2011

The Effect of Wisdom in Organizations on Team Cohesiveness, Interpersonal Trust, and Intrinsic Job Satisfaction, Partially mediated by Emotional Intelligence

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THE EFFECT OF WISDOM IN ORGANIZATIONS ON TEAM COHESIVENESS, INTERPERSONAL TRUST AND INTRINSIC JOB SATISFACTION, PARTIALLY MEDIATED BY EMOTIONAL INTELLIGENCE

By
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A DISSERTATION

Submitted to the
H. Wayne Huizenga School of Business and Entrepreneurship
Nova Southeastern University

in partial fulfillment of the requirements
for the degree of

DOCTOR OF BUSINESS ADMINISTRATION

2011

A Dissertation

Entitled

THE EFFECT OF WISDOM IN ORGANIZATIONS ON TEAM COHESIVENESS, INTERPERSONAL TRUST AND INTRINSIC JOB SATISFACTION, PARTIALLY MEDIATED BY EMOTIONAL INTELLIGENCE

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions or writings of another.

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ABSTRACT

THE EFFECT OF WISDOM IN ORGANIZATIONS ON TEAM COHESIVENESS, INTERPERSONAL TRUST AND INTRINSIC JOB SATISFACTION, PARTIALLY MEDIATED BY EMOTIONAL INTELLIGENCE

by

Charles D. Oden

Wisdom, though ancient in concept, has only recently grown in empirical research. Often seen as the pinnacle of human development, wisdom includes the key aspects of exceptional insight, reflection, discernment, knowledge, and judgment, which are required for guiding the long-term future of an organization. Wisdom is believed to enhance an organization's ability to work towards multiple goals simultaneously, assist in appropriately assigning priorities, and lessen the organization's reliance on guidance or rules. Utilizing simultaneous regression analysis, available through partial least squares modeling, this research study included 230 full time non-instructional staff from both a traditional university setting and numerous branch offices. The collective wisdom of individuals in a business setting, measured as a composite of the three dimensions (cognitive, affective and reflective), significantly increased team cohesiveness, cognitive-based and affective-based interpersonal trust, and intrinsic job satisfaction. The reflective wisdom factor of lack of self-pity or resentment provided the largest effect upon all three organizational measures. Perspective-taking significantly increased both team cohesiveness and all four aspects of emotional intelligence. Though emotional intelligence did have many significant relationships with wisdom, it was not determined to serve as a mediating variable.

ACKNOWLEDGEMENTS

I am extremely grateful to Dr. Cynthia Ruppel for her encouragement, guidance and direction throughout the dissertation process. She consistently kept me focused on the underlying theoretical understanding rather than allowing me to become overwhelmed with data and research. I am also extremely grateful to Dr. Monika Ardelt for allowing me to use the Three-Dimensional Wisdom Scale and her guidance concerning a deep and growing understanding of wisdom. I am also deeply grateful to Dr. Barry Barnes for sharing his knowledge and guidance concerning the organizational measures and reviewing the many details of this study. My utmost grateful appreciation is extended to my wonderful wife, who has endured many days of separation, long quiet days with little to no communication, and the unintended loss of my attention upon many occasions. She is my helper and the love of my life.

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CHAPTER I

Introduction

Globalization, increased interdependence of markets, and rapid advances in technology are all indicative of the increased complexities involved in organizational decision making. The uncertain, unpredictable and highly political global business environment requires both cognitive and social expertise (Sparrow, 1999). Managers and employees experience information overload and pressure for rapid financial results. They are called upon to utilize their cognitive skills such as knowledge and reason as well as lessons they have learned from previous experience. Managers are also called upon to handle conceptual complexity, make informed decisions, and utilize their ability to read and understand emotions (Sparrow, 1999). Strategic decision making literature promotes the utilization of reflective thinking, intuition (Brockmann & Anthony, 2002) and cognitive/rational decision making (Nutt, 1998). However, managers have a finite cognitive ability with which to process information and understand complex environments (Simon, 1957). To reduce complexities in decision making, managers use their personal mental maps and unconscious rules of behavior and accepted beliefs to filter, simplify and organize cognitive inputs (Friga & Chapas, 2008; Koumakhov, 2009).

Exceptional insight, discernment, knowledge and judgment are all factors of individual wisdom and are crucial for guiding the long-term future of an organization (Rowley, 2006). Wisdom is often seen as the pinnacle of human development (Baltes & Staudinger, 2000). Early historical writings compiled in Jeste and Valia (2008) described

wise individuals as being humble, insightful, knowledgeable, self-assured and decisive. Wise individuals lacked self-centeredness and also lacked a preoccupation with sensual pleasures. They demonstrated compassion, emotional stability, faith in God, and the ability to differentiate between the perishable and imperishable. Early historical writing also described wise individuals as participating in disciplined work and understanding their duty to society. Wise individuals understood their personal limitations, mortality and individual unimportance (Jeste & Vahia,2008).

Much of the research literature concerning wisdom has been philosophical or theoretical. More recent literature has followed Aristotle's concept of phronesis, concerning the practical understanding of wisdom and its demonstrated relevance to organizations (Moberg, 2008; Rowley & Gibbs, 2008). The standards set for wise individuals within organizations are high and include the following:

a. virtuous and visionary, providing clarity to business purposes and objectives (McKenna, Rooney, & Boal, 2009).
b. enhancing moral and ethical decision making and enabling individuals to do the right thing instead of just doing things right (Hays, 2007; Moberg, 2008; Roca, 2008).
c. more concerned with character and personality than with performance or positional power (Staudinger & Baltes, 1996; Sternberg, 1998).
d. possessing more than product or situational knowledge, providing the ability to focus on the big picture especially when faced with difficult decisions and potential loss (McKenna, et al., 2009).

e. having the ability to understand and integrate the technical, social, cultural and ethical complexity of a situation and develop creative solutions (McKenna, et al., 2009).

Research Problem and Subproblems

Research problem.

The purpose of this research was to determine if the collective wisdom of individuals in a business setting, measured by a composite of the three dimensions (cognitive, affective and reflective) in Ardelt's (2003) Three-Dimensional Wisdom Scale (3DWS), is predictive of team cohesiveness, interpersonal trust, and intrinsic job satisfaction within a business setting. Emotional intelligence was analyzed to determine whether it partially mediates these relationships.

Subproblems.

a. Determine if the cognitive, affective and reflective dimensions of wisdom predict team cohesiveness
b. Determine if the cognitive, affective and reflective dimensions of wisdom predict intrinsic job satisfaction
c. Determine if the cognitive, affective and reflective dimensions of wisdom predict interpersonal trust
d. Determine if emotional intelligence is a partially mediating variable between the cognitive, affective, and reflective dimensions of wisdom and team cohesiveness, intrinsic job satisfaction and interpersonal trust.

Background and Justification

Organizations must utilize the knowledge, experience, emotional understanding, and intuition of its managers and employees to understand and operate in the increasingly complex business environment (Sparrow, 2000). Decision-making quality, whether operational or strategic, is highly important to an organization's success (Gilmore, 1998). An understanding of the three dimensions of wisdom enables individuals within an organization to make decisions based not only on knowledge and analytic ability, but also upon reflection of previous experience, emotional understanding, intuition, values, virtues and in-depth understanding (Ardelt, 2003; Roca, 2008). Wisdom encourages shared experience and deeper understanding. It enhances an organization's willingness to learn and its ability to become vision-oriented and virtuous (Hays, 2007; Rowley & Gibbs, 2008). Among other virtues, practical wisdom includes the courage and justice needed for global leadership (Gottlieb, 1994; Jacobs, 1989). Development of wisdom within individuals also enhances creativity and innovative thinking. Wisdom strengthens the organization's ability to work towards multiple goals simultaneously, assists in appropriately assigning priorities, and lessens the organization's reliance on guidance or rules (Staudinger, Lopez, & Baltes, 1997). Wisdom provides the discernment needed for determining appropriate goals in accord with the values of the organization (Nonaka & Toyama, 2007).

Practical wisdom is concerned with meaningful issues with long-term relevance and is developed in individuals within a social environment (Kramer, 1980). Wisdom is developed through critical analysis when individuals actively, rather than reactively, deal with personal struggles such as job or financial loss, divorce, death, abuse, etc. (Holliday

& Chandler, 1986; Kramer, 1980; Smith, Staudinger, & Baltes, 1994; Staudinger, 1996; Staudinger & Baltes, 1996). Wisdom enables individuals to handle increasingly complex social situations, develop interpersonal relationships, foster cooperation and conflict resolution, overcome disillusionment, give and receive advice, and accept change more readily (Bray & Howard 1983; Kramer, 1990; Labouvie-Vief, 1980). It enables managers to make more reasoned decisions, to be more perceptive and discerning, and to learn from their environment (Sternberg, 1985).

The increasing number of managerial challenges and the growing need to meet social as well as corporate obligations requires increased wisdom rather than mere knowledge for their solution (Goede, 2009; Leduc, 2004). Accordingly, organizations are potentially changing from a knowledge economy to a wisdom economy (Howard, 2010). However, there are few empirical studies of wisdom, especially within organizational settings. The study of the collective wisdom of individuals in a business setting brings together the intuitive, intellectual, motivational, and relational capabilities of individuals. This empirical study of the collective wisdom of individuals in a business setting (composite of cognitive, affective and reflective capabilities) in relation to the intrinsic determinants of job satisfaction, team cohesiveness and interpersonal trust aims to test whether wisdom can be a measurable and important construct within organizations. Interpersonal trust, team cohesiveness and intrinsic job satisfaction have each shown to improve organizational decision making and therefore enhance an organization's performance and productivity. By potentially increasing individual's interpersonal trust, team cohesiveness or intrinsic job satisfaction, wisdom indirectly and cumulatively affects organizational performance. The study of wisdom within

organizations is rapidly growing in scholarly literature and its understanding transcends knowledge management (Kessler, 2006). In 2004 the Eastern Academy of Management focused its annual conference on organizational wisdom. Leaders in the field of wisdom research have therefore expressed a large need for empirical and operational studies related to wisdom (Baltes & Kunzmann, 2004; Barton, Plemons, Willis, & Baltes, 1975).

Definition of Terms Used in this Study

Wisdom: a composite of the cognitive, reflective and affective capabilities of an individual. It includes among the three dimensions the key aspects of exceptional insight, discernment, knowledge and judgment. Wisdom will be measured as a latent construct. Utilizing Ardelt's (2003) Three-Dimensional Wisdom Scale (3DWS), the three dimensions are as follows:

Cognitive dimension of wisdom: measures an individual's ability to deeply comprehend life and its positive and negative events, to understand interpersonal and intrapersonal relationships, and to understand the many facets of human nature. It also includes the acceptance of life's ambiguities, its uncertainties, the limitations of knowledge to solve all situations, and a desire to know the truth (Ardelt, 2003).

Reflective dimension of wisdom: measures an individual's ability to look at life events from many different perspectives, having self-awareness and self-insight, avoiding subjectivity and blaming of others, limiting self-centeredness, and an ability to understand complex motivations (Ardelt, 2003).

Affective dimension of wisdom: measures a person's compassion and honest concern for others and the lack of negative feelings towards themselves or others (Ardelt, 2003).

Team cohesiveness: the level to which individual team members have affinity for each other and the team (Chidambaram, 1996).

Intrinsic Job Satisfaction: the level of individual satisfaction developed from enjoying the type and variety of work being performed, utilization of individual skills, job accomplishment, opportunities for growth, and interpersonal relationships (Weiss, et al. (1967).

Interpersonal Trust: an individual's willingness to be open and vulnerable to another based on confidence in the other's competence, reliability and concern (McAllister, 1995).

Emotional Intelligence: an individual's "ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (Mayer & Salovey, 1997, p.10).

Scope of the Study

Participants in this study were from six states and included staff from both a traditional university setting and numerous branch offices. This study measures wisdom within individuals and assumes that since organizations are made up of groups of individuals working toward a common goal, the collective measurement of wisdom will

demonstrate the effect of employee wisdom upon organizations. Since wisdom is more all encompassing than knowledge this is a logical progression for business organizations. Wisdom increases interpersonal relationships and will result in improved business relationships. The Three-Dimensional Wisdom Scale and this study have focused primarily on practical wisdom rather than transcendent wisdom making it appropriate for study within organizations.

Summary

Understanding the function, interrelation and growth of wisdom among individuals within organizations can help businesses face rapidly changing technology and global competition. A review of historical and contemporary views of wisdom, as well as a discussion of empirical studies, will assist in demonstrating why the study of wisdom is increasing in current literature. This study examined the relationship between wisdom and team cohesiveness, interpersonal trust, intrinsic job satisfaction, and emotional intelligence.

CHAPTER II

Literature Review

Introduction

This chapter will review the relevant historical and contemporary perspectives of wisdom. A table will summarize the many different characteristics of wisdom from different perspectives. Models and empirical studies will be presented including Ardelt's (2003) Three-Dimensional Wisdom Scale (3DWS) which will be utilized for this study. The applicable literature concerning interpersonal trust, intrinsic job satisfaction, team cohesiveness and emotional intelligence will be reviewed, and four hypotheses will be generated and a model suggested.

Wisdom

Historical writings.

The classical writings of Socrates, Plato and Aristotle have guided modern development of wisdom research and advocated investigation and critical thinking. Aristotle described wisdom as one of the four principal virtues of wisdom, justice, temperance and fortitude (Ross, 2004). His description included the practical, theoretical, and interpersonal aspects of wisdom. Aristotle also differentiated "theoretical contemplation" (Hadreas, 2002, p. 369), general or speculative wisdom (sophia) from practical wisdom (phronesis) (Edmondson & Pearce, 2007; Ross, 2004). Sophia or transcendent wisdom includes intuition and includes a different form of knowing through

reflection. It involves a deeper form of wisdom and includes an understanding of principles and ultimate truth usually connected with the divine (Trowbridge, 2011).

Plato and Aristotle, who each used the term phronesis during their lectures to students in the first century B.C., often translated the term as prudence or practical wisdom (Aristotle, trans. 2000). Phronesis is a Greek word for practical wisdom with purpose and intention. It is rooted in the Greek word phroneo, meaning to have understanding in both action and counsel (Liddell & Scott, 1889). Phronesis is more than cognitive knowledge. It is developed from experience and embodied with both moral character and virtue. Practical wisdom enables reason, selection and the carrying out of the most beneficial actions for the situation (Halverson, 2004; Korthagen & Kessels, 1999). Similar to moral imagination, phronesis is "more perceptual than conceptual" (Korthagen & Kessels, 1999, p. 7; Scott, 1997). Phronesis requires a perception of local circumstances and an understanding of the "social ecology" of an organization (Halverson, 2004; Flaherty, 1999, p. 50). Practical wisdom is more than having a scientific understanding, it includes having an accurate understanding of how things work and are organized, understanding the written and unwritten rules of the situation, and being able to make expert virtuous decisions (Bloomfield, 2000; Kessels & Korthagen, 1996). Aristotle believed that phronesis encompassed all the ethical virtues (Gottlieb, 1994).

A revival in the study of Aristotelian phronesis and virtue ethics started near the end of the twentieth century (Tabachnick, 2004). Aristotle saw phronesis as wisdom in everyday decision making that then holds true in larger strategic decisions (Aristotle, trans. 2000). Though having a general understanding of a situation or subject matter is

important, it is incomplete. Phronesis requires having specific knowledge about the practical details. This also requires training and development of proper habits, necessitating time and experience (Kristjánsson, 2005). Additionally, phronesis requires the maturity to understand people's actions as well as the discernment to separate and prioritize moral and ethical choices (Holt, 2006). It is not merely the application of universal rules, religious laws or a simple majority rule. Phronesis is the development of character and virtues, and consideration of what is good for society (Flyvbjerg, 2001; Huigens, 1995). Logical application of laws, rules and ethical codes deals more with the universal and not the emotional, character-driven practical nature of specific decision making (Abizadeh, 2002; Holt, 2006). Phronesis is a comprehensive capacity that goes beyond predetermined or discrete answers. It bridges the category of cognitive knowledge to include necessary emotional elements and behavior (Halverson, 2004; Phelan, 2005; Schwarzenbach, 1996). Phronesis also includes the exercise of judgment, understanding and intuition, while maintaining the appropriate elements of history and tradition (Church, 1999; Halverson, 2004).

Aristotle cites Pericles as an outstanding example of phronesis (Aristotle, 2000). In Thucydides' (1972) account of Pericles he describes him as an experienced and successful Athenian general, considered powerful in action and debate. Faced with the overwhelming land army of the Spartans, Pericles believed that the Athenians should take a defensive land posture and stay within the city walls. This passivity was contrary to typical Greek thought. Pericles prioritized human life over the loss of land and burned homes. He desired that the Athenians living outside the city burn their own homes rather than having them burned by the Spartans. Pericles believed that watching their homes

being burned would enrage the Athenian onlookers causing them not to continue in a defensive posture. He strategically analyzed the experience and resources of his opponents and planned to utilize his superior naval forces. As people watched their homes be destroyed he refused to call a meeting of the people even though Athens was a democracy. Pericles was confident that his rational policy making would be overturned by the people's emotions and perceived hopelessness. Pericles knew individual's weakness for long suffering and he spoke to the people of putting the beauty and strength of Athens before their own self interests. He pointed out that if the country is whole, then even if individuals suffer they can recover, however if the country is lost then despite individual wealth no one recovers on their own. Pericles never sought power for his own motives and Athens was considered to be led wisely and at her best under his consistent guidance and integrity (Thucydides, 1972). Pericles was able to prevent politics from becoming about divisiveness and personal self-gratification (Monoson, 1998). Ideally, organizations are also led and operate with this level of phronesis and have moved beyond individual greed, selfishness, and the deification of material means (Flaherty, 1999).

Writings, including those by Kant, Aristotle and Confucius, refer to wisdom as the ability to deliberate and act upon the conduct of a good, moral, and harmonious life (Rowley & Slack, 2009). Egyptians placed an emphasis on modesty and controlling one's behavior as part of wisdom (Brugman, 2000). Early Christian writings including those by Augustine describe wisdom as comprehension of mortality, accepting divine authority over pride, loving the divine completely, having a hunger for justice, developing love for others to include enemies, and a relentless searching for truth

(Gilson, 1960). Early classical thought also related wisdom to both virtue and a connection to the divine. Writings by Thomas Aquinas related prudence to human wisdom and included that the divine Holy Spirit has the ability to provide counsel and direction towards wisdom (Gilson, 1951). Connections between wisdom and the divine are found in early Eastern and Western religions (Jeste & Vahia, 2008). Wisdom in the Western sense is more analytical and practical. Wisdom in the Eastern sense is more concerned with synthesis, integration, and self-transformation (Ferrari, Kahn, Benayon, & Nero, 2011). Writings indicate that wisdom resides in both the heart and mind and incorporates experience, spirituality and passion (Bierly, et al., 2000).

Contemporary perspectives.

Though wisdom is an ancient concept, only in the last 30 years has the use of wisdom as a unique construct grown in empirical research (Meeks & Jeste, 2009; Staudinger & Gluck, 2011). Practical wisdom is seen as the ability to understand complex situations, deliberate and then take effective action (Aristotle, trans. 2000; Gibson, 2008). Kramer (1980) described the functions of wisdom as the ability to resolve dilemmas, provide advice to others, provide management and guidance for society, conduct review of individual life events and decisions, and question the meaning of life. Neither experience nor psychological adjustment are entirely sufficient for wisdom (Staudinger & Gluck, 2011).

