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Michelle M. Fleig-Palmer

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THE IMPACT OF MENTORING ON RETENTION THROUGH KNOWLEDGE
TRANSFER, AFFECTIVE COMMITMENT, AND TRUST

by

Michelle M. Fleig-Palmer, Ph.D.

A DISSERTATION

Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Doctor of Philosophy

Major: Business

Under the Supervision of Professor Mary Uhl-Bien

Lincoln, Nebraska

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THE IMPACT OF MENTORING ON RETENTION THROUGH KNOWLEDGE
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University of Nebraska, 2009

Advisor: Professor Mary Uhl-Bien

Organizations today face a dilemma regarding the retention of key knowledge workers. Knowledge transfer amongst employees is crucial for organizational productivity. Yet, this same knowledge transfer assists employees in improving their skill sets which increases their marketability and the potential for them to pursue career opportunities elsewhere. This study proposed that mentoring relationships can assist organizations in addressing this dilemma. Results of research conducted in a healthcare facility indicated that protégés reported higher levels of knowledge transfer and affective commitment. On average, protégés who reported higher levels of knowledge transfer were more likely to report higher turnover intentions. Supplemental analyses suggest that the affective commitment fostered in a mentoring relationship may attenuate the negative effect of knowledge transfer on retention. In addition, trust was demonstrated to be an important component of mentoring relationships. Using the Mayer, Davis, and Schoorman (1995) model of trust, significant relationships were demonstrated between receipt of mentoring, evaluations of a mentor's trustworthiness, and a protégé's willingness to be vulnerable to a mentor. We can conclude that the fostering of mentoring relationships may assist organizations in simultaneously promoting effective

knowledge transfer and the affective commitment that assists in the retention of key knowledge workers. Since knowledge is a key resource in today's economy, future research in this area is recommended to better understand how mentoring relationships may benefit organizations.

DEDICATION

To David K. Palmer, Ph.D.

“Time flies, suns rise, and shadows fall.
Let time go by,
Love is forever, over all.”

From an old sundial

and

To Benjamin M. Palmer

“... whenever a person came to the place
where he rightly belonged in life,
the gate would swing in.”

Nora Burglon

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CHAPTER ONE

INTRODUCTION TO THE STUDY

Purpose of the Study

Although modern interest in mentoring can be attributed to *Les Aventures de Télémaque, fils d'Ulysse* (Fénelon, 1699) and *The Season's of a Man's Life* (Levinson, Darrow, Klein, Levinson, & McKee, 1978), the notion of a more-experienced individual providing knowledge and support to someone who is less-experienced has been in existence since Homer wrote his epic poem, *The Odyssey*. Mentoring is considered to be the oldest form of knowledge transfer (Stephenson, 1998). For centuries, in agrarian and hunting societies, one was surrounded by many adults who served as occupational role models, i.e., mentors, and the knowledge that was passed down from these mentors benefited both the individual and the collective organization of which one was a part (Csikszentmihalyi & Schneider, 2000). The historic transition to a knowledge society (Drucker, 1993) concurrent with the rapid development of new technologies means that organizational success is dependent upon knowledge workers (Cascio & Aguinis, 2008; Drucker, 1993). The transfer of knowledge and the retention of key knowledge workers, thus, is critical to organizational competitiveness (Cascio & Aguinis, 2008; DeLong, 2004; Holtom, Mitchell, Lee, & Eberly, 2008). This requires organizations and

researchers to focus more closely on processes such as mentoring that can support effective knowledge transfer and retention of critical knowledge workers.

Organizations that rely upon effective knowledge transfer to sustain a competitive advantage face a dilemma. If such organizations do not have processes to promote effective knowledge transfer, productivity will suffer and organizational survival may be threatened (Szulanski, Cappetta, & Jensen, 2004). Conversely, if organizations do invest in knowledge transfer they risk increasing the marketability and job mobility of their employees which could potentially harm retention (Rousseau & Shperling, 2004). Organizational effectiveness is dependent in part on the fact that an employee can contribute to an organization by utilizing knowledge gained from others only if the employee remains with the organization (DeLong, 2004). However, job mobility has increased in past decades because similarities in processes and technology mean that knowledge is less idiosyncratic to a particular organization and thus is more transferable (Rousseau & Shperling, 2004). To be effective, organizations must establish processes that promote knowledge transfer while simultaneously fostering a commitment to the organization that supports retention (Rousseau & Shperling, 2004).

Mentoring relationships in the workplace may assist organizations in addressing this dilemma. One aspect of mentoring relationships is the passing of knowledge from a more-experienced individual, i.e., the mentor, to a less-experienced individual, i.e., the protégé (e.g., Levinson et al., 1978; Kram, 1985). Research in this area suggests that providing skill-building opportunities to protégés is positively related to personal learning in the workplace (Lankau & Scandura, 2002). Yet, an unintended consequence of knowledge transfer via mentoring is the potential for increased job mobility for protégés

and the resulting negative effect on organizational retention efforts (Ramaswami & Dreher, 2007).

A second aspect of mentoring relationships is the personal support that a mentor may provide in order to enhance a protégé's sense of competence and effectiveness (Kram, 1985). Recent findings from a longitudinal study suggest that mentoring fosters organizational retention in part because the emotional bond established between a mentor and a protégé may contribute to higher levels of organizational commitment (Payne & Huffman, 2005). Mentoring relationships may operate, thus, through a dual pathway to impact organizational retention by assisting in the transfer of organizational knowledge while simultaneously developing the high-quality interpersonal relationships that strengthen a protégé's commitment to an organization.

The main purpose of this study is to investigate the dual nature of the effect of mentoring relationships through knowledge transfer and affective commitment on retention. By building and extending upon previous research, a theoretical framework is proposed and tested in which the relationship between mentoring, knowledge transfer, and retention is explored. Affective commitment is examined as a moderator of the relationship between knowledge transfer and retention in the context of mentoring relationships. Factors of trustworthiness and trust are included in the theoretical model to provide a more fine-grained analysis of the process whereby mentoring may simultaneously affect knowledge transfer and affective commitment. The goal of this research study is to contribute to a broader understanding of mentoring relationships and their impact on individual and organizational outcomes.

Research Questions

The loss of knowledge through voluntary turnover can negatively affect organizational productivity and growth; thus, retention of employees has become more important for today's managers (DeLong, 2004). Although mentoring is considered to be a time-honored mode of knowledge transfer (Stephenson, 1998) and has been shown to be beneficial for protégés (e.g., Allen, Eby, Poteet, Lentz, & Lima, 2004), the assumption that mentoring is a process whereby knowledge is transferred from the mentor to the protégé (Kram, 1985) has limited empirical support in the mentoring literature (Lankau & Scandura, 2007).

Researchers, also, have not considered the unintended negative consequences of knowledge transfer via mentoring relationships such as a protégé's improved marketability and potential job mobility that could negatively affect retention (Ramaswami & Dreher, 2007). Both practitioner and academic articles indicate that many organizations invest in mentoring programs with the assumption that such programs benefit organizations (Finkelstein & Poteet, 2007). This assumption has rarely been tested because mentoring researchers have focused on objective and subjective career outcomes for protégés (Allen et al., 2004) instead of outcomes that affect organizations (Wanberg, Welsh, & Hezlett, 2003). Wanberg et al. (2003) suggest that mentoring research should focus specifically on outcomes such as retention in order to assess the benefits that mentoring may provide to organizations.

To better understand why employees remain with their organizations, Holtom et al. (2008) suggest one area of interest should be the role of interpersonal relationships. Specifically they call for future research to focus, in part, on how the quality of interpersonal ties contributes to a better understanding of employee turnover decisions so

that avoidable turnover is reduced and retention of key employees is improved (Holtom et al., 2008). Because a mentor not only shares useful knowledge through career-related support but also provides encouragement through personal support (Kram, 1985), mentoring relationships may attenuate the potentially negative effects of knowledge transfer on retention. Meyer and Allen (1997) suggest that supportive work relationships are an antecedent to the affective component of organizational commitment because employees perceive they are being treated with consideration. Affective commitment has been shown to be positively related to mentoring and negatively related to protégés' actual turnover behavior (Payne & Huffman, 2005) and may be an intervening mechanism that mitigates the effect of knowledge transfer on turnover (Hall & Smith, in press). In light of the concern that skilled employees are more likely to leave organizations to pursue better opportunities, we need to better understand the moderating effect of affective commitment on the relationship between knowledge transfer and retention.

Additionally, Wanberg et al. (2003) have called for mentoring researchers to “dig deeper” into the process whereby mentoring influences outcomes through mediating factors. One potential mediating factor is trust. Kram (1985) discusses trust in her original conceptualization of mentoring by stating that trust in a mentor allows a protégé to risk making mistakes while learning from the mentor. A meta-analysis of the Mayer, Davis, and Schoorman (1995) model of trust demonstrated that the three factors of trustworthiness (ability, integrity, and benevolence) and trust positively affect risk-taking in a relationship (Colquitt, Scott, & LePine, 2007). There is empirical support for trust as a mediator in the relationship between tie strength (defined as the closeness of a working

relationship and the frequency of communication) and knowledge transfer (Levin & Cross, 2004). Thus, factors of trustworthiness and trust (Mayer et al., 1995) are included in the theoretical framework proposed in this study to answer the call by Hezlett and Gibson (2007) to include trust in models of mentoring.

This study presents an opportunity to specifically address the above assumptions in order to better understand if and how mentoring can address the dilemma faced by organizations who depend upon knowledge transfer for survival. The theoretical framework presented in this study proposes that mentoring plays a dual role in relation to organizational retention. Mentoring relationships may foster knowledge transfer to the protégé which may negatively affect retention. Concurrently, the affective commitment developed in a mentoring relationship may mitigate the effect of knowledge transfer on retention. Additionally, factors of trustworthiness and trust may act as intervening mechanisms in mentoring processes. By addressing gaps in mentoring research, this study will improve our understanding of the complexity of mentoring relationships and the impact of mentoring relationships on individual and organizational outcomes.

Therefore, the following key research questions are proposed:

- 1) What is the relationship between mentoring, knowledge transfer and retention?
- 2) Does the affective commitment fostered in mentoring relationships moderate the relationship between knowledge transfer and retention?
- 3) What role do the factors of trustworthiness and trust (as explicated by Mayer et al., 1995) play in understanding the relationship between mentoring, knowledge transfer, and retention?

Significance of the Study

The focus of this research proposal is important for three reasons. First, it examines mentoring, mentoring processes, and mentoring outcomes in the dynamic employment context impacting organizations today. Common amongst many organizations today is an increase in information technology along with similar performance standards that make it easier for skilled workers to move from one organization to another (Rousseau & Shperling, 2004). “Managers change jobs, industries, and even careers, as they seek to maintain or improve their standard of living while developing new, more marketable skills” (de Janasz, Sullivan, & Whiting, 2003, p. 80). Thus, the former implicit contract between employers and employees which involved investments in employees (including knowledge/skill training) in return for the employees’ commitment to the organization (Robinson, Kraatz, & Rousseau, 1994) is no longer the dominant employment model (Arthur & Rousseau, 1996). Because of the employment instability in today’s organizations, mentoring relationships may be key (Thomas and Higgins, 1996) to assisting organizations in both transferring and retaining the knowledge that will provide the greatest competitive advantage (Davenport & Prusak, 1998).

Second, this study explores the role of mentoring in addressing the dilemma between knowledge transfer and retention. Organizations that invest in knowledge transfer between employees will not realize performance benefits if employees leave the organization before they can use the knowledge to “render worthwhile service” (Fayol, 1949, p.39)—an observation echoed by current researchers such as Szulanski (1996), Griffeth and Hom (2001), and Dess and Shaw (2001). Organizations may even be

reluctant to invest in training because of the risk of losing highly-skilled workers (Thomas & Higgins, 1996). Along with Jacoby (1999), Rousseau and Shperling (2004) suggest that employee skills and knowledge are even more important today, indicating that organizations must foster organizational commitment to avoid costly turnover. Despite the fact that many organizations promote mentoring relationships in their workplaces (Finkelstein & Poteet, 2007), there is a paucity of empirical research attesting to the beneficial effects of mentoring on organizational outcomes (Wanberg et al., 2003). This study attempts to address such gaps in the research literature in order to better understand how mentoring relationships can benefit organizations.

The third potential contribution of this study is the inclusion of factors of trustworthiness and trust as intervening variables in mentoring processes. This would address the call by Wanberg et al. (2003) to unpack mentoring in order to gain a more fine-grained understanding of the mechanisms that link mentoring and outcomes. Also, this answers the specific call by Hezlett & Gibson (2007) to include trust in models of mentoring. Surprisingly, although trust is assumed to be an important component of mentoring relationships (Kram, 1985), little research has empirically examined trust in the context of mentoring relationships. This research study was conducted to offer new insights into mentoring relationships and outcomes that will benefit organizations seeking to address the competitive challenges presented by the information era. "... [C]urrent employer concerns with labor scarcity and retention are likely to persist into the next century ..." (Jacoby, 1999, p.138) so it behooves us to investigate if mentoring can assist organizations with concerns about retention.

The research plan is presented as follows. Chapter Two provides an in-depth review of the relevant research from the mentoring, knowledge management, human resources, and organizational behavior literatures. This review presents arguments to support the claims made in Chapter One as well as the theoretical framework and the proposed hypotheses. Chapter Three proposes a study design to test some of the general hypotheses set forth in Chapter Two. The results of the study are presented in Chapter Four. Chapter Five offers a discussion of the results along with implications for future research.

The investigation of the impact of mentoring on retention through knowledge transfer, affective commitment, and trust will contribute to an understanding of how organizations can retain their key knowledge workers.

CHAPTER TWO

LITERATURE REVIEW AND HYPOTHESES

Mentoring

Conceptualizations of mentoring have their origin in the ancient writings of Homer. In the epic poem, *The Odyssey*, Odysseus, the father of Telemachus, has been away from his kingdom of Ithaca for twenty years. His palace is being destroyed by men who assume that Odysseus is dead and want Ithaca for themselves. Telemachus has grown up without his father and despairs of the destruction imposed on Odysseus' royal house, yet he feels powerless to prevent it. Athena, the goddess of wisdom, observes Telemachus' plight and assumes the guise of Mentor, an old and trusted friend of Odysseus, in order to guide Telemachus as he searches for his long-lost father.

As Telemachus begins his search for his father under Athena's guidance, he confesses to her his fear that he is not experienced enough to ask King Nestor for information about Odysseus, saying, "Awful th' approach, and hard the task appears, To question wisely men of riper years." (Homer, Book III of *The Odyssey*). Athena, as Mentor, responds by bolstering Telemachus' confidence in his abilities so that Telemachus, "Urged by the precepts of the goddess given, And fill'd with confidence infused from Heaven," (Homer, Book III of *The Odyssey*), convinces King Nestor that he is truly Odysseus' son; thus King Nestor is willing to share what he knows of Odysseus. Athena, the goddess of wisdom, offers coaching, support, and encouragement in her role as Mentor so as to guide Telemachus as he seeks his father.

Work by Fénelon, a French educator, spurred renewed interest in mentoring in the field of education (Roberts, 1999). In *Les Aventures de Télémaque, fils d'Ulysse*

(Fénelon, 1699), he reinterprets *The Odyssey* to focus on the education of Odysseus' son, Telemachus. The character of Mentor is used to demonstrate the teaching of wisdom and valor. It is after the publication of Fénelon's book that the word 'mentor' becomes commonly used in everyday language (Roberts, 1999). Based on the writings of Homer and Fénelon, a mentor is conceptualized as one who guides, counsels, nurtures, and advises protégés.

History of Mentoring Research

Despite the popular usage of the word "mentor" since the mid-1700's (Roberts, 1999), formal research on mentoring has not occurred until recently. Levinson et al. (1978) were among the first researchers to explore mentoring relationships in the context of adult development. They concluded from their study of forty men that a relationship with a mentor was developmentally important to protégés focused on achieving career success (Levinson et al., 1978). Following this work, Roche (1979) conducted a survey of more than 1,000 executives of which nearly two-thirds reported having a mentor. Those executives who had mentors reported higher compensation, more education, and a greater willingness to mentor others (Roche, 1979). Further research was conducted by Kram (1983, 1985), who interviewed mentor-protégé pairs in order to gain insight into work-related developmental relationships that provided mentoring functions. Much of the nascent research examining mentoring in workplaces indicated that mentoring plays an important role in a protégé's career success (Kram, 1985; Levinson et al., 1978; Roche, 1979).

Definitions of Mentoring Relationships in Research

Initial conceptualizations of mentoring relationships viewed a mentor as an older, more experienced individual whose primary responsibility is to assist a protégé, a younger, less-experienced individual, as he/she strives towards career advancement (Kram, 1985; Levinson et al., 1978). Mentors were usually eight to fifteen years older than their protégés, for example, and this age difference was considered most beneficial (Levinson et al., 1978). The traditional notion of a mentoring relationship is one based on seniority in which a more senior person in the organization assists a more junior person with his/her professional and personal development (Higgins & Kram, 2001).

Although definitions of mentoring have emphasized age differences, early research acknowledged that a mentor could be younger than a protégé if that mentor had “... unusual expertise and understanding ...” (Levinson et al., 1978, p. 99). In the mentoring literature, age appears to be a proxy for experience. More recent conceptualizations of mentoring relationships place less emphasis on age differences between mentors and protégés, instead focusing on mentoring as involving the transfer of knowledge (Eby, Rhodes, & Allen, 2007) from a more-to-less-experienced individual (Eby & Allen, 2008). A review of definitions of mentoring indicates that mentors are often defined as individuals with “advanced experience and knowledge” (Haggard, Turban, & Dougherty, 2008). Since the present research study focuses specifically on knowledge transfer via mentoring relationships, I will adopt Mullen and Noe’s (1999) definition of mentoring relationships as:

... a one-to-one relationship between a more experienced member (mentor) and a less experienced member (protégé) of the organization or profession. The relationship is developed to promote the professional and

personal growth of the protégé through coaching, support, and guidance.

Through individualized attention, the mentor *transfers needed information* (emphasis added), feedback, and encouragement to the protégé as well as providing emotional support and ‘putting in a good word’ when possible. (p. 236).

The Functions of Mentoring Relationships

A mentoring relationship is a type of workplace relationship that is somewhat unique because of two types of mentoring functions provided to protégés (Kram, 1985): career-related and psychosocial functions. Career-related functions are those aspects of the mentoring relationship that involve the mentor guiding and passing on knowledge to the protégé; psychosocial functions are those aspects of the mentoring relationship that encourage the development of the protégé’s sense of competence and effectiveness.

Career-related mentoring functions include sponsorship, exposure-and-visibility, coaching, protection, and/or challenging assignments (Kram, 1985). A mentor provides career functions to facilitate a protégé’s career advancement (Kram, 1985) and these functions are made possible because of the mentor’s position and power in an organization (Ragins & Cotton, 1999). Sponsorship involves the mentor publically supporting the protégé. In the organizational context, it means that a mentor actively nominates a protégé for advancement opportunities such as lateral moves or promotions. Exposure-and-visibility is a socializing function; the mentor provides opportunities for the protégé to develop relationships with key individuals. Such relationships allow the protégé to demonstrate his/her ability and potential. Coaching involves the mentor “Passing on useful knowledge and perspectives ...” (Kram, 1985, p.29) as well as

experience to the protégé. The mentor provides access to information and advice to the protégé who has limited knowledge. Protection is provided by the mentor who shields the protégé from blame in negative situations. By intervening on a protégé's behalf, a mentor protects the protégé from unnecessary criticism or risk. Challenging assignments include training, work, and feedback that assist a protégé in mastering challenging tasks. The mentor may provide assignments that assist a protégé in developing either technical and/or managerial skills; thus, this function provides an important learning opportunity. The career functions are essential in mentoring relationships in part because valuable knowledge (e.g. ideas, feedback, and key relationships) is transferred from the mentor to the protégé to support the protégé's career development (Kram, 1985).

