass & Avolio, 2002). Situational diversity is the core reason that leaders do not restrict themselves to s single decision making style. On the contrary, leaders use multiple styles i.e. two or three styles while making decisions (Rowe & Mason, 1987). Majority of leaders are predisposed to adopt a dominant style of decision making which is known as primary style other then they employ backup style by adjusting their styles according to situational demands. Individuals have one primary, one secondary and one least preferred style (Driver et al., 1993). The change in style is dependent on the demands of the situation. Singh and Greenhaus (2004) illustrate that decision makers are not limited and they must not limit their selves to one strategy while making important decisions. Continually involving in multiple decisional strategies is pretty effective.

Transformational Leadership and Decision Making

Transformational leadership is the most active and effective style of leadership on the Full Range Leadership Theory (Bass & Avolio, 2003). In order to study the decision

making of transformational leaders, five hypotheses were formulated. The 1st hypothesis "transformational leadership style will positively predict rational decision making style" was supported in the present study. The findings are in line with the past research (Riaz, 2009; Tambe & Krishnan, 2000). Both transformational leadership and rational decision making are considered as an ideal style of leadership (Bass, 1999; Bass & Reggio, 2006; Bass & Avolio, 2000; Jabnoun & Rasasi, 2005) and decision making respectively (Mau, 1995; Chartrand et al., 1993; Riaz, 2009). However, rational decisions require more time and careful planning in the evaluation and selection of alternatives to make an ideal decision. Managers objectively process entire information to make a decision (Chater et al., 2003; Hendry, 2000; Mangalindan, 2004). Therefore certainty is an ideal condition for making rational decisions. It is because; under the conditions of certainty entire information is available regarding the alternatives and outcomes of a decision (Griffin, 2011). The second hypothesis "certainty will moderate the relationship between transformational leadership and rational decision making style" was supported in the present study. Availability of time and knowledge about the alternatives and outcomes decreases the chances of a bad decision and maximize the chance of an ideal decision (Griffin, 2011; Cook & Hunsaker, 2001). Thus in certainty, high quality decisions are made by using rationality.

The third hypothesis "transformational leadership style will positively predict intuitive and spontaneous decision making style" was supported in the present study. The findings are in line with the prior research (Downey et al., 2006). Both intuitive and spontaneous style involve high-speed decisions (Scott & Brucec, 1995). Similarly, past research indicates intuitive style is positively correlated with spontaneous style (Riaz,

2009). Even spontaneous style is considered as high-speed intuitive style (Scott & Brucec, 1995). Similarly, intuitive style is more appropriate under risk, uncertainty, and ambiguity (Bergstrand, 2001; Callan & Proctor, 2000; Kuypers, 1997). The fourth hypothesis "risk and uncertainty will positively predict intuitive decision making style in services providing organizations" was supported in the present study. Organizations face numerous circumstances when issues become so intricate, crucial, and sensitive that consulting and weighing various alternatives become impossible. For example, under the conditions of high uncertainty, risk, complexity, and conflicting situations, it becomes too hard to screen out all the options (Lindblom, 1959). Consequently, intuitive style remains the sole option to make decisions.

Intuitive decision making style is more suitable during the process of change (Andersen, 2000; Hansson & Andersen, 2001) and change is soul of transformational leadership (Stephen & Roberts, 2004). The process of change in the organizations creates the conditions of risks and uncertainty. Thus the fourth hypothesis "risk and uncertainty will moderate the relationship between transformational leadership and intuitive decision making style" was supported in the present study. Change is the hallmark of effective leadership practices. Transformational leaders have the ability to produce 'constructive or adaptive change' and taking risks when anarchy and instability provides some opportunities for change (Bedeian & Hunt, 2005). In the center of the storms, transformational leaders are ready to take risks frequently (Bass & Reggio, 2006). The successful companies never feel reluctance in taking risks and fear in trying new thing and experimenting new ideas (Peter & Waterman, 1983). Transformational leaders seek new ways, different perspectives and share risks (Stone & Patterson, 2005). Similarly risk

perception is positively associated with intuitive decision making (Bohm & Brun, 2008). Intuitive decision makers conceptualize risk as a whole instead of analyzing components of risk (Hablemitoglu & Yildirim, 2008). Intuitive decision making leads to effective decisional choices (Bergstrand, 2001).

The decisions leaders make vary in risk and uncertainty (Certo et al., 2008). Risky decision making can be characterized as a decisional situation with objective or given probabilities. Conversely, decisions under uncertainty involve decisional scenarios in which probabilities are subjective or unknown. Most of the time important decisions involve uncertainty rather than risk (Wu et al., 2004). In the times of extreme uncertainty like crisis and emergencies (Natale, O'Donnell, & Osborne, 1990) spontaneous decisions are required. Thus the fifth hypothesis "uncertainty will moderate the relationship between transformational leadership and spontaneous decision making style" was supported in the present study. For such type of scenarios leaders are trained to make "out of box" solutions of the problems and to understand organizational issues from a broader perspective. Leaders are prepared for risk taking and decision making in various scenarios (Fulmer & Goldsmith, 2001).Transformational leaders are courageous, visionaries, change agents, value driven, lifelong learners, and are able to deal with complexity, ambiguity, and uncertainty (Luthans, 1989). Transformational leaders conceptualize problems from a broader perspective and analyze the problem as a whole (Bass, 1994) which is the soul of spontaneous decision making style (Scott & Bruce, 1995). At times of uncertainty, focusing on the issue as a whole and avoiding engagement in the parts of the problem saves time which is the need of the decision making under uncertainty.