> Wisdom is not simply knowing how to steer one's way through life's difficulties…it is also knowing the deepest story, being able to see and appreciate the deepest significance of whatever occurs…knowing and understanding not

> merely the proximate goods but the ultimate ones, and seeing the world in this light (Nozick, 1989, p.276).

In a qualitative study of 68 information professionals, Rowley and Slack (2009) found knowledge and experience to be the most common descriptors of wisdom. Similar to the Self-Actualization step of Maslow's Hierarchy of Needs, wisdom can be seen as maturity, integrity and the pinnacle of human development (Baltes, Gluck, & Kunzmann, 2002; Baltes & Smith, 1990; Orwoll & Perlmutter, 1990).

As a part of developing a meta-theoretical basis for evaluating leaders, McKenna, et al. (2009) identified characteristics of a wise leader to include being thoughtful and articulate, utilizing creative and judicious instincts, capable of dealing with complex environments, capable of making judgments based on rational and spiritual understanding, and capable of making the commitment to the greater long-term good of the organization. Wisdom includes knowledge and discernment to see through complex situations and provide clarity and purpose (McKenna, et al., 2009).

Roca (2008) proposes that in addition to technical knowledge, educational institutions should assist in the development of wisdom, moral character and moral imagination in order to deal with change and accepting responsibility. He promotes the idea that business practices have both a technical and a moral dimension, and that wisdom assists in moral deliberation (Roca, 2008). Wisdom also allows managers to place less confidence in the certainty of rational decision making and remain open to other potential possibilities (Novicevic, Hench, & Wren, 2002; Roca, 2008; Sparrow, 2000).

Though one concise definition of wisdom seems illusive, recent writings have indicated that wisdom includes knowledge, decisiveness, intuition, and complex ethical and social judgment. Aldwin (2009) described wisdom as "a practice that reflects the developmental process by which individuals increase in self-knowledge, self-integration, nonattachment, self-transcendence, and compassion, as well as a deeper understanding of life" (p. 90). Despite many recent attempts to define wisdom, there is as much diversity as commonality. Leading researchers in the field of wisdom doubt that there can be one all-encompassing definition that will be generally accepted (Baltes & Kunzmann, 2004). A recent Delphi study of individuals studying wisdom found that wisdom is a rare human quality of advanced cognitive and emotional development, that is distinct from knowledge and spirituality, and that can be developed through education and experience. They believed wisdom to include an understanding of the limits of personal knowledge, self-reflection, self-insight, tolerance of ambivalence, acceptance of uncertainty, sense of justice or fairness, empathy, and social cognition (Jeste, D.V., Ardelt, M., Blazer, D., Kraemer, H.C., Vaillant, G., & Meeks, T.W., 2010). Table 1 provides a listing and categorization of many of the current descriptions of wisdom.

Table 1 – Characteristics of Wisdom

Characteristics of Wisdom
Cognitive:
a. The ability and willingness to understand a situation or phenomenon thoroughly and understand the limits of knowledge (Ardelt, 2004; Baltes & Staudinger, 2000)
b. Knowledge of the positive and negative aspects of human nature (Ardelt, 2004)
c. Truly superior level of knowledge, judgment and advice (Baltes & Staudinger, 2000)
d. Acknowledgement of ambiguity and uncertainty while continuing to make

important decisions (Ardelt, 2004; Baltes & Staudinger, 2000)
e. Knowledge with extraordinary scope, depth and balance and an ability to apply intelligence, experience, and reason to solve life's problems (Baltes & Staudinger, 2000; Clayton & Birren, 1980)
f. Expert judgment and advice concerning difficult life situations (Baltes & Staudinger, 2000; Mickler & Staudinger, 2008)
g. View problems from a broader long-term perspective (Baltes & Staudinger, 2000)
h. Perceptiveness, ability to analyze and assess consequences (Holliday & Chandler, 1986; Kramer, 1990)
i. Recognize the uncertainty of life and the limits of individual knowledge (Ardelt, 2003; Baltes & Staudinger, 2000)
j. Addresses important and difficult questions and suggests adaptive strategies concerning the conduct and meaning of life (Baltes & Staudinger, 2000)
k. Perfect synergy of mind and character, and orchestration of knowledge and virtues (Baltes & Staudinger, 2000)
l. Understanding of interpersonal and intrapersonal relationships and a deep comprehension of human nature (Ardelt, 2003; Brown, 2004)
m. Desire to know the truth (Ardelt, 2003)
n. Embracing the deep contradictions in life (good-bad; dependence-independence; selfishness-altruism; control-lack of control, finiteness-eternity, etc) and learning from each of them (Staudinger & Gluck, 2011)
Affective
a. Presence of positive emotions and understanding behavior toward others, characterized by being sensitive to the needs of others and being willing to share wisdom to help others (Ardelt, 2004; Clayton & Birren, 1980; Webster, 2003)
b. Emotional management and the absence of indifferent or negative emotions and behavior toward others (Ardelt, 2004; Brown & Greene, 2006)
c. Ability to understand context, essence, and self in situations (Holliday & Chandler, 1986; Kramer, 1990)
d. The desire for social contact and expression of empathy through shared experiences (Staudinger & Baltes, 1996; Staudinger, Maciel, Smith, & Baltes, 1998)
e. Interested, inspired and active but not reliant on temporary measures of happiness, amusement or pride (Kunzmann & Baltes, 2003)
f. Interested in personal growth, well-being of friends and societal engagement, not just living a pleasurable life (Kunzmann & Baltes, 2003)
g. Resolves conflicts through cooperation, not dominance, submission or avoidance (Kunzmann & Baltes, 2003)
Reflective
a. The ability and willingness to look at phenomena and events from different perspectives (Ardelt, 2004)
b. The absence of subjectivity, acceptance of responsibility, and the absence of a

	tendency to blame other people or circumstances for one's own situation or feelings (Ardelt, 2004; Webster, 2003)
c.	Flexible in adopting multiple perspectives of multiple stakeholders (Baltes & Staudinger, 2000)
d.	Includes intuition, reflective thinking and having the ability to withhold judgment, reflect upon available options, and to understand why things happen or why decisions are chosen (Clayton & Birren, 1980; Sternberg, 1990)
e.	Spiritual or philosophical introspection (Kramer, 2000)

Gibson (2008) developed a model for the development and operation of practical management wisdom. It was then tested using 38 MBA students and through six in-depth qualitative interviews with a senior Australian manager working in Japan during a successful corporate turnaround. The model proposed that wisdom develops over time through reflection upon previous experience and requires cognitive ability. It requires character and vision, and operates as a whole rather than parts or in sequence (Gibson, 2008). Wisdom can be developed through meditation upon and candid discussion of issues, and through use of reflective exercises (Bailey & Russell, 2008; Staudinger & Baltes, 1996; Sternberg, 2003).

Application in organizational settings.

Organizational strategic decision making is not solely a cognitive or rational process. Decisions include issues of employee job satisfaction, stress, trust, fairness, and the impact of organizational change (Sparrow, 2000). Managers must have a current and retrospective understanding of the business, political, social and emotional environment. A manager's ability to understand an event from multiple perspectives and to understand the complex relationships involved within the situation affects his or her ability to make appropriate decisions, which is therefore linked to organizational performance (Cockerill

& Schroder, 1993). Vilfredo Pareto "rejected the exclusive role of reason in decision making" (Novicevic, Hench, & Wren, 2002, p. 994) and included the need to understand emotions and intuition.

Successful organizations know how to utilize their advantages strategically for the company and for society (Bierly, Kessler, & Christensen, 2000). Development of wisdom within individual employees of an organization assists in reframing problems, provides goal orientation and context, develops trust and relationships, incorporates values, and provides new perspectives (Rowley, 2006). Operating as a collective of wise individuals, wise organizations make appropriate use of knowledge, make decisions from multiple perspectives, and understand social and ethical concerns (Rowley, 2006). Organizational understanding of social and ethical concerns has led to "positive cognitive, affective and behavioral response by consumers" and positive effects on the organization's long-term financial performance (Peters & Mullen, 2009, p.1).

Hays (2007) suggested a model of organizational wisdom drawn from the disciplines of psychology, philosophy, and human development, as well as Confucian, Tao, Buddhist and Native American sources. These sources were all in agreement that wisdom encompasses seeing the big picture, understanding complexity from multiple vantage points, recognizing our limitations, and serving the greater good (Hays, 2007). His 24 factor model is designed for the learning organization and includes the factors of teamwork and collaboration, appreciation for complexity, as well as organizational reflection, motivation, and values. Similar to Aristotle's concept of phronesis, values were seen as permeating the entire model and contain selflessness, compassion, and altruism (Gottlieb, 1994). Hays (2007) proposed that wise organizations are not solely

reliant on the wisdom of a few select leaders but rather they develop wisdom within individuals throughout the organization.

There are limits to individual's cognitive capabilities and their understanding of complexity (Simon, 1957). To cope, simplified mental models are formed to filter and structure information, decide which information to pursue, capture the main points and produce appropriate decisions (Simon, 1957; Walsh, 1995). Manager's mental models are influenced by their emotional state and may result in the utilization of suboptimal models which can produce flawed results (Sparrow, 2000).

Ideally, managers and organizations learn from studying prior decisions and utilize the reflective knowledge and experience of their employees in decision making (Sparrow, 2000). However, few managers spend the time to probe and test assumptions, values, and paradigms utilized in decision making and therefore fail to learn from crisis situations (Smith & Elliott, 2007). Wisdom includes the ability to clearly understand the situation and discern the best course of action within the values of the organization (Nonaka & Toyama, 2007). An individual's level of wisdom (composite of cognitive, affective and reflective abilities) therefore has a direct relationship to their decision making ability.

A better understanding of wisdom within organizational settings will enable better decision making and therefore increase profitability. Further empirical studies of wisdom will enhance current understanding of the relationships between wisdom and other organizational factors.

Empirical Studies of Wisdom

Through studying 83 educated individuals in a university setting, Clayton and Birren (1980) determined that there are three dimensions to the construct of wisdom (cognitive, affective, and reflective). As shown in Table 1, they proposed that the cognitive dimension was characterized by knowledge, experience, reason, introspection, and the ability to apply intelligence to solve life's problems (Clayton & Birren, 1980). Clayton and Birren (1980) suggested that the affective dimension included emotions and understanding and was characterized by empathy, peacefulness, gentleness, and sensitivity to the needs of others. They also suggested the reflective dimension included intuition, reflective thinking, withholding judgment, reflecting upon available options, and understanding why things happen or why decisions are chosen (Clayton & Birren, 1980; Staudinger, et al., 1997). Clayton and Birren (1980) proposed that individuals can and should grow in each of the three dimensions of wisdom. This growth will include maturity, absence of emotional liability, open-mindedness, even-temperedness, and sociability.

In other non-empirical studies, Loevinger (1976) hypothesized stages of an individual's ego development which can also be seen as a composite of the cognitive, affective and reflective dimensions of wisdom (Kramer, 1990). Additionally, Holliday and Chandler (1986) described three elements of wisdom as cognitive, interpersonal and experiential (Table 1).

Dominant quantitative framing of wisdom.

Based on the work of Clayton and Birren (1980), Ardelt (2003) developed a multi-faceted Three-Dimensional Wisdom Scale (3DWS) that integrated the cognitive, reflective and affective aspects of wisdom (Table 1). Broadly defining each of these traits, Ardelt (2003) encompassed much of the historical, Eastern and Western cultural understanding of wisdom theory. Studies of elderly individuals found wisdom to be positively correlated with general well-being, health, purpose, and mastery in life (Ardelt, 2003). Wisdom was negatively correlated to depression and a fear of death. Ardelt's initial questionnaire contained 132 items and was administered to 180 elderly adults. It was subsequently reduced to 39 items with demonstrated reliability (Chronbach's Alpha of .71 to.86).

Ardelt's (2003) definition of wisdom proposed that the cognitive dimension includes an individual's ability to deeply comprehend life and its positive and negative events, an understanding of interpersonal and intrapersonal relationships, and an understanding of the many facets of human nature. It also includes the acceptance of life's ambiguities, its uncertainties, the limitations of knowledge to solve all situations, and a desire to know the truth. The reflective dimension measures the ability to look at life events from many different perspectives, having self-awareness and self-insight, avoiding subjectivity and blaming of others, limiting self-centeredness, and having an ability to understand complex motivations (Ardelt, 2003). The affective dimension is the measure of a person's compassion and honest concern for others and the lack of negative feelings toward themselves or others (Ardelt, 2003).

To test the validity of Ardelt's (2003) Three-Dimensional Wisdom Scale (3DWS), Chen (2003) conducted a study of 456 Taiwanese high school and college students utilizing exploratory factor analysis and principal component analysis. Each dimension (cognitive, reflective, and affective) is a dominant factor which explained a large percentage (21%, 21%, 20% respectively) of the observed variance. The associated eigenvalues were 2.914, 2.534, and 2.474 respectively. Chi-square values ranged from 0.498 to 0.001 and did not approach the level of significance. Results loaded cleanly on distinct factors and the model was a good fit (Chen, 2003).

In a 2006 empirical study of 115 North Dakota high school students on a service-learning experience in Minnesota, Ardelt's (2003) Three-Dimensional Wisdom Scale (3DWS) was utilized in a study of pro-social values. Cronbach's alpha was acceptable (.73, .70, and .71 respectively) for all three dimensions indicating the measures' validity among adolescents. Pearson correlations indicated significant relationships between wisdom and time spent in extra-curricular activities, leadership, pro-social values, and negatively correlated to enjoyment (Bailey & Russell, 2008).

Dominant qualitative framing of wisdom.

The majority of recent empirical wisdom research has been conducted by the Max Planck Institute (MPI) for Human Development and Education located in Berlin. MPI research is largely interested in discovering how aging affects the human mind. They have developed the most widely accepted qualitative wisdom measure known as the Berlin Wisdom Paradigm which assesses wisdom as the social, cultural and personal expert knowledge of the practical navigation of life (Baltes & Smith, 1990). This

includes the planning, management and review of hypothetical social, cultural and personal situations (Kramer, 1980; Baltes & Kunzmann, 2004). The Berlin Wisdom Paradigm examines the individual's ability to imagine a variety of circumstances for different life events and how individuals might deal with those events throughout the entire life span. It also examines people's ability to understand that values are relative to the person and situation, and also their recognition and management of uncertainty (Smith, et al., 1994). Their constructs have focused on wisdom as expert judgment and advice concerning difficult life situations (Mickler & Staudinger, 2008). The MPI researchers' empirical analysis utilizes difficult hypothetical situations to measure participants along an established five dimensional scale. They conducted three subsequent empirical studies to investigate ways of expressing wisdom-related knowledge (Gluck & Baltes, 2006).

Differing from other contemporary perspectives, researchers at the MPI believe individuals possess wisdom-related knowledge rather than wisdom itself. They also believe that wisdom may be found in certain documents and texts. MPI researchers therefore do not believe that individuals themselves are wise, though they may act wisely (Baltes & Kunzmann, 2004). The development of wisdom-related knowledge is through the interaction of intrinsic motivation combined with specific cognitive, emotional and social factors during an individual's life (Baltes & Kunzmann, 2004; Gluck & Baltes, 2006). Individuals scoring higher in wisdom-related knowledge view events from several different perspectives, routinely balance multiple interests, experience greater openness to experiences, and experience concern for both personal and the common good (Kunzmann & Baltes, 2003). Two MPI researchers, Mickler and Staudinger (2008),

further separate personal or individual wisdom from general wisdom. They categorize personal or individual wisdom as related to the conduct of a person's own life and general wisdom as insights into overcoming life's challenges in general.

Baltes and Staudinger's (2000) description of wisdom is closely aligned with Ardelt's (2003) cognitive dimension of wisdom. They suggest that wisdom includes a deep understanding of life's events and uncertainties, understanding knowledge and its limitations, and using knowledge for the good of themselves and others. Individuals should be capable of understanding and addressing the meaning of life, and understand the importance of harmony between knowledge and character (Baltes & Staudinger, 2000).

In a study of 293 participants from Berlin, Kunzmann and Baltes (2003) extended their predominantly theoretical definition of wisdom beyond the cognitive aspect of having expert knowledge to explore the feelings, values and social relationships of individuals scoring higher in wisdom-related knowledge. They investigated wisdom-related knowledge and its association with affective experiences, value orientations, and strategies of conflict management (Table 1). They found that individuals with higher wisdom-related knowledge were less likely to allow negative feelings to become chronic, frequently experienced interest and inspiration, limited effortless joy or pleasure seeking, had equal concern for personal growth and the care of others, and they engaged in cooperative conflict resolution (Kunzmann & Baltes, 2003). Kunzmann and Baltes (2003) discovered that individuals who scored high in wisdom-related knowledge were interested, alert, inspired, attentive, and active. They also scored well in values of personal growth, insight, well-being of friends, societal engagement, and ecological

protection. Individuals who scored high in wisdom-related knowledge did not display a negative personality or affect. They displayed balance; therefore, they did not seek a pleasurable life, and were not able to be categorized as exuberant, happy, proud, amused, or cheerful. Wisdom-related knowledge was associated with the conflict management strategy of cooperation. Individuals who scored high on wisdom-related knowledge did not display dominant, submissive or avoiding strategies (Kunzmann & Baltes, 2003).

Additional approaches to wisdom.

Also similar to Ardelt (2003), Webster (2003) developed a self-assessed wisdom scale which included the five components of experience, reflectiveness, emotional regulation, openness and humor. He also believed wisdom to be multi-dimensional with interdependent factors (Table 1) (Webster, 2003). The initial 30 item questionnaire was administered to 266 Canadians with a broad age range and a subsequent scale reliability of alpha = .78. Results of the study indicated an insignificant correlation between wisdom and education level. This may further indicate the difference between wisdom and intelligence. Though humor was a weaker component in the study, it may function as a coping mechanism in dealing with difficult life situations (Brent & Watson, 1980; Mickler & Staudinger, 2008). The scale is largely focused on an individual's level of introspection and emotions and ignores the cognitive dimension (Ardelt, 2003). In a subsequent study, Webster (2007) expanded his initial 30 item questionnaire to 40 questions and administered it to 171 Canadians in a broad age range with increased reliability. This study found that wise individuals share their wisdom to help others and have accepted responsibility for the lives they have led (Webster, 2003).

Brown (2004) studied ten recent graduate students and investigated what conditions facilitated the development of wisdom. He utilized a grounded theory approach and developed a six-factor model of wisdom containing self-knowledge, interpersonal understanding, judgment, life knowledge, life skills and willingness to learn (Brown, 2004). Brown and Green (2006) conducted a second larger study utilizing a 141-item web-based questionnaire provided to over 7000 undergraduate students. They received 1188 valid responses and used half of the responses for exploratory factor analysis and the remaining half for confirmatory factor analysis. Exploratory factor analysis either confirmed or modified hypothesized factors with confirmatory factor analysis resulting in the establishment of factors of self-knowledge, altruism, life knowledge, life skills, inspirational engagement, judgment, and emotional management (Brown & Greene, 2006). Utilizing Hu and Bentler's (1999) criteria for model-fit metrics were acceptable with SRMR=.68, RMSEA=.058, CFI=.811, and NNFI=.804 (Brown & Greene, 2006).

This study will utilize the dominant quantitative study of wisdom and the Three-Dimensional Wisdom Scale (3DWS) developed by Ardelt (2003). The ability of the 3DWS to include both Eastern and Western thought, its alignment with historical and contemporary wisdom perspectives, and the inclusion of cognitive, affective and reflective dimensions enables it to transfer well to organizational settings.