The psychosocial functions of role modeling, acceptance-and-confirmation, counseling, and friendship serve to enhance a protégé's sense of self-worth in an organization and a protégé's sense of identity, competence, and effectiveness in a professional role. These functions are dependent upon the quality of the interpersonal relationship between the mentor and the protégé (Kram, 1985). Role modeling is provided by a mentor who demonstrates the behavior, attitudes, and/or values that a protégé wants to emulate. The protégé observes the mentor's example, identifies with aspects of it, and learns from these observations. Acceptance-and-confirmation involves a mentor communicating positive feedback and encouragement to a protégé. A mentor's positive regard toward a protégé can foster the development of trust so that the protégé feels comfortable taking risks. Counseling is offered by a mentor who allows a protégé to discuss concerns that may impact the protégé's professional responsibilities. By exploring personal concerns with a mentor, a protégé is able to gain perspective and

comfort while resolving inner conflicts. Friendship is the social interaction between a mentor and protégé that consists of informal exchanges that both find enjoyable. The establishment of collegiality characterized by mutual liking and understanding assists a protégé in learning to interact with others in the organization, especially authority figures, more easily. The psychosocial functions are important in mentoring relationships and may impact a protégé on a more personal level because they are dependent upon the quality of the relationship and the emotional bond between the mentor and the protégé (Ragins & Cotton, 1999).

Gaps in Mentoring Research

Despite its origins in the ancient writings of Homer, it is only within the past twenty-five years that organizational researchers have begun to examine the phenomenon of mentoring. Since the initial research investigating the specific mentoring behaviors which encourage the development and growth of a protégé (e.g., Levinson et al., 1978; Kram, 1985), a major focus of mentoring research has been to explore the influence of mentoring on protégé outcomes such as job attitudes and career progress (Allen et al., 2004). The receipt of mentoring functions has been shown to relate to a number of positive outcomes for protégés (see qualitative reviews by Noe, Greenberger, & Wang, 2002; Wanberg et al., 2003).

Mentoring has beneficial effects on protégés' job satisfaction, compensation, number of promotions, and intent to remain with an organization (Underhill, 2006; Allen et al., 2004). In their meta-analysis comparing mentored and non-mentored individuals, Allen et al. (2004) found that mentored individuals reported greater career satisfaction, career commitment, and expectations for advancement. Protégés who reported higher

levels of career-related mentoring functions received also reported higher levels of career-related outcomes such as compensation and job satisfaction as well as a greater number of promotions (Allen et al., 2004). Protégés who received higher levels of psychosocial support reported similar results as well as stronger intentions to remain with their organizations (Allen et al., 2004). An additional meta-analytic study by Underhill (2006) replicated Allen et al.'s (2004) findings along with reporting that protégés indicated greater self-esteem and lower work stress and work-family conflict than non-protégés. Clearly, protégés benefit from the different types of mentoring functions provided by a mentor.

However, research in the field of mentoring has primarily focused on outcomes of relevance to *protégés*, such as objective and subjective measures of career success (Allen et al., 2004; Scandura & Pellegrini, 2007). Very little research, for example, has investigated outcomes important to organizations such as the influence of mentoring on retention rates in organizations (Wanberg et al., 2003). Wanberg et al. (2003) suggest that more work is needed to understand "... exactly what organizations gain from mentoring ..." (p.55). Lankau and Scandura (2007), moreover, recommend that mentoring researchers focus on improving an understanding of the impact of mentoring functions on the learning and knowledge transfer that takes place in mentoring relationships and the effects on organizational outcomes. To date, very few empirical studies have examined if mentoring relationships contributed to protégés' gaining knowledge (Lankau & Scandura, 2007) even though mentoring is assumed to promote knowledge transfer (Stephenson, 1998). Thus, a key focus of this study is the effect of mentoring on knowledge transfer and retention.

Overview of the Conceptual Model

Given the definition of mentoring stated above, I propose a model, shown in Figure 1, in which the primary relationship of interest is that between mentoring (e.g., Kram, 1985), knowledge transfer (e.g., Szulanski, 1996), and retention (e.g., Holtom et al., 2008). I conceptualize mentoring as a direct antecedent of knowledge transfer and knowledge transfer as a mediator of the relationship between mentoring and retention. As expanded upon in this study, knowledge transfer and retention are chosen as outcomes of interest because an organization's greatest asset is considered to be those employees who use knowledge productively (e.g., Drucker, 1993; Nonaka & Takeuchi, 1995); thus, retention of these employees is critical to organizational effectiveness (Cascio & Aguinis, 2008).

The exploration of knowledge transfer and retention points to an inherent dilemma that exists in mentoring relationships. On the one hand, initial studies suggest that mentoring enhances organizational retention of protégés (Joiner, Bartram, & Garreffa, 2004; Lankau & Scandura, 2002; Payne & Huffman, 2005). Conversely, protégés who increase their skills via knowledge transfer from their mentors are simultaneously increasing their marketability and potential job mobility, which could hinder retention (DeLong, 2004; Hall & Smith, in press). Why, then, does it appear that mentoring positively influences retention? Do mentoring relationships play a dual role such that organizational retention is benefited overall despite knowledge transfer to protégés? If so, how is this dual pathway enacted in mentoring relationships?

In the conceptual model, Kram's (1985) mentoring functions are separated into two categories to assist in better understanding the effect of different mentoring functions

on organizational retention. The affective commitment fostered in mentoring relationships (e.g., Payne & Huffman, 2005) may moderate the relationship between knowledge transfer and retention. The three factors of trustworthiness (ability, integrity, and benevolence) and trust (Mayer et al., 1995) are included as intervening variables that assist in explaining the relationship between mentoring and knowledge transfer (c.f., Hezlett & Gibson, 2007). Trust has been shown to be an antecedent of knowledge transfer (e.g., Abrams, Cross, Lesser, & Levin, 2003; Levin & Cross, 2004); thus, it may be an explanatory mechanism for understanding mentoring's effect on knowledge transfer. As elaborated on further in this chapter, I propose that knowledge transfer will be less likely to negatively influence retention for those protégés with higher affective commitment. An in-depth examination of mentoring functions along with the intervening variables of trust and affective commitment will provide a more fine-grained analysis of the process by which mentoring can positively impact knowledge transfer and retention.

Outcomes of Mentoring Relationships

Knowledge Transfer

Knowledge transfer is defined as an exchange of organizational knowledge between a source and a recipient (Grover & Davenport, 2001) in which the exchange consists of information and advice about resources and relationships (Szulanski, 1996). This definition suggests that structured information is combined with a recipient's experiences in order to create a capacity for action (DeLong, 2004). A primary mode of knowledge transfer is the direct sharing of knowledge between individuals (DeLong, 2004; Ford, 2002; Grover & Davenport, 2001) such as mentors and protégés.

Knowledge is defined as a framework derived from one's experience, expert insight, and contextual information (Davenport & Prusak, 1998) and it assists in the evaluation and integration of new experiences and information (Grover & Davenport, 2001; Davenport & Prusak, 1998). Tacit knowledge, as originally defined by Polanyi (1966), is the knowledge of "...more than we can tell" (p.4). In contrast to explicit knowledge which can be clearly stated, tacit knowledge is highly personal and embodied in one's experiences, perceptions, judgments, and intuitions (Polanyi, 1966). Nonaka and colleagues (e.g., Nonaka & Takeuchi, 1995) applied the concept of tacit knowledge to business in order to better understand the role of knowledge as a competitive advantage in organizations. A consistent theme found in the research of Nonaka and his colleagues (Nonaka & Takeuchi, 1995; von Krogh, Ichijo, & Nonaka, 2000; Nonaka, Toyama, & Konno, 2001) is that tacit knowledge resides in individuals and is not easily communicated or transferred to others. In an empirical study conducted at the Kennedy Space Center, Becerra-Fernandez and Sabherwal (2001) found that social processes played an important role in the transfer of tacit knowledge among members in an organization. Since tacit knowledge can only be acquired through shared experience (Nonaka & Takeuchi, 1995), workplace relationships such as mentoring should be fostered to promote the transfer of tacit knowledge (DeLong, 2004).

Though viewed as a key aspect of mentoring (Stephenson, 1998), knowledge transfer has been primarily examined at the interfirm level (e.g., Szulanski, 1996), at the interdepartmental level (e.g. Berta & Baker, 2004), and at the team level (e.g., Gibson, Waller, Carpenter, & Conte, 2007). Grover and Davenport (2001) suggest that much research on knowledge transfer has a more macro focus, examining the transfer of

knowledge between and within organizations. Knowledge management articles highlight knowledge transfer as a key mechanism for organizational success, yet a gap exists between practice (e.g., Buckman, 1998) and formal research (Gallupe, 2001; Grover & Davenport, 2001). A key emphasis of research in knowledge transfer should be on the contribution of individuals to the process (Grover & Davenport, 2001). Little research in the knowledge management literature, however, has explicitly tested mentoring as a means by which knowledge is transferred among individuals (Gallupe, 2001). Similarly, despite the emphasis by early mentoring researchers on the importance of knowledge sharing (e.g., Kram, 1985), researchers are just beginning to explicitly examine the linkages between mentoring and knowledge transfer (Lankau & Scandura, 2007).

Protégés consider a mentor's "willingness to share knowledge and understanding" as the most important aspect of a mentoring relationship (Roche, 1979, p.24). One of the primary reasons for difficulties in knowledge transfer between organizational units is the lack of a personal bond; therefore, Szulanski (1996) recommends the fostering of closer relationships to improve knowledge transfer. Relationships are a critical factor in the success of knowledge transfer; mentors can assist protégés in acquiring both the explicit and tacit knowledge needed to gain competency and to accomplish tasks (Crocitto, Sullivan, & Carraher, 2005; Von Krogh, Ichijo, & Nonaka, 2000). Protégés learn from their mentors "... by observation, imitation, and practice. ... The mere transfer of information will often make little sense if it is abstracted from embedded emotions and nuanced contexts that are associated with shared experiences" (Nonaka, 1994, p.19). Strong ties, such as those found in mentoring relationships, are more effective in transferring tacit knowledge (Hansen, 1999) which is acquired primarily through

experience (Crocitto et al., 2005). Mentoring relationships can provide the opportunity for social interaction that permits the transfer of knowledge not easily expressed in words and numbers (Greer, 2001).

Protégés are able to develop competencies when their mentors transfer knowledge to them through training and performance feedback (Kram, 1985). An in-depth understanding of the mentoring functions explains, in part, how the mentor actively passes knowledge to the protégé so that the protégé gains the expertise that will benefit himself/herself and the organization (Kram, 1985). The sponsorship function exposes the protégé to job opportunities so that the protégé can build upon skills that will benefit his/her future career (Kram, 1985). In the exposure and viability function, a mentor promotes the development of a protégé's knowledge about other aspects of the organization by assigning projects whereby the protégé interacts with key organizational members (Kram, 1985). Coaching involves the transfer of knowledge from the mentor to the protégé (Kram, 1985). The mentor acts as a teacher in providing technical training and feedback through challenging assignments (Kram, 1985). These mentoring functions demonstrate the types of behaviors that a mentor exhibits when transferring knowledge to a protégé.

Research suggests that protégés benefit from the skills and knowledge transferred to them from their mentors. In a qualitative study, Dymock (1999) reported outcomes from knowledge transfer included networking opportunities with key managers, a broader understanding of the organization, and increased knowledge about protégés' particular job functions. The receipt of career-related mentoring functions positively influenced protégés' organizational and professional knowledge (Kowtha & Tan, 2008). Support

has been found for the positive effect of challenging assignments on protégés' knowledge of their department and/or organization (Chao et al., 1992; Lankau & Scandura, 2002).

Overall, these results suggest that mentors transferred knowledge to protégés through the sponsorship, exposure and visibility, coaching, and challenging assignments mentoring functions. Thus, I propose that mentoring can be viewed as a type of developmental relationship that promotes knowledge transfer between mentors and protégés.

Hypothesis 1 – The mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments will be positively related to knowledge transfer.

Performance

The purpose of knowledge transfer is to pass information from the more-experienced to the less-experienced employees so that the less-experienced employees can build the capabilities needed to assume future roles in the organization (DeLong, 2004). Although mentoring research has focused on career-related outcomes that are important to protégés, there is a need to explicitly examine the mechanisms by which mentoring influences outcomes such as improved job performance (Wanberg, Welsh, & Hezlett, 2003). Mentoring researchers need to move beyond the implicit assumption that protégés who benefit from knowledge transfer will automatically exhibit improved job performance.

Research at both the organizational and individual level of analysis appears to support the notion that knowledge transfer mediates the relationship between mentoring and performance. Results from an empirical study by Collins and Smith (2006) suggest that commitment-based human resource practices such as mentoring facilitate knowledge transfer between employees and result in improved performance as measured by

increases in sales and new products. At the individual level, knowledge shared between participants in an experimental simulation had a direct positive effect on performance (Quigley, Tesluk, Locke, & Bartol, 2007). In a study of law firms whose HR strategy focused, in part, on providing developmental support to inexperienced lawyers, mentoring was positively related to revenues per lawyer and profits per partner (Malos & Campion, 2000). Knowledge transfer in management teams mediated the positive relationship between empowering leadership behaviors (e.g., coaching) and performance (Srivastava, Bartol, & Locke, 2006).

Building upon Kammeyer-Mueller and Wanberg's (2003) work, Kowtha and Tan (2008) found that knowledge of the organization and profession mediated the relationship between career-related mentoring and the ability to perform. They suggested that task mastery is achieved by the transfer of tacit knowledge through interpersonal interaction. In addition, receipt of mentoring functions was related to the perceived positive influence on one's job performance (Wanberg, Kammeyer-Mueller, & Marchese, 2006). Based on these studies, one may infer that mentoring will positively impact a protégé's job performance through knowledge transfer.

Hypothesis 2 – Knowledge transfer will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and performance.

Retention

As an outcome of mentoring relationships in workplace settings, retention is of interest in this study because of its importance to organizational performance. For decades, management researchers have emphasized the importance of retaining talented

employees through research on turnover (see reviews by Hom & Griffeth, 1995; Maertz & Campion, 1998; Holtom et al., 2008). Voluntary turnover is defined as an employee's decision to terminate employment with an organization even though he/she could have remained with that organization (Griffith & Hom, 2001; Maertz & Campion, 1998). It can prove costly to organizations because of the difficulty inherent in replacing highly-skilled employees and lost organizational knowledge (Frank, Finnegan, & Taylor, 2004; Griffeth & Hom, 2001; Maertz, Griffeth, Campbell, & Allen, 2007). The focus of research on voluntary turnover has thus turned towards retention in response to a need for understanding the factors that influence workers to remain with an organization (Holtom et al., 2008; Mitchell, Holtom, Lee, Sablinski, & Erez, 2001) so that organizations can minimize the drain of talent that negatively affects performance (Griffeth & Hom, 2001).

The occurrence of the massive layoffs and downsizings that have recently taken place suggests that organizations today are less concerned with retention. In the United States, the total number of mass layoff events, defined as the number of employers who had 50 or more workers file unemployment claims, equaled 21,137 in 2008, the highest number reported since 2001 (Bureau of Labor Statistics, 2009). Overseas organizations are also reporting layoffs of employees. In Japan, for example, NEC Corporation announced a layoff of 20,000 employees and Hitachi has proposed a layoff of 7,000 workers (Wassener, 2009). On the surface, this trend suggests that retention is not as important to organizations as in the past.

Researchers such as Mitchell et al. (2001) and Holtom et al. (2008), however, contend that the retention of high quality employees is of even greater significance today. Despite the pervasive downsizing, organizations are concerned about workers with

unique and critical knowledge such as engineers and scientists (Gomez-Mejia, Balkin, & Milkovich, 1990) whose loss would negatively affect innovation and future profitability (DeLong, 2004; Hom & Griffeth, 1995). In today's knowledge economy, formal knowledge is considered to be the key resource for individuals and organizations (Drucker, 1993). In order for an organization to achieve a competitive advantage, management must be able to exploit available knowledge, part of which resides in the organization (Drucker, 1993; March, 1991). If organizations invest in talented employees through increases in their knowledge, the knowledge transferred to these employees is lost if they leave the organization (Cappelli, 2008). While recognizing that there will always be some voluntary turnover in an organization, retention rates should be somewhat high so that experienced workers are available to share their organizational knowledge with newcomers (March, 1991) and to use their expertise to directly benefit their organization (Griffeth & Hom, 2001; Szulanski, 1996). Thus, in the knowledge economy, it is important to look at issues of retention (Holtom et al., 2008, Mitchell et al., 2001).

In particular, there are two reasons why organizations in today's knowledge economy must be concerned about retention. First, workers are experiencing greater job mobility (Cappelli, 2003). In the past, there was an implicit contract between employers and employees in which lifelong careers at the same organization were the dominant employment model (Arthur & Rousseau, 1996). Talent was developed internally and retained because the skills needed to run an organization were unique to that organization (Cappelli, 2008; Rousseau & Shperling, 2004). This implies that knowledge transferred within an organization remained in that organization. The stable markets that permitted

long-term employment relationships, however, have been replaced by dynamic markets (Arthur & Rousseau, 1996) impacted by pressures such as the increase in knowledge work and globalization (Holtom et al., 2008). Organizations have reacted to the uncertain markets by breaking the past implicit contract regarding lifelong employment relationships and job security is no longer a given in many organizations (Arthur & Rousseau, 1996; Cappelli, 2008). Workers, thus, must maintain their marketability in the job market to be assured of continuous employment.

Second, there is greater pressure to hire workers from outside organizations in order to capture the knowledge and experience necessary to stay abreast of technological changes (Cappelli, 2003). Knowledge workers recruited to other organizations may represent the loss of the best contributors to their previous employers' success (Trevor, 2001). Organizations are beginning to acknowledge that the loss of the more marketable employees usually means the loss of the better performers (Rousseau & Shperling, 2003; Trevor, 2001). Organizations face significant challenges in retaining valued employees because of the changes in the employment relationship that promote greater job mobility.

Traditional research has focused on the influence of job satisfaction on voluntary turnover (Holtom et al., 2008; Mitchell & Lee, 2001). While the implication of such research is that workers dissatisfied with their jobs will leave and those satisfied with their jobs will remain, researchers suggest that this view is too simplistic and narrow in explaining what influences turnover and retention (Mitchell & Lee, 2001). To develop alternative theoretical understandings of voluntary turnover and retention, researchers have expanded upon the initial research to explore other constructs (Holtom et al., 2008). Recognizing that "... less turnover research has focused specifically on how an employee

decides to remain with an organization and what determines this attachment” (Mitchell et al., 2001), researchers are beginning to recognize the importance of relationships in retaining workers (e.g., Mitchell et al., 2001; Mossholder, Setton, & Henagan, 2005; Westaby, 2003).