Finally, transformational leadership refers to the wide-ranging integrated qualities needed for all individuals, groups, and organizations which are on the journey of transformation. The transformational leader is a focal point that generate purpose and meaning in the organization. Thus transformational leadership characteristics are vital for today's rapidly changing business environments (Stephen & Roberts, 2004).

Transactional Leadership and Decision Making

The transactional leadership style is second important style of leadership on the FRLT (Bass & Avolio, 2003). In order to study the decision making of transactional leaders, five hypotheses were formulated. The first hypothesis "transactional leadership style will positively predict rational decision making style in services providing organizations" was supported in the present study. The findings are in line with the past literature (Barbuto et al., 2000) suggesting that transactional leaders are rational problem solvers and decision makers. They employ logic while making important organizational decisions. Rational decision making style is linked with positive outcomes (Chartrand et al., 1993; Harren, 1979; Mau, 1995; Scott & Bruce, 1995; Shiloh & Shenhav-Sheffer, 2004). Contrary to the transformational leaders who are change oriented, the transactional leaders promote stability in the organizations (Daft & Lane, 2002). Therefore, transactional leaders can effectively work under the conditions of certainty which are characterized by low level of ambiguity (Griffin, 2011) and known outcomes (Cook & Hunsaker, 2001).

The second hypothesis "certainty will moderate the relationship between transactional leadership style and rational decision making style" was supported in the

present study. Transactional leadership is based on the promise to "follow the rules" (Daft & Lane, 2002). Similarly, under the conditions of certainty, decisions are made with pre-established rules, policies and procedures (Greenberg & Baron, 1993; Harrison, 1987; Moorhead & Griffin, 1998). Daft and Lane (2002) argue that transactional leadership style is more appropriate for traditional management practices involving smooth procedures. Leaders are dynamic and active in taking corrective actions before the things went wrong by introducing rules to prevent errors whereas passive leaders do not react spontaneously and let the problems become more intricate before intervening (Bass & Avolio, 2000). Transactional leaders are more competent to make decisions under the conditions of certainty. Although certainty is an ideal condition for decision making (Greenberg & Baron, 1993) but certain situations are exceptional (Cook & Hunsaker, 2001) and most of the important organizational decisions are made under risk or uncertainty (Griffin, 2011). In this regard, transactional leadership can be described as 'not bad' but 'insufficient condition' for developing the leadership potential to the maximum (Avolio, 1999).

Rational decisions of the transactional and transformational decisions are assisted by knowledge management processes in the organizations. The second hypothesis "knowledge management processes will positively predict rational decision making in services providing organizations" and the third hypothesis "knowledge management processes will moderate the relationship between transformational, transactional leadership and rational decision making" was supported in the present study. Nicolas (2004) found that knowledge management effects different phases of decision making process in intricate situations. Holsapple (1995) illustrates that knowledge management

processes are used as decision support systems during the course of decision making. Using key knowledge factors including information technology infrastructure, human resource, knowledge sharing and organizational culture, Muhammad and Jalal (2011) discovered that knowledge management factors are perquisite for making successful decisions in organizations. Ilic (2010) found that knowledge management plays a vital role in making decisions in the health institutions. McKenzie, van Winkelen, and Grewal (2011) discovered that knowledge management assists in making right decisions across varying contexts and helps in selecting right decision making processes in diverse scenarios. Courtney (2001) is of the view that knowledge based decision support systems are considered effective for making appropriate decisions.

Past research is evident that transformational and transactional leadership is positively associated with knowledge management processes (Crawford, 2005; Bryant, 2003). Bryant (2003) studied the role of transformational and transactional leadership and discovered that leaders play central role in expertly creating, sharing and exploring knowledge in the modern organizations. Effective leaders are principally committed and motivated in taking knowledge management initiatives in the organizations. The current epic is based on the knowledge based economy in which knowledge sharing is the backbone of the business in the corporate sector (Baker & Badamshina, 2002). In the current era, modern organizations are focusing on the massive developments and flourishing the business with the help of knowledge management (Daft, 2001). Beside the considerable importance of knowledge management, it is worth noticing that it is the responsibility of the leaders to share knowledge and enables subordinates in managing

knowledge in the organizations and making knowledge-oriented rational decisions (Holowetzki, 2002).

Most of the managers try to reduce uncertainty and ensure certainty in order to make a better decision (Greenberg & Baron, 1993). The uncertainty can be changed into certainty by collecting relevant informational and knowledge (Griffin, 2011). Therefore, knowledge management has received much attention in the recent years although its existence can be traced back in the history (Kucza, 2001). Bryant (2003) illustrate that in three core processes of knowledge management including creating, sharing and exploring knowledge, leadership plays a central role. However, transformational leaders are better at creating and sharing knowledge at individual and group level whereas transactional leaders are more competent in creating and sharing knowledge at organizational level. Thus, both transformational and transactional leaders promote knowledge management at all levels including individual, group and organizational levels. Similarly, unclear expectations, ill-defined directions, and ambiguous goals are by product of the absence of transactional leadership (Avolio, 1999). Thus an ideal approach integrates both leadership styles (Bass, 1998).

Laissez faire Leadership and Decision Making

The laissez faire style is the most passive and ineffective style of leadership on the FRLT (Bass & Avolio, 2003) according to underlying theory and research respectively. The laissez faire style lies on the non-leadership dimension of the Full Range Leadership Theory (Jones & Rudd, 2007). In order to study the decision making of laissez faire leaders, five hypotheses were formulated. The first hypothesis "laissez-faire leadership

style will positively predict dependent and avoidant decision making style in services providing organizations" was supported in the present study. The findings are in line with the past research (Riaz, 2009) illustrating that laissez faire leaders adopt dependent and avoidant decision making style. The findings also support the theoretical assumptions behind the laissez faire leadership style. The theorists (Avolio & Bass, 2002) of Full Range Leadership Theory illustrate that laissez faire leaders avoid decisions and shift their decision responsibility to others (Jones & Rudd, 2007). Bass (1990) explains that laissez faire leaders hand over their responsibility, withdraw their duties regarding subordinates, and avoid decision making. Both dependent and avoidant decision making styles results in negative outcomes (Scott & Bruce, 1985).