Cognitive Dimension

Cognitive development has been studied from at least as early as 1950 when Piaget spoke of children developing through four stages from sensory-motor skills to

concrete and formal operational methods of acquiring, organizing and retrieving information (John, 1999). Kohlberg (1972) looked at cognitive development and its effect upon moral reasoning. He proposed six stages ranging from decisions made to avoid punishment to decisions made according to an individual's ethical principles, values and beliefs (Kohlberg, 1972). Recent literature concerning cognitive development is focused primarily in the field of moral reasoning. Wisdom-related performance is related to intelligence, moral reasoning, openness to experience, social intelligence, and creativity (Staudinger & Pasupathi, 2003).

The cognitive dimension of wisdom includes knowledge, ability to apply intelligence, experience, reason, and the ability to solve life's problems (Clayton & Birren, 1980). Baltes and Staudinger (2000) propose that individuals draw on their personal strategies and goals in a cognitive and intrinsically motivational manner to deal with life's problems. Intellectual capability and social interaction are among the foremost resources of wisdom (Holliday & Chandler, 1986). Intelligence and wisdom both include reasoning and problem-solving capabilities. However, intelligence alone has only a marginal effect upon a person's level of wisdom (Staudinger, et al., 1997). Individuals possessing wisdom-related knowledge are more able to accept ambiguity and have less need for seeking closure (Staudinger, et al., 1998).

Knowledge is an important organizational resource defined as the understanding of facts, principles, relationships and consequences (Lakshman, 2007). Knowledge management within organizations has increased over the last several years and is the effective creation and sharing of knowledge throughout the organization through committees, networks, teams, etc. (Lakshman, 2007).

In 1962, Budner defined tolerance of ambiguity as "the propensity to perceive ambiguous circumstances as desirable" (p. 29). He also pointed out the ambiguous nature of new, complex and contradictory environments. Intolerance of ambiguity is more closely correlated to authoritarianism, dogmatism, censorship and perfectionism (Budner, 1962; Wittenburg & Norcross, 2001). Citing eight prior studies, Nicolaidas and Katsaros (2011) pointed out that tolerance of ambiguity is "correlated with creativity (Tegano, 1990), decision making, critical thinking and orientation towards diversity (Wilkinson, 2006), positive attitudes toward risk (Lauriola & Levin, 2001), emotional intelligence (George & Jones, 2001), effective performance in new and complex learning situations (Jonassen & Grabowski, 1993), job satisfaction (Wittenburg & Norcross, 2001; Judge et al., 1999) and coping with uncertainty (Stoycheva, 2001)" (p. 46). In business environments with role ambiguity, tolerance of ambiguity has a significant effect upon an individual's level of job satisfaction (Frone, 1990). Current business environments are uncertain, complex and rapidly changing, and manager's tolerance of ambiguity assists their ability to react quickly and successfully, lowers their anxiety, and fosters their ability to successfully enact needed changes (Hamilton, 1988; Keenan, 1978; Nicolaidas & Katsaros, 2011). The ability to live with uncertainty and tolerate ambiguity is a prerequisite for successful leadership (Wilkinson, 2006).

Wisdom is also related to discernment and in-depth understanding (Staudinger, et al., 1997). Discernment is the ability to deeply perceive and distinguish the right course of action (Scholl, 2001). Information becomes knowledge through discernment. When information has been processed through discernment, the knowledge can then be shared throughout the organization for effective problem solving. Sharing insights from

reflection upon these vital decisions increases the knowledge throughout the organization and reinforces shared values and goals. Choosing the appropriate goals through creativity and insight and designing the strategy for achieving them are vital functions of strategic management (Nonaka & Toyama, 2007). This situational knowledge is known as wisdom (Baltes, 1992).

Affective Dimension

Wisdom involves being able to overcome "immature coping mechanisms such as projection and intellectualization" and allows for perception, tolerance and empathy of others' emotions (Kramer, 1990, p. 304). All individuals have unmet childhood needs. However, wise individuals do not allow these needs to restrict their ability to accomplish goals and form satisfying relationships. They do not allow these unmet needs to develop into depression or narcissistic or egoistic drives for accomplishment or grandiosity (Miller, 1981). Development of wisdom is related to ego development and requires awareness of repressed emotions and acknowledging the struggles caused by these emotions (Labouvie-Vief, Hakim-Larson, & Hobart, 1987). Wise individuals are able to critically analyze and overcome projection of these emotions onto others in order to further develop their cognitive skills and to become empathetic towards others (Kramer, 1990). The affective dimension of wisdom includes emotions and understanding and is characterized by being sensitive to the needs of others (Clayton & Birren, 1980).

Individuals higher in wisdom-related knowledge are less aligned with seeking a pleasant life and more aligned with being affectively involved with society and friends. They are aligned towards gaining insight, personal growth and cooperation (Kunzmann &

Baltes, 2003). They are more open-minded and flexible, and have the desire for social contact and expression of empathy (Staudinger, et al., 1998). Wisdom is best developed through social interaction and openness to shared experiences (Staudinger & Baltes, 1996). Individuals choosing to work in helping professions which deal more frequently with struggles such as divorce, death, abuse, etc., learn many valuable life lessons and therefore score higher in wisdom-related knowledge (Baltes & Staudinger, 1993).

Reflective Dimension

There is a call in academic literature for improved "retrospective sense-making" by managers (Sparrow, 2000, p.16). "Those best able to look back on and draw lessons from past experience will be those most capable of making decisions for themselves and guiding others to do so" (Kramer, 1980, p. 288). A study of strategic management shows many examples of repeated mistakes (Sparrow, 2000). The reflective dimension of wisdom includes intuition, reflective thinking, the ability to withhold judgment, the ability to reflect upon available options, and the understanding of why things happen or why decisions are chosen (Clayton & Birren, 1980; Sternberg, 1990). The reflective dimension measures the individual's ability to perceive reality as it is without any major distortions, overcome subjectivity and projections, limit self-centeredness, avoid blaming others, engage in reflective thinking from varying directions, obtain insight, and the understanding of complex motivations (Ardelt, 2003). Growth in the reflective aspect of wisdom requires hard mental, emotional and spiritual work (Howard, 2010). When individuals engage in reflective thinking, they are seldom trying to make an immediate decision but rather trying to assess the pleasure or displeasure of an event and then make

a statement for further utilization (Thorseth, 2008). Reflective thinking is also consideration of current principles and practices (Beirne & Knight, 2004). "Wisdom requires deep thinking and reflection" (Howard, 2010, p. 219). Wisdom involves dealing with life's problems in a positive manner, assisting and leading others, and spiritual or philosophical introspection (Kramer, 2000). Insight is a principal part of wisdom and includes having a deeper understanding of events, past and present.

As a concept more in tune with eastern thought, intuition is the utilization of gut feelings partially honed from reflection on prior experience. Many successful managers would struggle if they were forced to make decisions based strictly upon their cognitive abilities (Novicevic, et al., 2002). Vilfredo Pareto believed that individuals were more ruled by sentiment than by logic (Novicevic, et al., 2002). Barnard also rejected the exclusive role of reason and warned against relying too heavily upon logic at the neglect of intuition (Novicevic, et al., 2002).

The business world is changing rapidly, and the inability of managers to receive complete information, together with the demand for immediate solutions, have forced them to rely on decision-making models to provide a means of security and reassurance. These models are free of emotions, utilize complex logic, and provide precise results. Unfortunately, these models are only moderately accurate in a real world setting (Hayward & Preston, 1998; Nutt, 1999). Successful managers tend to rely on both decision models and gut feelings or intuition under complex situations (Burke & Miller, 1999).

In a qualitative study of 60 experienced business professionals within major organizations, 59% utilize intuition often or always, and nearly 92% utilize a combination

of data analysis and intuition for making decisions (Burke & Miller, 1999). Participants in the study believed that intuition enabled them to make decisions more rapidly, provided a check of analytic data, increased attentiveness, and improved the manager's instincts (Burke & Miller, 1999). Although intuition is seen by some as too ethereal or philosophical, it includes cognitive, affective and ethical or moral components. Intuition is "a judgment for a given course of action that comes to mind with an aura or conviction of rightness or plausibility, but without clearly articulated reasons or justifications" (Hodgkinson, Sadler-Smith, Burke, Claxton, & Sparrow, 2009, p. 279).

Sinclair and Ashkanasy (2005) describe intuition as an unconscious internalized process of trying to piece together a puzzle by scanning cognitive and affective memory and surroundings. Neuroscientists have found that intuition involves the same regions of the brain that are activated during emotionally-driven decision making (Hodgkinson, et al., 2009). Through varied associations, intuition provides guidance and approximations (Epstein, 1998; Sinclair & Ashkanasy, 2005).

Self-pity or resentment is an opposing state from wisdom in which individuals deal poorly with life crisis (Gluck, 2011). There is a significant correlation between life satisfaction and job satisfaction, though causality has not been determined (Bowling et al., 2010; Tait, Padgett & Baldwin, 1989). Kurzynski (1998) pointed out that holding on to feelings of anger and resentment can deteriorate an individual's character and work relationships. Self-pity and resentment can "act as a veil through which we see ourselves and others" (Pattakos, 2009, p.21). It can also require justification, develop an excessive desire for attention, cause an inability to focus, and can result in volatile emotions, any of which can decrease job satisfaction, interpersonal trust and team cohesiveness.

The Perspective-Taking scale of the Interpersonal Reactivity Index (Davis, 1980) utilized within the Three-Dimensional Wisdom Scale (Ardelt, 2003) assesses an individual's tendency to see things through the perspective of others. The psychological factor of Perspective-taking deep acting (PTDA) in current literature is considered to be an internal cognitive change brought about by taking another's viewpoint. It can result in increased performance, decreased physical exhaustion and decreased intention to quit (Blau, et al., 2010, Grandey, 2003). Perspective-taking enhances the strategic thinking capabilities of managers and enables employees to explore a customer's point of view. It also enables individuals with diverse knowledge and experience to exchange, analyze, appreciate and integrate the knowledge and experience of others (Boland & Tenkasi, 1995).

Good management is based on insight, intuition, vision and experience (Mintzberg, 2004). All three dimensions of wisdom lead toward good organizational management. High levels of team cohesiveness, interpersonal trust and intrinsic job satisfaction are characteristics of well run organizations. The utilization of reflective thinking in daily and strategic decision making should be further explored and enhanced (Brockmann & Anthony, 2002). Greater reflection within organizations is needed to "deepen the analytic and collaborative dimensions" (Chaterjee, 2009, p. 158). Wisdom, especially reflective wisdom, is crucial for guiding the long-term future of an organization (Rowley, 2006).

Team Cohesiveness

Cohesiveness is the extent to which members of the group have affinity towards each other and to the group as a whole. Team cohesiveness includes the acceptance of roles, norms, orientations and the general direction of the group (Schriesheim, 1980). Cohesive teams are more cooperative, willing to assist each other, and are positively related to team success and employee job satisfaction (Dobbins & Zaccaro, 1986; Robbins & Fredendall, 2001; Sanders & Schyns, 2006). It also enhances decision making, communication, cooperation, morale, motivation, sensitivity and creativity (Chidambaram, 1996).

With the flattening of organizations, working in teams has become a matter of common practice. With the use of teams, organizations have experienced increased productivity, effectiveness, quality, creativity, and problem solving ability (Northouse, 2007). Effective teams understand their strengths and weaknesses, develop the ability to take the necessary action, and are focused upon the group's goals. The seven constructs of effective teams described by Adams, Simon, and Ruiz (2002) are common purpose, clearly defined goals, role clarity, psychological safety, mature communication, productive conflict resolution, and accountable interdependence. Team interactions require social skills and collective action as well as an assessment of requirements and potential weaknesses (Janz & Prasarnphanich, 2003; Johnson, Johnson, Buckman, & Richards, 1988). In settings like healthcare, teams must be able to communicate well, work with conflicting and incomplete information, accept unpredictability and disagreement, and make wise decisions collectively (Edmondson & Pearce, 2007). In studying an industrial environment, Seashore (1977) found that team members feel

pressure from other team members to perform well. They also found that team cohesiveness reduces the workplace anxiety of team members (Seashore, 1977).

Teams must be characterized by respect and interpersonal trust to allow members to take risks. This also encourages them to ask questions, voice concerns and ideas, and receive constructive feedback (Adams, et al., 2002; Edmondson, 1999). The ability of team members to listen, explore alternatives, and become mutually dependent, greatly affects team effectiveness and productivity (Adams, et al., 2002). Seven variables correlated to team performance are clear objectives, team skills and expertise, stimulating tasks, conflict resolution, ability to take risks, commitment to results, and recognition of accomplishments (Thamhain, 2004).

Teamwork enhances the organizations ability to combine strengths and overcome weaknesses (McEvoy & Buller, 1997). Employees operating as part of a team have the ability to learn more effectively and deal with more complex concepts. These individuals and teams develop insights that go beyond the current issues or needs of the organization (McEvoy & Buller, 1997). When individuals operate as a team, they share experiences and consider ideas requiring reflective thinking (Lee, Bonk, Magjuka, & Liu, 2006). Leaders of truly effective teams are expected to have compassion and concern for members of the team as well as demonstrate concern for customers and those outside the organization (Bartolome, 1989).

Training and collaborative learning environments are more successful when participants feel a sense of commitment and concern for the others in the group (Katz & Rezaei, 1999). Some employees and managers are able to distinguish complexities within relationships which have a positive impact on organizational teamwork (Preiss,

2000). Teamwork can reduce barriers between individuals and increase interdependence and openness (Irvine & Wilson, 1994). Working around the moods and emotions of others and understanding the effect of moods upon communication requires the affective dimension of wisdom (Kessler & Bailey, 2007).

Team cohesiveness necessitates a collective mindset among team members. To set goals for the group and achieve them consistently, team members must demonstrate both their competence and their care for the concerns of others. Seashore (1977) said that cohesive team members feel peer pressure to perform well on the job. To perform well, team members must be competent and be accepted as competent by their peers. Team cohesiveness necessitates that team members are cooperative and care for each other and for the team as a whole. Members must be able to express concerns and receive constructive feedback requiring increased social skills, respect, and the ability to listen. Team cohesiveness requires the ability to assess past group and personal performances in both tasks and social settings. This assessment necessitates reflection from multiple perspectives and the ability to provide balanced constructive feedback.

The cognitive dimension of wisdom provides the ability to address important and difficult situations, the ability to suggest adaptive strategies, and a greater balance in life (Baltes & Staudinger, 2000). The affective dimension of wisdom demonstrates compassion and concern for other team members, has a balanced outlook on life's current events, and limits selfish pleasure seeking, especially at the expense of others (Ardelt, 2003). Individuals high in the affective dimension of wisdom are able to resolve conflicts through cooperation and are interested in the personal growth and well-being of

their teammates (Kunzmann & Baltes, 2003). They also have an understanding of interpersonal and intrapersonal relationships (Brown, 2004).

The reflective dimension of wisdom is the ability to look at previous events from many different perspectives, the ability to accept responsibility and avoid blaming others for life's situations, and the ability to maintain a balanced and realistic outlook on life (Ardelt, 2004). It also includes the ability to withhold judgment, engage in reflective thinking, and utilize individual intuition (Clayton & Birren, 1980; Sternberg, 1990).

H1: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, affective and reflective dimensions, will increase team cohesiveness.

Interpersonal Trust

Trust within organizations is essential for effectiveness (Tschannen, 2004). Interpersonal trust results in improved behaviors, attitudes, processes and performance (Dirks, 2000; Dirks & Ferrin, 2002; Jones & George, 1998). Trusting relationships are built upon experience and perception, and can increase employee job satisfaction, organizational commitment, and financial profits while reducing job-related stress (Dirks & Ferrin, 2001; Flaherty & Pappas, 2000; Robinson, 1996; Staples & Ratnasingham, 1998). Teams who lack trusting relationships waste time establishing rapport and monitoring others' quality and progress (Serva & Fuller, 2004).

Although there is not one accepted definition of trust, the multi-dimensional construct of "one party's willingness to be vulnerable to another party based on the belief

that the latter party is competent, reliable, open and concerned" (Mishra, 1996, p. 265) is one of the most robust, specific and utilized (Lewicki, Tomlinson, & Gillespie, 2006). The four dimensions in this definition are closely interrelated (Mishra, 1996). When operating or trading outside the United States, trust is considered a necessary precursor to operations and may be more important than pricing considerations. Within a single organization an individual's level of trust in the organization is also correlated with the level of trust among members of the organization (DeTienne, Kyer, Hoopes, & Harris, 2004).

Webber (2008) studied 78 teams and found that affective trust developed when individuals were willing to help, take a personal interest in, and perform additional tasks for other team members. A cross-sectional study of medical offices in northern California found an individual's level of trust was closely related to their level of job satisfaction (Dong, 2006). The cognitive element of trust is dependent upon a team member's consistent and reliable performance (Webber, 2008). Trust has also been found to be a moderating variable between intrinsic motivation and team effectiveness (Dirks, 1999).

Assessment of competence, reliability and dependability are necessary for development of interpersonal trust (Mishra, 1996). The cognitive aspect of trust, where an individual decides whom to trust, is dependent upon reliable performance (Lewis & Weigert, 1985; Webber, 2008). Development of trust is demonstrated by limited self-centeredness, concern for others, and individual's willingness to be open and accessible and believe that other team members share their best interest (Mishra, 1996).

Interpersonal trust is developed from assessment of previous events and prior performance of team members.

The cognitive dimension of wisdom is built upon individuals' expert knowledge, their openness to new experiences, and their concern for both personal interests and the interests of others. Wisdom provides perfect synergy of mind and character, knowledge and virtues, which increases interpersonal trust (Baltes & Staudinger, 2000). The affective dimension of wisdom demonstrates understanding and being sensitive to the needs of others (Ardelt, 2004; Clayton & Birren, 1980). It also includes openness and equal concern for personal growth and the care of others. This includes the desire for social contact and expression of empathy through shared experiences (Staudinger & Baltes, 1996). The reflective dimension of wisdom includes an individual's ability to assess previous events in a balanced manner. This ability provides a more accurate assessment of individual reliability, past performance and demonstrated competence. It also includes the acceptance of responsibility and lack of blaming others for life's situation or feelings (Ardelt, 2004; Webster, 2003).

H2a: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, reflective and affective dimensions, will increase cognitive-based interpersonal trust.

H2b: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, reflective and affective dimensions, will increase affective-based interpersonal trust.

Intrinsic Job Satisfaction

Job Satisfaction has a lengthy history of scholarly research from Taylor's emphasis on studying job mechanics (Wrege & Greenwood, 1991) to the Hawthorne studies which brought out the importance of the worker. As early as 1935, Hoppock incorporated aspects of workers' mental, physical and emotional environment in studies of job satisfaction (Hoppock, 1935; Wright, 2006). Job satisfaction is employee's feelings of ease with their job responsibilities (Vroom, 1964). Job satisfaction has both cognitive (what individuals think about their job) and affective (what individuals feel about their job) aspects (Wright & Cropanzano, 2000). Individuals spend most of their waking hours at work, necessitating their desire for some level of job satisfaction. Job satisfaction has a positive effect upon employees concern and willingness to listen to others (Motowidlo, 1984; Patterson, Warr, & West, 2004).