Mentoring is a type of workplace relationship that may assist in promoting the retention of talented knowledge workers. Protégés who reported receiving mentoring were more likely to indicate that they did not have plans to leave their organization (Joiner et al., 2004). In studies of hospital employees, those who received vocational support (e.g., coaching) were less likely to indicate that they were searching for another job (Kleinman, Siegal, & Eckstein, 2001; Lankau & Scandura, 2002) and more apt to be with the hospital four years later (Lankau & Scandura, 2002). In a study of U.S. Army officers, those who reported having a mentor were more likely to still be in the army after ten years (Payne & Huffman, 2005). These studies suggest that protégés involved in mentoring relationships are less likely to leave their organization.

While the link between mentoring and turnover has been supported in the literature, less research in the field of mentoring has addressed why protégés remain with their organization (Payne & Huffman, 2005). Given that organizations are searching for ways to retain their key employees and that research is needed to understand the process of remaining with an organization (Holtom et al., 2008), I suggest that an investigation of mentoring relationships may enhance our understanding of the influences on retention. Moreover, because the retention of knowledge workers is so important to organizations (Holtom et al., 2008), mentoring must be decomposed to better understand the

mechanisms that explain the process of how mentoring influences retention (Payne & Huffman, 2005).

Knowledge Transfer as a Mediator of Mentoring and Retention

Increases in knowledge work in today's dynamic workplace require organizations to focus on the retention of talented employees (Holtom et al., 2008). Knowledge workers are increasingly more important for organizational competitiveness today (Cascio & Aguinis, 2008) so the knowledge transfer between employees and the retention of key employees is critical. Organizations that have not been concerned with retention in the past, however, are now struggling to keep their skilled employees (Cappelli, 2008). In professions heavily dependent upon knowledge transfer such as medicine, engineering, and chemicals manufacturing, the pool of skilled workers is shrinking; thus, there is increased competition for the available workers (DeLong, 2004). This increased demand has created a situation in which workers stay with an organization just long enough to gain the knowledge necessary to build their "tool kit" and become more marketable so they can pursue better opportunities elsewhere (Cappelli, 2008; DeLong, 2004; Rousseau & Shperling, 2003, 2004).

If organizations invest in knowledge transfer among employees who then gain valuable expertise, the loss of these employees will be detrimental to firm performance because knowledge gaps will ensue (DeLong, 2004; Ranft & Lord, 2000). There is a need to better understand the unintended effects of knowledge transfer on organizational retention. The dilemma for organizations is that knowledge transfer amongst employees and retention of knowledge is critical to organizational success, yet the employees who benefit personally from knowledge transfer may also be more likely to leave their

organization because such knowledge is useful to other employers as well (Cappelli, 2008; DeLong, 2004). The increase in common processes and technology across organizations, for example, has made it easier for highly skilled workers to be productive when they move from one organization to another (Rousseau & Shperling, 2004). This dilemma between the need for knowledge transfer and its potentially deleterious effects on retention suggests the importance of a better understanding of the role of mentoring relationships in relation to organizational retention.

Results from prior studies, as mentioned previously, indicate that protégés have lower turnover intentions and are less likely to voluntarily leave their organizations (Joiner et al., 2004; Kleinman et al., 2001; Lankau & Scandura, 2002; Payne & Huffman, 2005). Protégés who reported higher levels of mentoring received were less likely to report intentions to leave their organization (Lankau & Scandura, 2002). Similarly, perceived support from one's supervisor is also negatively related to turnover intentions (Maertz et al., 2007). Malos and Campion (2000) also found that firms with higher levels of mentoring had lower turnover; moreover, they suggested that the mentoring specifically assisted in developing protégés' knowledge and skills. Based on the above research, one may posit that the knowledge and feedback provided to a protégé by a mentor may influence the protégé's turnover intentions. Yet these studies have not investigated the potentially negative effects of mentoring on retention because of knowledge transfer. I expect that knowledge transfer will mediate the effect of mentoring on organizational retention.

Though organizations recognize the importance of encouraging interpersonal relationships such as mentoring to facilitate the transfer of explicit and tacit knowledge

(Nonaka & Takeuchi, 1995), such efforts may inadvertently assist individuals in gaining the competencies needed to pursue opportunities elsewhere. In one of the few studies to explore this phenomenon, personal learning was found to mediate the effects of mentoring on turnover such that those who reported greater skill development had greater intentions to leave their organization (Kleinman et al., 2001). In a study of public accountants, career-related support was positively related to turnover intentions (Hall & Smith, in press). Though little empirical research has explored this effect, several considerations may shed light on this dilemma.

First, in the knowledge management literature, absorptive capacity, i.e., one's stock of knowledge, is posited to be necessary in order to be able to exploit external sources of knowledge (Cohen & Levinthal, 1990; Szulanski, 1996). The process of knowledge transfer from the mentor to the protégé is assumed to contribute to a protégé's absorptive capacity, thereby increasing the protégé's ability to assimilate and apply new knowledge for personal and professional gain. According to researchers such as Rousseau and Shperling (2003, 2004) and DeLong (2004), those employees who are more highly-skilled are more likely to perceive and take advantage of external information about opportunities for job mobility. For example, the higher the employee's reported educational achievement, the less likely he/she perceives the necessity of remaining with an organization (Bretz, Boudreau, & Judge, 1994; Mayer & Schoorman, 1998; Trevor, 2001). The more marketable employees are not as inclined to remain with their organization (Bretz et al., 1994; Trevor, 2001).

Second, a basic assumption of mentoring relationships is the focus on the benefit to the protégé (Eby, Allen, Evans, Ng, & DuBois, 2008). While mentoring relationships

may include the function of friendship which implies some mutuality (Kram, 1985), mentors have an ethical responsibility to understand that they should be concerned about the protégé's development, not vice-versa (Moberg & Velasquez, 2004). Mentors are obligated to provide knowledge, wisdom, and developmental support so that learning is transferred from the mentor to the protégé (Moberg & Velasquez, 2004). Thus, to fulfill his/her ethical responsibility toward a protégé, a mentor must share knowledge and encourage a protégé, even if it results in the protégé leaving the organization so as to further his/her career interests.

Third, Malos and Campion (1995) suggest that the type of knowledge transfer to protégés may influence their intentions to remain with an organization. If a mentor transfers knowledge that is specific to the organization (i.e., firm practices and relationships), then the protégé will be more likely to remain with the organization because the knowledge cannot be applied elsewhere. Based on the above, I propose that knowledge transfer will mediate the relationship between mentoring and protégés' intentions to remain with their organization. Knowledge transfer is expected to only partially mediate the relationship between mentoring and turnover intentions because the extensive literature on turnover indicates that retention is influenced by many factors (e.g., Holtom et al., 2008).

Hypothesis 3 – Knowledge transfer will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and retention.

The Role of Affective Commitment

Affective Commitment

Although the knowledge transfer engendered through mentoring relationships may negatively impact retention, mentoring may influence the extent of turnover intentions through protégés' affective commitment, a type of organizational commitment. Organizational commitment is defined as the strength of an employee's identification with and involvement in a particular organization (Porter, Steers, Mowday, & Boulian, 1974). It is characterized by a belief in and acceptance of an organization's values and goals, a willingness to contribute to the organization, and a desire to remain with the organization (Porter et al., 1974). Based on this definition, organizational commitment represents not merely passive loyalty but can be inferred from employees' actions as well as the expressions of their beliefs and values (Mowday, Porter, & Steers, 1982).

Meyer and Allen (1991) distinguish between three forms of organizational commitment: affective, continuance, and normative. Affective commitment is the desire to remain a member of an organization because of an emotional attachment. This emotional attachment, which encourages identification with and involvement in the organization, implies that employees remain with an organization because they want to do so. Continuance commitment refers to an awareness that the perceived costs of leaving the organization are large enough such that employees feel they need to remain with their organization. Normative commitment reflects a perceived obligation to remain with an organization. Employees with this sense of obligation feel they ought to remain with their organization. Overall, organizational commitment refers to an attachment to the employing organization including its goals and values. (Mowday et al., 1982).

The belief that organizational commitment ties workers to organizations suggests that such ties will reduce turnover intentions and voluntary turnover itself (Meyer &

Allen, 1991). A meta-analysis of antecedents of turnover showed that organizational commitment is negatively related to turnover (Kammeyer-Mueller, Wanberg, Glomb, & Ahlburg, 2005; Porter et al., 1974) and a better predictor of turnover than other workplace attitudes such as job satisfaction (Griffeth, Hom, & Gaertner, 2000). Affective commitment in particular, as compared to continuance and normative commitment, has a stronger positive influence on retention (Meyer & Herscovitch, 2001). A meta-analysis of the three dimensions of organizational commitment demonstrated that affective commitment had the strongest negative correlation with turnover intentions and actual turnover behavior (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). A worker's desire to exert effort for the benefit of the organization (i.e., affective commitment) may make him/her less sensitive to cues that might possibly limit such efforts (Meyer & Herscovitch, 2001). Since retention is of interest in this study and the negative effect of affective commitment on turnover intentions and turnover behavior has been demonstrated, affective commitment is pertinent to this investigation.

Since an aspect of mentoring functions involves establishing relationships on a more personal level (Kram, 1985), an emotional attachment engendered between a mentor and a protégé may result in the protégé feeling more affectively committed to the organization. Mentoring is seen as more influential as regards protégés' work-related attitudes than protégés' career outcomes (e.g., promotions or salary) because attitudes can enhance attachment and interpersonal relationships (Eby et al., 2008). Protégés are more likely to report higher levels of organizational commitment than non-mentored individuals (Aryee & Chay, 1994; Kleinman, et al., 2001; Rigsby, Siegal, & Spiceland, 1998). Opportunities to interact with one's mentor and the closeness of a mentoring

relationship were related to protégés' affective commitment (Orpen, 1997). Protégés have higher levels of affective commitment than non-mentored employees (Payne & Huffman, 2005). Affective commitment partially mediated a negative relationship between a protégé's engagement in a mentoring relationship and voluntary turnover behavior (Payne & Huffman, 2005; Sosik, Lee, & Bouquillon, 2005). Receipt of mentoring appears to be an antecedent of affective commitment.

Not all researchers, however, have evidence to support a relationship between mentoring and affective commitment. Results from one study suggest that mentoring may not contribute to organizational commitment (Raabe & Beehr, 2003). In addition, the mechanisms through which mentoring may influence protégés' affective commitment have not been fully investigated. Thus, there is a need to more fully understand if mentoring influences affective commitment and, more importantly, how.

Kram (1985) suggests that some of the mentoring functions that a mentor provides to a protégé may contribute to an "... emotional bond that underlies the relationship" (p. 32). Role modeling contributes to an emotional attachment between a mentor and a protégé because the protégé identifies with the mentor (Kram, 1985). A mentor who provides counseling gives a protégé the opportunity to talk freely about concerns and problems (Kram, 1985). By shielding a protégé from blame in controversial situations and providing positive feedback to him/her, a mentor builds a closer relationship with a protégé through the protection and the acceptance and confirmation functions (Kram, 1985). The friendship function also encourages an emotional attachment because a mentor interacts socially with a protégé to encourage positive informal exchanges (Kram, 1985). Employees who observe a supervisor's

supportive and caring behavior may attribute such behavior to the supervisor and to the organization's general culture which would positively influence affective commitment (Rhoades, Eisenberger, & Armeli, 2001); thus, it is possible that support from a mentor will foster affective commitment.

Hypothesis 4 – The mentoring functions of role modeling, counseling, protection, acceptance and confirmation, and friendship will be positively related to affective commitment

Affective Commitment as Moderator of Knowledge Transfer and Retention

A meta-analysis conducted of the relationship between affective commitment and various organizational outcomes showed a negative correlation with turnover intentions as well as actual turnover behavior (Meyer et al., 2002). This may be because favorable work conditions such as perceived supervisor support (i.e., the perception that supervisors value employees' contributions and care about employees' well-being) may influence positive perceptions of perceived organizational support which then contribute to retention (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Rhoades et al., 2001). Affective commitment has also been found to mediate the relationship between favorable work environments (e.g., perceived supervisor care and concern) and voluntary turnover behavior (Rhoades et al., 2001).

In a review of research on organizational commitment, Meyer and Herscovitch (2001) suggest that workers with higher levels of organizational commitment may persist in behavior that appears to be contrary to their own self-interest. This implies that even though a worker understands his/her knowledge could provide a better job opportunity elsewhere, he/she may remain with an organization because the desire to be identified

with and involved with that organization makes him/her willing to continue to contribute to the organization. Thus, the affective commitment engendered from a mentoring relationship may attenuate the negative effect of knowledge transfer on retention.

Hypothesis 5 – Affective commitment will moderate the relationship between knowledge transfer and retention.

The Role of Trust

Trust

Though considered to be a critical component in effective mentoring relationships, few empirical studies have investigated trust in mentoring relationships (Hezlett & Gibson, 2007). Of those, results from one study suggest that a protégé's level of trust in a mentor appeared to remain steady regardless of how long the mentor and protégé had worked together (Bouquillon, Sosik, & Lee, 2005). In another study, career-related and psychosocial support were positively related to protégé's trust in a mentor (Young & Perrewé, 2000). Such research indicates a growing awareness of the importance of examining trust in mentoring relationships (Hezlett & Gibson, 2007). However, to improve our understanding of the effects of mentoring on outcomes such as knowledge transfer and retention, we need to investigate underlying mechanisms such as trust.

Since the mid-1990's, work in the area of trust has flourished (Schoorman, Mayer, & Davis, 2007). As defined by Mayer and colleagues, trust is neither a trait nor a behavior, rather it is "... an aspect of relationships ... [that varies] within person and across relationships" (Schoorman et al., 2007, p. 344) and arises only in risky situations (Mayer et al., 1995). Key to the definition of trust is the notion that the trusting party is

vulnerable to and relies upon another party (Currall & Inkpen, 2006; Mayer et al., 1995; Rousseau, Sitkin, Burt, & Camerer, 1998); thus, trust is defined as the willingness to take a risk and its outcome is risk taking in the relationship (Mayer et al., 1995; Mayer and Gavin, 2005).

One purpose of this study is to answer the call for a better understanding of the process of mentoring through the investigation of intervening variables (Wanberg et al., 2003) such as trust. I contend that Mayer et al.'s (1995) theory of trust is particularly suited to mentoring relationships for several reasons. First, Mayer et al.'s (1995) theory of trust focuses specifically on the actions and behaviors of the person being trusted (Colquitt et al., 2007). This parallels Kram's (1985) typology of mentoring functions which delineates the actual behaviors that mentors engage in to support protégés' professional and personal growth. Second, trustworthiness, which is comprised of ability, integrity, and benevolence, is viewed as distinct from trust itself (Mayer et al., 1995). The three factors of trustworthiness capture the characteristics of the person being trusted and can be related to Kram's (1985) mentoring functions that describe the behaviors and characteristics of a mentor. Third, benevolence, which encompasses caring and concern for another person, lends itself directly to mentoring relationships because mentors engage protégés on a personal level.

Fourth, Mayer et al.'s (1995) theory of trust has received extensive empirical research support (Schoorman et al., 2007). For example, a longitudinal study of this model found that managers who were more trusted by their employees had higher sales and profits and lower employee turnover (Davis, Schoorman, Mayer, & Tan, 2000). Moreover, there was a significant positive relationship between an employee's

perceptions of a manager's ability, integrity, and benevolence and the employee's trust in the manager. A meta-analysis demonstrated moderately strong relationships between trust and the outcome of risk taking (Colquitt et al., 2007). In addition, results showed moderately strong relationships between trust and three aspects of job performance, i.e., task performance, organizational citizenship behaviors, and counterproductive work behaviors. Trust, as conceptualized by Mayer et al. (1995), is predictive of important organizational outcomes (Colquitt et al., 2007) and Mayer et al.'s (1995) model of trust can assist in expanding our understanding of how mentoring relationships impact knowledge transfer and retention.

Trust as a Moderator of Mentoring and Knowledge Transfer

Empirical results suggest that the quality of relationships serves as a conduit for the transfer of knowledge (Szulanski, 1996). As an antecedent to knowledge transfer, the existence of trust in a relationship has been shown to increase the likelihood that the information received will be understood and used appropriately (Abrams et al., 2003). Szulanski et al. (2004) found support for the importance of perceived trustworthiness of a source on intrafirm knowledge transfer. Higher levels of trust, for example, have been associated with greater sharing of knowledge among team members (Nelson & Coopriider, 1996).

The presence of trust in a vulnerable work situation may allow employees to concentrate on the work at hand. Those workers who expressed greater trust in their managers and top management team, for example, reported a greater ability to focus their attention on their job (Mayer & Gavin, 2005). Feeling a sense of psychological safety is key to learning in organizations because it allows employees to experiment and make

mistakes (Edmondson, 1999). Hospital employees' willingness to participate in quality improvement efforts, for example, was higher amongst those who felt unconstrained by the potentially negative consequences of sharing information and suggesting changes (Nembhard & Edmondson, 2006).

Mentoring relationships have "... a basic trust that encourages the [protégé] to take risks ... This basic trust makes risk-taking less awesome ..." (Kram, 1985, p. 35). The existence of trust in a mentoring relationship allows the protégé to take risks because he/she is confident of being accepted by the mentor even if mistakes are made during the learning process (Kram, 1985). Protégés report that they are most likely to seek advice and information from their mentors at critical moments such as career or life transitions (de Janasz et al., 2003; Liang, Brogan, Spencer, & Corral, 2008). In addition, the degree of trust in a mentoring relationship influenced the amount of organizational learning reported by protégés (Dymock, 1999). The existence of trust in a mentoring relationship may enhance the relationship between receipt of mentoring and knowledge transfer.

Hypothesis 6 – Trust in mentor will moderate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and knowledge transfer.

Trustworthiness Factors

Ability. According to the Mayer et al. (1995) model of trust, the perceived factors of a party's trustworthiness are distinguished from trust in a party. The first factor of perceived trustworthiness, ability, is defined as those skills and competencies that permit a party to be influential within a specific domain (Mayer et al., 1995). When considered in the context of mentoring, the ability aspect of perceived trustworthiness implies that an

individual (i.e., a protégé) trusts in a party (i.e., a mentor) because of the mentor's experience or training in a particular area that is of importance to the protégé (Mayer et al., 1995).

Of the career-related functions of mentoring, the challenging assignment component involves the protégé receiving technical training and performance feedback while the coaching component consists of the mentor providing knowledge to help the protégé succeed on difficult tasks (Kram, 1985). Also, the exposure and visibility function involves the mentor assigning responsibilities that introduce the protégé to key organizational members so that the protégé learns about the organization (Kram, 1985). Thus, a protégé may base an assessment of a mentor's perceived trustworthiness on the mentor's ability as demonstrated by the differing mentoring functions mentioned above. A mentor's expertise as perceived by the protégé could lead the protégé to assess the mentor as high in perceived trustworthiness based on the mentor's ability and to be more apt to trust the mentor.

Hypothesis 7 – Ability will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and trust.

Integrity. The second factor, integrity, is the perception that a trusted party adheres to a set of principles that the trusting party finds acceptable (Mayer et al., 1995). Integrity may be assessed by a protégé observing a mentor's behaviors such as the consistency of a mentor's prior actions or whether a mentor acts in accordance with what he/she has communicated (Mayer, et al., 1995). Similarly, Robinson (1996) suggests one aspect of integrity is constancy between one's espoused views and one's actions.