People with a dependent style have external locus of control, are negatively rated by their supervisors on innovativeness (Scott & Bruce, 1985). Such people rely on others' consultations and advice and suffer from impractical objectives, rely upon limited and narrow range conclusion, and face diverse advices (Fischhoff, 1992). Similarly, dependent decision making style is attributed to the lack of self and environmental awareness (Blustein & Phillips, 1988). People exhibiting dependent style are occupied with difficulties in operations related to decision making processes involving deliberate thinking. With avoidant style, people find trouble while taking initiatives in decisional scenarios. They are unable to practice their attentions when decisional action has to be taken (Scott & Bruce, 1995). Laissez faire leaders perceive their selves incompetent and ignore leadership responsibilities. When they are called for assistance, they show irresponsiveness on the important issues (Bass, 1998).Both dependent and avoidant decisions are positively associated and share many features (Riaz, 2009; Scott & Bruce,

1995). People with dependent personality disorder and avoidant personality disorder share multiple common symptoms (Diagnostic and Statistical Manual-VI, 2012).

Laissez faire leaders consistently use dependent and avoidant style—contrary to the transformational and transactional leaders who change their styles according to the demands of the diverse situations. Whatever the situation is laissez faire leaders avoid decisions and shift their responsibilities to other employees in the organizations. However, laissez fair leaders constantly perceived uncertainty while making decisions and consequently remain detached from decision scenarios (Bass, 1990). Thus the second hypotheses "uncertainty will positively predict dependent and avoidant decision making style" was supported in the present study. Uncertainty creates high levels of ambiguity are increases the chances of making bad decisions (Griffin, 2011). Past literature is evident that dependent and avoidant decisions are bad decisions and result in negative consequences (Loo, 2000; Nygren & White, 2002; Scott & Bruce, 1995). Thus laissez faire leaders—constantly overwhelmed with the perceptions of uncertainty—simply avoids the decisions or transfer their responsibility to others (Scott & Bruce, 1995). Therefore the third hypothesis "uncertainty will moderate the relationship between laissez faire leadership style and dependent decision making style" and the fourth hypothesis "uncertainty will moderate the relationship between laissez faire leadership style and avoidant decision making style" were supported in the present study. Avoidance under the conditions of uncertainty is one of prominent work values across 50 countries of the world (Clark, 2004).

One more thing which multiplies the avoidant tendencies is stress at job. The fifth hypothesis "job stress will positively predict avoidant decision making style in services

providing organizations" was supported in the present study. The results are consistent with the previous studies (Batool, 2007, Thunholm, 2008). Maner et al. (2006) illustrate that dispositional anxiety is positively related to risk avoidant decision making. Stress is positively associated with multiple avoidant management functions including avoidant leadership style (Wager et al., 2003), avoidant decision making style (Thunholm, 2008), and avoidant conflict management style (Moberg, 2001). The sixth hypothesis "job stress will moderate the relationship between laissez-faire leadership style and avoidant decision making style" was supported in the present study. Every leader faces some sort of stress while making a programmed decision involving routine conditions in general and non-programmed decision involving uncertainty in particular (Singh, 2001). Useem, Cook and Sutton (2005) illustrate that all decisions involve stress. Whenever the leaders make decisions they face certain levels of stress that vary across situations. Similarly, stress has direct relevance with the perception of a decision situation (Miller et al., 2009). Thus, specialized programmes should be designed to train supervisors how to effectively deal with stress and its effects on leadership and decision making. Laissez-faire leadership is associated with negative effects on work related outcomes (Yammarino & Bass, 1990) and considered as the most unproductive style of leadership (Bass & Avolio, 1994). This is the reason that it is the style of leadership which is infrequently observed in the corporate sector (Bass & Avolio, 1989).

Level of certainty, risk and uncertainty was identified among three groups of participants including hospital superintendents, bank managers, and head of departments in universities. The first hypothesis "head of departments will significantly score higher on certainty as compared to bank managers and hospital superintendents" was not

supported in the present study. Cook and Hunsaker (2001) illustrate that leaders make important decision under certainty in exceptional cases. Instead, most of significant decisions are taken under risk and uncertainty (Griffin, 2011). The sixth hypothesis "bank managers will significantly score higher on risk as compared to hospital superintendents and head of department in universities" was supported in the present study. Financial institutions deal with money and other business transactions involving more risks. For example, authorizing loans and introducing insurances involves competent risk analysis. This is why, managers exhibited more risk as compared to heads and superintendents. The seventh hypothesis "hospital superintendents will significantly score higher on risk as compared to bank managers and head of department in universities" was supported in the present study. Health institutions frequently deal with uncertain cases involving human life risks and uncertainties. This is why, medical superintendents exhibited more uncertainty than managers and heads.