Intrinsic job satisfaction factors include those internal positive motivational items that cause employees to continuously desire to improve. These may include the chance to vary tasks, the opportunity to be true to individual beliefs, to do things for others, to utilize individual capabilities and judgment, to exercise initiative, have job flexibility, and to feel a sense of job accomplishment (Weiss, Dawis, England, & Lofquist, 1967). Intrinsic job satisfaction increases when the job aligns with their individual beliefs about the world, expands their level of knowledge, helps them understand complex motivations, or allows them to show compassion and concern for others. If individuals' beliefs, personal growth, and concern for others are not shared by the organization, their level of job satisfaction decreases (Kreintner & Kinicki, 2007). Intrinsic job satisfaction

increases motivation and organizational commitment and reduces individual stress (Kreintner & Kinicki, 2007).

How individuals feel about life seems to effect how they feel about their job (Bowles, Eschleman & Wang, 2010; Ilies & Judge, 2003). Individuals' affective disposition may also account for up to 30 percent of their variance in job satisfaction (Bowles, Eschleman & Wang, 2010; Staw & Ross, 1985). A small study of 24 managers in a charitable organization found that pleasant affective experiences and beliefs have a significant positive impact on job satisfaction (Weiss, et al., 1999). A study of similar results received from twins raised apart, and two additional follow-up studies, have shown that genetics also has an influence upon work values, intrinsic and overall job satisfaction (Arvey, McCall, Bouchard, Taubman, & Cavanaugh, 1994). Having a positive affect (PA) refers to an individual having an overall sense of well-being including enthusiasm, confidence and cheerfulness (Ilies & Judge, 2003). Positively affective (PA) individuals have fewer absences, less intention to quit and greater job satisfaction (George, 1989; Pelled & Xin, 1999; Staw, Bell, & Clausen, 1986). Negative affective (NA) people have more absences, greater intention to quit and lower job satisfaction. In a recent meta-analysis, PA had a positive relationship with intrinsic job satisfaction factors (Bowling, Hendricks, & Wagner, 2008).

Exercising developed capabilities and achieving success also develops intrinsic job satisfaction (Weiss et al., 1967). Positive interpersonal relationships and personal growth, through utilization of skills, accomplishments and opportunities, are motivational factors and increase intrinsic job satisfaction.

The cognitive dimension of wisdom includes having superior knowledge, judgment and advice, and the desire to continuously improve in the expert knowledge of the practical aspects of life (Baltes & Staudinger, 2000). It also includes the ability to apply intelligence, experience and reason (Clayton & Birren, 1980). The affective dimension of wisdom is demonstrated through the lack of negative affect (NA) and the presence of positive emotions toward others. Wisdom-related knowledge is positively related with an individual's interest, inspiration, and having equal concern for personal growth and the care of others. The reflective dimension of wisdom includes the ability to assess prior events from multiple perspectives, utilize intuition, withhold judgment, and to understand why things happen or why decisions are chosen. It provides a balanced perspective and an understanding of one's own situation (Ardelt, 2004; Webster, 2003). The opportunity to understand complex motivations, enjoy accomplishments and relationships, and assess prior and potential growth opportunities, will result in improved individual intrinsic job satisfaction.

H3: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, reflective and affective dimensions, will increase intrinsic job satisfaction.

Emotional Intelligence

"Recognizing, embracing and employing emotions in a constructive way is a benchmark of wisdom" (Webster, 2003, p. 15). Emotional intelligence is the ability to perceive, access, generate, understand, and regulate emotions (Mayer & Salovey, 1997).

Characteristics similar to character, personality and competence are included within current descriptions of emotional intelligence (Goleman, 1998). Emotional intelligence enables an individual to utilize emotional awareness to manage relationships (Bradberry & Greaves, 2005). Salovey and Mayer (1997) described the four functions of emotional intelligence as "understanding of one's own and others' emotions, emotional facilitation, emotional understanding, and management of one's own and others' emotions" (Jordan & Lawrence, 2009, p. 452). Having self-awareness, social-awareness, and a clear understanding of individual emotions, can provide greater credibility and an improved organizational climate (Momeni, 2009).

Emotional intelligence enables an individual to express emotions precisely and appropriately, empathize with others, think before taking action, assume responsibility rather than blaming others, and become motivated towards success (Gillespie, 2004). Unlike cognitive intelligence (measured by IQ tests), emotional intelligence (measured by Emotional Quotient tests) can be developed but takes deliberate and sustained effort (Emmerling & Goleman, 2005). Emotional self-awareness enables individuals to dampen their responses to emotional stimuli, allowing them to continue to think clearly and communicate effectively (Jordan & Lawrence, 2009). Being able to perceive, assess and express emotions appropriately is necessary before being able to advance to the thinking, understanding and managing of emotions (Mayer & Salovey, 1997; Poon, 2004).

A quantitative study of 30 car parts manufacturing managers found that the manager's level of emotional intelligence can explain 55% of the variance in organizational climate (Momeni, 2009). Emotional intelligence has a larger effect upon

organizational climate or individual success than intelligence or technical expertise (Goleman, 1998). In many situations, the ability to respond appropriately may be more important than knowing the correct solution (Estep, 2005). The organization's ability to encourage and promote the development of individual emotional intelligence increases their productivity and effectiveness (Goleman, 1998). Individuals and organizations trained and competent in emotional intelligence may be more successful in customer service as individual's desire for connectedness continues to increase (Howard, 2010).

Salovey and Mayer (1997) conducted research to develop one of the first valid measures of emotional intelligence to include Mayer and Salovey's Emotional Intelligence Skill Development Inventory. Goleman's book titled Emotional Intelligence greatly increased interest in the concept and pushed forward understanding (Goleman, 1995). Both trait and skill measures have been developed to include Bar-On's Emotional Quotient Inventory (Bar-On, 1997). One of the challenges of many of these measures is that trait measures have not necessarily transferred into action.

Emotional intelligence enables an individual to understand, assess and express emotions precisely and appropriately. It enables individuals to empathize with others, think before taking action, assume responsibility, and become motivated towards success (Gillespie, 2004). It also enables individuals to dampen their responses to emotional stimuli, allowing them to continue to think clearly and communicate effectively (Jordan & Lawrence, 2009). Being able to assess and express emotions appropriately is necessary before being able to advance to the thinking, understanding and management of emotions (Mayer & Salovey, 1997; Poon, 2004). Individuals high in the affective dimension of wisdom are able to manage their own emotions (Brown & Greene, 2006).

It is necessary to utilize cognitive, affective and reflective capabilities to accurately understand, assess and express appropriate emotions in an organizational environment. The affective foundations of trust include emotional bonds between individuals (Lewis & Wiegert, 1985). Team cohesiveness, interpersonal trust, and job satisfaction are all largely affected by emotional bonds and relationships between individuals.

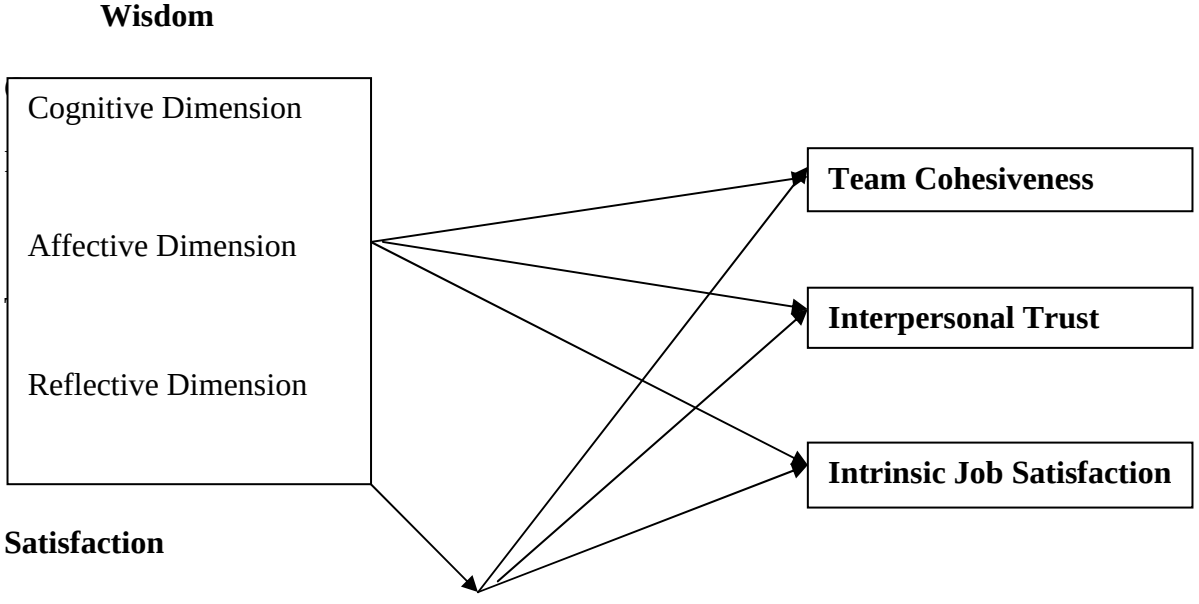
H4: Emotional intelligence is a partially mediating variable between wisdom (composite of cognitive, affective and reflective dimensions) and each of the variables team cohesiveness, interpersonal trust, and intrinsic job satisfaction.

Demographics

Though aging takes its toll on the physical body, the Max Planck Institute has found that aging does not have the same effect upon acquired skills and knowledge of how to deal with real life situations. Older participants in empirical studies have generally performed as well as younger participants (Baltes, 1992; Baltes, Staudinger, Maercker, & Smith, 1995; Smith & Baltes, 1990). Older individuals, however, are less likely to be open to new experiences, critically evaluate themselves, and accept unpleasant ambiguities from their own lives (Mickler & Staudinger, 2008). Webster (2007) also found that age did not necessarily correlate with wisdom (Webster, 2007). In their study of Muslims from Pakistan and Jews from Canada, Ferrari et al. (2011) found that wisdom rather than age, gender, or participation in religious activities, had a significant effect on an individual's level of life satisfaction. Ardelt (2003) found marital status, gender, per-capita income, education in years, and occupation were all

significantly and positively correlated with the measurement error of the cognitive dimension of wisdom. Gender was also positively correlated with wisdom in Webster's (2003) study, with women scoring higher. In their study of gender differences, Gluck, Strasser & Bluck (2009) found very small overall differences. They did however find that men view the cognitive dimensions of intelligence and the ability to understand complex issues as more important to wisdom than women, and women view the affective and reflective dimensions of acceptance of other's views and love for humanity as more important to wisdom than men. Men expected to grow in wisdom through studying philosophy and women through an understanding of life events (Gluck, Strasser & Bluck, 2009).

A Model of Wisdom and Organizational Factors



Summary

Historically, Aristotle understood wisdom to be an expertise in everyday practical decision making. Within current organizations, wisdom is also more than knowledge; it includes the affective abilities to improve working relationships and the reflective abilities to learn from previous experience. Understanding and increasing wisdom within organizations can have a positive financial impact on organizational success. This study demonstrates how the three dimensions of wisdom (cognitive, affective and reflective) have a significant effect upon the measures of intrinsic job satisfaction, cognitive-based and affective-based interpersonal trust, and team cohesiveness.

CHAPTER III

Methodology

Introduction

This chapter will discuss the survey instrument and the original sources from which it was developed. It will also discuss details of the data collection for both the pilot and actual study. Measures and empirical standards and processes are also discussed.

Population, Sampling Method, Sample Size

A pilot study was conducted one month prior to the actual study to validate the instrument with 198 surveys being distributed to non-instructional employees at two north Florida community colleges. The pilot study achieved a 52.5% return rate with 104 surveys returned. Factor analysis resulted in 11 factors including Intrinsic Job Satisfaction, Team Cohesiveness, Cognitive Interpersonal Trust, Affective Interpersonal Trust, Regulation of Emotions, Others Emotion Appraisal, and Self Emotion Appraisal. Wisdom measures loaded upon four factors including Tolerance of Ambiguity, Lack of Self-pity or Resentment , Acceptance/Liking of Others, and Perspective Taking. Each factor loaded distinctly and above .6. The Pilot Study found that the composite of the three dimensions of Wisdom had a significant positive effect upon Emotional Intelligence ($t = 3.144$, $p < 0.01$) and Interpersonal Trust ($t = 2.590$, $p < 0.01$). Wisdom also had a significant positive effect upon Intrinsic Job Satisfaction ($t = 3.470$, $p < 0.001$) and Team Cohesiveness ($t = 2.429$, $p < 0.05$). The Reflective dimension had the largest effect with

the Lack of Pity or Resentment factor having a significant positive effect upon Interpersonal Trust ($t = 3.841$, $p < 0.001$) and the Perspective-taking factor having a significant positive effect upon Self-Emotional Appraisal ($t = 3.288$, $p < 0.01$) and Regulation of Emotions ($t = 2.224$, $p < 0.05$). Validity and Reliability were both sufficient with Average Variance Extracted (AVE) of .639 - .885, Composite Reliability of .843 - .958, and Cronbach Alpha of .729 - .934. Since the instrument was found to have sufficient validity, and there were no apparent difficulties with individuals completing the survey despite its length, the same instrument was utilized for both the pilot study and the final study.

The final study included 535 surveys being distributed to non-instructional employees from both a traditional university setting and numerous branch offices in six states. This resulted in 230 returned surveys for a 43% return rate. Non-instructional employees were utilized because of their service orientation and their increasing emphasis on customer service. Surveys were sent to each department and location and included self-addressed stamped envelopes for each individual to complete separately and return. Individuals were told that the survey concerned several different aspects of business and were not told that the survey included a wisdom scale to prevent contamination of the data. Data was collected and analyzed at the individual level and departmental level. Demographic data to include gender, age, position, and years of formal education will also be collected for verification with prior research. Names were not requested or included on the study to allow for participant anonymity.

Instrument and Data Source

This study utilized the Three-Dimensional Wisdom Scale (3DWS) developed by Ardelt (2003), intrinsic measures of the Minnesota Satisfaction Questionnaire Short-Form revised 1985, McAllister (1995) interpersonal trust measures, Chidambaram's (1996) Cohesiveness scale, adapted from Seashore's Index of Group Cohesiveness, and Wong and Law (2002) emotional intelligence measures.

There are few empirical measures of wisdom. The most widely referenced quantitative measure is Ardelt's (2003) Three-Dimensional Wisdom Scale (3DWS) provided in Appendix A. This instrument measures wisdom as a latent variable through its three dimensions (Ardelt, 2003). The multi-dimensional wisdom scale developed by Ardelt (2003), based on prior work by Clayton and Birrren (1980), was found to be a quantitative, valid and reliable instrument (Cronbach Alpha of .71 to.86, NNFI .94, AGFI .93) which encompasses the multi-faceted dimensions of practical wisdom described in ancient and current literature. This instrument has been utilized in several subsequent studies. It contains 39 items with 14 items measuring the cognitive dimension (ex. I prefer to just let things happen rather than try to understand why they turned out that way), 13 items measuring the affective dimension (ex. Sometimes when people are talking to me, I find myself wishing they would leave), and 12 items measuring the reflective dimension (ex. When I look back at what's happened to me, I feel cheated). Results are measured utilizing a 5 point Likert scale ranging from 1 – Strongly Agree to 5 – Strongly Disagree, and 1 – Definitely true of myself to 5 – Not true of myself. Eight items are reverse scored.

For analysis of the latent construct of wisdom, the results from the 14 cognitive items were loaded into SmartPLS 2.0 to determine the score for the cognitive dimension, the results of the 12 reflective items to determine the score for the reflective dimension, and the results of the 13 affective items to determine the score for the affective dimension.

To measure intrinsic job satisfaction, the Weiss et al. (1967) Minnesota Job Satisfaction Questionnaire (short-form) has 20 measures for both intrinsic and extrinsic job satisfaction, shown as Appendix B. Originally 12 items were found to measure intrinsic satisfaction, six measures of extrinsic satisfaction, and two items that measured both extrinsic and intrinsic. Reliability quotient was .84 - .91 and test-retest consistency of one year was .70, Cronbach Alpha .81, GFI .81, AGFI .73, CFI .81, RMSEA .63 (Hirschfield, 2000; Weiss, 1967).

Later research found that 10 items measured intrinsic satisfaction, six measured extrinsic satisfaction, and four items measured both extrinsic and intrinsic. Hirschfeld (2000) empirically tested both the original and revision and found that the revision did not significantly improve results. Seven measures of intrinsic satisfaction (ex. The chance to do different things from time to time), which are well accepted, will be utilized. Measures will use a 5 point Likert scale ranging from 1 – very dissatisfied to 5- very satisfied.

The most widely utilized instrument for team cohesiveness was developed by Seashore (1977), shown as Appendix C. It has been modified and utilized in many varied studies. The instrument was developed for an industrial environment and utilized in 1950 to assess employee morale, relationships and practices. Items measured whether team

members felt like members of the team, whether they were attracted to the team or would leave it, given the right opportunity, and whether they felt the team was better at getting along together than others' teams. Internal consistency reliability was .77 and Cronbach alpha reliability was .87 (Chidambaram, 1996). In this study the Chidambaram's (1996) cohesiveness scale, which was adapted from Seashore's index of group cohesiveness, will be utilized. It contains six items (ex. I feel that I am a part of the team) and results are measured using a 5 point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree.

The interpersonal trust measures developed by McAllister (1995) are shown as Appendix D. The measures have a CFI of .9 and factor loadings ranging from .66-.89 for affect-based trust and .69-.90 for cognition-based trust. The reliability of the affective-based and cognitive-based measures was .88 and .85 respectively, NFI .98, RMSEA .11, Chi-square with 362 df is 681.64 ($p < .001$) (McAllister, 1995). The measure to assess interpersonal trust will consist of 11 items with six items measuring the cognitive-based dimension (ex. This person approaches his/her job with professionalism and dedication) and five items measuring the affective-based dimension (ex. I would have to say that we have both made considerable emotional investments in our working relationship). Results are measured utilizing a 5-point Likert scale ranging from 1 – Strongly Agree to 5 – Strongly Disagree. One item is reverse scored.

Similar to the basic definition of emotional intelligence by Mayer and Salovey (1997), the Wong and Law Emotional Intelligence Scale, shown as Appendix E, measures individual's ability to understand and control their own emotions, and the ability to perceive and understand the emotions of co-workers (Wong & Law, 2002).

The Wong and Law (2002) instrument contains 16 items with four items measuring self-emotion appraisal (ex. I have a good sense of why I have certain feelings most of the time), four items measuring others' emotional appraisal (ex. I am a good observer of others' emotions), four items measuring the use of emotions (ex. I always set goals for myself and then try my best to achieve them) and four items measuring regulation of emotion (ex. I am able to control my temper and handle difficulties rationally). Cronbach alpha reliability coefficient is .83-.90 and internal consistency .83 (Aslan & Erkus, 2008). Model Chi-squared for the four-factor model for the 16 EI items was 179.33 (df=98). The standardized RMR was .07, the CFI was .91, and the TLI was .89 (Wong & Law, 2002).

Results are measured utilizing a 5 point Likert scale ranging from 1 – Strongly Agree to 5 – Strongly Disagree and seven items are reverse scored.

Validity and Reliability

A sufficient quantity of data was collected to conduct a valid t-test, utilizing the means to determine if the wisdom indicators (cognitive, reflective, and affective) as well as the measures of interpersonal job satisfaction, interpersonal trust, team cohesiveness and emotional intelligence are significantly different at a level of statistical significance of 0.05. T- testing was used to determine if each of the wisdom indicators had a significant effect upon each of the additional measures (Hair, et al. 2006). Exploratory factor analysis was conducted during the pilot study and confirmatory factor analysis during the final study to ensure proper loadings on each factor. Partial least squares modeling was utilized to ensure that the paths defined in the model provide for a

goodness of fit and measure unidimensionality. Additionally the model examined the correlations among variables and determined if they are interrelated. Exploratory and confirmatory factor analysis was conducted utilizing SPSS v19.