As a role model, a mentor demonstrates attitudes, values, and behaviors and a protégé identifies with the example set by the mentor (Kram, 1985). The mentor has an ethical responsibility, for example, to treat a protégé's personal concerns as confidential (Moberg & Velasquez, 2004). If a protégé observes a mentor's constancy between words and actions (e.g., the mentor promises confidentiality and his/her actions support the protégé's privacy), the protégé may assess the mentor as having integrity and, thus, trust the mentor. In a qualitative study, protégés reported trusting their mentors because the mentors could "keep a secret" (Liang et al., 2008). If a protégé positively views the mentor's actions and the mentor's constancy between words and actions, the protégé would assess the mentor as having integrity and be more willing to trust the mentor.

Benevolence. The third factor, benevolence, is the belief that a trusted party is disposed toward doing good to the trusting party (Mayer et al., 1995). Benevolent acts are not perfunctory attempts, they are sincere attempts to do good by easing another's suffering or by promoting another's welfare (Livnat, 2004). Livnat (2004) suggests that a benevolent person may act mildly irrational (in economic terms) because his/her care and concern motivates him/her to do good even when there are predictable costs that result. This is similar to the mentoring functions of sponsorship and protection in which a mentor's support for a protégé may have negative effects for the mentor (Kram, 1985). "The mentor wants to help the protégé, even though the mentor is not required to be helpful and there is no extrinsic reward for the mentor" (Mayer et al., 1995, p. 719), thus benevolence implies a personal concern for and attachment to another. In the counseling function, the mentor listens to the protégé's concerns and shares his/her experience while in the acceptance-and-confirmation function, the mentor nurtures and respects the protégé

(Kram, 1985). The friendship function permits the protégé to share personal experiences with the mentor (Kram, 1985). The focus is on the protégé's personal and professional growth, not on the benefit to the mentor (Eby et al., 2007). The perceived benevolence of a mentor may instill trust in a protégé because the mentor's behavior appears to relate to the protégé's needs and desires (Mayer et al., 1995).

Hypothesis 8 – Integrity and benevolence will mediate the relationship between the mentoring functions of role modeling, counseling, protection, acceptance and confirmation, and friendship and trust.

Chapter Summary

Researchers in the field of mentoring are beginning to address a key underlying assumption of the mentoring process; i.e., mentoring is a mechanism by which knowledge is transferred from more-to-less-experienced individuals. While knowledge transfer is beneficial to protégés wherever they work, it can only benefit an organization if the knowledge remains in that organization. The dilemma posed by knowledge transfer is how to facilitate the knowledge transfer necessary for organizational effectiveness while retaining highly skilled employees and their commensurate knowledge base. The nomological network proposed in this study attempts to explain mentoring's dual role in promoting the knowledge transfer critical for organizational success while simultaneously fostering the affective commitment that will support organizational retention. The above arguments provide evidence from the literature that the three factors of trustworthiness and trust are intervening variables that impact the relationship between mentoring and knowledge transfer. Chapter Three will address the proposed research

design and methodology for testing the hypotheses set forth in this chapter. This includes a discussion of the recruitment method for the sample and the measures for the variables.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Research Design

Mentoring is viewed as a type of interpersonal work-related relationship that is “... best understood from the perspective of adults working in organizational settings” (Allen et al., 2008, p. 349). When the primary focus of research is to examine variables and processes in real-world settings, survey methodology is recommended (Simon, 1969). Edmondson and McManus (2007) recommend obtaining quantitative data through surveys at field sites in order to test specific hypotheses when mediating mechanisms are examined in a theoretical model. Thus, the hypotheses presented in this study of mentoring were tested in a field-study setting using survey methodology.

The field setting chosen for this study was a healthcare facility (hospital and outpatient services) in the Midwest region of the United States. The healthcare industry is of particular interest in this study for several reasons. First, Kanter’s (2006) classification of the transition from a “white collar” to a “white coat” economy places emphasis on professionals in science and healthcare. Future economic growth will be heavily dependent, in part, on the work done by healthcare professionals (Kanter, 2006). Healthcare was the largest industry sector in 2006 and is projected to generate more new jobs between 2006 and 2016 than any other industry (Bureau of Labor Statistics, 2007, 2008). Almost 35% of all healthcare workers are employed by hospitals (Bureau of Labor Statistics, 2008). Clearly, the healthcare industry is a growing sector of the economy and is important to furthering our understanding of workplace phenomena.

Second, the healthcare industry is facing significant concerns regarding retention of employees because of the increasing shortages of healthcare professionals in certain occupations. According to the U. S. Department of Health and Human Services, for example, the shortage of nurses is projected to be 12 percent by 2010 and 30 percent by 2020 (Moran & Fernandey, 2006). Despite a steady supply of physicians, the trend towards reduced working hours per week as well as increased retirements and medical specialties suggests a deficit of medical doctors in the coming years (Miller, 2007). Similarly, the rapid growth in diagnostic imaging has resulted in the supply of radiologists failing to meet demand (Knaub, 2007). Shortages in these types of healthcare occupations highlight the importance of focusing on the retention of healthcare workers (e.g., Almada, Carafoli, Flattery, French, & McNamara, 2004) so as to minimize the costs of voluntary turnover (DeLong, 2004; Griffeth & Hom, 2001).

Third, knowledge transfer is an important issue for organizations in which “Knowing what to expect and what to do ... can be literally a life-or-death matter” (Davenport & Prusak, 1998, p.8). Healthcare facilities such as hospitals are complex organizations in which knowledge transfer is critical for achieving beneficial outcomes for patients (Berta & Baker, 2004). A member of a surgical team, for example, discussed the importance of sharing knowledge with other team members because a mistake could irreversibly harm a patient (Edmondson, Bohmer, & Pisano, 2001). Knowledge transfer and retention are considered crucial to achieving greater patient safety (Berta & Baker, 2004). A healthcare organization, thus, provided a suitable context in which to test the proposed model of mentoring.

Site and Sample

The healthcare facility at which the survey was administered is located in a micropolitan area of the Midwest region of the United States. This healthcare system has a hospital that provides inpatient acute care (130 beds) and skilled nursing (36 beds). In addition, outpatient services are provided in several areas including emergency room, surgery, rehabilitation, wellness, community health, and alcohol and drug treatment.

In order to minimize Type II error, i.e., concluding that no effect exists when there is a true effect (Murphy & Myors, 1998), an a priori estimate was calculated of the sample size needed to maximize the statistical power of this study's analyses (Cohen, 1988). To determine the sample size required to obtain a given level of statistical power, three parameters were evaluated (Cohen, 1988). First, the significance criterion (α) was selected to determine the probability of concluding that there is an effect in the population when there is not (Snedecor & Cochran, 1980). In the behavioral sciences, the convention is to set α at .05 (Cohen, 1988) which was done in this study. Second, an effect size was chosen to indicate the degree of departure from the null hypothesis that there is no effect in the population (Cohen, 1988). Based on a meta-analysis of the influence of mentoring on objective and subjective outcomes, effect sizes ranged from .06 to .31 (Allen et al., 2004). In another meta-analysis of mentoring studies, Underhill (2006) found an overall mean effect size of .24 of mentoring on outcomes such as tenure with an organization and organizational commitment. Thus, the effect size was estimated conservatively at .15 (c.f., Murphy & Myors, 1998). Third, convention was followed in setting the desired level of power at .80, indicating that a researcher is four times more likely to correctly identify a true effect in the population (Murphy & Myors, 1998). Based on these parameters, the sample size needed to detect the presence of effects if,

indeed, those effects truly exist as hypothesized, was estimated to be 343 respondents (Garbin, 2008).

The healthcare facility at which the survey was administered employs 1,085 persons and all employees were eligible to participate in the study. In order to reach as many employees as possible, data collection took place on eleven of twelve consecutive days and during both day and evening shifts. As detailed in the Procedures section below, employees were approached while working and asked if they would be interested in participating in the survey. This method of sampling was used to increase the likelihood of participation and to be able to create an identification of the individual surveys in the least intrusive manner. However, one consequence of this approach was that employees who were on vacation, or were too busy with their work on that particular shift could not be invited to participate. A total of 321 employees completed the survey which is 29.6% of the eligible employees. However, a more realistic estimate of the response rate is closer to 60% as fewer than two in five employees who were invited to participate, declined. Of the 321 surveys, six were not included in the statistical analyses because of missing data leaving 315 useable responses.

Procedures

The recruitment of participants and the administration of surveys took place in three phases. In the first phase of the study, the healthcare employees were notified via email that the top management team had authorized a third-party investigator (i.e., this researcher) to conduct a survey of supportive workplace relationships and the effects of such relationships on workplace outcomes. Employees were reassured that confidentiality would be maintained and that participation was voluntary. The email also

notified the employees of the approximate days that the researcher would be in the healthcare facility to administer the survey.

The second phase consisted of the initial distribution of the surveys. The top management team gave permission for the researcher and an assistant to visit each department in the healthcare system so as to personally invite employees, if they were interested, to complete the survey. Because the healthcare facility operates 24/7, the researcher and her assistant were at the healthcare facility at various times, day and evening, in order to distribute surveys to as many employees as possible. While some areas in the healthcare facility were open to the researcher at all times, other areas such as surgery were restricted. For restricted areas, the researcher would arrange a time with the department manager to obtain access to employees.

Employees were allowed to complete the surveys during work hours at their work station if they wished to do so. Employees who preferred to participate in the survey in a confidential manner had the option of meeting the researcher or her assistant in a private conference room during scheduled times. As an incentive to encourage participation, employees who completed the survey had the option of choosing to register in one of four raffles for a cardiology stethoscope, medical software, a gift certificate to a local grocery, or a gift certificate to a local electronics store.

Each survey packet contained a cover letter, a code number form, and the survey itself. The cover letter explained the nature of the research and asked the healthcare employee to read the paragraphs about informed consent prior to completing the survey. The code number form was used to track the names of employees who participated in the survey in order to collect turnover data twelve months after the initial survey

administration. Upon completing the survey, the employee wrote his/her name on the code number form and the researcher or the assistant wrote a unique code number on that form and the survey. The code form and the survey were then placed into separate envelopes as the employee watched so as to reassure the employee of the steps being taken to insure confidentiality.

Care was taken to ensure the protection of all employees. First, employees were given information about informed consent so that they were notified of the minimal risks associated with the research and of their rights as research participants. Second, the use of code numbers insured that no one but the researcher and the on-site research assistant could identify any individual employee. The code number forms were maintained in a separate, locked cabinet separate from the actual survey. The survey data was entered using the code numbers so that individual responses cannot be identified. Third, employees were assured in writing and in person that they could refuse to answer any question or they could withdraw from the study at any time without adversely affecting their relationship with the healthcare facility or the researcher.

The third phase consisted of a follow-up reminder. An email was sent to all employees of the healthcare facility two days before the final distribution of surveys. The email reminder provided the days and times when the researcher was at the healthcare facility for the final administration of surveys for those employees who were still interested in participating.

Measures

A survey questionnaire was used to collect data for this study. Respondents were first provided a definition of a mentor as, "... one or more persons whom you feel have

taken an active interest in your career by providing developmental assistance.” This definition is consistent with that provided by mentoring researchers such as Higgins and Kram (2001) and Higgins and Thomas (2001). Respondents were then asked, “Have you had a mentor during the past year?” If they answered “Yes” to this question, they were asked to think of the mentor who had influenced their career the most as they completed the rest of the questionnaire. Respondents who indicated they did not have a mentor were asked to fill out the remainder of the questionnaire with their supervisor in mind. This permitted an investigation of the overall developmental support that employees at this healthcare facility were receiving (c.f., Higgins & Kram, 2001; Higgins & Thomas, 2001).

The following variables were examined using established measures with known psychometric properties such as reliability and validity. All established scales were scored using the same five-point Likert-type scale with 1 = strongly disagree and 5 = strongly agree.

Mentoring Functions. The Mentor Role Instrument (MRI, Ragins & McFarlin, 1990) was used to assess the nine mentoring functions. The MRI is a 27-item measure that uses three items to measure each of the nine mentoring functions. “My mentor suggests specific strategies for achieving career aspirations” is an example of an item used to measure a protégé’s perceptions of the coaching received from a mentor.

In the conceptual model presented in this study, the nine mentoring functions were placed into one of two categories. The mentoring functions of Sponsorship, Coaching, Exposure and Visibility, and Challenging Assignments were placed in one category to represent the behaviors that focus to a large degree on the transfer of

knowledge from a mentor to a protégé. The mentoring functions of Protection, Role Modeling, Acceptance and Confirmation, Counseling, and Friendship were combined in a second category to represent the supportive type of interpersonal behaviors that a mentor extends to a protégé.

To represent the mentoring functions that provide specific, job-related information to a protégé, the mentoring/informational composite variable was created. Twelve items were combined from the Sponsoring, Coaching, Exposure and Visibility, and Challenging Assignments subscales from the Mentoring Role Instrument. The mentoring/informational composite variable demonstrated a coefficient alpha of .95 with acceptable corrected item-total correlations.

A second composite variable represents those mentoring functions in which a mentor provides the interpersonal assistance that assist a protégé with career-related concerns. The mentoring/interpersonal variable was created by combining the fifteen items from the Protection, Role Modeling, Acceptance and Confirmation, Counseling, and Friendship subscales from the Mentor Role Instrument. The mentoring/interpersonal composite variable exhibited a coefficient alpha of .96 and acceptable corrected item-total correlations.

A 2nd order confirmatory factor analysis (CFA) was conducted using MPlus to evaluate the level of fit for the loadings of three items on each of the nine mentoring functions and of the nine mentoring functions on the two composite variables of mentoring/informational and mentoring/interpersonal. An acceptable level of fit was indicated for the mentoring/informational and mentoring/interpersonal composite variables as 2nd order factors ($X^2[288] = 666.37$; CFI = .96; TLI = .95; RMSEA = .07;

SRMR = .04). Based on the internal consistency measures and the fit of the CFA, the composite variables of mentoring/informational and mentoring/interpersonal were used in subsequent statistical analyses.

Knowledge Transfer. Lankau and Scandura's (2002) six-item measure of personal skill development was used to measure the extent to which knowledge had been transferred to protégés. Respondents indicated their agreement with statements such as "I have gained new skills." The personal skill development scale demonstrated a coefficient alpha of .87 which is similar to the $\alpha = .84$ found by Lankau and Scandura (2002).

Affective Commitment. Similar to Maertz et al. (2007), affective commitment was assessed using the nine-item version (Bozeman & Perrewé, 2001) of the Organizational Commitment Questionnaire (OCQ, Mowday, Steers, & Porter, 1979). This revised version is recommended to avoid conceptual overlap between employees' attachment to an organization and employees' intent to stay (or leave) an organization (Bozeman & Perrewé, 2001). Examples of items include "I talk up this organization to my friends as a great organization to work for." and "I feel very little loyalty to this organization" (reverse-scored item). This scale demonstrated an internal reliability of .84, lower than the coefficient alpha of .91 reported by Maertz et al. (2007).

Trust. Trust was measured using the seven-item Schoorman and Ballinger (2006) adaptation of Schoorman, Mayer, & Davis's (1996) trust measure. The items were altered slightly to change the referent from "supervisor" to "mentor" in keeping with the focus of this research. An example item is "If my mentor asked why a problem occurred, I would speak freely even if I were partly to blame." The trust measure exhibited a coefficient alpha of .65 which is similar to that reported by Schoorman et al. (2007).

Trustworthiness Factors. The three factors of trustworthiness were assessed using scales developed by Mayer and Davis (1999). In the three scales, the referent was changed to “My mentor” where appropriate. Ability was measured with three items (e.g., My mentor has much knowledge about the work that needs done, $\alpha = .96$).

Items from the Integrity and Benevolence scales were combined to form a composite variable representing the factors of trustworthiness that would relate to a protégé’s personal concerns. The five items of the integrity/benevolence composite variable assessed aspects of integrity (e.g., I never have to wonder whether my mentor will stick to his/her word) and of benevolence (e.g., My mentor will go out of his/her way to help me). The coefficient alpha for the Integrity/Benevolence composite variable is .94 and the corrected item-total correlations are acceptable.

Retention. Retention was operationalized in two ways. First, turnover intentions were assessed using a single-item measure from Vandenberg and Scarpello (1990). The item asks respondents to indicate the probability that they would choose to leave the healthcare facility for a better job during the next year. Responses were given on a scale of 0 to 100 with 0 indicating they were certain of staying at the healthcare facility and 100 indicating that they were certain they would leave the healthcare facility for a better job within the next year.

Vandenberg and Scarpello (1990) reported an estimated reliability of this single-item measure to be .65. Based on previous research, validity for this one-item measure is supported. For example, in studies using this single-item measure, organizational commitment is predictive of intentions to quit ($r = -.63$; Vandenberg & Scarpello, 1990)

and intentions to quit were predictive of job search behaviors (Vandenberg & McCullin, 1989).

Second, researchers such as Meyer and Herscovitch (2001) emphasize that a primary goal of organizational commitment research is to predict actual voluntary turnover behavior. Thus, twelve months after the initial survey administration, actual turnover data will be collected from the healthcare facility.

Demographics. Respondents were asked to indicate their gender, age, educational level, job classification, and tenure (in years) with the organization.

Control variables. Several control variables were included in this study. A variable that is considered to be significant predictor of organizational commitment is educational attainment (Glisson & Durick, 1988) so respondents were asked to indicate the highest level of education that they had completed. Higgins and Thomas (2001) suggest that greater work experience may influence an employee's inclination toward and opportunities for mentoring relationships. This was controlled for in two ways. Job classification data was requested in order to identify positions with increasing levels of responsibility. Also, tenure with the organization was assessed by asking respondents how long they had been employed at the healthcare facility.

Analyses

Descriptive statistics (means and standard deviations) were calculated using SPSS for each of the measured variables along with the intercorrelations between the variables. Correlations between variables were examined to determine if they were significant and in the expected direction.

To test hypotheses one and four, OLS regression was used. Hypotheses three, seven, and eight were assessed using Baron and Kenny's (1986) procedure for evaluating mediation. Hypotheses five and six were tested for moderating effects using Baron and Kenny's (1986) recommendations for testing for interactions. All hypothesis testing was conducted using SPSS.

To test the fit of the overall conceptual model, data was analyzed via structural equation modeling in MPlus. To assess model fit, several fit indices were calculated in addition to the Pearson chi-square (X^2) statistic since it is sensitive to sample size (Kline, 1998). Evaluation of fit was assessed by the comparative fit index (CFI), the root-mean-squared error of approximation (RMSEA), and the standardized root-mean-square residual (SRMSR) (Kline, 1998; Raykov & Marcoulides, 2006).

CHAPTER FOUR

RESULTS

The purpose of surveying the employees at the healthcare facility was to gain a greater understanding of the relationship between mentoring and retention and the role of intervening variables such as knowledge transfer, affective commitment, and trust. This section will report on the results of the various analyses conducted on the data from the surveys. These analyses include the descriptive statistics of the sample, bivariate correlations between variables, tests of hypotheses, and an evaluation of the overall fit of the conceptual model.

Descriptive Statistics

The descriptive statistics are summarized in Table 1. Included are the means and standard deviations for the full sample of 315 subjects. Of the 315 subjects, 133 indicated that they had a mentor during the past year. The percentage of employees indicating that they have a mentor (42.2%) is similar to that of another mentoring study conducted in a healthcare organization (52.7%, Lankau & Scandura, 2002). As mentioned previously, those subjects who indicated that they did not have a mentor completed the rest of the survey by rating their immediate supervisor.