The in order to identify the primary, secondary and the least preferred leadership style, decision making style, and decision making situation, ranking was done on the basis of mean and scale mean scores. The scale mean scored indicated that transformational style was the most prominent style of leadership in services providing organizations. The ranking is line with the past research in the indigenous context (Khan, 2009; Riaz, 2009). Bass (1985) illustrate that transformational leadership is more visible in collectivist cultures rather than individualistic cultures. Beside this transformational leadership is effective in various countries of the world including USA, India, China, Spin, Australia, and Japan (Schultz & Schultz, 2002). Transactional was the secondary whereas laissez faire style was the least preferred style of leadership in services providing

organizations. Bass and Avolio (1989) illustrate that laissez faire style is infrequently observed in the corporate sector. The scale mean scored indicated that rational, intuitive and avoidant was the primary, secondary and least preferred style of leadership respectively. This classification is also in line with the past research (Riaz, 2009). Finally, the mean scores indicated that certainty, risk and uncertainty were the primary, secondary and the least preferred decision situation respectively. These findings are counter intuitive and inconsistent with the literature (Griffin, 2012) indicating the certainty is exceptional.

The eighth hypothesis "hospital superintendents will significantly score higher on job stress as compared to bank managers and head of departments in universities" was supported in the present study. In the main study, same trends were observed in the findings on job stress that were found in the main study. The findings confirm the assumption that job stress is occupation specific (Keil, 1999; The Independent, August 7, 2000). Thus on the basis of the findings of the present study, jobs of hospital superintendents, bank managers and head of departments in universities can be classified as high, medium and low stress occupations.

CONCLUSION, IMPLICATIONS AND LIMITATIONS

Conclusion

The present study was conducted to examine the decision making styles (Scott & Bruce, 1995) of transformational, transactional and laissez faire leaders (Bass & Reggio, 2006) under the conditions of certainty, risk and uncertainty (Griffin, 2011). The present study focused on the "style approach" to leadership. The style approaches to leadership focuses on the behavior of the leaders in different contexts (Northouse, 2007). Although different behaviors of the leaders, their antecedents and outcomes are well-researched in the past literature but the incorporation of the contexts while describing leadership behaviors remained less researched. Thus the present study concentrated on role of decision contexts while describing the leadership styles and decision making styles of the transformational, transactional and laissez-faire leaders based on FRLT (Bass & Avolio, 2003). The study addressed the theoretical assumption that decision making styles of these leaders are situation specific (Avolio & Bass, 2002). The findings showed that transformational leaders use multiple decision making strategies across different situations. Transformational style positively predicted rational, intuitive and spontaneous style. Just like leadership styles, decision making situations directly affect decision making styles. In the same manner, certainty, risk and uncertainty directly predicted rational, intuitive and spontaneous style respectively.

Beside the direct effect on decision making styles, decision situations also serves as a buffer and facilitator while opting a specific decision making style. The findings showed that certainty moderated between transformational style and rational style which indicates that certain situations facilitate in rational decision making. Risk and uncertainty moderated between transformational style and intuitive style indicating that

when transformational leadership is multiplied by risk and uncertainty the leaders make intuitive decisions. Similarly, uncertainty moderated the relationship between transformational leadership and spontaneous style—showing that spontaneous style is an outcome of the interplay of transformational leadership and uncertainty. The findings also showed that certainty moderated between transactional style and rational style which illustrates that rule-guided rational decisions are facilitated by the conditions of certainty. Beside decision situations, due to the importance of the knowledge based economy in the current epoch, role of knowledge management processes in decision making styles was also investigated. The findings showed that knowledge management processes not only directly effect rational decisions of the leaders but also effect in interaction with transformational and transactional style. The findings confirmed that knowledge management processes in the organizations directly predicts and assists transformational and transactional leaders' rational decisions.

The third important style in the FRLT i.e. laissez faire leadership style positively predicted dependent and avoidant style. The perception of decision uncertainty moderated between laissez faire style and dependent style. Similarly, uncertainty moderated between laissez faire style and avoidant style. The findings illustrate that laissez faire leaders depend upon others and avoid decisions in interaction with uncertainty. The findings illustrate that laissez faire style is not the sole predictor of decision avoidance; instead, job stress also predicts avoidant style. Besides the direct effect, job stress moderated between laissez faire leadership style and avoidant style. Overall the findings contributed to the underlying theory. The findings confirmed that decision making of the leaders based on FRLT is situation specific (Bass & Reggio,

2006). Similarly, the findings confirmed the direct and the supporting effect of knowledge management processes on the rational decision making of transformational and transactional leaders. The findings also confirmed the direct role of job stress in decision avoidance as well as its effects in interaction with laissez faire leadership style.

The present study integrated the style and situational approaches of leadership and explained FRLT from a contingency perspective. So far "only a few research studies have been conducted to justify the assumptions and propositions set forth by the situational approach" (Northouse, 2007, p. 97). Thus, the deficiency in the literature on the situational leadership makes its theoretical bases questionable (Graeff, 1997; Vecchio & Boatwright, 2002) in spite of the fact that situational approaches carry practical strengths. Graeff (1997) and Yukl (1998) suggested that situational approaches to leadership are more flexible in nature—stressing on the leaders to change their styles according to the situational requirements. The style approaches and the situational approaches are widely used in the training of the leaders in organizations (Blanchard, Zigarmi, & Nelson, 1993; Hersey & Blanchard, 1988; Northouse, 2007). Hersey and Blanchard (1993) found that situational leadership approaches were incorporated in the training programs of the 400 out of 500 successful companies. The present study also answers the criticism that style approaches fail to find a universally effective style of leadership across all situations (Northouse, 2007). The present study illustrates that leaders face diverse situations including certainty, risk and uncertainty (Griffin, 2011) and consequently cannot use a single rigid style to all situations; instead, they adjust their style by keeping in view the nature of the underlying situations (Northouse, 2007).