Partial Least Squares (PLS) develops estimates for parameters which "maximizes explained variance" (Hair, 2010, p. 760). Utilizing Smart PLS 2.0, factor loadings "should be .5 or higher and ideally .7 or higher" to their appropriate variable and not cross-loaded to other variables (Chin, 1998; Hair et al, 2010, p. 686). Composite Reliability, which is preferred to Cronbach's Alpha, was used to test internal consistency and generally remained above the .7 standard. Average Variance Extracted (AVE) was also largely above the .5 standard (Chin, 1998; Dillon & Goldstein, 1984; Fornell & Larcker, 1981; Hair, Anderson, Tatham, & Black, 1998; Henseler, Ringle, & Sinkovics, 2009; Komiak & Benbasat, 2006). AVE values greater than .50 indicate that at least 50% of the variance in a measure is due to the hypothesized underlying trait (Fornell & Larcker, 1981). Cronbach Alpha was used as a secondary reliability measure and largely remained above .7 (Hair et al, 2010).

Bootstrapping, which draws a large number of samples from the existing data, was utilized to determine t-values (Hair et al., 2010). Cases were set to match the number of survey responses received. The number of cases was set equal to 230 to equal the number of usable surveys and the number of samples was set at 1000. T-values equal to or greater than 1.960 ($p < 0.05$) were considered significant (Schumacker & Lomax, 2004). Results are presented showing both findings and limitations of the model (Leedy & Ormrod, 2005).

Method of Analysis

Utilizing simultaneous regression analysis available through partial least squares modeling, a composite of the three indicators of wisdom were analyzed to assess their ability to explain the variance in employee team cohesiveness, interpersonal trust and intrinsic job satisfaction. Emotional intelligence was also analyzed to determine if it is a partially mediating variable between the three dimensions of wisdom (cognitive, affective and reflective) and the three variables described.

The survey instrument consisted of 77 items (three dimensions of wisdom-39, emotional intelligence-16, interpersonal trust-11, intrinsic job satisfaction-7, and team cohesiveness-4) with both positive and negative responses combined from the existing instruments previously identified. Each dimension or factor included at least three items. Items were answered utilizing a 5-point Likert scale. Survey instruments were sent directly to directors at the various locations and distributed to departments on the university campus to ensure ability to separate data by departments or locations. Self-addressed stamped envelopes were provided with each survey to allow individuals to return surveys directly to the researcher for analysis. Upon receipt, a review was conducted to determine whether each survey was filled out correctly and completely. Incomplete surveys or surveys with more than three missing non-demographic variables were set aside. Respondents were not informed that they were filling out a wisdom scale. As data was collected, it was entered in MS Excel with all negative response items being reversed. To ensure accuracy of data entry, an independent 100% recheck of all data entry was conducted. Each variable was separated and analyzed for factor loading and correlation. Exploratory factor analysis, confirmatory factor analysis, and partial least

squares modeling were utilized. Demographic data including age, gender, education, position and years with the university were also included in the instrument. There is no theoretical support for any of these variables serving as a moderator.

Missing Data

Of the 230 surveys returned, 27% (62) contained missing data. Of those, 91% were missing data on only 1-3 variables. Thirty-eight (61%) were only missing data on one variable, twelve (19%) were missing data on two variables, seven (11%) were missing data on three variables. Two (3%) were missing data on four variables and one (1.5%) was missing data on six variables which included four of the five demographic variables. Two surveys had missing data on 13-14 variables which included at least four of the five demographic questions. These two surveys (3%), and one survey (1.5%) that was clearly marked in haste with all answers being scored three, were eliminated from the data analysis. This provided 228 usable surveys.

The 228 usable surveys each contained 77 survey variables and 5 demographic variables. Of the 77 survey variables only 26 were missing data from any of the cases. Of those, 17 were only missing data on one case, six were missing data on two cases, two were missing data on three cases, one on four cases, and one was missing data on five cases. The variable missing four cases is the first wisdom question and the variable missing five cases is the final cognitive wisdom question. Of the five demographic variables, age was missing data on 20 cases, years with employer was missing data on 14 cases, education level was missing data on eight cases, position was missing data on six cases, and gender was missing on two cases.

The 201 usable surveys received within the first month were compared with the remaining 27 usable surveys received within the second month. There was an average of only 2% difference among the responses with the later responses being received from individuals generally lower in education and position and correspondingly lower in some cognitive measures.

Hair et al. (2010) provides that if missing data does not exceed 10% of any case or variable, it can be ignored. Schumacker and Lomax (2004) suggest that mean substitution is appropriate when handling a proportionately small amount of missing data. For each scale, the mean of the remaining items in the scale was computed and was substituted for the missing observations in both the pilot and actual studies.

Summary

Instrument items were drawn from five well-established instruments with established validity, reliability and credibility, though the Three-Dimensional Wisdom Scale (3DWS) had not been empirically utilized within a business organization. Therefore, this study was conducted to allow for exploratory and confirmatory factor analysis and to demonstrate its effects upon team cohesiveness, interpersonal trust, and intrinsic job satisfaction. This study demonstrated the relationships involved between wisdom and factors within a business environment. It further clarified existing relationships and provided many new findings that will provide the basis for further studies.

CHAPTER IV

Analysis and Presentation of Findings

Introduction

This section will present the detailed results of the actual study of responses from full time non-instructional staff from both a traditional university setting and numerous branch offices in six states. Four statistical models of the variable relations were utilized, with each model becoming increasingly more complex and providing more granularity. These results of each model were analyzed to determine what effect increasing the wisdom of individuals in a business setting, measured by cognitive, affective and reflective dimensions, had upon intrinsic job satisfaction, interpersonal trust and team cohesiveness. Emotional intelligence was analyzed to determine if it has a mediating effect upon the relationship.

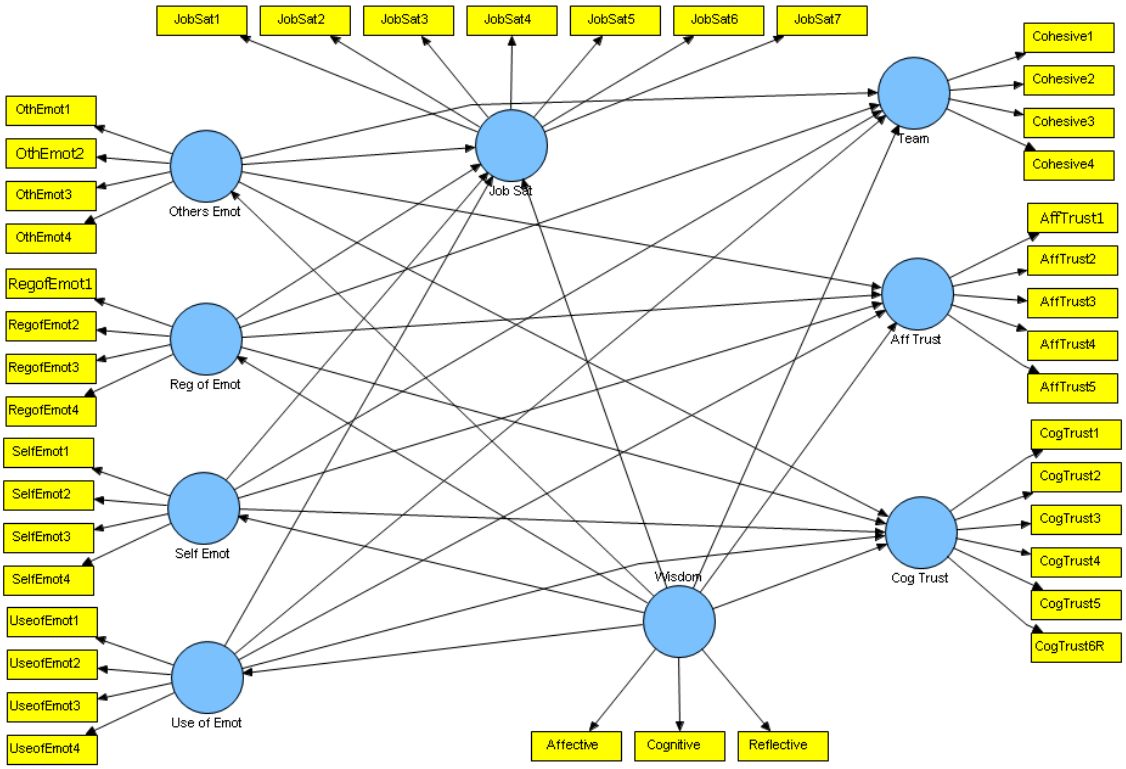
Using factor analysis through SPSS v19 and the simultaneous regression analysis available through partial least squares (PLS) modeling, wisdom as a latent variable as well as the three dimensions of wisdom (cognitive, affective and reflective) were analyzed to assess their impact on the variables of employee team cohesiveness, interpersonal trust and intrinsic job satisfaction. Emotional Intelligence was analyzed to determine if it was a partially mediating factor.

Model 1

The first model best demonstrates the intent of the Three-Dimensional Wisdom Scale (Ardelt, 2003). It was designed for the measures of each dimension (cognitive,

affective and reflective) to be combined into one latent variable called Wisdom. For analysis of the latent construct of wisdom, the results for the 14 items designated as cognitive were entered into PLS to determine the score for the cognitive dimension, the results of the 12 items designated as reflective to determine the score for the reflective dimension, and the results of the 13 items designated as affective to determine the score for the affective dimension.

Figure 1 – Model 1 – Analyzed Wisdom as a holistic measure



In Model 1, figure 1 above, the latent variable Wisdom was analyzed to determine its overall effect upon the measures of Intrinsic Job Satisfaction, Cognitive Interpersonal Trust, Affective Interpersonal Trust, Team Cohesiveness. The four measures of

Emotional Intelligence (Others Emotional Appraisal, Regulation of Emotion, Self Emotional Appraisal, Use of Emotions) were proposed as partially mediating variables.

Factor analysis, utilizing SPSS v19, Principal Component Analysis and Varimax rotation resulted in nine distinctive factors consisting of Intrinsic Job Satisfaction, Team Cohesiveness, Cognitive-based Interpersonal Trust, Affective-based Interpersonal Trust, Regulation of Emotion, Use of Emotion, Self Emotion Appraisal, Other Emotion Appraisal, and Wisdom. All factors measured at or above .6.

Model 1 results.

As shown in Tables 2 and 3 below, validity, as indicated by Average Variance Extracted (AVE) (.631-.783), exceeded the .5 requirement for all measures. Reliability, as indicated by Composite Reliability (.851-.935) and also Cronbach's Alpha (.747-.919), exceeded the .7 requirement for all measures (Hair et al., 2010).

Table 2 – Model 1 Validity and Reliability Measures

	AVE	Composite Reliability	R Square	Cronbach's Alpha
Aff Trust	0.718686	0.927278	0.073626	0.902494
Cog Trust	0.702587	0.933633	0.106116	0.913929
Job Sat	0.636632	0.924290	0.195239	0.904093
Others Emot	0.647986	0.878928	0.206054	0.819050
Reg of Emot	0.631480	0.871319	0.153425	0.799503
Self Emot	0.694179	0.900211	0.070676	0.851077
Team	0.783713	0.935449	0.059359	0.918940
Use of Emot	0.643952	0.878168	0.105358	0.816188
Wisdom	0.658216	0.851573		0.747154

Using the bootstrapping technique, 230 cases and 1000 samples to obtain the t-values of the path coefficients to determine significance, Wisdom was determined to significantly increase Intrinsic Job Satisfaction ($\beta = .41$, $t = 5.088$, $p < 0.001$), Cognitive-based Interpersonal Trust ($\beta = .242$, $t = 2.833$, $p < 0.01$), Affective-based Interpersonal Trust ($\beta = .187$, $t = 2.019$, $p < 0.05$), and Team Cohesiveness ($\beta = .208$, $t = 2.226$, $p < 0.05$). Wisdom also significantly increased Others' Emotion Appraisal ($\beta = .454$, $t = 7.847$, $p < 0.001$), Regulation of Emotion ($\beta = .392$, $t = 6.945$, $p < 0.001$), Use of Emotion ($\beta = .325$, $t = 4.403$, $p < 0.001$), and Self-Emotion Appraisal ($\beta = .266$, $t = 2.286$, $p < 0.01$). Self-Emotion Appraisal significantly decreased Cognitive-based Interpersonal Trust ($\beta = -.162$, $t = 1.996$, $p < 0.05$). For Emotional Intelligence to be a partially mediating variable the relationship between Wisdom and Cognitive-based Interpersonal Trust must be reduced while remaining significant when Emotional Intelligence is added. Since the relationship between Wisdom and Cognitive-based Interpersonal Trust remained significant and unchanged, Emotional Intelligence is not a partially mediating factor (Hair et al., 2010).

In Model 1, results indicate that increasing the wisdom of individuals in a business setting, as measured by a composite of cognitive, reflective and affective dimensions, increased team cohesiveness (supporting Hypothesis 1), increased cognitive-based interpersonal trust (supporting Hypothesis 2a), increased affective-based interpersonal trust (supporting Hypothesis 2b), and increased intrinsic job satisfaction (supporting Hypothesis 3). However, emotional intelligence did not serve as a partially mediating variable between wisdom and team cohesiveness, interpersonal trust, and intrinsic job satisfaction (thus not supporting Hypothesis 4).

Table 3 – Model 1 Standardized and unstandardized path coefficients

Unstandard	Job Satisfaction	Cog Trust	Aff Trust	Team Cohesiveness	Reg of Emot	Emotional Use of Emot	Intelligence Other Emot	Self Emot
Wisdom	0.409***	0.249**	0.188*	0.211*	0.395***	0.328***	0.440***	0.272**
Self Emot		-0.179*						
Standard								
Wisdom	0.410***	0.242**	0.187*	0.208*	0.392***	0.325***	0.454***	0.266**
Self Emot		-.162*						

***** $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Model 2

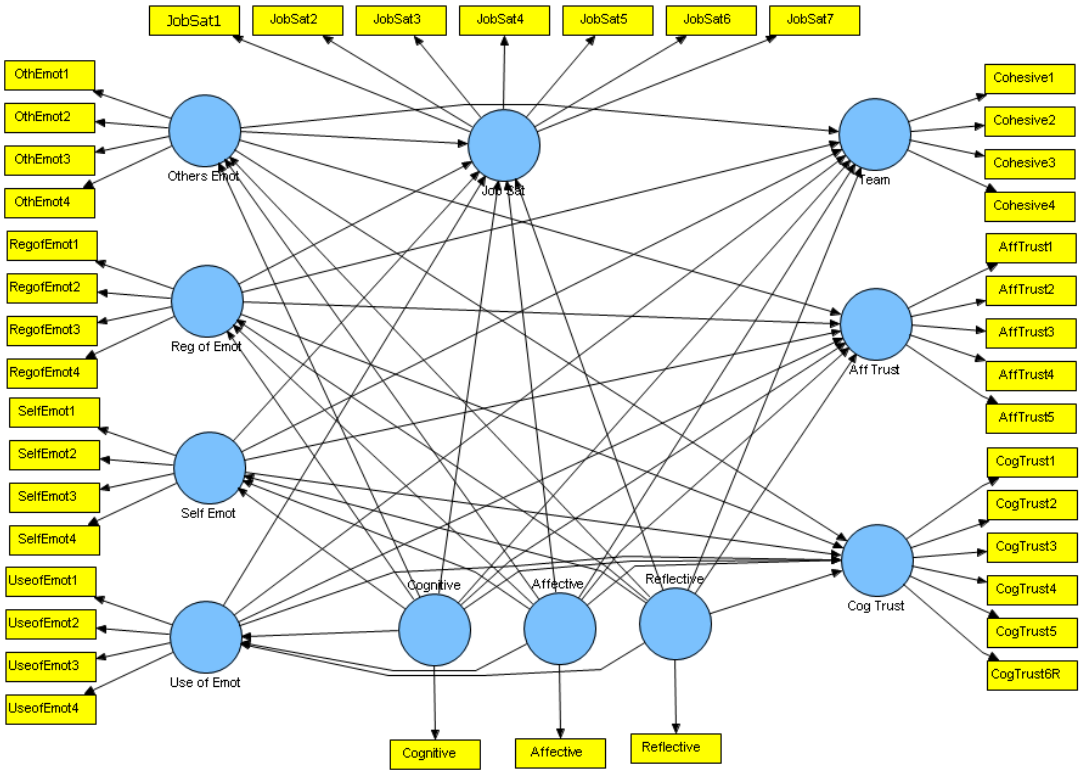
Model 2 is slightly modified from Model 1 to provide an increasing level of detail. In Model 2, the three Wisdom dimensions were analyzed separately to determine their individual effects on Intrinsic Job Satisfaction, Interpersonal Trust, and Team Cohesiveness. Emotional Intelligence was again analyzed as a mediating factor as seen in Figure 2 below. The factor analysis remained largely unchanged from Model 1 and still met the required thresholds as noted in Table 4. The averages of each of the three dimensions indicated slightly higher averages for the Reflective dimension (3.907) than for the Cognitive (3.606) and Affective dimensions (3.577).

Model 2 results.

As tables 4 and 5 below demonstrate, the model results were slightly improved. Validity, as indicated by Average Variance Extracted (AVE) (.631-.800), again exceeded the .5 requirement for all measures. Reliability, as indicated by Composite Reliability

(.871-.941) and Cronbach's Alpha (.800-.919), also again exceeded the .7 requirement for all measures (Hair et al., 2010).

Figure 2 – Model 2 – Analyzed 3 dimensions of Wisdom individually



Bootstrapping was used to obtain the t-values of the path coefficients to determine significance and to provide evidence that the Reflective dimension of Wisdom significantly increased Intrinsic Job Satisfaction ($\beta = .418$, $t = 3.692$, $p < 0.001$), Team Cohesiveness ($\beta = .351$, $t = 3.385$, $p < 0.001$), and Cognitive-based Interpersonal Trust ($\beta = .262$, $t = 2.258$, $p < 0.05$). The Reflective dimension also significantly increased Regulation of Emotions ($\beta = .336$, $t = 4.574$, $p < 0.001$), Self-Emotion Appraisal ($\beta = .367$, $t = 4.171$, $p < 0.001$), Use of Emotions ($\beta = .287$, $t = 3.466$, $p < 0.001$), and Others'

Emotion Appraisal ($\beta = .219$, $t = 3.129$, $p < 0.01$). The Affective dimension of Wisdom also significantly increased Others' Emotion Appraisal ($\beta = .280$, $t = 3.220$, $p < 0.01$) and Regulation of Emotion ($\beta = .175$, $t = 2.351$, $p < 0.05$). The Reflective dimension of Wisdom had the largest effect with significance in all areas except Affective Interpersonal Trust. The Affective dimension of Wisdom significantly increased two areas of Emotional Intelligence but did not significantly increase Intrinsic Job Satisfaction, Team Cohesiveness, Affective-based or Cognitive-based Interpersonal Trust. The Cognitive dimension of Wisdom did not provide any significant relationships. Self-Emotion Appraisal again significantly decreased Cognitive-based Interpersonal Trust ($\beta = -.189$, $t = 2.314$, $p < 0.05$). However, Emotional Intelligence was again determined to not be a mediating factor.