The first eight variables in Table 1 represent the operationalizations of the variables in the conceptual model. The means of the **Mentoring/Informational** ($M = 3.46$) and the **Mentoring/Interpersonal** ($M = 3.57$) composite variables are above three suggesting that, on average, respondents are receiving some type of mentoring support.

Ratings of **Personal Skill Development** ($M = 4.24$) were highest suggesting that subjects had acquired new skills during the past year. The mean of **Affective Commitment** ($M = 3.90$) indicated that, on average, subjects were emotionally attached to the healthcare organization. This mean was consistent with previous research (e.g., Bozeman & Perrewé, 2001, $M = 3.84$).

On average, evaluations of **Trust** ($M = 3.35$) were the lowest. The mean for the trustworthiness factor of **Ability** ($M = 4.12$) is higher than that for **Integrity / Benevolence** ($M = 3.72$) indicating that subjects rated their mentors/supervisors higher on their knowledge and capabilities than on their fairness or concern towards others.

The mean of 19.93 for **Turnover Intention** suggests that, on average, there is a 20% likelihood of a subject leaving the organization within the next year. The standard deviations for the first seven variables (measured on a 5-point Likert-type scale) are close to one indicating an acceptable amount of variance in the responses.

The three control variables included in this study are listed next in Table 1. **Education** is an ordinal variable with 1 = an education at the high school level or below and 5 = education at the M.D. or Ph.D. level. The mean of 2.15 indicates that, on average, subjects have a degree at the Associates level. **Job Classification** is an ordinal variable that was coded in terms of increasing work responsibility at the healthcare organization with 1 = support staff and 5 = director-level responsibility. The mean of 1.84 indicates that, on average, subjects are responsible for providing direct patient care. The mean of **Tenure in Organization** represents the average number of years that subjects had worked at the healthcare organization ($M = 9.68$) and is comparable to that for all healthcare employees at this facility ($M = 9$).

The average of the last two variables also indicates that the sample is representative of the employees at the healthcare organization. As **Gender** was coded with 1 = female, 88% of subjects were female as compared to 88% of all employees at the healthcare facility. The average **Age** of subjects in the sample ($M = 44.08$) is comparable to that of all healthcare employees at this organization ($M = 43$). Data regarding ethnicity was not collected since 96 % of the healthcare facility's employees are Caucasian with 2 % Latino and the remaining 2% African American, American Indian, or Asian. On the whole, the demographic profile suggests that the sample of 315 subjects is representative of the population of employees at this healthcare facility.

Correlation of Variables

The zero-order correlations among all the variables for the entire sample are also presented in Table 1. The mentoring/informational and mentoring/interpersonal measures are significantly correlated with the other six variables in the conceptual model (i.e., personal skill development, affective commitment, trust, ability, integrity/benevolence, and turnover intentions). Of note is the comparison between mentoring/informational and mentoring/interpersonal for these six variables. The correlations between mentoring/interpersonal and the other variables are consistently higher than those involving mentoring/informational.

The correlations between the mentoring/informational and the mentoring/interpersonal variables and other variables are in the expected direction. The higher the perceptions of mentor support whether informational or interpersonal, for example, the higher the trust in the mentor/supervisor ($r = .59$ and $.71$, respectively, $p \leq .01$). The correlations between mentoring/informational and mentoring/interpersonal and

turnover intentions are also in the expected direction, indicating that as mentor support increases, the likelihood of an employee leaving the healthcare organization decreases ($r = -.30$ and $-.36$, respectively, $p \leq .01$). Similarly, other mentoring researchers have found support for the negative relationship between mentoring and turnover (e.g., Lankau & Scandura, 2002; Payne & Huffman, 2005).

An examination of the correlations between the dependent variables of personal skill development, affective commitment, trust, and turnover intentions indicates a number of significant correlations consistent with past research. For example, the negative relationship between affective commitment and turnover intentions ($r = -.53$, $p \leq .01$) was also found in a mentoring study conducted in public accounting firms (Stallworth, 2003). Also, the correlation between affective commitment and trust ($r = .53$, $p \leq .01$) is comparable to that ($r = .54$, $p \leq .05$) found in a meta-analysis conducted by Colquitt et al. (2007). The correlations in and of themselves are interesting and the relationships they suggest between study variables will be explored further during the tests of the hypotheses.

Comparison of Subjects With Mentors and Subjects Without Mentors

Table 2 presents a comparison of the means and standard deviations between subjects who have mentors and subjects who do not have mentors. This was done to examine the impact of mentoring on the variables of interest. For the first eight variables, the mean differences are in the expected direction. For example, subjects with mentors had higher affective commitment ($M = 4.01$) than subjects without mentors ($M = 3.82$). This is consistent with previous mentoring research such as Stallworth (2003) who reported that accounting employees with mentors were more likely to report higher levels

of affective commitment. The means for turnover intentions in the two groups were also in the expected direction such that it was lower for subjects with mentors ($M = 16.29$) than subjects without mentors ($M = 22.58$). This finding is also consistent with mentoring research (c.f., Payne & Huffman, 2005).

To evaluate if having a mentor was more influential in regards to the dependent variables of knowledge transfer, affective commitment, trust, and retention, t-tests were conducted to determine if there was a significant difference between subjects with a mentor and subjects without a mentor. All investigations were found to be significant in the expected direction.

On average, subjects with mentors reported learning more new skills ($M = 4.33$) than subjects without mentors ($M = 4.17$) ($t = -2.462, p \leq .05$). Subjects with mentors were more committed to the healthcare organization ($M = 4.01$) than subjects without mentors ($M = 3.82$) ($t = -2.442, p \leq .05$). Those with mentors reported higher levels of trust in their mentor ($M = 3.49$) and those without mentors reported lower levels of trust in their supervisors ($M = 3.24$) ($t = -3.711, p \leq .01$). Subjects with mentors indicated lower intentions to quit ($M = 16.30$) than subjects without mentors ($M = 22.60$) ($t = 1.963, p \leq .05$).

The comparison of the means between subjects with mentors versus subjects without mentors as well as the t-tests demonstrate that there is a significant difference between the two groups. This provides justification for conducting tests of the hypotheses on the subsample of subjects with mentors.

Control Variables

The control variables of education, job classification, and tenure in the organization were examined in regards to their influence on the dependent variables of personal skill development, affective commitment, trust, and turnover intentions. The purpose of these analyses was to determine which control variables needed to be included in tests of the hypotheses.

To evaluate the impact of education and job classification on the four dependent variables, one-way ANOVA's were conducted. Only three significant differences were found. There was a significant difference between level of education and turnover intentions such that some groups of employees report significantly lower intentions to quit than others ($F(4,301) = 2.92, p \leq .05$). Likewise, some classifications of employees reported significantly lower turnover intentions than others ($F(3,288) = 3.26, p \leq .05$). There was also a significant relationship between job classification and affective commitment such that some groups of employees reported significantly higher levels of affective commitment ($F(3,290) = 2.94, p \leq .05$).

An examination of the correlations between tenure in organization and the dependent variables of personal skill development, affective commitment, trust, and turnover intentions demonstrated that only the correlation between tenure in organization and turnover intentions was significant ($r = -.22, p \leq .01$). Based on the results of the one-way ANOVA tests and the correlational tests, only the control variables that have a significant impact on the dependent variables will be included in the tests of hypotheses. Thus, when turnover intention is the dependent variable, education, job classification, and tenure in organization will be included as control variables. When affective commitment is the dependent variable, job classification will be included as a control variable.

Tests of Hypotheses

A summary of the hypotheses and the support for findings is provided in Table 3. All of the hypotheses were tested on the subsample of 133 respondents who reported having a mentor during the past year. For those subjects with mentors, support was found for hypotheses one, four, six, and seven suggesting that mentoring has a direct effect on knowledge transfer and affective commitment and that trust is an important component of mentoring relationships.

The test of hypothesis 1 assessed whether the mentoring/informational functions (sponsorship, exposure and visibility, coaching, and challenging assignments) were positively related to knowledge transfer. This hypothesis was tested by regressing personal skill development on the mentoring/informational composite variable in the subsample of employees with mentors (Table 4). Results suggest that the higher the mentor was rated on providing job-specific assistance, the higher the ratings of new skills learned ($\beta = 0.520$, $t = 6.963$, $p \leq .01$), thus hypothesis one was supported.

Hypothesis 2 was not tested because performance data was not collected. The job performance of respondents was unable to be collected by the researcher at this point in time.

The test of hypothesis 3 is to assess whether knowledge transfer from a mentor mediates the relationship between the mentoring/informational provided and intentions to quit. Using the test of mediation recommended by Baron and Kenny (1986), three regression equations were estimated (Table 5). The first step, regressing the mediator of personal skill development on the independent variable of mentoring/informational, was completed in hypothesis 1 and that relationship was found to be significant (Table 5).

In the second step, the dependent variable of turnover intentions was regressed on the independent variable of mentoring/informational and the control variables of education, job classification, and tenure in organization. A significant relationship was found between mentoring/informational and intentions to quit ($\beta = -0.255$, $t = -2.899$, $p \leq .01$).

For the third step, the dependent variable of turnover intentions was regressed on the independent variable of mentoring/informational, the mediator of personal skill development, and the control variables of education, job classification, and tenure in organization. The relationship between intentions to quit and mentoring/informational was significant ($\beta = -0.280$, $t = -2.684$, $p \leq .01$); however, personal skill development became insignificant ($\beta = 0.046$, $t = .450$, $p \geq .05$). Because there is no mediating effect of personal skill development on turnover intentions, hypothesis 3 is not supported.

Support was found for hypothesis 4 in which affective commitment was regressed on the mentoring/interpersonal functions (role modeling, counseling, protection, acceptance and confirmation, and friendship) and the control variable of job classification (Table 6). The effect of mentoring/interpersonal functions on affective commitment was significant ($\beta = 0.51$, $t = 6.58$, $p \leq .01$).

To test hypothesis 5 that affective commitment is a moderator of the relationship between knowledge transfer and retention, Baron and Kenny's (1986) recommended approach was used. An interaction term was created by multiplying affective commitment by personal skill development. Retention was regressed on affective commitment, personal skill development, their interaction, and the control variables of education, job classifications, and tenure in organization (Table 7). Only the main effect

of knowledge transfer ($\beta = 0.71$, $t = 3.05$, $p \leq .01$) was significant. Hypothesis 5 was not supported.

Hypothesis 6 proposed that trust would mediate the relationship between mentoring/informational functions (sponsorship, exposure and visibility, coaching, and challenging assignments) and knowledge transfer. Again, Baron and Kenny's (1986) approach to moderation was used. Trust was multiplied by mentoring/informational to create the interaction term for the regression equation. Knowledge transfer was regressed on mentoring/informational, trust, and their interaction (Table 8). The main effects of mentoring/informational ($\beta = 0.91$, $t = 2.71$, $p \leq .01$) and trust ($\beta = 0.68$, $t = 2.47$, $p \leq .05$) were significant. However, the interaction was not significant ($\beta = -0.78$, $t = -1.55$, $p \geq .05$), thus, hypothesis 6 was not supported.

To test hypothesis 7, the effect of ability on the relationship between the mentoring/informational functions (sponsorship, exposure and visibility, coaching, and challenging assignments) and trust was assessed. Table 9 shows the results for the three regression equations that were estimated (Baron & Kenny, 1986). First, the mediator of ability was regressed on the independent variable of mentoring/informational and this relationship was significant for ($\beta = 0.54$, $t = 7.33$, $p \leq .01$).

In the second step, the dependent variable of trust was regressed on the independent variable of mentoring/informational. This relationship was also significant ($\beta = 0.43$, $t = 5.45$, $p \leq .01$).

Lastly, trust is regressed on mentoring/informational and the mediator of ability. The relationships between trust and mentoring/informational ($\beta = 0.20$, $t = 2.35$, $p \leq .05$) and trust and ability ($\beta = 0.42$, $t = 4.86$, $p \leq .01$) were significant. Because all of the

regression equations held in the predicted direction and the effect of the independent variable (mentoring / informational) is less in the third step than in the second (Baron & Kenny, 1986), ability mediates the relationship between mentoring/informational and trust and hypothesis 7 is supported for both samples. Baron and Kenny (1986) state that full mediation occurs only when the independent variable has no effect on the dependent variable in the third step so ability partially mediates the relationship between mentoring/informational and trust.

In hypothesis 8, integrity and benevolence were proposed to mediate the relationship between the mentoring/interpersonal functions (role modeling, counseling, protection, acceptance and confirmation, and friendship) and trust in mentor. Table 10 shows the results for the mediation effects that were tested (Baron & Kenny, 1986). In the first step, the mediator of integrity/benevolence was regressed on the independent variable of mentoring/interpersonal and this relationship was significant ($\beta = 0.85$, $t = 18.68$, $p \leq .01$). Next, the dependent variable of trust was regressed on the independent variable of mentoring/interpersonal. This relationship was also significant ($\beta = 0.64$, $t = 9.42$, $p \leq .01$). Lastly, trust was regressed on mentoring/interpersonal and the mediator of integrity/benevolence. Only the relationship between trust and integrity/benevolence ($\beta = 0.54$, $t = 4.45$, $p \leq .01$) was significant. Because all of the regression equations held in the predicted direction and the effect of the independent variable (mentoring/interpersonal) is less in the third step than in the second (Baron & Kenny, 1986), integrity/benevolence mediates the relationship between mentoring/interpersonal and trust so hypothesis 8 is supported for both samples. This is an example of full mediation because the independent variable has no effect on the dependent variable in the

third step (Baron & Kenny, 1986), thus, integrity/benevolence is a full mediator of the relationship between mentoring/interpersonal and trust.

Test of Overall Conceptual Model

Structural equation modeling provides a tool for investigating the overall fit of the conceptual model. I began with the model hypothesized in Chapter 2 (see Figure 1). In addition to the structural model, a measurement model was computed. The measurement model included the mentoring/informational and mentoring/interpersonal composite variables as latent variables with 27 indicators. Due to the limited size of the sample of subjects with mentors (133 persons), the other six latent variables in the measurement model were represented by one indicator each. The model did not demonstrate good fit ($X^2 [542] = 1587.72$; CFI = .78; TLI = .76; RMSEA = .12; SRMR = .10).

Supplemental Analyses

Additional analyses were conducted for several reasons. The first set of supplemental analyses was undertaken in an attempt to further explore the characteristics of the sample as a whole. The second set of analyses investigates assumptions about the relationship between mentoring and the factors of trustworthiness. Given that hypotheses 5 and 6 were not supported initially, the third set of supplemental analyses was conducted to explore the impact of the modification of measures on potential effects in the sample.

The first set of supplemental analyses involved tests of the hypotheses on the full sample. An examination of the comparison of means between subjects with mentors and subjects without mentors (Table 2) demonstrated that some mentoring support was provided to those in the non-mentored group ($n = 182$). Those who rated their

supervisors indicated that mentoring support was received though it was somewhat less than that received by subjects with mentors. Because, on average, evidence shows that all respondents received some type of mentoring support, tests of the hypotheses were carried out on the entire sample to determine if the pattern of relationships was the same as that for the subsample of subjects with mentors. A summary of support for the tests of the hypotheses with the full sample is provided in Table 3.

Support for hypothesis 1 was replicated in the entire sample ($\beta = 0.48$, $t = 9.64$, $p \leq .01$; Table 11). Hypothesis 3 was not supported (Table 12). Although the relationship between intentions to quit and mentoring/informational remained significant in the third equation ($\beta = -0.30$, $t = -4.78$, $p \leq .01$), the relationship between intentions to quit and personal skill development was insignificant ($\beta = -0.08$, $t = -1.25$, $p \geq .05$). The relationship between mentoring/interpersonal and affective commitment was significant ($\beta = 0.50$, $t = 9.72$, $p \leq .01$; Table 13) indicating support for hypothesis 4.

Table 14 and 15 provide the results for the supplemental analyses for hypotheses 5 and 6. Hypothesis 5 was not supported since neither of the main effects (knowledge transfer, $\beta = 0.32$, $t = 1.72$, $p \geq .05$; affective commitment, $\beta = -0.24$, $t = -0.92$, $p \geq .05$) nor the interaction ($\beta = -0.50$, $t = -1.31$, $p \geq .05$) were significant. For hypothesis 6, the interaction of mentoring/informational and trust was not significant ($\beta = 0.35$, $t = 1.02$, $p \geq .05$) nor were the main effects (mentoring/informational, $\beta = 0.14$, $t = 0.61$, $p \geq .05$; trust, $\beta = 0.03$, $t = 0.17$, $p \geq .05$). Hypothesis 6 was not supported.

Support was found for partial mediation in the test of hypothesis 7 (Table 16) since the relationship between ability and trust was significant ($\beta = 0.41$, $t = 7.47$, $p \leq .01$) and the relationship between mentoring/informational and trust was significant ($\beta =$

0.32, $t = 5.87$, $p \leq .01$). Similarly, hypothesis 8 was supported (Table 17). The relationship between integrity/benevolence and trust was significant ($\beta = 0.43$, $t = 6.25$, $p \leq .01$) and the relationship between mentoring/interpersonal and trust was significant ($\beta = 0.35$, $t = 5.12$, $p \leq .01$) indicating partial mediation.

Based on these results, support for the tests of the hypotheses in the subsample of subjects with mentors was replicated in the tests of the hypotheses in the entire sample (Table 3). Of note is hypothesis 8 for which support was found in both samples; however, full mediation was supported in the subsample of subjects with mentors and partial mediation in the entire sample. Overall, the effects of mentoring support were consistent across samples.

The second set of supplemental analyses tested the assumption that the factors of trustworthiness exhibited significant, unique relationships with the mentoring/informational and mentoring/interpersonal composite variables. Hypotheses 7 and 8 were tested again in the subsample of those with mentors with one difference. In hypothesis 7, integrity/benevolence was investigated as a mediator of the relationship between mentoring informational and trust. Ability was examined as a mediator of the relationship between mentoring interpersonal and trust in hypothesis 8.

Integrity/benevolence was found to fully mediate the relationship between mentoring informational and trust (Table 18) because integrity/benevolence had a significant relationship with trust ($\beta = 0.68$, $t = 8.46$, $p \leq .01$) and the formerly significant relationship between mentoring/informational and trust became insignificant ($\beta = 0.02$, $t = .24$, $p \geq .05$). A comparison of Table 10 and Table 18 demonstrates that regardless of

the type of mentoring support provided, integrity/benevolence fully mediated the relationship between mentoring and trust.

Ability did not mediate the relationship between mentoring/interpersonal and trust (Table 19). While the relationship between mentoring/interpersonal and trust was significant ($\beta = 0.56$, $t = 5.28$, $p \leq .01$), the relationship between ability and trust was not significant ($\beta = 0.10$, $t = .98$, $p \geq .05$). A comparison of Table 9 and Table 19 suggests that ability has a significant, unique relationship with the mentoring/informational composite variable.

The third set of supplemental analyses evaluated the internal consistency of the affective commitment scale and the trust scale and the potential effects on tests of the hypotheses. As mentioned previously, the affective commitment scale exhibited a coefficient alpha that appeared to be low relative to previous research. An analysis of the affective commitment scale showed that the reverse-coded item #3 exhibited a poor corrected item-total correlation of .174. This item was removed from the affective scale resulting in the coefficient alpha increasing from .84 to .88. Similarly, item #5 in the trust scale had a low corrected item-total correlation of -.018. The trust scale's coefficient alpha increased from .65 to .72 after this item was removed.