Implications

The present study has many theoretical and practical implications. First, Decision Situations Scale was developed in the present study which can be used in the future researches to measure certainty, risk and uncertainty in organizations (Griffin, 2011). Secondly, the study contributed to the FRLT by confirming the assumptions of theorists (Bass & Reggio, 2006) that choice of a decision making style is situation specific. Thus specialized training programs should be designed to enable leaders use appropriate styles across diverse situations while making important decisions. Thirdly, the role of knowledge management processes in rational decision making (Bergeron, 2003; Hellreiegel et al., 2001; Holsapple, 1995; Nicolas, 2004) also shared valuable insights regarding knowledge based rational decisions by transformational and transactional leaders. The study confirmed that knowledge management processes in the organizations assist in rational decision making. Fourth, the study confirmed the role of job stress in decision avoidance. The study also confirmed the additive effect of job stress in the relationship between laissez faire style and avoidant style. Stress influences the decision makers before, during, after making a decision. However it most severely effects during the process of decision making. In this regards, leaders should be trained to make effective decisions under the conditions of job stress (Useem et al., 2005).

Limitations

Beside these theoretical and practical implications, the present study carried some potential limitations. First, the present study was limited to three leadership styles of FRLT. It would be more appropriate to study all nine factors of the theory. The study was

limited to services providing organizations. It would be more appropriate in the future research to investigate the nature of decision situations in manufacturing industries. The present study was based on the cross-sectional survey research design which usually instills low internal validity, thus casual inferences cannot be drawn. In the future research, experimental studies will be more appropriate to study the cause-affect connections between decision making situations and decision making styles of leaders. Although cross-rating were done to avoid common method variance but still social desirability may influence the rating of job stress, decision situations, decision making styles and knowledge management processes. In the present study, role of overall knowledge management processes was investigated. In future research, it would be more appropriate to investigate the role of distinct knowledge management processes in rational decision making. Beside all these limitations, the present study is pretty insightful in understanding the decision making styles of transformational, transactional and laissez faire leaders across different situations.

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ANNEXURES

Annexure-A

INTRODUCTION AND INFORMED CONSENT FOR SUPERVISORS

I am student of PhD at Department of Psychology, International Islamic University Islamabad. The department conducts different researches on various social, psychological and organizational issues. The present study is an academic research which aims to examine the job stress and conditions of decision making in service providing organizations including banks, hospital and educational departments. Your participation is highly appreciated. The obtained information will remain confidential and would solely be used for the research purpose.

I have complete information about the nature, objectives, and importance of this study and willing providing the information for research purpose.

_____

Signature

Annexure-B

DEMOGRAPHIC INFORMATION SHEET FOR SUPERVISORS

Gender: Male / Female

Age (in years): _____

Education (degree name): _____

Current Designation (job title): _____

Total Job Experience: _____

Job Experience in the Present Job: _____

Total Number of Employees in Your Organization: _____

Total Number of Employees under Your Direct Supervision: _____

Annexure-C

JOB STRESS SCALE

Listed below are the statements that represent possible opinions that you may have about your stress at job. Please indicate the degree of your agreement or disagreement with each statement by selecting the option that best represents your point of view about your job stress in this organization.

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Working here makes it hard to spend enough time with my family	1	2	3	4	5
2	I spend so much time at work paying much of the attention to small details that I fail to understand bigger plans of the organization	1	2	3	4	5
3	Working here leaves little time for other activities.	1	2	3	4	5
4	I frequently get the feeling I am married to the organization	1	2	3	4	5
5	I have too much work and too little time to do it in	1	2	3	4	5
6	Sometimes I am frightened by the telephone ringing at home because the call might be job-related	1	2	3	4	5
7	I feel like I never have a day off.	1	2	3	4	5
8	I have felt nervous as a result of my job.	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
9	My job annoys me more than it should.	1	2	3	4	5
10	There are lots of times when my job irritates me greatly.	1	2	3	4	5
11	Sometimes when I think about my job I get a tight feeling in my chest	1	2	3	4	5
12	I feel guilty when I take time off from job	1	2	3	4	5

Annexure-D

DECISION SITUITIONS SCALE

The statements given below are related to the conditions and situations in which you make decisions in the present job. Please indicate the degree of your agreement or disagreement with each statement by selecting the option that best represents your point of view about the conditions and situation that you face while making decisions.

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I make decisions in extreme time pressure	1	2	3	4	5
2	My decisions comprise of disorganized, ambiguous and unstructured problems	1	2	3	4	5
3	I leave my decisions at the altar of fate to determine their success	1	2	3	4	5
4	I have very limited information required for making decisions	1	2	3	4	5
5	My decisions incorporate unclear, uncertain and ill-defined problems	1	2	3	4	5
6	I face unique, novel, and unusual problems	1	2	3	4	5
7	I am uncertain about the outcomes of my decisions	1	2	3	4	5
8	My decision making incorporates with abstract, subjective, and vague issues	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
9	My decisions involve high level of stress and tension	1	2	3	4	5
10	My decisions become successful or unsuccessful, depending on the situation	1	2	3	4	5
11	I have limited time for making decisions	1	2	3	4	5
12	I have a little information required for making decisions	1	2	3	4	5
13	I make decisions in doubt and confusion	1	2	3	4	5
14	Outcomes of my decisions are based on chance factors	1	2	3	4	5
15	My decisions involve risks as I have no set rules to apply	1	2	3	4	5
16	My decisions involve costs and benefits	1	2	3	4	5
17	My decisions revolve in between success and failure	1	2	3	4	5
18	I often make decisions in tense situations	1	2	3	4	5
19	I deal with structured and organized decisional issues	1	2	3	4	5
20	I have enough time for making decisions	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
21	My decisions are simple, pre-planned, repetitive and routine	1	2	3	4	5
22	I solve problems with pre-established rules, policies and procedures	1	2	3	4	5
23	I know in advance the outcomes of my decisions	1	2	3	4	5
24	I make decisions without any stress	1	2	3	4	5
25	I am certain about the consequences of my decisions	1	2	3	4	5
26	I have clear understanding about the nature of my decisions	1	2	3	4	5
27	I have complete information required for making decisions	1	2	3	4	5

Annexure-E

GENERAL DECISION MAKING STYLES QUESTIONNAIRE

The statements given below are related to your decision making style in the present job. Please indicate the degree of your agreement or disagreement with each statement by selecting the option that best represents your point of view about your style of decision making in the present job.