Table 4 – Model 2 Validity and Reliability Measures

	AVE	Composite Reliability	R Square	Cronbach's Alpha
Aff Trust	0.718711	0.927279	0.073509	0.902494
Affective	1.000000	1.000000		1.000000
Cog Trust	0.702963	0.933708	0.122656	0.913929
Cognitive	1.000000	1.000000		1.000000
Job Sat	0.636881	0.924358	0.225187	0.904093
Others Emot	0.647665	0.878754	0.215934	0.819050
Reflective	1.000000	1.000000		1.000000
Reg of Emot	0.631362	0.871267	0.178006	0.799503
Self Emot	0.694299	0.900355	0.115248	0.851077
Team	0.799789	0.941057	0.095098	0.918940
Use of Emot	0.643903	0.878091	0.115088	0.816188

Table 5 – Model 2 Standardized and unstandardized path coefficients

Unstandard	Job Satisfaction	Cog Trust	Aff Trust	Team Cohesiveness	Reg of Emot	Emotional Use of Emot	Intelligence Other Emot	Self Emot
Reflective	0.415***	0.264*		0.342***	0.344***	0.274***	0.213**	0.371***
Affective					0.172*		0.270**	
Self Emot		-0.202*						
Standard								
Reflective	0.418***	0.262*		0.351***	0.336***	0.287***	0.219**	0.367***
Affective					0.175*		0.280**	
Self Emot		-.189 *						

***** $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In Model 2, results indicate that increasing the wisdom of individuals in a business setting, as measured by each of the cognitive, reflective and affective dimensions, again increased team cohesiveness (supporting Hypothesis 1), increased cognitive-based interpersonal trust (supporting Hypothesis 2a), and increased intrinsic job satisfaction (supporting Hypothesis 3). However, results indicate that increasing the wisdom of individuals in a business setting did not significantly increase affective-based interpersonal trust (thus not supporting Hypothesis 2b). Additionally, emotional intelligence again did not serve as a partially mediating variable between wisdom and team cohesiveness, interpersonal trust, and intrinsic job satisfaction (thus not supporting Hypothesis 4).

Model 3

In Model 3, factor analysis was conducted on each of the Wisdom dimensions (cognitive, affective, reflective) separately using SPSS v19. This factor analysis provided

a more detailed description of each of the Wisdom dimensions as demonstrated in Table 6 below with each of the three dimensions loading on two factors.

Table 6 – Model 3 Wisdom Factor Components

Perspective-Taking	
Reflective C1R	I try to look at everybody's side of a disagreement before I make a decision (reverse scored)
Reflective C3R	When I'm upset at someone, I usually try to "put myself in his or her shoes" for a while (reverse scored)
Reflective C5R	I always try to look at all sides of a problem (reverse scored)
Reflective E1R	When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information (reverse scored)
Reflective E4R	Before criticizing someone, I try to imagine how I would feel if I were in their place (reverse scored)
Tolerance of Ambiguity	
Cognitive A5	You can classify almost all people as either honest or crooked
Cognitive B1	A person either knows the answer to a question or he/she doesn't
Cognitive B3	People are either good or bad
Compassion/Empathy	
Affective C2R	If I see people in need, I try to help them one way or another (reverse scored)
Affective D1	I often have not comforted another when he/she needed it
Affective D4	Sometimes I don't feel very sorry for other people when they are having problems
Lack of Self-pity or Resentment	
Reflective A6	I would feel much better if my present circumstances changed
Reflective C8	When I look back on what has happened to me, I can't help feeling resentful
Reflective E6	When I look back on what's happened to me, I feel cheated
Reflective B6	Things often go wrong for me by no fault of my own
Need for Cognition	
Cognitive C7	I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something
Cognitive D5	I often do not understand people's behavior

Cognitive D8	I prefer just to let things happen rather than try to understand why they turned out that way
Cognitive E7	Simply knowing the answer rather than understanding the reasons for the answer to a problem is fine with me
Liking/Acceptance of Others	
Affective B4	There are some people I know I would never like
Affective C4	There are certain people whom I dislike so much that I am inwardly pleased when they are caught and punished for something they have done
Affective D7	Sometimes when people are talking to me, I find myself wishing that they would leave

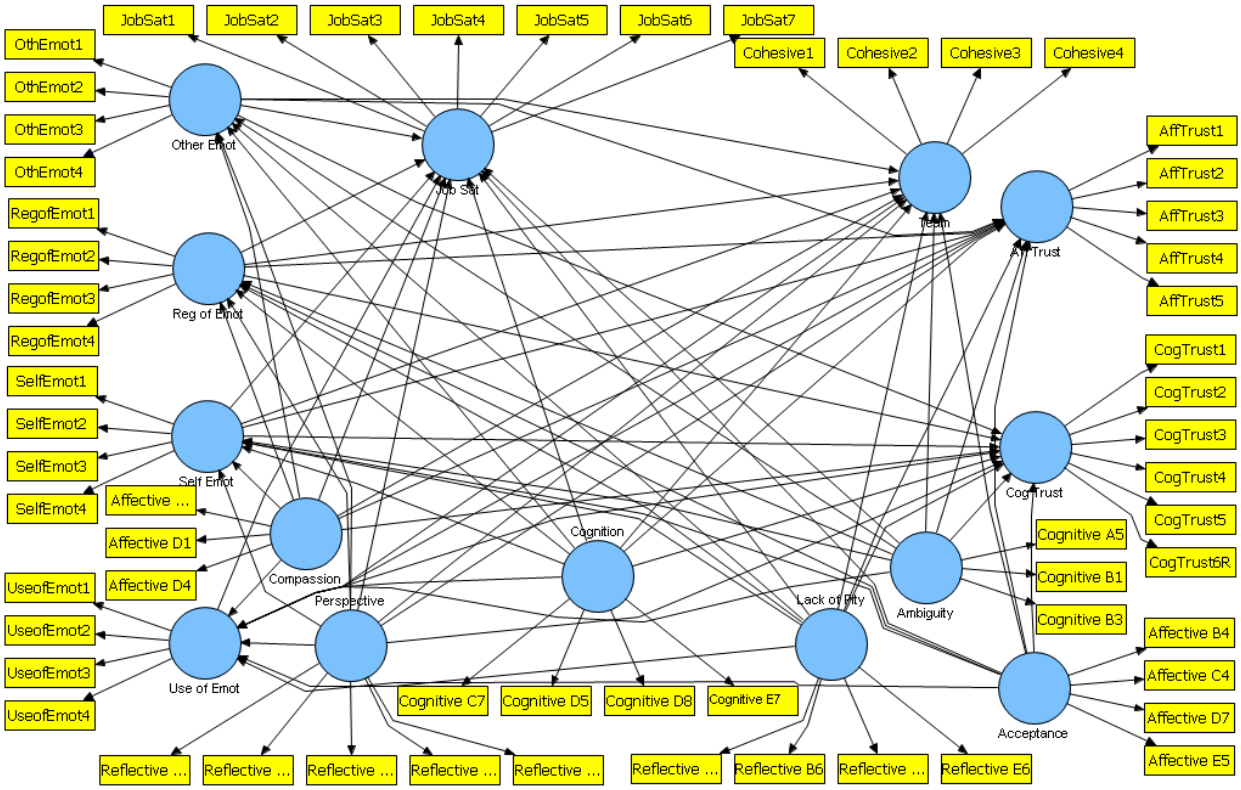
These components were developed from the original scales utilized to develop the Three-Dimensional Wisdom Scale (Ardelt, 2003). Varimax rotation was again chosen to provide improved separation of factors (Hair, et al., 2010). The two Reflective components were Perspective-taking (.641-.842) and Lack of Self Pity or Resentment (.661-.842). The two Cognitive components were Tolerance of Ambiguity (.740-.851) and Need for Cognition (.614-.749). The two Affective components were Compassion/Empathy (.640-.811) and Liking/Acceptance of Others (.620-.802). Model 3 (Figure 3) below analyzes each of these six single dimension wisdom components in relation to the other elements.

Model 3 results.

This model further described major components, and weaker though essential factors, within the three dimensions of wisdom. As shown in tables 7 and 8 below, Validity, as indicated by Average Variance Extracted (AVE) (.533-.800), once again exceeded the .5 requirement for all measures except Need for Cognition (.470) and Liking/Acceptance (.492). Reliability, as indicated by Composite Reliability (.779-.941),

also again exceeded the .7 standard for all measures. As a secondary measure of reliability, Cronbach's Alpha (.717-.919), all measures exceeded the .7 standard, with the exception of Need for Cognition (.622), Compassion/Empathy (.597), and Liking/Acceptance of Others (.656) (Hair et al., 2010) as seen in Table 7 below.

Figure 3 – Model 3 – Analyzed using component parts of the 3 dimensions of Wisdom from factor analysis



Bootstrapping was used to obtain the t-values of the path coefficients to determine significance and provided that the Reflective factor of Lack of Self-Pity or Resentment significantly increased Intrinsic Job Satisfaction ($\beta = .404$, $t = 4.925$, $p < 0.001$), Team Cohesiveness ($\beta = .291$, $t = 3.554$, $p < 0.001$), Cognitive-based Interpersonal Trust ($\beta =$

.298, t = 3.513, p < 0.001), and Affective-based Interpersonal Trust (β = .207, t = 2.594, p < 0.01). The Reflective factor of Perspective-taking significantly increased Team Cohesiveness as well (β = .165, t = 2.153, p < 0.05). The Reflective factor of Perspective-taking significantly increased Others' Emotional Appraisal (β = .304, t = 4.720, p < 0.001), Self-Emotion Appraisal (β = .277, t = 4.093, p < 0.001), Regulation of Emotion (β = .269, t = 3.709, p < 0.001), and Use of Emotion (β = .272, t = 3.663, p < 0.001). The Affective factor of Compassion/Empathy significantly increased Use of Emotions (β = .259, t = 3.709, p < 0.001), and Others' Emotion Appraisal (β = .243, t = 3.511, p < 0.001). The Affective factor of Acceptance of Others significantly increased Regulation of Emotion (β = .281, t = 4.073, p < 0.001). The Cognitive factor of Tolerance for Ambiguity significantly increased Self-Emotion Appraisal (β = .209, t = 3.285, p < 0.01) and Intrinsic Job Satisfaction (β = .137. t = 2.140, p < 0.05). The Cognitive factor of Need for Cognition significantly increased Others' Emotional Appraisal (β = .208, t = 2.798, p < 0.01).

The Reflective dimension of Wisdom again had the largest effect with significance in all areas. The Affective dimension of Wisdom significantly increased three areas of Emotional Intelligence but did not significantly increase Intrinsic Job Satisfaction, Team Cohesiveness, Affective-based or Cognitive-based Interpersonal Trust. The Cognitive dimension of Wisdom increased two areas of Emotional Intelligence. Self-Emotion Appraisal again significantly decreased Cognitive Interpersonal Trust (β = -.176, t = 2.237, p < 0.05). Emotional Intelligence again was not a mediating factor.

Table 7 – Model 3 Validity and Reliability Measures

	AVE	Composite Reliability	R Square	Cronbach's Alpha
Acceptance	0.492149	0.793932		0.656189
Aff Trust	0.720332	0.927793	0.110431	0.902494
Ambiguity	0.631635	0.833823		0.717142
Cog Trust	0.703006	0.933732	0.155606	0.913929
Cognition	0.470408	0.779757		0.622363
Compassion	0.553629	0.787114		0.597138
Job Sat	0.636959	0.924383	0.276926	0.904093
Lack of Pity	0.562637	0.836520		0.740073
Other Emot	0.651930	0.881242	0.303538	0.819050
Perspective	0.533245	0.850171		0.779801
Reg of Emot	0.631112	0.871147	0.196939	0.799503
Self Emot	0.693469	0.900043	0.173121	0.851077
Team	0.800592	0.941327	0.114095	0.918940
Use of Emot	0.644745	0.878588	0.207002	0.816188

Table 8 – Model 3 Standardized and unstandardized path coefficients

	Job Satisfaction	Cog Trust	Aff Trust	Team Cohesiveness	Reg of Emot	Emotional Use of Emot	Intelligence Other Emot	Self Emot
Unstandard								
Lack of Pity	0.403***	0.306***	0.214**	0.292***				
Perspective				0.152*	0.256***	0.265***	0.299***	0.280***
Compassion						0.243***	0.243***	
Acceptance					0.290***			
Ambiguity	0.130*							-0.217**
Cognition							0.210**	
Self Emot		-0.191*						
Standard								
Lack of Pity	0.404***	0.298***	0.207**	0.291***				
Perspective				0.165*	0.269***	0.272***	0.304***	0.277***
Compassion						0.259***	0.245***	
Acceptance					0.281***			
Ambiguity	0.137*							-0.208**
Cognition							0.208**	
Self Emot		-0.176*						

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In Model 3, results indicate that increasing the wisdom of individuals in a business setting, as measured by a composite of cognitive, reflective and affective dimensions, increased team cohesiveness (supporting Hypothesis 1), increased cognitive-based interpersonal trust (supporting Hypothesis 2a), increased affective-based interpersonal trust (supporting Hypothesis 2b), and increased intrinsic job satisfaction (supporting Hypothesis 3). Emotional intelligence again did not serve as a partially mediating variable between wisdom and team cohesiveness, interpersonal trust, and intrinsic job satisfaction (thus not supporting Hypothesis 4).

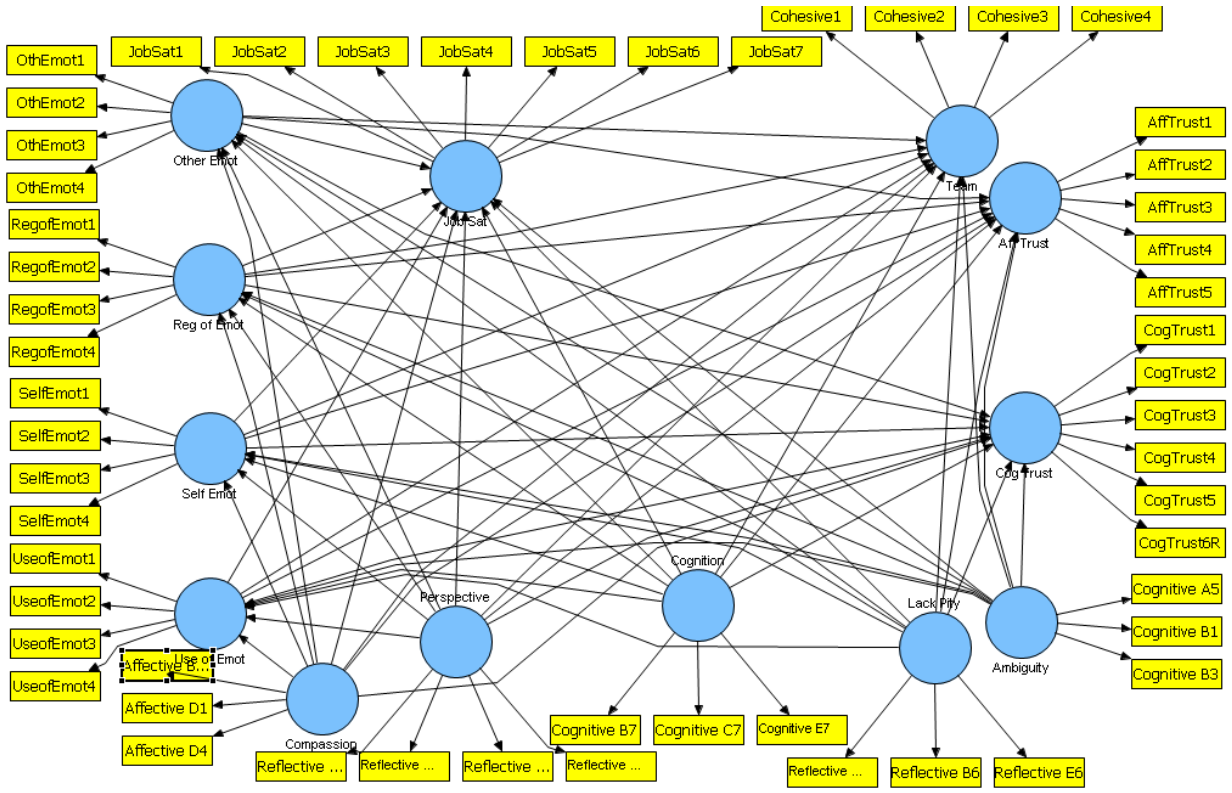
Model 4

In Model 4, factor analysis was conducted on all the data concerning all the variables using SPSS v19 as shown in figure 4 below. Varimax rotation was again used to provide improved separation of factors (Hair, et al., 2010). The initial factor loading resulted in 20 factors. Since the Three-Dimensional Wisdom Scale (Ardelt, 2003) was designed to include many varied aspects of wisdom, identifying individual components and determining distinct components relative to a business setting initially resulted in significant cross-loading between the three dimensions of Wisdom. Further reduction due to cross-loadings and insufficient loadings resulted in 13 factors. Intrinsic Job Satisfaction (.638-.821), Team Cohesiveness (.645-.883), Cognitive-based Interpersonal Trust (.691-.817) and Affective-based Interpersonal Trust (.752-.803) each loaded distinctly on separate factors. Most measures of Emotional Intelligence including Others' Emotion Appraisal (.661-.794), Use of Emotion (.674-.781), Regulation of Emotion (.652-.883), and Self-Emotion Appraisal (.664-.873) loaded distinctly as well.

Table 9 – Model 4 Wisdom Factor Components

Perspective-Taking	
Reflective C1R	I try to look at everybody's side of a disagreement before I make a decision (reverse scored)
Reflective C3R	When I'm upset at someone, I usually try to "put myself in his or her shoes" for a while (reverse scored)
Reflective C5R	I always try to look at all sides of a problem (reverse scored)
Reflective E4R	Before criticizing somebody, I try to imagine how I would feel if I were in their place (reverse scored)
Need for Cognition	
Cognitive B7	Ignorance is bliss
Cognitive C7	I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something
Cognitive E7	Simply knowing the answer rather than understanding the reason for the answer to a problem is fine with me
Tolerance of Ambiguity	
Cognitive A5	You can classify almost all people as either honest or crooked
Cognitive B1	A person either knows the answer to a question or he/she doesn't
Cognitive B3	People are either good or bad
Compassion/ Empathy	
Affective B8R	I can be comfortable with all kinds of people (reverse scored)
Affective D1	I often have not comforted another when he/she needed it
Affective D4	Sometimes I don't feel very sorry for other people when they are having problems
Lack of Self-pity or Resentment	
Reflective A6	I would feel much better if my present circumstances changed
Reflective B6	Things often go wrong for me by no fault of my own
Reflective E6	When I look back on what's happened to me, I feel cheated

Figure 4 – Model 4 – Analyzed using results from measurement reduction of all variables and Wisdom



Wisdom measures resulted in five factors with components associated with each of the factors, as indicated by Table 9 above. The components were again developed from the original scales utilized to develop the Three-Dimensional Wisdom Scale (Ardelt, 2003). The Wisdom components included Tolerance of Ambiguity (.690-.804), Compassion/Empathy (.653-.709), Perspective-taking (.595-.774), Need for Cognition (.576-.674), and Lack of Self-pity or Resentment (.581-.661).

Model 4 results.