The revised version of the affective commitment scale and the trust scale were used in retesting hypotheses in both the subsample of subjects with mentors and the entire sample (Table 20). Overall, support for hypotheses was the same as before except for the tests of hypotheses 5 and 6 in the subsample of subjects with mentors.

For hypothesis 5, the main effect of knowledge transfer on turnover intentions ($\beta = 0.77$, $t = 3.49$, $p \leq .01$) and the interaction of knowledge transfer and affective

commitment ($\beta = -0.99$, $t = -2.09$, $p \leq .05$) are significant (Table 21). The graph of the interaction indicates that the relationship knowledge transfer and turnover intentions is stronger for those subjects with a mentor who report lower affective commitment (Figure 2).

Hypothesis 6 was tested to understand the effect of the interaction between the variables of trust and mentoring/informational on knowledge transfer (Table 22). Both main effects were significant (mentoring/informational, $\beta = 0.90$, $t = 3.22$, $p \leq .01$); trust, $\beta = 0.81$, $t = 3.06$, $p \leq .01$) as well as the interaction ($\beta = -0.90$, $t = -1.98$, $p \leq .05$). A graph of this interaction (Figure 3) indicates that the relationship between mentoring/informational and knowledge transfer was slightly stronger for subjects with mentors who reported lower levels of trust. The analyses conducted with the revised affective commitment and trust scales appear to shed some light on the influence of moderating variables on mentoring processes.

CHAPTER FIVE

DISCUSSION

In today's economy, knowledge is the "essential resource" for organizational productivity (Drucker, 1993, p. 44). Yet, organizations face a dilemma because employees who acquire the knowledge necessary to become more productive organizational members are simultaneously contributing to their professional growth (DeLong, 2004) which facilitates their marketability and potential job mobility (Rousseau & Shperling, 2003, 2004). Since mentoring is viewed as a vehicle for fostering knowledge transfer in organizations (e.g., DeLong, 2004) and has been empirically shown to positively impact employee retention (Payne & Huffman, 2005), an understanding of how mentoring addresses this organizational dilemma is needed.

The purpose of this study was to extend previous research in the fields of mentoring by investigating the impact of mentoring relationships on retention through a dual pathway. Kram (1983, 1985) first proposed this dual mechanism by suggesting that mentors provide both career and psychosocial functions. In providing career-related assistance, a mentor transmits knowledge because of his/her expertise in a particular domain and his/her connections to influential organizational members. The psychosocial support is demonstrated by expressing concern regarding a protégé's welfare. This study is one of the first empirical investigations to more fully examine this dual pathway and the underlying processes through which mentoring may simultaneously harm and benefit an organization's retention efforts.

The idea that mentoring may both hurt and help retention may seem incongruous since results from empirical studies suggest that the receipt of mentoring mitigates

protégés' intentions to quit (e.g., Lankau & Scandura, 2002; Payne & Huffman, 2005). It was not the purpose of this study to challenge the conventional thinking that mentoring positively impacts retention. Rather, the aim of this research was to assist researchers and practitioners in gaining a deeper understanding of how mentoring ultimately benefits retention in an organization even if the knowledge transfer taking place assists a protégé in improving his/her career marketability and potential job mobility. Three key findings emerged that provide a more fine-grained understanding of the process by which mentoring influences retention.

First, the findings from this study provide initial support for the pathway from receipt of career-related informational types of mentoring functions to knowledge transfer between a mentor and protégé and to retention. Protégés who received higher levels of mentoring that conveyed job-related information were more likely to report higher levels of learning and this result was consistent across samples. The age-old premise that mentoring is a vehicle for knowledge transfer between a mentor and a protégé (Stephenson, 1998) was empirically supported. Moreover, receipt of career-related informational types of mentoring had a direct effect on retention.

Second, the supportive interpersonal-type of mentoring appears to operate through a second pathway by fostering higher levels of affective commitment in protégés. This may be because a mentor sets an example by role modeling the norms, behavior, and values necessary for a protégé's success in an organization (Swap, Leonard, Shields, & Abrams, 2001). By relating his/her experiences to a protégé, a mentor assists a protégé in identifying shared values (Kram, 1985; Swap et al., 2001) that foster the protégé's identification with the organization. Supplemental analyses suggested that the higher the

level of protégés' affective commitment, the less likely they were to report intentions to quit even if they had increased their job marketability through knowledge transfer.

Mentoring research that has explored personality attributes of protégés may shed some light on these findings. Protégés exhibiting higher internal locus of control are more likely to initiate mentoring relationships (Turban & Dougherty, 1994). Protégés higher on proactive personality reported receiving greater amounts of mentoring (Wu, Turban, & Cheung, 2007). It is possible that protégés who take initiative in seeking mentoring support may also be more proactive in seeking the transferrable type of knowledge that will assist them in their career mobility. Thus, only when affective commitment to an organization is strong will it mitigate the negative impact of knowledge transfer on retention.

Third, the results suggest that trust is indeed an important component of mentoring relationships and point the way to an understanding of how trust may develop in mentoring relationships. The provision of career-related informational types of mentoring functions was related to assessments of ability. Evaluations of integrity and benevolence were influenced by both career-related informational mentoring and supportive interpersonal mentoring. This suggests that to establish trust based on one's ability, sponsoring and coaching types of behavior are beneficial. However, there did not appear to be a consistent pattern regarding the type of mentoring behaviors that have a stronger influence on integrity and benevolence. Evaluations of the trustworthiness factor of ability are directly related to one's expertise which can be directly identified through coaching and challenging assignment types of behaviors. Assessment of integrity and benevolence are not tied to a particular area of expertise but to observations

of one's actions; thus, such assessments may be based on a variety of behaviors and integrity/benevolence may be influenced by many types of mentoring behaviors.

The effect of mentoring behaviors on trust works through the trustworthiness factors of ability, integrity, and benevolence and this finding was consistent across samples. It suggests the external event of the receipt of mentoring influences an assessment of the mentor/supervisor's ability or integrity/benevolence which, in turn, influences an assessment of the willingness to be vulnerable to that person. Although this finding is not causally interpretable because the design of this study did not permit temporal precedence (Cook & Campbell, 1976), it does highlight the importance of the role of trust in mentoring relationships.

A supplemental analysis of the relationship of trust to knowledge sharing suggested that the relationship between receipt of mentoring and knowledge transfer was stronger for protégés who reported higher levels of trust in their mentor. The conceptualization of trust as the willingness to be vulnerable to another (Mayer et al., 1995) suggests that trust in and of itself may not directly influence knowledge sharing. Rather, a protégé who has limited knowledge is vulnerable to a mentor with more expertise. By itself, trust in the mentor will not promote knowledge sharing between the mentor and protégé. However, the combination of the receipt of mentoring functions along with a willingness to be vulnerable to a mentor's guidance may positively impact knowledge sharing.

Taken together, the findings regarding trust in mentoring relationships may prove beneficial not only for mentoring researchers but also for trust researchers seeking a better understanding of the types of behaviors that foster trust in relationships. Moreover,

the notion that trust may moderate relationships may assist in a more fine-grained analysis of how trust influences relationships between variables.

While theory and research findings from related fields (e.g., team performance, Srivastava et al., 2006) provide support for knowledge transfer as a mediating variable, there was lack of support in this study. In terms of retention, receipt of career-related informational mentoring mattered more than knowledge transfer. A more precise conceptualization of the type of knowledge that is being transferred from the mentor to the protégé may need to be explored. Dymock (1999) reported two types of knowledge that protégés received from mentors: first, a general understanding of an organization's operations and second, specific advice about the job itself. This corresponds to the notion that knowledge can be specific to an organization or transferrable. An understanding of the type of knowledge that a mentor is transferring to a protégé will assist in better understanding the impact of mentoring on organizational retention.

Though knowledge transfer was not found to be a mediating variable in this study, the direction of its effect on retention was in the expected direction in the subsample of protégés; i.e., knowledge transfer was positively related to turnover intentions. This suggests that as protégés learn more, they increase their job marketability and are more likely to consider seeking a job outside their current organization. As theorized, it is possible that the knowledge transfer that occurs in mentoring relationships may be harmful to organizational retention.

By asking respondents to fill out the survey with their supervisor in mind if they could not identify a mentor, this study assisted in a better understanding of the types of mentoring support provided by different individuals. Though mentoring has traditionally

been conceptualized as a dyadic relationship, it may be more important for researchers to understand the mentoring functions being provided rather than attempting to decide if a mentoring relationship exists (Kram, 1985). Lankau and Scandura (2002) also recommend that research place less emphasis on identifying the mentor-protégé dyad and more emphasis on what aspect of developmental relationships assist in knowledge transfer. A comparison of mean differences between protégés and employees without mentors demonstrated that those without mentors still received mentoring support albeit not as much as protégés. Thus, valuable information was gathered that permitted a broader understanding of the mentoring provided and its impact on knowledge transfer and retention. It may behoove researchers to incorporate this approach in the future so a more fine-grained understanding of the effectiveness of mentoring functions can be obtained.

Strengths of Study

There are a number of identifiable strengths related to this study. First, a long-held assumption in mentoring research is that trust is formed in the relationship between a mentor and a protégé (e.g., Kram, 1985). This study is one of the first to empirically examine protégés' perceptions of trust in individuals who provide mentoring functions. Knowledge management researchers have demonstrated the importance of trust in the facilitation of knowledge transfer (e.g., Levin & Cross, 2004) so an incorporation of trust is essential in obtaining a more fine-grained understanding of mentoring processes. In addition, the use of the Mayer et al. (1995) model of trust built upon work by researchers such as Levin and Cross (2004) to better understand the role of the different factors of

trustworthiness in relationships, such as mentoring ones, that emphasize knowledge transfer.

A second strength of this study is the incorporation of research from several distinct yet related fields. Mentoring researchers have called for the direction of research to shift from studying individual-level outcomes to organizational-level outcomes (Wanberg et al., 2003). In order to better develop theory to address this concern, research in the knowledge management, human resources, and organizational behavior fields was examined in order to more fully understand the role mentoring plays in impacting organizational-level outcomes such as retention.

The third is the nature of the sample itself. Healthcare represents the largest industry sector of the United States economy and is projected to create the greatest number of jobs by 2016 (Bureau of Labor Statistics, 2007, 2008). Knowledge workers in science and healthcare, moreover, are part of the “white coat” economy that will drive innovation and economic growth in the future (Kantor, 2006). Healthcare organizations, thus, represent a type of knowledge-based organization that is important to study in order to expand our understanding of phenomena in the work environment.

Similar to Ferlie, Fitzgerald, Wood, and Hawkins (2005), I suggest that the results of a study such as this conducted in a healthcare setting are relevant for organizations engaged in knowledge management strategies. Since knowledge-based organizations as a whole are an expanding sector of the economy (Ferlie et al., 2005) and as mentoring is proposed as vehicle for knowledge sharing in all types of organizations (e.g., DeLong, 2004), an understanding of how mentoring processes affect knowledge transfer and

retention is beneficial to any organization pursuing effective knowledge management practices.

Limitations

In retrospect, the operationalization of knowledge sharing used in this study may not have been the most appropriate representation. In this research study, the measure of personal learning focused, in part, on the acquisition of new skills but did not distinguish between organization-specific knowledge and transferrable knowledge. Transferrable knowledge consists of skills, competencies, and experiences that are useful across employers and increases in this type of knowledge could negatively affect retention (Cappelli, 2008) because employees can use this knowledge to find better job opportunities elsewhere. To more fully capture the notion of knowledge transfer and to clearly capture its effects on retention, a different operationalization that distinguishes between organization-specific and transferrable knowledge may be necessary.

The cross-sectional design of this study precludes causal interpretation of the hypotheses. The condition of temporal precedence is necessary to infer that the influence of the independent variable causes changes in the dependent variable (Cook & Campbell, 1976). It is recommended that future research designs involving retention as a dependent variable incorporate longitudinal data in order to observe the influence of variables such as knowledge sharing on actual turnover in an organization.

In addition, the self-report nature of the survey may raise concern about common source method variance. While the assessment of all study variables with the same method may lead to some degree of variance in responses due simply to method, Spector (2006) suggests that a more complex understanding is needed of monomethod biases.

One recommendation made by Spector (2006) is that internal psychological states may best be measured by a combination of self-reports and other methods that could verify observed relationships between sets of variables. For example, actual turnover data could confirm the noted relationships between knowledge transfer and turnover intentions. Scandura and Williams (2000) suggest that, in mentoring research, efforts at triangulation of data should extend beyond longitudinal study designs to field experimental designs.

Future Research

While the findings in this study provided some insight into mentoring's role regarding retention, more work is needed to understand the intervening mechanisms and to be able to causally interpret observed relationships. A longitudinal study in which observed variables could be measured at different points in time may help researchers to better understand how mentoring influences retention. Trust was demonstrated to be an important aspect of mentoring relationships. With an increasing emphasis on the diversity of the workforce, one area for future research would be to examine trust in mentoring relationships cross-culturally. Another area to consider is how trust impacts mentoring relationships that occur through electronic means of communication, an increasing reality as technology becomes more prominent in the workplace. Also, current research in the mentoring literature is examining concepts such as a mentor's/protégé's commitment to a mentoring relationship or his/her willingness to mentor (e.g., Potrat, Shockley, & Allen, 2009; Wang, Noe, Wang, & Greenberger, 2009). Extending this research by incorporating trust into these models of mentoring processes may assist in better understanding how trust is developed and how it impacts outcomes of mentoring relationships.

Conclusion

Because knowledge is a key resource today (Drucker, 1993), a more systematic understanding of how knowledge is shared in organizations is needed in order for organizations to be able to better manage it (Ipe, 2003). Organizations must understand the types of processes that facilitate effective knowledge transfer between individuals (Ipe, 2003, Becerra-Fernandez & Sabherwal, 2001) while simultaneously retaining knowledge in the organization so it can benefit the organization. This study is one of the few empirical research efforts to shed light on this process.

While it was expected that the supportive mentoring functions would positively impact retention through affective commitment, the informational mentoring functions also had a strong effect. This suggests that the posited dual pathway through which mentoring influences retention was not as distinct as expected and more research is needed to understand the mechanisms through which mentoring influences retention. Results of this study suggest that a focus on mentoring simply as a vehicle to promote knowledge sharing may harm an organization as the more talented employees may “jump ship.” Attention must also be given to understanding the mentoring behavior’s that foster a protégé’s affective commitment so as to mitigate the potentially negative effect of knowledge transfer on retention.

Lastly, this study demonstrated that trust is integral to mentoring relationships as proposed by Kram (1983, 1985). Moreover, higher levels of trust in mentoring relationships may facilitate knowledge transfer. The provision of mentoring functions to protégés in an organization may assist an organization in meeting two critical goals for ongoing effectiveness: knowledge sharing and retention.

REFERENCES

- Abrams, L., Cross, R., Lesser, E., & Levin, D. (2003). Nurturing trust in knowledge intensive work. *The Academy of Management Executive*, 17(4), 1-13.
- Allen, T. A., Eby, L. T., O'Brien, K. E., & Lentz, E. (2008). The state of mentoring research: a qualitative review of current research methods and future research implications. *Journal of Vocational Behavior*, 73(3), 343-357.
- Allen, T. D., Eby, L. T., Poteet, M. L., Lentz, E., & Lima, L. (2004). Career benefits associated with mentoring for protégés: A meta-analysis. *Journal of Applied Psychology*, 89(1), 127-136.
- Almada, P., Carafoli, K., Flattery, J. B., French, D. A., & McNamara, M. (2004). Improving the retention rate of newly graduated nurses. *Journal for Nurses in Staff Development*. 20(6), 268–273.
- Arthur, M. B., & Rousseau, D. M. (1996). Introduction: The boundaryless career as a new employment principle. In M. B. Arthur & D. M. Rousseau (Eds.), *The boundaryless career: A new employment principle for a new organizational era* (pp. 3-20). New York: Oxford University Press.
- Aryee, S., & Chay, Y. W. (1994). An examination of the impact of career-oriented mentoring on work commitment attitudes and career satisfaction among professional and managerial employees. *British Journal of Management*, 5(4), 241-249.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.

Becerra-Fernandez, I., & Sabherwal, R. (2001). Organizational knowledge management: A contingency perspective. *Journal of Management Information Systems*, 18(1), 23-55.

Berta, W. B., & Baker, G. R. (2004). Factors that impact the transfer and retention of best practices for reducing error in hospitals. *Health Care Management Review*, 29(2) 90-97.

Bouquillon, E., Sosik, J., & Lee, D. (2005). It's only a phase: Examining trust, identification and mentoring functions received across the mentoring phases. *Mentoring and Tutoring*, 13(2), 239-258.

Bozeman, D. P., & Perrewé, P. L. (2001). The effect of item content overlap on organizational commitment questionnaire-turnover cognitions relationships. *Journal of Applied Psychology*, 86(1), 161-173.

Bretz, R. D., Boudreau, J. W., & Judge, T. A. (1994). Job search behavior of employed managers. *Personnel Psychology*, 47, 275-301.

Buckman, R. H. (1998). Knowledge sharing at Buckman Labs. *Journal of Business Strategy*, 19(1), 11-15.

Bureau of Labor Statistics, U.S. Department of Labor. (2007, December 4). *Table 1. Employment by major industry sector, 1996, 2006, and projected 2016*. Retrieved April 7, 2009, from <http://www.bls.gov/news.release/ecopro.t01.htm>

Bureau of Labor Statistics, U.S. Department of Labor. (2008, March 12). *Career guide to industries: Health care*. Retrieved April 7, 2009, from <http://www.bls.gov/oco/cg/cgs035.htm>

Bureau of Labor Statistics, U.S. Department of Labor. (2009, January 28). *Mass layoffs in December 2008 and annual totals for 2008*. Retrieved February 11, 2009, from http://www.bls.gov/news.release/archives/mmls_01282009.pdf

Cappelli, P. (2003). Will there really be a labor shortage? *Organizational Dynamics*, 32(3), 221-233.

Cappelli, P. (2008). *Talent on demand: Managing talent in an age of uncertainty*. Boston, MA: Harvard Business Press.

Cascio, W. F., & Aguinis, H. (2008). Staffing twenty-first-century organizations. *The Academy of Management Annals*, 2(1), 133-165.

Chao, G., Walz, P., & Gardner, P. (1992). Formal and informal mentorships: A comparison on mentoring functions and contrast with nonmentored counterparts. *Personnel Psychology*, 45, 619-636.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences, second edition*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, W. M. & Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.

Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92(4), 909-927.

Cook, T. D., & Campbell, D. T. (1976). The design and conduct of quasi-experiments and true experiments in field settings. In: M. D. Dunnette (ed.), *Handbook of Industrial and Organizational Psychology*, (pp. 223-326). Chicago, Ill: Rand McNally College Publishing Co.

Crocitto, M., Sullivan, S. E., & Carraher, S. M. (2005). Global mentoring as a means of career development and knowledge creation: A learning based framework and agenda for future research. *Career Development International*, 10(6/7), 522-535.

Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult: How teenagers prepare for the world of work*. New York, NY: Basic Books.

Currall, S. C. & Inkpen, A. C. (2006). On the complexity of organizational trust: A multi-level co-evolutionary perspective and guidelines for future research. In A. Zaheer & R. Bachmann (Eds.), *The Handbook of Trust Research* (pp. 235-246). Cheltenham, United Kingdom: Edward Elgar.