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I confirm twice my source of information before believing it.	1	2	3	4	5
2	I rely upon my instincts while making a decision.	1	2	3	4	5
3	I often need help of other people while making decisions.	1	2	3	4	5
4	I postpone my important decisions until there is pressure.	1	2	3	4	5
5	I generally make decisions instantly.	1	2	3	4	5
6	I have the true facts before taking a decision.	1	2	3	4	5
7	I try to rely on my sixth sense while making decisions.	1	2	3	4	5
8	I rarely make decisions without taking opinion from others.	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
9	I postpone making decisions, whenever it's possible.	1	2	3	4	5
10	I often make decisions on the spur of the moment.	1	2	3	4	5
11	I make organized and logical decisions.	1	2	3	4	5
12	I generally make decisions, which I feel are right.	1	2	3	4	5
13	It's easy for me to make an important decision, if I have support of others.	1	2	3	4	5
14	I make quick decisions.	1	2	3	4	5
15	I have to be careful while making decisions.	1	2	3	4	5
16	When I make a decision it is more important for me to feel that it is the right decision rather than it is based on the logical reason.	1	2	3	4	5
17	I take help from others advice while making my important decisions.	1	2	3	4	5
18	I generally take important decisions on the last moments.	1	2	3	4	5
19	I often make decisions at once without prior thinking.	1	2	3	4	5
20	While making decisions for any specific task, I have many alternatives in my mind.	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
21	I tend to make excuses whenever I have to make important decisions.	1	2	3	4	5
22	When I make a decision, I trust my personal feelings and reactions.	1	2	3	4	5
23	When I have to make important decisions, I like to have somebody to guide me in the right direction.	1	2	3	4	5
24	I do not make many decisions because thinking about them makes me uneasy.	1	2	3	4	5
25	While making decisions, I do what I think is right at the moment.	1	2	3	4	5

Annexure-F

INTRODUCTION AND INFORMED CONSENT FOR SUBORDINATES

I am student of PhD at Department of Psychology, International Islamic University Islamabad. The department conducts different researches on various social, psychological and organizational issues. The present study is an academic research which aims to examine the leadership and knowledge management practices in service providing organizations including banks, hospital and educational departments. Your participation is highly appreciated. The obtained information will remain confidential and would solely be used for the research purpose.

I have complete information about the nature, objectives, and importance of this study and willing providing the information for research purpose.

_____

Signature

Annexure-G

DEMOGRAPHIC INFORMATION SHEET FOR SUBORDINATES

Gender: Male / Female

Age (in years): _____

Education (degree name): _____

Current Designation (job title): _____

Total Job Experience: _____

Job Experience in the Present Job: _____

Total Job Experience Under the current Supervisor: _____

Annexure-H

MULTIFACTOR LEADERSHIP QUESTIONNAIRE

The statements given below are related to the leadership style of your supervisor in the present job. Please indicate the degree of your agreement or disagreement with each statement by selecting the option that best represents your point of view about the leadership style of your immediate supervisor in the present job.

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	My supervisor provides others with assistance in exchange for their efforts.	1	2	3	4	5
2	My supervisor reexamines critical assumptions to question whether they are appropriate.	1	2	3	4	5
3	My supervisor fails to interfere until problems become serious.	1	2	3	4	5
4	My supervisor focuses attention on irregularities, mistakes, exceptions, and deviations from standards.	1	2	3	4	5
5	My supervisor avoids getting involved when important issues arise.	1	2	3	4	5
6	My supervisor talks about my most important values and beliefs.	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
7	My supervisor remains absent when needed.	1	2	3	4	5
8	My supervisor seeks differing perspectives when solving problems.	1	2	3	4	5
9	My supervisor talks optimistically about the future.	1	2	3	4	5
10	My supervisor instills pride in others for being associated with him.	1	2	3	4	5
11	My supervisor discusses in specific terms that who is responsible for achieving performance targets.	1	2	3	4	5
12	My supervisor waits for things to go wrong before taking action.	1	2	3	4	5
13	My supervisor talks enthusiastically about what needs to be accomplished.	1	2	3	4	5
14	My supervisor specifies the importance of having a strong sense of purpose.	1	2	3	4	5
15	My supervisor spends time teaching and coaching.	1	2	3	4	5
16	My supervisor makes clear what one can expect to receive when performance goals are achieved.	1	2	3	4	5
17	My supervisor shows that he is a firm believer in, if some method doesn't work then don't apply it.	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
18	My supervisor goes beyond self-interest for the good of the group.	1	2	3	4	5
19	My supervisor treats others as individuals rather than just as a member of a group.	1	2	3	4	5
20	My supervisor demonstrates that problems must become chronic before taking action.	1	2	3	4	5
21	My supervisor acts in ways that build other's respect for him.	1	2	3	4	5
22	My supervisor concentrates my full attention on dealing with mistakes, complaints, and failures.	1	2	3	4	5
23	My supervisor considers the moral and ethical consequences of decisions.	1	2	3	4	5
24	My supervisor keeps track of all mistakes.	1	2	3	4	5
25	My supervisor displays a sense of power and confidence.	1	2	3	4	5
26	My supervisor articulates a compelling vision of the future.	1	2	3	4	5
27	My supervisor directs his attention toward failures to meet standards.	1	2	3	4	5
28	My supervisor avoids making decisions.	1	2	3	4	5