This model used factor analysis to examine all measures used in this study. As shown in tables 10 and 11 below, the remaining items have been reduced slightly from Model 3 since the Three-Dimensional Wisdom Scale was created as a holistic measure of Wisdom rather than to define component parts. Since the original instrument was exploratory in nature, and in the interest of capturing Wisdom in its entirety, the design of the instrument favored overlap rather than omission. Model 4 design on the other hand does provide an objective factorial analysis of this instrument as well as others used in this study.

Table 10 – Model 4 Validity and Reliability Measures

	AVE	Composite Reliability	R Square	Cronbach's Alpha
Aff Trust	0.720376	0.927803	0.117581	0.902494
Ambiguity	0.631345	0.833593		0.717142
Cog Trust	0.702710	0.933617	0.151438	0.913929
Cognition	0.520384	0.762408		0.560872
Compassion	0.551906	0.785938		0.595941
Job Sat	0.636953	0.924393	0.257783	0.904093
Lack Pity	0.603374	0.819938		0.675199
Other Emot	0.651857	0.881203	0.290429	0.819050
Perspective	0.569987	0.840489		0.747593
Reg of Emot	0.630673	0.870835	0.132570	0.799503
Self Emot	0.693832	0.900109	0.162669	0.851077
Team	0.800649	0.941346	0.101819	0.918940
Use of Emot	0.644572	0.878520	0.166750	0.816188

Validity, as indicated by Average Variance Extracted (AVE) (.520-.801), also again exceeded the .5 requirement for all measures. Reliability, as indicated by

Composite Reliability (.762-.941), also again exceeded the .7 standard for all measures. Once again, as a secondary measure of reliability, Cronbach's Alpha (.717-.919) exceeded the .7 standard for all measures with the exception of Lack of Self-Pity or Resentment (.675), Need for Cognition (.561) and Compassion/Empathy (.596) (Hair et al., 2010).

Bootstrapping was used to obtain the t-values of the path coefficients to determine significance in Model 4 and identified 14 significant relationships. Lack of Pity or Resentment significantly increased Intrinsic Job Satisfaction ($\beta = .215$, $t = 4.077$, $p < 0.001$), Team Cohesiveness ($\beta = .242$, $t = 3.113$, $p < 0.01$), Cognitive-based Interpersonal Trust ($\beta = .292$, $t = 3.705$, $p < 0.001$) and Affective-based Interpersonal Trust ($\beta = .215$, $t = 2.865$, $p < 0.01$). Perspective-taking significantly increased Others' Emotional Appraisal ($\beta = .334$, $t = 5.716$, $p < 0.001$), Regulation of Emotion ($\beta = .273$, $t = 3.493$, $p < 0.001$), Use of Emotion ($\beta = .257$, $t = 3.514$, $p < 0.001$), Self-Emotional Appraisal ($\beta = .248$, $t = 3.679$, $p < 0.001$). Tolerance of Ambiguity significantly increased Intrinsic Job Satisfaction ($\beta = .127$, $t = 2.075$, $p < 0.05$) and decreased Self-Emotional Appraisal ($\beta = -.204$, $t = 3.100$, $p < 0.01$). Compassion/Empathy significantly increased Others' Emotional Appraisal ($\beta = .231$, $t = 3.181$, $p < 0.01$) and Use of Emotion ($\beta = .199$, $t = 2.433$, $p < 0.05$). Need for Cognition significantly increased Others' Emotional Appraisal ($\beta = .199$, $t = 2.780$, $p < 0.05$). Self-Emotion Appraisal again significantly decreased Cognitive-based Interpersonal Trust ($\beta = -.168$, $t = 2.101$, $p < 0.05$). Again, Emotional Intelligence did not serve as a mediating factor.

In Model 4, as in previous models, results indicate that increasing the wisdom of individuals in a business setting, as measured by a composite of cognitive, reflective and

affective dimensions, increased team cohesiveness (supporting Hypothesis 1), increased cognitive-based interpersonal trust (supporting Hypothesis 2a), increased affective-based interpersonal trust (supporting Hypothesis 2b), and increased intrinsic job satisfaction (supporting Hypothesis 3). Once again emotional intelligence did not serve as a partially mediating variable between wisdom and team cohesiveness, interpersonal trust, and intrinsic job satisfaction (thus not supporting Hypothesis 4).

Table 11 – Model 4 Standardized and Unstandardized path coefficients

						Emotional Intelligence		
Unstandard	Job Satisfaction	Cog Trust	Aff Trust	Team Cohesiveness	Reg of Emot	Use of Emot	Other Emot	Self Emot
Lack of Pity	0.347***	0.297***	0.222**	0.244**				
Perspective					0.245***	0.227***	0.327***	0.234***
Compassion						0.217*	0.227**	
Ambiguity	0.119*							-0.216**
Cognition							0.211*	
Self Emot		-0.182*						
Standard								
Lack of Pity	0.347***	0.292***	0.215**	0.242**				
Perspective					0.273***	0.257***	0.337***	0.248***
Compassion						0.199*	0.231**	
Ambiguity	0.127*							-0.204**
Cognition							0.199*	
Self Emot		-0.168*						

***** $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Detailed Results

Table 12 below presents the standardized coefficients from each of the models. The t-values are placed in parenthesis.

Table 12 Summary of Significant Path Coefficients from all paths shown by model

Model 1	**Job Satisfaction**	**Cog Trust**	**Aff Trust**	**Team Cohesiveness**
Wisdom	0.410 (5.088)***	0.242 (2.833)**	0.187 (2.019)*	0.208 (2.226)*
Self Emot		-0.162 (1.996)*		
Model 2				
Reflective	0.418 (3.692)***	0.262 (2.258)*		0.351 (3.385)***
Affective				
Self Emot		-0.189 (2.314)*		
Model 3				
Lack of Pity	0.404 (4.925)***	0.298 (3.513)***	0.207 (2.594)**	0.291 (3.554)***
Perspective				0.165 (2.153)*
Ambiguity	0.137 (2.140)*			
Self Emot		-0.176 (2.237)*		
Model 4				
Lack of Pity	0.347 (4.077)***	0.292 (3.705)***	0.215 (2.856)**	0.242 (3.113)**
Ambiguity	0.127 (2.075)*			
Self Emot		-0.168 (2.010)*		

Model 1	**Reg of Emot**	**Emotional Use of Emot**	**Intelligence Other Emot**	**Self Emot**
Wisdom	0.392 (6.945)***	0.325 (4.403)***	0.454 (7.847)***	0.266 (2.868)**
Model 2				
Reflective	0.336 (4.574)***	0.287 (3.466)***	0.219 (3.129)**	0.367 (4.171)***
Affective	0.175 (2.351)*		0.280 (3.221)**	
Model 3				
Perspective	0.269 (3.709)***	0.272 (3.663)***	0.304 (4.720)***	0.277 (4.093)***
Compassion		0.259 (3.709)***	0.245 (3.511)***	
Acceptance	0.281 (4.073)***			
Ambiguity				-0.208 (3.285)**
Cognition			0.208 (2.798)**	
Model 4				
Perspective	0.273 (3.493)***	0.257 (3.514)***	0.337 (5.716)***	0.248 (3.697)***
Compassion		0.199 (2.433)*	0.231 (3.181)**	
Ambiguity				-0.204 (3.100)**
Cognition			0.199 (2.780)*	

***** $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 13 below presents the R-squared values from each of the models. Though some values are relatively low, they serve in addition to current findings in literature. R-square values tend to be higher in more complex models as the number of variables increase.

Table 13 – Wisdom R-Squared Values

	Job Satisfaction	Cog Trust	Aff Trust	Team Cohesiveness	Reg of Emot	Emot Use of Emot	Intel Other Emot	Self Emot
Model 1	0.195	0.106	0.074	0.059	0.153	0.105	0.206	0.071
Model 2	0.225	0.123	0.074	0.095	0.178	0.115	0.216	0.115
Model 3	0.277	0.156	0.110	0.114	0.197	0.207	0.304	0.173
Model 4	0.258	0.151	0.118	0.102	0.133	0.167	0.290	0.163

Table 14 – Summary Model Fit Measures

	AVE	Composite Reliability	Cronbach's Alpha
Model 1	.631 - .783	.851 - .935	.747 - .919
Model 2	.631 - .800	.871 - .941	.800 - .919
Model 3	.470 - .800	.779 - .941	.597 - .919
Model 4	.520 - .801	.762 - .941	.561 - .919

Demographics.

Table 15 shows the results of the demographics collected in this study. As seen in figure 5 below, each of the demographic variables were analyzed. Higher position (β = .185, t = 2.668, $p < 0.01$), increased education (β = .209, t = 2.619, $p < 0.01$) and being female (β = .138, t = 2.185, $p < 0.05$) each significantly increased Wisdom. Further analysis demonstrated that increased education significantly increased the Cognitive dimension of Wisdom (β = .292, t = 4.132, $p < 0.01$). Higher position significantly increased the Reflective dimension of Wisdom (β = .220, t = 3.214, $p < 0.01$). And

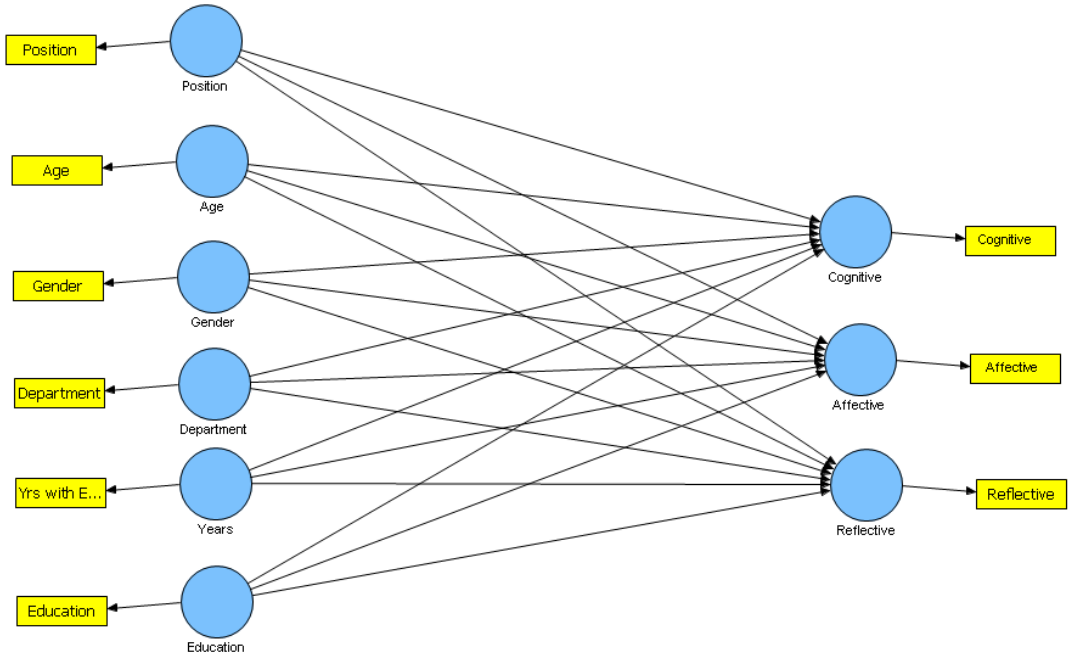
consistent with the finding of Ardelt (2009), Gender significantly increased the Affective dimension of Wisdom ($\beta = .172$, $t = 2.508$, $p < 0.05$) with women scoring higher.

Table 15 Demographic Variables – Descriptive Statistics

Gender	Men	Women			
	82	145			
Age	Average	Range			
	45.16	20-67			
Education Level	High School	Bachelors	Masters	Doctorate	
	39	64	85	33	
Position	Staff	Professional	Senior Prof	Executive	
	105	84	20	14	
Years with Employer	Average	Range	1 to 9	10 to 19	20 to 30
	6.07	1 to 30	172	33	9

The use of demographics as control variables was not designated in the original model. To further ensure validity and to rule out alternate explanations for the relationships found, analysis using demographics as control variables in Model 1 was performed.

Figure 5 - Demographics



Results indicated only slight changes from the original model as shown in Table 16 below. Beta coefficients refer to the effects of wisdom on each of the dependent variables.

Table 16 – Demographic Controlled results

	Model 1	Controlled Model
Intrinsic Job Satisfaction	β = .410/t = 5.008/p<0.001	β = .410/t = 4.846/p<0.001
Cognitive-based Trust	β = .242/t = 2.833/p<0.01	β = .254/t = 2.900/p<0.01
Affective-based Trust	β = .187/t = 2.019/p<0.05	β = .198/t = 2.069/p<0.05
Team Cohesiveness	β = .208/t = 2.226/p<0.05	β = .198/t = 2.040/p<0.05
Other's Emotional Appraisal	β = .454/t = 7.847/p<0.001	β = .452/t = 7.316/p<0.001
Regulation of Emotions	β = .392/t = 6.945/p<0.001	β = .377/t = 5.720/p<0.001
Use of Emotions	β = .325/t = 4.403/p<0.001	β = .308/t = 4.229/p<0.001
Self Emotional Appraisal	β = .266/t = 2.286/p<0.05	β = .241/t = 2.539/p<0.05

Demographics resulted in three significant effects with Gender (being female) positively affecting Other's Emotional Appraisal ($\beta = 0.157$, $t = 2.703$, $p<0.01$), Age negatively affecting Other's Emotional Appraisal ($\beta = -0.232$, $t = 4.027$, $p<0.001$), and Education negatively affecting Team Cohesiveness ($\beta = -0.203$, $t = 2.732$, $p<0.01$). Table 17 provides the revised R-squared values when the demographic (control) variables are included.

Table 17 – Demographic Revised R Squared Values

	Job Satisfaction	Cog Trust	Aff Trust	Team Cohesiveness	Reg of Emot	Emot Use of Emot	Intel Other Emot	Self Emot
Model 1	0.206	0.115	0.079	0.082	0.160	0.125	0.283	0.077
Model 2	0.235	0.129	0.079	0.116	0.196	0.136	0.286	0.130
Model 3	0.291	0.168	0.121	0.143	0.212	0.221	0.368	0.195
Model 4	0.273	0.166	0.127	0.132	0.156	0.184	0.357	0.189

Hypothesis and Findings

H1: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, affective and reflective dimensions, will increase team cohesiveness. Hypothesis supported as shown in Table 18 below. The Reflective dimension of Wisdom and specifically the components of Lack of Self-Pity or Resentment ($t = 3.662$, $p < 0.001$) and Perspective-taking ($t = 2.108$, $p < 0.05$) significantly increased Team Cohesiveness. Wisdom significantly increased Team Cohesiveness in all four models.

Table 18 Hypothesis Findings

	Model 1	Model 2	Model 3	Model 4
Hypothesis 1	Supported	Supported	Supported	Supported
Hypothesis 2a	Supported	Supported	Supported	Supported
Hypothesis 2b	Supported	Not Supported	Supported	Supported
Hypothesis 3	Supported	Supported	Supported	Supported
Hypothesis 4	Not Supported	Not Supported	Not Supported	Not Supported

H2a: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, affective and reflective dimensions, will increase cognitive-based interpersonal trust. Hypothesis supported. The Reflective dimension of Wisdom and specifically the factor of Lack of Self-Pity or Resentment significantly increased both Cognitive-based Interpersonal Trust ($t = 3.882$, $p < 0.001$). Wisdom significantly increased Cognitive-based Interpersonal Trust in all four models.

H2b: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, affective and reflective dimensions, will increase affective-based interpersonal trust. Hypothesis supported. The Reflective dimension of Wisdom and specifically the factor of Lack of Self-Pity or Resentment significantly increased Affective-based Interpersonal Trust ($t = 2.683$. $p < 0.01$). Wisdom significantly increased Affective-based Interpersonal Trust in three of four models.

H3: Increasing the collective wisdom of individuals in a business setting, as measured by a composite of cognitive, affective and reflective dimensions, will increase intrinsic job satisfaction. Hypothesis supported. The Reflective dimension of Wisdom and

specifically the factor of Lack of Self-Pity or Resentment significantly increased ($t = 4.289$, $p < 0.001$) Intrinsic Job Satisfaction. Both the Reflective dimension ($t = 3.692$, $p < 0.001$) and the composite of all three dimensions of Wisdom ($t = 5.088$, $p < 0.001$) significantly increased Intrinsic Job Satisfaction.

H4: Emotional intelligence is a partially mediating variable between wisdom (composite of cognitive, affective and reflective dimensions) and team cohesiveness, interpersonal trust, and intrinsic job satisfaction. Hypothesis not supported. Though the Reflective Perspective-Taking aspect of Wisdom provided many significant positive relationships with Emotional Intelligence, Emotional Intelligence did not provide sufficient significant positive relationships with Intrinsic Job Satisfaction, Interpersonal Trust or Team Cohesiveness to serve as a mediating variable. In each model, Self Emotion Appraisal significantly decreased Cognitive Interpersonal Trust. It may be that the better a person understands and is able to control their own emotions, the better they are at developing trust without either not needing to rely upon information or being able to overcome negative information. Though Self Emotion Appraisal significantly decreased Cognitive Interpersonal Trust, the relationship between Wisdom and Cognitive Interpersonal Trust was relatively unchanged with the addition of the proposed mediating factor, therefore not supporting mediation.

Summary

This chapter introduced and presented four models of increasing complexity. Each model was discussed and presented to include models and tables demonstrating results. The significant findings and R-squared values from each model were presented. Each hypothesis was again presented with three of the four hypotheses being supported.

CHAPTER V

Discussions and Conclusions

Introduction

Wisdom is a complex construct with significant potential to increase organizational success. The empirical results presented demonstrate that increasing the collective wisdom of individuals in a business setting, as a composite of the cognitive, affective and reflective dimensions, has many significant effects upon intrinsic job satisfaction, cognitive-based and affective based interpersonal trust, team cohesiveness, and emotional intelligence. This chapter will present a discussion of the significant findings, their implications for theory and practice, and suggestions for further research.

Discussion

In this study, the reflective dimension of wisdom had a larger effect than either the cognitive or affective dimensions upon all other elements of the study. Ardelt (2003) stated that the Reflective dimension is the "essential element for development of both the cognitive and the affective dimensions of wisdom" (p. 362). However, wise individuals excel in all three dimensions rather than in one or two dimensions (Ardelt, 2004). This is supported by these empirical findings in an organizational setting that the combination of all three dimensions has a greater effect than any single dimension.

Wisdom includes the concepts of need for cognition, attitudes about reality, dogmatism, tolerance of ambiguity, perspective-taking, lack of resentment, personal problem-solving, emotional empathy, acceptance of others, compassion, helping

disposition, aggression, liking people, and acceptance of others. Though not all of these elements resulted in distinct components, the combination of these provided significant positive effects upon intrinsic job satisfaction, interpersonal trust, team cohesiveness and emotional intelligence as demonstrated in Model 1.

Delineating wisdom into individual components provided greater granularity than using only the three dimensions developed by Ardelt (2003). By separating wisdom into the individual components of perspective-taking, need for cognition, tolerance of ambiguity, compassion/empathy and lack of self-pity or resentment the PLS model was better specified. This highlights the components making the greatest contribution to these organizational constructs to facilitate employee selection, and target intervention designed to promote the growth of wisdom for maximum organizational effect. Improving the specificity involved further dividing the cognitive dimension into need for cognition and tolerance of ambiguity while the reflective dimension was split into perspective taking and lack of self-pity or resentment. The affective dimension was comprised of compassion or empathy in the final model.