Davis, J. H., Schoorman, F. D., Mayer, R. C., & Tan, H. H. (2000). The trusted general manager and business unit performance: Empirical evidence of a competitive advantage. *Strategic Management Journal*, 21(5), 563-576.

Davenport, T. & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston, MA: Harvard Business School Press.

de Janasz, S. C., Sullivan, S. E., & Whiting, V. (2003). Mentor networks and career success: Lessons for turbulent times. *Academy of Management Executive*, 17(4), 78-91.

DeLong, D. W. (2004). *Lost knowledge: Confronting the threat of an aging workforce*. Oxford: Oxford University Press.

Dess, G. G., & Shaw, J. D. (2001). Voluntary turnover, social capital, and organizational performance. *Academy of Management Review*, 26(3): 446-456.

- Dirks, K. T. & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87*(4), 611-628.
- Drucker, P. F. (1993). *Post-capitalist society*. New York, NY: HarperBusiness.
- Dymock, D. (1999). Blind date: A case study of mentoring as workplace learning. *Journal of Workplace Learning, 11*(8), 312–317.
- Eby, L. T., & Allen, T. D. (2008). Moving toward interdisciplinary dialogue in mentoring scholarship: An introduction to the special issue. *Journal of Vocational Behavior, 72*(2), 159-167.
- Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2008). Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. *Journal of Vocational Behavior, 72*(2), 254-267.
- Eby, L. T., Rhodes, J. E., & Allen, T. D. (2007). Definition and evolution of mentoring. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 7-20). Malden, MA: Blackwell Publishing.
- Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*, 350-383.
- Edmondson, A. C., Bohmer, R. M., & Pisano, G. P. (2001). Disrupted routines: Team learning and new technology implementation in hospitals. *Administrative Science Quarterly, 46*, 685-716.
- Edmondson, A. C., & McManus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review, 32*(4), 1155-1179.

Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology, 87*(3), 565-573.

Fayol, H. (1949). *General and industrial management*. London: Isaac Pitman.

Fénelon, François de Salignac de la Mothe, (1699). *Les Aventures de Télémaque, fils d'Ulysse*.

Ferlie, E., Fitzgerald, L., Wood, M., & Hawkins, C. (2005). The nonspread of innovations: The mediating role of professionals. *Academy of Management Journal, 48*, 117–134.

Finkelstein, L. M., & Poteet, M. L. (2007). Best practices for workplace formal mentoring programs. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 345-367). Malden, MA: Blackwell Publishing.

Firtko, A., Stewart, R., & Knox, N. (2005). Understanding mentorship and preceptorship: Clarifying the quagmire. *Contemporary Nurse, 19*(1/2), 32-40.

Ford, D.P. (2003). Trust and knowledge management: The seeds of success. In C. W. Holsapple (Ed.), *Handbook on knowledge management 1: Knowledge Matters* (pp. 553-576). Berlin, Germany: Springer-Verlag.

Frank, F. D., Finnegan, R. P., Taylor, C. R. (2004). The race for talent: Retaining and engaging workers in the 21st century. *Human Resource Planning, 27*(3), 12-25.

Gallupe, B. (2001). Knowledge management systems: Surveying the landscape. *International Journal of Management Reviews, 3*(1), 61-77.

Garbin, C. P. (2008). Power, effect size & sample size. Retrieved December 20, 2008, from <http://psych.unl.edu/psycrs/statpage/mrpower.pdf>

Gibson, C. B., Waller, M. J., Carpenter, M., and Conte, J. (2007). Antecedents, consequences, and moderators of time perspective heterogeneity for knowledge management in MNO teams. *Journal of Organizational Behavior*, 28, 1005-1024.

Glisson, C. & Durick, M. (1988). Predictors of job satisfaction and organizational commitment in human service organizations. *Administrative Science Quarterly*, 33, 61-81.

Gomez-Mejia, L. R., Balkin, D. B., & Milkovich, G. T. (1990). Rethinking your rewards for technical employees. *Organizational Dynamics*, 18, 62-75.

Greer, C. R. (2001). *Strategic human resource management: A general managerial approach* (2nd edition). Upper Saddle River, NJ: Prentice Hall.

Griffeth, R. W. & Hom, P. W. (2001). *Retaining valued employees*. Thousand Oaks, CA: Sage Publications, Inc.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the millennium. *Journal of Management*, 26, 463-488.

Grover, V. & Davenport, T. H. (2001). General perspectives on knowledge management: fostering a research agenda. *Journal of Management Information Systems*, 18(1), 5-21.

Haggard, D. L., Turban, D., & Dougherty, T. W. (2008, August). *Who is a mentor? An in-depth examination of the way mentoring is defined*. Paper presented at the annual meeting of the Academy of Management, Anaheim, CA.

Hall, M., & Smith, D. (in press). Mentoring and turnover intentions in public accounting. *Accounting, Organizations and Society*.

Hansen, M. T. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative Science Quarterly*, 44, 82-111.

Hezlett, S. A., & Gibson, S. K. (2007). Linking mentoring and social capital: Implications for career and organization development. *Advances in Developing Human Resources*, 9(3), 384-412.

Higgins, M. C., & Kram, K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *Academy of Management Review*, 26(2), 264-288.

Higgins, M. C., & Thomas, D. A. (2001). Constellations and careers: Toward understanding the effects of multiple developmental relationships. *Journal of Organizational Behavior*, 22, 223-247.

Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). Turnover and retention research: A glance at the past, a closer review of the present, and a venture into the future. *The Academy of Management Annals*, 2(1), 231-274.

Hom, P. W., & Griffeth, R. W. (1995). *Employee turnover*. Cincinnati, OH: South-Western.

Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 2, 337-359.

Jacoby, S. M. (1999). Are career jobs headed for extinction? *California Management Review*, 42(1), 123-145.

Joiner, T., Bartram, T., & Garreffa, T. (2004). The effects of mentoring on perceived career success, commitment and turnover intentions. *The Journal of American Academy of Business*, 5(1/2), 163-170.

Kammeyer-Mueller, J. D. & Wanberg, C. R. (2003). Unwrapping the organizational entry process: Disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology*, 88(5), 779-794.

Kammeyer-Mueller, J. D., Wanberg, C. R., Glomb, T. M., & Ahlburg, D. (2005). The role of temporal shifts in turnover processes: It's about time. *Journal of Applied Psychology*, 90, 644-58.

Kanter, R. M. (2006). From white collar to white coat. *CommonWealth*, 11(3), 52-57.

Kleinman, G., Siegal, P. H., & Eckstein, C. (2001). Mentoring & learning: The case of CPA firms. *Leadership and Organization Development Journal*, 22(1), 22-33.

Kline, R. B. (1998). Principles and practice of structural equation modeling. New York, NY: Guilford.

Knaub, J. (2007, July 30). Turning crisis into opportunity — Challenges facing radiology in the 21st century. *Radiology Today*, 8(15), 10.

Kowtha, N. R., & Tan, T. W. S. (2008). Mediating role of knowledge in the socialization of new professionals: An exploratory study. Paper presented at the annual meeting of the Academy of Management, Anaheim, CA.

Kram, K. E. (1983). Phases of the mentor relationship. *Academy of Management Journal*, 26(4), 608-625.

Kram, K.E. (1985). *Mentoring at work: Developmental relationships in organizational life*. Glenview, IL: Scott, Foresman and Company.

Lankau, M. J., & Scandura, T. A. (2002). An investigation of personal learning in mentoring relationships: Content, antecedents, and consequences. *Academy of Management Journal*, 45(4), 779-790.

Lankau, M. J., & Scandura, T. A. (2007). Mentoring as a forum for personal learning. In B. R. Ragins & K. E. Kram (Eds.), *The handbook of mentoring at work: Theory, research, and practice*. (pp. 95-122). Thousand Oaks, CA: Sage Publications, Inc.

Levin, D. Z., & Cross, R. (2004). The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Management Science*, 50(11), 1477-1490.

Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). *The seasons of a man's life*. New York, NY: Ballantine Books.

Liang, B., Brogan, D., Spencer, R., & Corral, M. (2008). Youth mentoring relationships across three developmental periods: A qualitative analysis. *Journal of Vocational Behavior*, 72, 168-182.

Livnat, Y. (2004). On the nature of benevolence. *Journal of Social Philosophy*, 35(2), 304-317.

Maertz, C. P., & Campion, M. A. (1998). 25 years of voluntary turnover research: A review and critique. *International Review of Industrial and Organizational Psychology*, 13, 49-81.

Maertz, C. P., & Griffeth, R. W., Campbell, N. S., & Allen, D. G. (2007). The effects of perceived organizational support and perceived supervisor support on employee turnover. *Journal of Organizational Behavior, 29*, 1059-1075.

Malos, S. B., & Campion, M. A. (1995). An options-based model of career mobility in professional service firms. *Academy of Management Review, 20*, 611-644.

Malos, S. B., & Campion, M. A. (2000). Human resource strategy and career mobility in professional service firms: A test of an options-based model. *Academy of Management Journal, 43*(4), 749-760.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science, 2*(1), 71-87.

Mayer, R. C., & Davis, J. H. (1999). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology, 84*(1), 123-136.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*(3), 709-734.

Mayer, R. C. & Gavin, M. B. (2005). Trust in management and performance: Who minds the shop while the employees watch the boss? *Academy of Management Journal, 48*(5), 874-888.

Mayer, R. C., & Schoorman, F. D. (1998). Differentiating antecedents of organizational commitment: A test of March and Simon's model. *Journal of Organizational Behavior, 19*, 15-28.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*, 61-89.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage Publications.

Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review, 11*, 299-326.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior, 61*(1), 20-52.

Miller, E. J. (2007, April). The coming physician shortage: The problem and policy options. Paper presented at the 2007 meeting of the Midwest Political Science Association Conference, Chicago, IL.

Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal, 44*, 1102-1121

Mitchell, T. R., & Lee, T. W. (2001). The unfolding model of voluntary turnover and job embeddedness: Foundations for a comprehensive theory of attachment. *Research in Organizational Behavior, 23*, 189-246.

Moberg, D. J., & Velasquez, M. (2004). The ethics of mentoring. *Business Ethics Quarterly, 14*, 95-122.

Mossholder, K. W., Setton, R. P., & Henagan, S. C. (2005). A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors. *Academy of Management Journal, 48*, 607-618.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organizational linkages: The psychology of commitment, absenteeism, and turnover*. New York, NY: Academic Press.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, *14*, 224-247.

Mullen, E. J., & Noe, R. A. (1999). The mentoring information exchange: When do mentors seek information from their protégés? *Journal of Organizational Behavior*, *20*, 233-242.

Murphy, K. R., & Myers, B. (1998). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests*. Mahwah, NJ: Lawrence Erlbaum Associates.

Nelson, K. M., & Coopridge, J. G. (1996). The contribution of shared knowledge to IT group performance. *MIS Quarterly*, *20*(4), 409-432.

Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, *27*, 941-966.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organizational Science*, *5*(1), 14-37.

Nonaka, I. & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. NY: Oxford University Press

Nonaka, I., Toyama, R., & Konno, N. (2001). SECI, Ba and leadership: A unified model of dynamic knowledge creation. In I. Nonaka and D.J. Teece (Eds.), *Managing industrial knowledge* (pp. 13-43). London: Sage Publications.

Noe, R. A., Greenberger, D. B., & Wang, S. (2002). Mentoring: What we know and where we might go. *Research in Personnel and Human Resources Management*, 21, 129-173.

Orpen, C. (1997). The effects of formal mentoring on employee work motivation, organizational commitment and job performance. *The Learning Organization*, 4(2), 53-60.

Payne, S. C., & Huffman, A. H. (2005). A longitudinal examination of the influence of mentoring on organizational commitment and turnover. *Academy of Management Journal*, 48(1), 158-168.

Polanyi, M. (1966). *The Tacit Dimension*. Garden City, NY: Doubleday & Company, Inc.

Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5), 603-609.

Poteat, L. F., Shockley, K. M., & Allen, T. D. (2009). Mentor-protégé commitment fit and relationship satisfaction in academic mentoring. *Journal of Vocational Behavior*, 74(3), 332-337.

Quigley, N. R., Tesluk, P., Locke, E., & Bartol, K. (2007). A multilevel investigation of motivational mechanisms underlying knowledge sharing and performance. *Organizational Science*, 18(1), 71-88.

Raabe, B., & Beehr, T. A. (2003). Formal mentoring versus supervisor and coworker relationships: Differences in perception and impact. *Journal of Organizational Behavior*, 24, 271-293.

Ragins, B. R., & Cotton, J. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology, 84*(4), 529-550.

Ragins, B. R., & McFarlin, D. B. (1990). Perceptions of mentor roles in cross-gender mentoring relationships. *Journal of Vocational Behavior, 37*(3), 321-339.

Ramaswami, A., & Dreher, G. F. (2007). The benefits associated with workplace mentoring relationships. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 211-231). Malden, MA: Blackwell Publishing.

Ranft, A. L., & Lord, M. D. (2000). Acquiring new knowledge: The role of retaining human capital in acquisitions of high-tech firms. *The Journal of High Technology Management Research, 11*(2), 295-319.

Raykov, T., & Marcoulides, G. A. (2006). *A first course in structural equation modeling* 2nd edition. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organizational support. *Journal of Applied Psychology, 86*(5), 825-836.

Rigsby, J., Siegal, P., & Spiceland, J. (1998). Mentoring among management service professionals: An adaptive mechanism to cope with rapid corporate change. *Managerial Journal, 13*(2), 107-116.

Roberts, A. (1999, November). Homer's Mentor: Duties fulfilled or misconstrued? *History of Education Journal, 81-90*.

- Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly, 41*, 574-599.
- Robinson, S. L., Kraatz, M. S., & Rousseau, D. M. (1994). Changing obligations and the psychological contract: A longitudinal study. *Academy of Management Journal, 37*(1), 137-152.
- Roche, G. R. (1979). Much ado about mentors. *Harvard Business Review, 57*, 14-18.
- Rousseau, D. M., & Shperling, Z. (2003). Pieces of the action: Ownership and the changing employment relationship. *Academy of Management Review, 28*(4), 553-570.
- Rousseau, D. M., & Shperling, Z. (2004). Ownership and the changing employment relationship: Why stylized notions of labor no longer generally apply--A reply to Zardkoohi and Paetzold. *Academy of Management Review, 29*(4), 562-569
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review, 23*(3), 393-404.
- Scandura, T. A., & Pellegrini, E. K. (2007). Workplace mentoring: Theoretical approaches and methodological issues. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 71-91). Malden, MA: Blackwell Publishing.
- Scandura, T. A., & Williams, E. A. (2000). Research methodology in management: Current practices, trends, and implications for future research. *The Academy of Management Journal, 43*(6), 1248-1264.

Schoorman, F. D., & Ballinger, G. A. (2006). Leadership, trust and client service in veterinary hospitals. Working paper, Purdue University, West Lafayette, IN.

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (1996). Organizational trust: Philosophical perspectives and conceptual definitions. *Academy of Management Review*, *21*, 337–340.

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management Review*, *32*(2), 344-354.

Simon, J. L. (1969). *Basic research methods in social science: The art of empirical investigation*. New York, NY: Random House, Inc.

Snedecor, G. W., & Cochran, W. G. (1980). *Statistical methods, seventh edition*. Ames, IA: The Iowa State University Press.

Sosik, J. J., Lee, D., & Bouquillon, E. A. (2005). Context and mentoring: Examining formal and informal relationships in high tech firms and K-12 schools. *Journal of Leadership and Organizational Studies*, *12*(2), 94-108.

Spector, P.E. (2006). Method variance in organizational research, truth or urban legend? *Organizational Research Methods*, *9*, 221–32.

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy and performance. *Academy of Management Journal*, *49*(6), 1239–1251.

Stallworth, L. (2003). Mentoring, organizational commitment and intentions to leave public accounting. *Managerial Auditing Journal*, *18*(5), 405-418.

- Stephenson, K. (1998). What knowledge tears apart, networks make whole. *Internal Communication Focus*, 36. Retrieved December 3, 2008 from <http://www.netform.com/html/icf.pdf>
- Swap, W., Leonard, D., Shields, M., & Abrams, L. (2001). Using mentoring and storytelling to transfer knowledge in the workplace. *Journal of Management Information Systems*, 18(1), 95-114.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17, 27-43
- Szulanski, G., Cappetta, R., & Jensen, R. J. (2004). When and how trustworthiness matters: Knowledge transfer and the moderating effect of casual ambiguity. *Organization Science*, 15(5), 600-613.
- Thomas, D., & Higgins, M. (1996). Mentoring and the boundaryless career: Lessons from the minority experience. In M. B. Arthur & D. M. Rousseau (Eds.), *The boundaryless career: A new employment principle for a new organizational era* (pp. 268-281). New York: Oxford University Press.
- Trevor, C. O. (2001). Interactions among actual ease-of-movement determinants and job satisfaction in the prediction of voluntary turnover. *Academy of Management Journal*, 44(4), 621-638.
- Turban, D. B., & Dougherty, T. W. (1994). Role of protégé personality in receipt of mentoring and career success. *Academy of Management Journal*, 37, 688-702.
- Underhill, C. M. (2006). The effectiveness of mentoring programs in corporate settings: A meta-analytical review of the literature. *Journal of Vocational Behavior*, 68, 292-307.

Vandenberg, R. J., & McCullin, R. S. (1989). A longitudinal evaluation of the impact of two bases of psychological attachment on turnover attitudes and behavior. In F. Hoy (Ed.), *Best Paper Proceedings of the Academy of Management*, (pp. 234-238). Washington, DC: Academy of Management.

Vandenberg, R. J., & Scarpello, V. (1990). The matching model: An examination of the processes underlying realistic job previews. *Journal of Applied Psychology*, 75(1), 60-67.

von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling knowledge creation: How to unlock the mystery of tacit knowledge and release the power of innovation*. New York, NY: Oxford University Press.

Wanberg, C., Kammeyer-Mueller, J., & Marchese, M. (2006). Mentor and protege predictors and outcomes of mentoring in a formal mentoring program. *Journal of Vocational Behavior*, 69, 410-423.

Wanberg, C. R., Welsh, E. T., & Hezlett, S. A. (2003) Mentoring research: A review and dynamic process model. *Research in Personnel and Human Resources Management*, 22, 39-124.

Wang, S., Noe, R. A., Wang, Z. M., & Greenberger, D. B. (2009). What affects willingness to mentor in the future? An investigation of attachment styles and mentoring experiences *Journal of Vocational Behavior*, 74(3), 245-256.

Wassener, B. (2009, January 30). Japan's latest woes include layoffs at NEC. *The New York Times*. Retrieved February 11, 2009, from <http://www.nytimes.com/2009/01/31/business/worldbusiness/31honda.html>

Westaby, J. D. (2003). The integrative reason model and employee turnover: New links in behavioral intention models. Paper presented at the annual meeting of the Academy of Management, Seattle, WA.

Wu, S. Y., Turban, D. B., & Cheung, Y. H. (2007). Examining the antecedents and consequences of mentoring relationships. *Academy of Management Proceedings*, 1-6.

Young, A. M., & Perrewé, P. L. (2000). The exchange relationship between mentors and protégés: The development of a framework. *Human Resource Management Review*, 10(2), 177-209.