Sr. No.	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
29	My supervisor considers an individual as having different needs, abilities, and aspirations from others.	1	2	3	4	5
30	My supervisor gets others to look at problems from many different angels.	1	2	3	4	5
31	My supervisor helps others to develop their strengths.	1	2	3	4	5
32	My supervisor suggests new ways of looking at how to complete assignments.	1	2	3	4	5
33	My supervisor delays responding to urgent questions.	1	2	3	4	5
34	My supervisor emphasizes the importance of having a collective sense of mission.	1	2	3	4	5
35	My supervisor expresses satisfaction when others meet expectations.	1	2	3	4	5
36	My supervisor expresses confidence that goals will be achieved.	1	2	3	4	5

Annexure-I

KNOWLEDGE MANAGEMENT PROCESSES SCALE

This questionnaire studies about knowledge management processes of the organizations. Read the statements carefully. There is no right or wrong answer. Tick the option that is most correct in your opinion with regard to the existing situation in your organization. Just tick the one option and do not leave any statement blank.

Sr. No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	This organization has processes for applying knowledge learned through experiences.	1	2	3	4	5
2	This organization has processes for using knowledge in development of new services.	1	2	3	4	5
3	This organization has processes for using knowledge to solve new problems.	1	2	3	4	5
4	This organization seldom uses knowledge to improve efficiency.	1	2	3	4	5
5	This organization uses knowledge to adjust strategic direction.	1	2	3	4	5
6	This organization is able to locate and apply knowledge to changing competitive conditions.	1	2	3	4	5

Sr. No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7	This organization takes advantage of new knowledge.	1	2	3	4	5
8	This organization quickly applies knowledge to competitive needs.	1	2	3	4	5
9	This organization links sources of knôwledge in solving problems.	1	2	3	4	5
10	In this organization, employees maintain records of legal guidelines and policies related to tasks.	1	2	3	4	5
11	In this organization, employees rarely search through customer and task related databases to obtain knowledge necessary for the tasks.	1	2	3	4	5
12	In this organization, employees document knowledge needed for the tasks.	1	2	3	4	5
13	In this organization, employees are unable to systematically administer knowledge necessary for the tasks and store it for further use.	1	2	3	4	5
14	Professional knowledge such as customer knowledge and demand forecasting is managed systematically.	1	2	3	4	5

Sr. No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15	To build information resources, organization wide standards are used.	1	2	3	4	5
16	Employees have few educational opportunities to improve performance of new tasks.	1	2	3	4	5
17	University-administered education is offered to enhance employees' ability to perform tasks.	1	2	3	4	5
18	Organization wide knowledge and information are regularly updated and well maintained.	1	2	3	4	5
19	I can learn what is necessary for new tasks.	1	2	3	4	5
20	I am unlikely to refer to best practices and apply them to my tasks.	1	2	3	4	5
21	I can use the internet to obtain knowledge for the tasks.	1	2	3	4	5
22	In this organization, employees improve task efficiency by sharing information and knowledge.	1	2	3	4	5
23	In this organization, information systems like intranet and electronic bulletin boards are developed to share information and knowledge.	1	2	3	4	5
24	In this organization, employees promote sharing of information and knowledge with other teams.	1	2	3	4	5

Sr. No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
25	I hardly ever use an electronic bulletin board to analyze tasks.	1	2	3	4	5
26	I fully understand core knowledge necessary for my task.	1	2	3	4	5
27	I obtain useful information and suggestions from brainstorming meetings.	1	2	3	4	5
28	I understand computer programs needed to perform the tasks and use them well.	1	2	3	4	5
29	I am ready to accept new knowledge and apply it to my tasks when necessary.	1	2	3	4	5

Annexure-J

DEVELOPMENT OF DECISION MAKING STYLES

Author(s) and Year	Decision making styles
1. Jung (1923)	Sensing, thinking, feeling, intuition, extroversion / introversion
2. Briggs and Myers (1943)	Intuition, sensing, thinking, feeling, extroversion / introversion
3. Vroom and Yetton (1973)	Autocratic, consultative, group based
4. McKenney and Keen (1974)	Information gathering, Information processing
5. Mitroff and Kilmann (1975)	Sensing, intuiting, thinking, feeling
6. Arroba (1977)	Rational, intuitive, dependent
7. Johnson (1978)	Spontaneous, systematic, internal, external
8. Harren (1979)	Rational, intuitive, dependent
9. Mann (1982)	Decision making self-esteem
10. Phillips et al. (1984)	Avoidant
11. Buck and Daniels (1985)	Rational, intuitive, dependent
12. Rowe and Mason (1987)	Behavioral, conceptual, analytical, directive
13. Mann, Harmoni, and Power (1989)	Self-confident, vigilant, complacent, evasive, panicked
14. Hunt et al. (1989)	Analytic, intuitive, mixed type
15. Ali (1989)	Autocratic, pseudo-consultative, consultative, participative, delegatory
16. Driver et al. (1990)	Decisive, hierarchic, flexible, integrative, systemic
17. Lussier (1994)	Reflexive, reflective, consistent
18. Scott and Bruce (1995)	Rational, intuitive, dependent, avoidant, spontaneous
19. French, West, Elander, and Wilding (1993)	Control, thoroughness, instinctiveness, social resistance, hesitancy, perfectionism, idealism
20. Mann et al. (1997)	Decision self-esteem, vigilance, hyper-vigilance, buck-passing, defensive avoidance, rationalization, procrastination
21. Yukl (1998)	Autocratic, consultative, delegative
22. Tuinistra, van Sonderen, Groothoff, van den Heuvel, and Post (2000)	Self-confidence, avoidance, panic, impulsive
23. Nygren and White (2002)	Analytical, intuitive, regret-based / avoidant
24. Lizarraga et al. (2005)	Uncertainty, time/money constraints, information and goals, consequences of decision, motivation, self-regulation, emotions, cognition, social pressure, work pressure
25. Haniffa and Ahmad (2008)	Democratic, directive, normal-adoptive, intuitive, rational, hesitant, consensus, participative, creative, risk-taking, strategic, minority