As the models become more specific and explanatory, it can be seen that wisdom as a holistic construct is very significantly related to job satisfaction and cognitive-based interpersonal trust at the 0.001 level but is related at the 0.01 level to affective-based interpersonal trust and team cohesiveness. In Model 4, where more refined components of wisdom are used, the reflective dimension component of lack of self-pity or resentment is highly related at the 0.001 level or greater. This effect is masked in the more holistic view. Consistent in Model 2 it was the reflective dimension that proved to have the most impact on job satisfaction, cognitive trust and team cohesiveness. This

suggests that when using traditional organizational measures, wisdom should also be tested at the component level to accurately capture the full impact of wisdom in an organizational setting.

Recent organizational literature has attempted to define factors that can increase leader and employee potential. Emotional intelligence has been proposed to assist within the relationship driven business environment. Recent social science literature has proposed wisdom as a construct that can be applied in many settings. This research study demonstrated that wisdom, with its dimensions and components, can be useful in traditional organizational settings.

This study demonstrates that wisdom is not a substitute measure for emotional intelligence, but is instead a separate construct. Perspective-taking was the wisdom component which most significantly increased all emotional intelligence measures. The perspective-taking component enables an individual to anticipate others' reactions and behaviors resulting in improved working relationships and social skills (Davis, 1983). With the exception of self-emotion appraisal, emotional intelligence did not have a significant effect on wisdom or its components. Additionally, emotional intelligence did not provide the anticipated partial mediation between wisdom and the operational measures.

This study also demonstrates that individuals who do not harbor "feelings of anger at the world over real or fantasized mistreatment" (Buss & Durkey, 1957, p. 343) and who have "the propensity to perceive ambiguous circumstances as desirable" (Budner, 1962, p. 29) will have increased job satisfaction. Those who are able to accept both the positive and negative events of life (Thomas, 1991) will also display increased

cognitive-based and affective-based trust as well as increased team cohesiveness. Individuals able to transcend beyond their own perspectives, viewpoints and self-centeredness towards a greater concern for others (Le, 2011; Levenson & Crumpler, 1996; Levenson, Jennings, Aldwin & Shiraishi, 2005) will result in increased emotional intelligence and increased team cohesiveness. There has been little research concerning these components in organizational literature.

Unlike popular thought, in this study wisdom did not significantly increase with age. Other results were more typical such as education does increase the cognitive aspect of wisdom, having a higher position within an organization necessitates more reflective thinking, and women score more highly in the affective dimension of wisdom than men. Future research should explore such issues as whether being at a higher position in the organization allows one to obtain greater perspective and thus greater wisdom, or whether employees have been promoted because of their greater wisdom. The impacts of wisdom on the organization are still in the infancy of exploration.

Implications for Theory

Much of the research literature concerning wisdom has been philosophical or theoretical. This study provides an initial step in the study of wisdom's effect upon business processes. There is some concern that wisdom, like knowledge, may be seen as a commodity (McKenna & Rooney, 2005). Since wisdom is an extension of knowledge, wisdom may, as knowledge already is, be viewed as an organizational asset. This study demonstrates that wisdom can be both a measurable and an important construct within business organizations. It is a complex construct and should not become simplified for

ease of analysis or implementation. Wisdom is a combination of the three dimensions (cognitive, affective and reflective) and all three dimensions must be developed to become wise individuals (Ardelt, 2004). "Management is wise to the extent that it uses a blend of intelligence, creativity, experience, and virtue to achieve a common good through balancing intrapersonal, interpersonal, and extrapersonal organizational/institutional/spiritual interests over both the short and long terms" (McKenna & Rooney, 2005, p. 4; Sternberg, 1998). The further understanding of the three dimensions and components of wisdom (Table 1) enables organizations to make decisions based upon reflection of previous experience, cognitive and emotional understanding (Ardelt, 2003; Roca, 2008). This study should provide understanding of the advantage to business when wise individuals who lack self-centeredness, lack anger or hostility concerning previous life events, have the ability to express compassion and empathy, are capable of seeing others' perspectives, and are able to deal well with complex and contradictory environments, are involved in their business environments.

The lack of significant effects of the cognitive dimension to job satisfaction, interpersonal trust and team cohesiveness indicates the need for more than knowledge ability within the organization. Wisdom has long been considered the pinnacle of human development and may serve well as the pinnacle for leadership training and business development. With the growth of global business and China and India playing a larger role in the world market, understanding wisdom from both the Eastern (relational, historical) and Western (cognitive, analytical) traditions should enhance business functions (Chaterjee, 2009).

While individual components of wisdom may have different organizational outcomes, studying and measuring wisdom in its entirety is desirable since in today's business environment most jobs do not include a single organizational outcome. Any research that does not use all the dimensions (and its individual components) risks missing an important component or dimension given the strong holistic nature of wisdom, particularly since wisdom research is in the early stages.

With the retirement from many organizations of older and senior workers, with their experience and knowledge, there is a growing need for leaders capable of strategic planning, perspective-taking, and values-based decision making. These transformational leaders attempt to convey these values throughout the organization and motivate others by their values. In addition to strategic thinking and decision making, wise leaders are capable of connecting processes, perspective-taking, anticipating reactions, understanding how concerns are linked, capable of self-restraint, maintaining psychological contracts, etc. (McKenna & Rooney, 2005). Wisdom has the ability to achieve deeper organizational harmony and includes the courage and justice needed for ensuring moral, social, and ethical global leadership (Chaterjee, 2009; Gottlieb, 1994; Jacobs, 1989).

Implications for Practice

Sternberg (1990) suggested that wisdom has five functions including resolving dilemmas and making decisions, advising others, management and guidance, self-reflection, and theoretical and philosophical thinking, each able to be developed and are applicable to business environments. Encouraging professional development of wisdom among individuals within an organization will enhance moral and ethical decision

making (Hays, 2007; Moberg, 2008; Roca, 2008), increase concern for individual character (Staudinger & Baltes, 1996; Sternberg, 1998), develop the ability to focus on the big picture when faced with difficult decisions, and increase the ability to understand complex situations and develop creative solutions (McKenna, et al., 2009).

Developing wisdom within organizations will provide clarity for leaders to enhance business vision, values, purposes, goals and objectives, and the courage and justice needed for global leadership (Gottlieb, 1994; Hays, 2007; Jacobs, 1989; McKenna, Rooney, & Boal, 2009; Nonaka & Toyama, 2007). It will assist leaders in facing rapidly changing technology and global competition. It will also promote greater concern among leaders for character and personality rather than with positional power (Staudinger & Baltes, 1996; Sternberg, 1998). Developing wisdom will enhance leaders moral and ethical decision making, enabling them to do the right thing instead of just following written rules for doing things right (Hays, 2007; Moberg, 2008; Roca, 2008). It will provide leaders with the ability to focus on the big picture especially when faced with difficult decisions and potential loss (McKenna, et al., 2009). Developing wise leaders will enable them to go beyond replication of others ideas to utilize their own creativity, intelligence, experience and judgment (Sternberg, 2003). In describing servant leadership, Srivastva and Cooperrider (1998) believed that leaders can foster increases in organizational wisdom. Hays (2007) proposed that wise organizations should not be solely reliant on a few select leaders but rather develop wisdom throughout the organization.

Developing wisdom within organizations will assist managers to become more perceptive and discerning, learn from their environment, and make more reasoned

decisions (Sternberg, 1995). It will improve manager's decision-making capabilities based on reflection, emotional understanding, intuition, values, virtues, as well as knowledge and analytic ability (Ardelt, 2003; Roca, 2008). Wisdom will assist managers to understand and integrate the technical, social, cultural, relational and ethical complexity of global business environments and develop creative solutions (McKenna, et al., 2009).

Developing wisdom within organizations will assist employees in actively dealing with personal struggles towards growth (Holliday & Chandler, 1986; Kramer, 1980; Smith, Staudinger & Baltes, 1994; Staudinger, 1996; Staudinger & Baltes, 1996). It will develop individuals who are capable of handling increasingly complex social situations, develop interpersonal relationships, foster cooperation and conflict resolution, give and receive advice, and accept change more readily (Bray & Howard, 1983; Kramer, 1990; Labouvie-Lief, 1980). Walsh (2011) described a situation where a normally talented woman with high potential has problems with insecurity, self-image and defensiveness. Her normally high potential is reduced to rationality and sub-optimal functioning until she receives guidance in the pursuit of wisdom. The pursuit of wisdom among employees enhances their intuitive, intellectual, motivational and relational capabilities (Curnow, 2011). Wisdom can be developed through meditation upon and candid discussion of issues, and through the use of reflective exercises (Bailey & Russell, 2008; Staudinger & Baltes, 1996; Sternberg, 2003).

This study demonstrated that increasing the collective wisdom of individuals in a business setting has an impact upon employee job satisfaction, team cohesiveness and interpersonal trust and should therefore provide an area of interest within organizations

and professional development should be directed to the goal of understanding and increasing cognitive, affective, and reflective capabilities among employees resulting in increased profitability. There are now several tools available for evaluating wisdom, enabling organizations to potentially recruit and promote individuals who display greater wisdom. Organizations can develop wisdom within their current employees and utilize these tools in succession planning.

Understanding the many facets of wisdom (Table 1) without minimizing it for simplicity will be a challenge. Organizations need to spend the time to understand wisdom, including its dimensions and components, which will further enable them to probe and test assumptions and learn critical lessons from crisis situations (Ardelt, 2003; Smith & Elliott, 2007). Organizations need to assess their organization to determine current status, decide which areas to attempt to improve, determine how to address those areas, and then budget time and finances to support the effort. Employee assistance programs are increasing within business organizations providing some of these necessary support systems.

In the social environment of business, the dimensions and components of wisdom can be developed in individuals, enhancing their creativity and innovative thinking , encouraging individuals to share their experience and develop deeper understanding, and increasing an organization's willingness to learn and to become vision-oriented and virtuous (Hays, 2007; Kramer, 1980; Rowley & Gibbs, 2008; Sternberg, 1990). Growth in the dimensions of wisdom will increase maturity, increase even-temperedness, increase open-mindedness, increase sociability, and reduce emotional liability in the workplace (Clayton & Birren, 1980). Wisdom will provide a more balanced, inspired, perceptive,

discerning, and engaged organization, better suited for international competition (Kunzmann & Baltes, 2003; Sternberg, 1985).

Recommendations for Future Research

This study has demonstrated that increasing the collective wisdom of individuals in a business setting has important organizational outcomes. Further research is needed to validate these findings in other similar settings and other business environments.

This study utilized the Three-Dimensional Wisdom Scale developed by Ardelt (2003) with its ability to measure wisdom as a composite measure of cognitive, affective and reflective dimensions. Through the use of factor analysis this study identified individual components useful in a business setting. Further research needs to be conducted to verify these components emerge within other business settings.

Several effects such as self emotional appraisal's effect upon cognitive interpersonal trust, tolerance of ambiguity's effect upon affective interpersonal trust, lack of self-pity or resentment's effect upon regulation of emotion, and use of emotion's effect upon affective interpersonal trust all were significant at $p < 0.10$ and may be significant at $p < 0.05$ in other studies.

This study also determined that the three dimensions of wisdom have a very significant effect upon emotional intelligence. However, further research is needed to determine the complete nature of the relationship between wisdom and emotional intelligence. Though emotional intelligence did not mediate wisdom's effect upon intrinsic job satisfaction, interpersonal trust and team cohesiveness, further research is

needed to determine if it serves in this role in similar settings and other business organizations.

Position significantly increased the reflective dimension of wisdom. However, there was no significant indication that greater wisdom led to a higher position and increased authority. Further studies need to be conducted to see if leaders are wise and if wise leaders make different decisions especially concerning their desire for measures of happiness, amusement, pride, and living a pleasurable life (Kunzmann & Baltes, 2003)

Lack of pity or resentment has been examined in relation to psychological well-being. Little to no research has been conducted concerning a generalized feeling of resentment and its effect upon the workplace. The relationship between perspective-taking and emotional intelligence also requires further research.

Limitations

Participants in this study were from six states and included staff from both a traditional university setting and numerous branch offices. The study was conducted within a single university and therefore suffers from well-known limitations of survey research conducted at a single point in time. Further studies in other similar settings as well as within other types of organizations will be required to further validate findings.

The Three-Dimensional Wisdom Scale (Ardelt, 2003) used in this study is well aligned with both ancient and recent thought concerning wisdom. It has a good theoretical foundation and is reliable. However, there are few published empirical studies which have used it to-date, providing it limited exposure. Further research both within

and outside an organizational setting should be done to further validate this instrument in a variety of situations.

This study examined the specific areas of teamwork, trust and job satisfaction using well established instruments. Further research should be conducted to determine the relationship between wisdom and other important organizational outcomes.

Summary

The increasing number of managerial challenges and the growing need to meet social, as well as corporate obligations, requires increased wisdom rather than mere knowledge for their solution (Goede, 2009; Leduc, 2004). Organizations must utilize the knowledge, experience, emotional understanding, and intuition of its managers and employees to understand and operate in the increasingly complex business environment (Sparrow, 2000). Wisdom within an organization enables individuals to make decisions based not only on knowledge and analytic ability, but also upon reflection and emotional understanding. Wisdom enables individuals to handle increasingly complex social situations, develop interpersonal relationships, foster cooperation and conflict resolution, overcome disillusionment, give and receive advice, and accept change more readily (Bray & Howard 1983; Kramer, 1990; Labouvie-Vief, 1980).

Wisdom, like many other terms, is one of those things that many individuals have an idea about what it is and "knows it when they see it", however it is difficult to define and measure. This study has moved the existing discussion of wisdom from other fields of study into the organization, providing yet another way to measure a traditionally more intangible asset of the organization. This empirical study of the collective wisdom of

individuals in a business setting (composite of cognitive, affective and reflective dimensions) and its separate components, in relation to the intrinsic determinants of job satisfaction, team cohesiveness and interpersonal trust, demonstrates that wisdom is a measurable and important construct, and can provide organizations a distinct competitive advantage in a service economy.

Appendix A

THREE-DIMENSIONAL WISDOM SCALE (Ardelt, 2003)

	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)
1. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.	***c***				
2. I am annoyed by unhappy people who just feel sorry for themselves.	***a***				
3. Life is basically the same most of the time.	***c***				
4. People make too much of the feelings and sensitivity of animals.	***a***				
5. You can classify almost all people as either honest or crooked.	***c***				
6. I would feel much better if my present circumstances changed.	***r***				
7. There is only one right way to do anything.	***c***				
8. There are some people I know I would never like.	***a***				
9. It is better not to know too much about things that cannot be changed.	***c***				
10. Things often go wrong for me by no fault of my own.	***r***				
11. Ignorance is bliss.	***c***				

12. I can be comfortable with all kinds of people.	***a-rev***				
13. A person either knows the answer to a question or he/she doesn't.	***c***				
14. It's not really my problem if others are in trouble and need help.	***a***				
15. People are either good or bad.	***c***				

How much are the following statements true of yourself?

	Definitely true of myself (1)	Mostly true of myself (2)	About half-way true (3)	Rarely true of myself (4)	Not true of myself (5)
1. I try to look at everybody's side of a disagreement before I make a decision.	***r-rev***				
2. If I see people in need, I try to help them one way or another.	***a-rev***				
3. When I'm upset at someone, I usually try to "put myself in his or her shoes" for a while.	***r-rev***				
4. There are certain people whom I dislike so much that I am inwardly pleased when they are caught and punished for something they have done.	***a***				
5. I always try to look at all sides of a problem.	***r-rev***				
6. Sometimes I feel a real compassion for everyone.	***a-rev***				
7. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.	***c***				
8. When I look back on what has happened to me, I can't help feeling resentful.	***r***				

	Definitely true of myself (1)	Mostly true of myself (2)	About half-way true (3)	Rarely true of myself (4)	Not true of myself (5)
9. I often have not comforted another when he or she needed it.	***a***				
10. A problem has little attraction for me if I don't think it has a solution.	***c***				
11. I either get very angry or depressed if things go wrong.	***r***				
12. Sometimes I don't feel very sorry for other people when they are having problems.	***a***				
13. I often do not understand people's behavior.	***c***				
14. Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems.	***r***				
15. Sometimes when people are talking to me, I find myself wishing that they would leave.	***a***				
16. I prefer just to let things happen rather than try to understand why they turned out that way.	***c***				
17. When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information.	***r-rev***				
18. I don't like to get involved in listening to another person's	***a***				

	Definitely true of myself (1)	Mostly true of myself (2)	About half-way true (3)	Rarely true of myself (4)	Not true of myself (5)
troubles.					
19. I am hesitant about making important decisions after thinking about them.	***c***				
20. Before criticizing somebody, I try to imagine how *I* would feel if I were in their place.	***r-rev***				
21. I'm easily irritated by people who argue with me.	***a***				
22. When I look back on what's happened to me, I feel cheated.	***r***				
23. Simply knowing the answer rather than understanding the reasons for the answer to a problem is fine with me.	***c***				
24. I sometimes find it difficult to see things from another person's point of view.	***r***				

Appendix B

REVISED MINNESOTA SATISFACTION QUESTIONNAIRE

Short-Form Items for Intrinsic Satisfaction (Weiss, et al., 1967). Measured using a 5-point Likert scale ranging from 1 – very dissatisfied to 5- very satisfied.

1. The chance to do different things from time to time
2. Being able to do things that don't go against my conscience
3. The chance to do things for other people
4. The chance to do something that makes use of my abilities
5. The freedom to use my own judgment
6. The chance to try my own methods of doing the job
7. The feeling of accomplishment I get from the job

Appendix C

CHIDAMBARAM'S (1996) COHESIVENESS SCALE

Adapted from Seashore's Index of Group Cohesiveness. Measured using a 5-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree.

1. I feel that I am a part of the team.
2. My team works together better than most teams on which I have worked.
3. My teammates and I help each other better than most other teams on which I have worked.
4. My teammates and I get along better than most other teams on which I have worked.

Appendix D

INTERPERSONAL TRUST MEASURES (McAllister, 1995)

Measured on a 5-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree.

Affect-based trust

1. We have a sharing relationship. We both freely share our ideas and hopes.
2. I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen.
3. We would both feel a sense of loss if one of us was transferred and we could no longer work together.
4. If I shared my problems with this person, I know (s)he would respond constructively and caringly.
5. I would have to say that we have both made considerable emotional investments in our working relationship.

Cognitive-based trust

1. This person approaches his/her job with professionalism and dedication.
2. Given this person's track record, I see no reason to doubt his/her competence and preparation for the job.
3. I can rely on this person not to make my job more difficult by careless work.
4. Most people, even those who aren't close friends of this individual, trust and respect him/her as a coworker.
5. Other work associates of mine who must interact with this individual consider him/her to be trustworthy.
6. If people knew more about this individual and his/her background, they would be more concerned and monitor his/her performance more closely. (Reverse-coded)

Appendix E

EMOTIONAL INTELLIGENCE ITEMS (Wong & Law, 2002)

Measured utilizing a 5-point Likert scale ranging from 1- strongly disagree to 5 – strongly agree.

Self-emotion appraisal (SEA)

1. I have a good sense of why I have certain feelings most of the time.
2. I have a good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

Others' emotion appraisal (OEA)

5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of people around me.

Use of emotion (UOE)

9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivated person.
12. I would always encourage myself to try my best.

Regulation of emotion (ROE)

13. I am able to control my temper and handle difficulties rationally.
14. I am quite capable of controlling my own emotions.

15. I can always calm down quickly when I am very angry.

16. I have good control of my own emotions.

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