Annexure-K

MEASUREMENT OF DECISION MAKING STYLES

Sr. No.	Scale Name	Author(s) and Year
1.	Older Adult Decision Making Competence	Finucane and Gullion (2010)
2.	Maximizing Tendency Scale	Diab, Gillespie, and Highhouse (2008)
3.	Decision Making Styles Questionnaire	Haniffa and Ahmad (2008)
4.	Maximization Scale (Short Form)	Nenkov, Morrin, Ward, Schwartz, and Hull (2008)
5.	Adult Decision Making Competence Scale	de Bruin et al. (2007)
6.	Decision Outcome Inventory	de Bruin et al. (2007)
7.	Decision Making Questionnaire	Lizarraga et al. (2005)
8.	Youth Decision Making Competence	Parker and Fischhoff (2005)
9.	Intuitive-Analytical Judgment Scale	Sjoberg (2003)
10.	Decision Making Style Inventory	Nygren (2002)
11.	Maximization Scale	Schwartz et al., (2002)
12.	Decision Making Questionnaire	Tuinistra et al. (2000)
13.	Melbourne Decision Making Questionnaire	Mann et al. (1997)
14.	Cognitive Styles Index	Allinson and Hayes (1996)
15.	General Decision Making Styles Questionnaire	Scott and Bruce (1995)
16.	Decision Making Questionnaire	French, West, Elander, and Wilding (1993)
17.	Indecisiveness Scale	Frost and Shows (1993)
18.	Decision Making Styles Inventory	Rowe and Boulgarides (1992)
19.	Compensatory Style Questionnaire	Zakay (1990)
20.	Ali's Questionnaire	Ali (1989)
21.	Assessment of Career Decision Making	Buck and Daniels (1985)
22.	Myers-Briggs Type Indicator	Myers and McCaulley (1985)
23.	Decision Making Styles Inventory	Coscarelli(2007)
24.	Flinders Decision Making Questionnaire	Mann (1982)
25.	Assessment of Career Decision Making	Harren (1979)

Annexure-L

RESEARCH ON DECISION MAKING STYLES PROPOSED BY SCOTT AND BRUCE (1995)

Sr. No.	Author(s) and Year	Correlation of decision making styles
01	Riaz (2009)	Leadership styles
02	Russ et al. (1996)	Leadership styles
03	Tambe and Krishnan (2000)	Transformational leadership style
04	Singh and Greenhaus, (2004)	Job satisfaction, person-job fit, self and environmental awareness
05	Riaz, Riaz, and Batool (2012)	Big five personality types
06	Riaz, Batool, and Riaz (2012)	Emotional intelligence
07	Hayie, Hassan and Riaz (2009)	Self-regulation
08	Batool (2006)	Belief in personal control
09	Riaz, Haque, and Hassan (2010)	Individual and organizational factors
10	Loo (2000)	Conflict management styles
11	Scott and Bruce (1994)	Turnover intention and turnover
12	Johnson (2001)	Groupthink
13	Henningsen et al., (2000)	Social Loafing
14	Blais et al. (2003)	Personal fear of invalidity and personal need for structure
15	Jamil (2009)	Emotional intelligence
16	Hough and Ogilvie (2005)	Extroversion, introversion, sensing, thinking, feeling, intuition
17	Nygren and White (2002)	Self-esteem, need for cognition, goal orientation
18	Scott and Bruce (1995)	Self-esteem, locus of control, innovativeness, social desirability
19	Thunholm (2004)	Self-esteem, locus of control, innovativeness, social desirability, action control
20	Batool (2003)	Locus of control
21	Nygren and White (2005)	Personality types, locus of control, risk seeking
22	Thunholm (2004)	Locus of control: Internal and external
23	Higgins (2002)	Promotion and prevention cognitive focus
24	Mau (2000)	Decision making self-efficacy
25	Batool (2006)	Stress, self-efficacy
26	Thunholm (2008)	Negative stress
27	Shoemaker (2010)	Depression, anxiety
28	Smith (2005)	Goal orientation
29	Baiocco et al. (2008)	Action control
30	Watt (2000)	Rule based, knowledge based, and skill based behaviors
31	De Bruin et al. (2007)	Satisfactory decision outcomes
32	Blais et al. (2003)	Need for cognition
33	Barber (2005)	Risk seeking
34	Mau (2000)	Decision making self-efficacy
35	Galotti et al. (2006)	Decision planning, attitude toward thinking and learning
36	Bruine de Bruin et al., (2007)	Decision making competence
37	Shiloh and Shenhav-Sheffer (2004)	Decision related difficulties
38	Baiocco et al. (2008)	School achievements
39	Hablemitoglu and Yildirim (2008)	Risk perception
40	Gambetti et al. (2008)	Learning and thinking
41	Rehman and Waheed (2012)	Leadership styles and emotional intelligence