Table 1

Descriptive Statistics for Measured Variables ^a

	Min	Max	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	
1. Mntr/Informational	1.00	5.00	3.46	.89	(.95)												
2. Mntr/Interpersonal	1.00	5.00	3.57	.94	.84	(.96)											
3. Personal Skill Dev.	1.00	5.00	4.24	.60	.48	.49	(.87)										
4. AC	1.67	5.00	3.90	.69	.48	.50	.54	(.84)									
5. Trust	1.29	5.00	3.35	.61	.59	.71	.41	.53	(.65)								
6. Ability	1.00	5.00	4.12	1.08	.65	.76	.41	.49	.62	(.96)							
7. Integrity/Benevolence	1.00	5.00	3.72	1.07	.70	.84	.41	.51	.73	.79	(.94)						
8. Turnover Intentions	0.00	100.00	19.93	28.50	-.30	-.36	-.18	-.53	-.32	-.38	-.36						
9. Education	1.00	5.00	2.15	.88	.06	.06	.11	.02	.01	.01	.07	.16					
10. Job Classification	1.00	4.00	1.84	.73	.13	.07	.04	.05	.11	.03	.11	.05	.38				
11. Tenure in Organiz.	0.08	38.00	9.68	8.55	-.02	-.01	-.01	.07	.06	-.01	.01	-.22	-.01	.13			
12. Gender	0.00	1.00	.88	.32	.02	.05	.04	-.02	-.02	-.01	-.02	-.03	-.12	-.17	.05		
13. Age	19.00	74.00	44.08	12.60	-.05	-.04	-.09	.17	.03	-.04	.02	-.22	-.14	-.07	.49	-.15	

^a n = 315 for all variables. All correlations $\geq .12$ are significant at $p \leq .05$. Coefficient alphas are on the diagonal in parentheses.

Table 2

Comparison of Means and Standard Deviations for Employees with Mentors and Employees without Mentors

	<u>With mentors</u>		<u>Without mentors</u>	
	Mean	s.d	Mean	s.d.
1. Mntr/Informational	3.81	.80	3.20	.87
2. Mntr/Interpersonal	3.95	.80	3.30	.94
3. Personal Skill Dev.	4.33	.62	4.17	.57
4. AC	4.01	.70	3.82	.67
5. Trust	3.49	.58	3.24	.61
6. Ability	4.47	.91	3.87	1.12
7. Integrity/Benevolence	4.15	.91	3.41	1.08
8. Turnover Intentions	16.29	26.66	22.58	29.56
9. Education	2.26	.91	2.07	.85
10. Job Classification	1.93	.73	1.77	.73
11. Tenure in Organiz.	8.79	7.87	10.32	8.98
12. Gender	.90	.30	.87	.34
13. Age	42.22	12.62	45.43	12.46

Table 3

Summary of Hypotheses and Support for Findings

	Employees with Mentors	Full Sample
1. The mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments will be positively related to knowledge transfer.	Yes	Yes
2. Knowledge transfer will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and performance.	Not tested	Not tested
3. Knowledge transfer will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and retention.	No	No
4. The mentoring functions of role modeling, counseling, protection, acceptance and confirmation, and friendship will be positively related to affective commitment.	Yes	Yes
5. Affective commitment will moderate the relationship between knowledge transfer and retention.	No	No
6. Trust in mentor will moderate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and knowledge transfer.	No	No
7. Ability will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and trust in mentor.	Yes (partial)	Yes (partial)
8. Integrity and benevolence will mediate the relationship between the mentoring functions of role modeling, counseling, protection, acceptance and confirmation, and friendship and trust in mentor.	Yes (full)	Yes (partial)

Table 4					
Regression of Knowledge Transfer on Mentoring/Informational					
Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
Mentoring / Informational	.40	.06	.52	6.96**	R ² = .270 Adj. R ² = .265
Intercept	2.80	.23		12.45**	F(1, 131) = 48.49**

* p < .05
**p < .01

Table 5

Knowledge Transfer as a Mediator of the Relationship between
Mentoring/Informational and Retention

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
<i>DV-Personal Skill Development</i>					
Mentoring / Informational	.40	.06	.52	6.96**	R ² = .270 Adj. R ² = .265 F(1, 131) = 48.49**
Intercept	2.80	.23		12.45**	
<i>DV-Turnover Intentions</i>					
Education	5.46	2.62	.19	2.09*	R ² = .123 Adj. R ² = .093 F(4, 117) = 4.092**
Job Classification	1.68	3.34	.05	.50	
Tenure in organization	-.48	.29	-.15	-1.67	
Mentoring / Informational	-8.28	2.86	-.26	-2.90**	
Intercept	35.91	12.51		2.87**	
<i>DV-Turnover Intentions</i>					
Education	5.33	2.64	.19	2.02*	R ² = .124 Adj. R ² = .086 F(5, 116) = 3.292**
Job Classification	1.79	3.36	.05	.53	
Tenure in organization	-.47	.29	-.15	-1.65	
Mentoring / Informational	-9.09	3.39	-.28	-2.68**	
Personal Skill Development	1.91	4.25	.05	.45	
Intercept	30.74	17.00		1.81	

* p < .05

**p < .01

Table 6					
Regression of Affective Commitment on Mentoring/Interpersonal					
Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
Job Classification	.09	.07	.09	1.22	R ² = .268 Adj. R ² = .256 F(2, 123) = 22.46**
Mentoring / Interpersonal	.45	.07	.51	6.58**	
Intercept	2.06	.31		5.88**	

* p < .05

**p < .01

Table 7

Affective Commitment as a Moderator of the Relationship between
Knowledge Transfer and Turnover Intentions

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
Education	3.55	2.28	.13	1.56	$R^2 = .367$ Adj. $R^2 = .334$ $F(6, 115) =$ 11.11^{**}
Job Classification	2.99	2.85	.09	1.05	
Tenure in organization	-.46	.25	-.14	-1.88	
Personal Skill Development	29.12	9.56	.71	3.05**	
Affective Commitment	-3.63	12.45	-.10	-.29	
Interaction	-5.08	2.80	-.89	-1.82	
Intercept	-15.84	38.90		-.41	

* $p < .05$

** $p < .01$

Table 8

Trust as a Moderator of the Relationship between
Mentoring/Informational and Knowledge Transfer

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
Mentoring / Informational	.70	.26	.91	2.71**	R ² = .343 Adj. R ² = .328 F(3, 129) = 22.45**
Trust	.73	.30	.68	2.47*	
Interaction	-.12	.08	-.78	-1.55	
Intercept	.70	.96		.73	

* p < .05

**p < .01

Table 9

Ability as a Mediator of the Relationship between
Mentoring/Informational and Trust

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
<i>DV-Ability</i>					
Mentoring / Informational	.61	.08	.54	7.33**	R ² = .291 Adj. R ² = .285
Intercept	2.13	.33		6.53**	F(1, 131) = 53.69**
<i>DV-Trust</i>					
Mentoring / Informational	.31	.06	.43	5.45**	R ² = .185 Adj. R ² = .179
Intercept	2.31	.22		10.40**	F(1, 131) = 29.70**
<i>DV-Trust</i>					
Mentoring / Informational	.15	.06	.20	2.35*	R ² = .310 Adj. R ² = .300
Ability	.27	.06	.42	4.86**	F(2, 130) = 29.23**
Intercept	1.74	.24		7.37**	

* p < .05

**p < .01

Table 10

Integrity/Benevolence as a Mediator of the Relationship between
Mentoring/Interpersonal and Trust

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
<i>DV-Integrity/Benevolence</i>					
Mentoring / Interpersonal	.98	.05	.85	18.68**	R ² = .727 Adj. R ² = .725
Intercept	.29	.21		1.36	F(1, 131) = 348.93**
<i>DV-Trust</i>					
Mentoring / Interpersonal	.46	.05	.64	9.42**	R ² = .404 Adj. R ² = .399
Intercept	1.66	.20		8.39**	F(1, 131) = 88.66**
<i>DV-Trust</i>					
Mentoring / Interpersonal	.13	.09	.18	1.47	R ² = .482 Adj. R ² = .474
Integrity / Benevolence	.34	.08	.54	4.45**	F(2, 130) = 60.58**
Intercept	1.56	.19		8.38**	

* p < .05

**p < .01

Table 11

Regression of Knowledge Transfer on Mentoring/Informational

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
Mentoring / Informational	.32	.03	.48	9.64**	$R^2 = .229$ Adj. $R^2 = .227$
Intercept	3.13	.12		26.23**	$F(1,312) = 92.87^{**}$

* $p < .05$ ** $p < .01$

Table 12

Knowledge Transfer as a Mediator of the Relationship between
Mentoring/Informational and Retention

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
<i>DV-Personal Skill Development</i>					
Mentoring / Informational	.32	.03	.48	9.64**	R ² = .229 Adj. R ² = .227 F(1,312) = 92.87**
Intercept	3.13	.12		26.23**	
<i>DV-Turnover Intentions</i>					
Education	4.31	1.83	.14	2.36*	R ² = .179 Adj. R ² = .168 F(4,281) = 15.36**
Job Classification	2.52	2.24	.07	1.12	
Tenure in organization	-.75	.18	-.23	-4.22**	
Mentoring / Informational	-10.68	1.73	-.34	-6.17**	
Intercept	49.48	7.37		6.72**	
<i>DV-Turnover Intentions</i>					
Education	4.52	1.84	.15	2.46*	R ² = .181 Adj. R ² = .166 F(5,279) = 12.33**
Job Classification	2.33	2.25	.06	1.04	
Tenure in organization	-.74	.18	-.23	-4.18**	
Mentoring / Informational	-9.45	1.98	-.30	-4.78**	
Personal Skill Development	-3.60	2.89	-.08	-1.25	
Intercept	60.26	11.46		5.26**	

* p < .05

**p < .01

Table 13

Regression of Affective Commitment on Mentoring/Interpersonal

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
Job Classification	.02	.05	.02	.32	$R^2 = .247$ Adj. $R^2 = .242$ $F(2,291) = 47.71^{**}$
Mentoring / Interpersonal	.36	.04	.50	9.72**	
Intercept	2.57	.16		16.18**	

* $p < .05$ ** $p < .01$

Table 14

Affective Commitment as a Moderator of the Relationship between Knowledge Transfer and Turnover Intentions

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
Education	4.25	1.66	.14	2.56*	$R^2 = .339$ $\text{Adj. } R^2 = .325$ $F(6,278) = 23.79^{**}$
Job Classification	1.59	2.00	.04	.795	
Tenure in organization	-.62	.16	-.19	-3.82**	
Personal Skill Development	14.84	8.65	.32	1.72	
Affective Commitment	-9.64	10.45	-.24	-.92	
Interaction	-3.14	2.40	-.50	-1.31	
Intercept	40.24	35.73		1.13	

* $p < .05$

** $p < .01$

Table 15

Trust as a Moderator of the Relationship between Mentoring/Informational and Knowledge Transfer

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
Mentoring / Informational	.09	.15	.14	.614	$R^2 = .256$ Adj. $R^2 = .249$ $F(3,310) = 35.59^{**}$
Trust	.03	.17	.03	.17	
Interaction	.05	.05	.35	1.02	
Intercept	3.25	.52		6.25**	

* $p < .05$

** $p < .01$

Table 16

Ability as a Mediator of the Relationship between Mentoring/Informational and Trust

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
<i>DV-Ability</i>					
Mentoring / Informational	.78	.05	.65	14.92**	R ² = .416
Intercept	1.43	.19		7.65**	Adj. R ² = .414
					F(1,313) = 222.52**
<i>DV-Trust</i>					
Mentoring / Informational	.40	.03	.60	12.89**	R ² = .347
Intercept	1.96	.11		17.55**	Adj. R ² = .345
					F(1,313) = 166.11**
<i>DV-Trust</i>					
Mentoring / Informational	.22	.04	.32	5.87**	R ² = .446
Ability	.23	.04	.41	7.47**	Adj. R ² = .442
Intercept	1.62	.11		14.50**	F(2,312) = 125.45**

* p < .05

**p < .01

Table 17

Integrity/Benevolence as a Mediator of the Relationship between
Mentoring/Interpersonal and Trust

Variables	Full Sample				Overall Statistics
	B	SE	β	t	
<i>DV-Integrity/Benevolence</i>					
Mentoring / Interpersonal	.96	.04	.84	27.25**	R ² = .704 Adj. R ² = .703 F(1,313) = 742.75**
Intercept	.29	.13		2.19*	
<i>DV-Trust</i>					
Mentoring / Interpersonal	.46	.03	.71	17.97**	R ² = .508 Adj. R ² = .506 F(1,313) = 322.79**
Intercept	1.69	.10		17.72**	
<i>DV-Trust</i>					
Mentoring / Interpersonal	.23	.05	.35	5.12**	R ² = .562 Adj. R ² = .560 F(2,312) = 200.50**
Integrity / Benevolence	.24	.04	.43	6.25**	
Intercept	1.62	.09		17.86**	

* p < .05

**p < .01

Table 18

Integrity/Benevolence as a Mediator of the Relationship between
Mentoring/Informational and Trust

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
<i>DV-Integrity/Benevolence</i>					
Mentoring / Informational	.69	.08	.61	8.74**	R ² = .368 Adj. R ² = .363
Intercept	1.52	.31		4.95**	F(1, 131) = 76.30**
<i>DV-Trust</i>					
Mentoring / Informational	.31	.06	.43	5.45**	R ² = .185 Adj. R ² = .179
Intercept	2.31	.22		10.40**	F(1, 131) = 29.71**
<i>DV-Trust</i>					
Mentoring / Informational	.01	.06	.02	.24	R ² = .474 Adj. R ² = .466
Integrity /Benevolence	.43	.05	.68	8.46**	F(2, 130) = 58.59**
Intercept	1.65	.20		8.48**	

* p < .05

**p < .01

Table 19

Ability as a Mediator of the Relationship between
Mentoring/Interpersonal and Trust

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
<i>DV-Ability</i>					
Mentoring / Interpersonal	.88	.06	.77	13.70**	R ² = .589
Intercept	.99	.26		3.81**	Adj. R ² = .586
					F(1, 131) = 187.72**
<i>DV-Trust</i>					
Mentoring / Interpersonal	.46	.05	.64	9.42**	R ² = .404
Intercept	1.66	.20		8.39**	Adj. R ² = .399
					F(1, 131) = 88.66**
<i>DV-Trust</i>					
Mentoring / Interpersonal	.41	.08	.56	5.28**	R ² = .408
Ability	.07	.07	.10	.980	Adj. R ² = .399
Intercept	1.60	.21		7.65**	F(2, 130) = 44.80**

* p < .05

**p < .01

Table 20

Summary of Hypotheses and Support for Findings with Revised
Affective Commitment and Trust Scales

	Employees with Mentors	Full Sample
1. The mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments will be positively related to knowledge transfer.	Yes	Yes
2. Knowledge transfer will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and performance.	Not tested	Not tested
3. Knowledge transfer will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and retention.	No	No
4. The mentoring functions of role modeling, counseling, protection, acceptance and confirmation, and friendship will be positively related to affective commitment.	Yes	Yes
5. Affective commitment will moderate the relationship between knowledge transfer and retention.	Yes	No
6. Trust in mentor will moderate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and knowledge transfer.	Yes	No
7. Ability will mediate the relationship between the mentoring functions of sponsorship, exposure and visibility, coaching, and challenging assignments and trust in mentor.	Yes (partial)	Yes (partial)
8. Integrity and benevolence will mediate the relationship between the mentoring functions of role modeling, counseling, protection, acceptance and confirmation, and friendship and trust in mentor.	Yes (partial)	Yes (partial)

Table 21

Affective Commitment as a Moderator of the Relationship between
Knowledge Transfer and Turnover Intentions

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
Education	3.26	2.23	.12	1.46	$R^2 = .395$ Adj. $R^2 = .364$ $F(6, 115) =$ 12.53^{**}
Job Classification	3.36	2.79	.10	1.20	
Tenure in organization	-.38	.24	-.12	-1.59	
Personal Skill Development	31.46	9.01	.77	3.49**	
Affective Commitment	-1.93	11.44	-.06	-.17	
Interaction	-5.40	2.58	-.99	-2.09*	
Intercept	-25.75	36.18		-.71	

* $p < .05$

** $p < .01$

Table 22

Trust as a Moderator of the Relationship between
Mentoring/Informational and Knowledge Transfer

Variables	Employees with Mentors				Overall Statistics
	B	SE	β	t	
Mentoring / Informational	.70	.22	.90	3.22**	R ² = .363 Adj. R ² = .347 F(3, 129) = 24.37**
Trust	.76	.25	.81	3.06**	
Interaction	-.13	.06	-.90	-1.98*	
Intercept	.72	.80		.90	

* p < .05

**p < .01

Figure Caption

Figure 1. Overview of Theoretical Framework with Hypothesized Relationships.

Figure 2. Interaction Effect of Affective Commitment with Knowledge Transfer on Turnover Intentions.

Figure 3. Interaction Effect of Trust with Mentoring/Informational on Knowledge Transfer.

Figure 1. Overview of Theoretical Framework with Hypothesized Relationships.

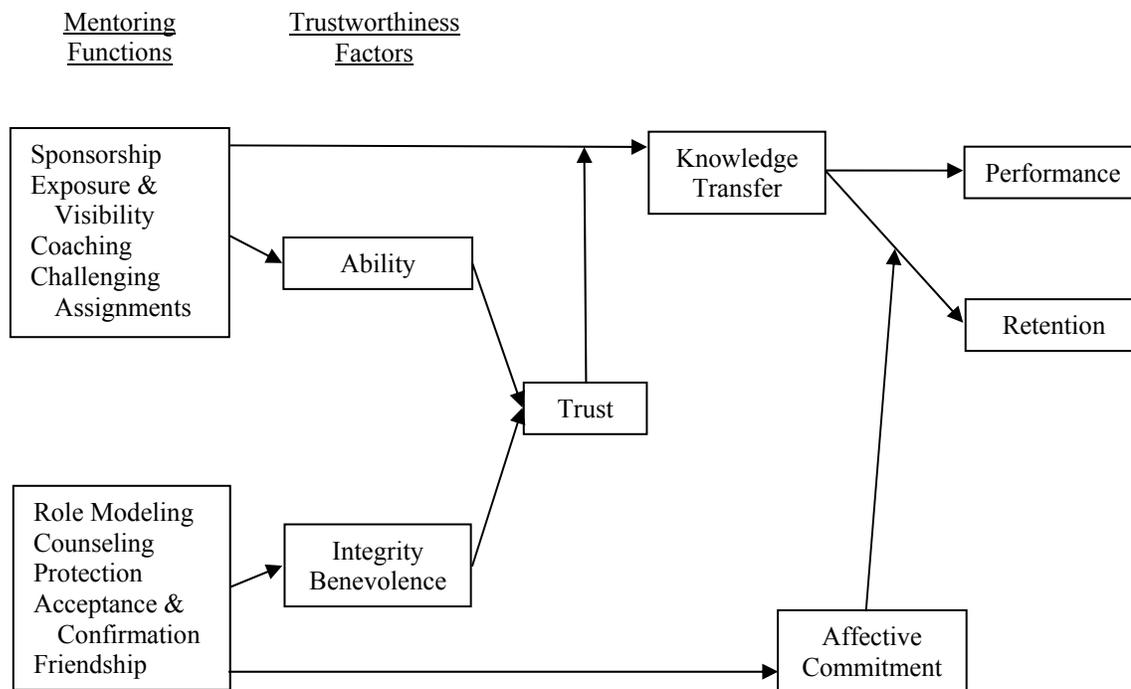


Figure 2. Interaction Effect of Affective Commitment with Knowledge Transfer on Turnover Intentions.

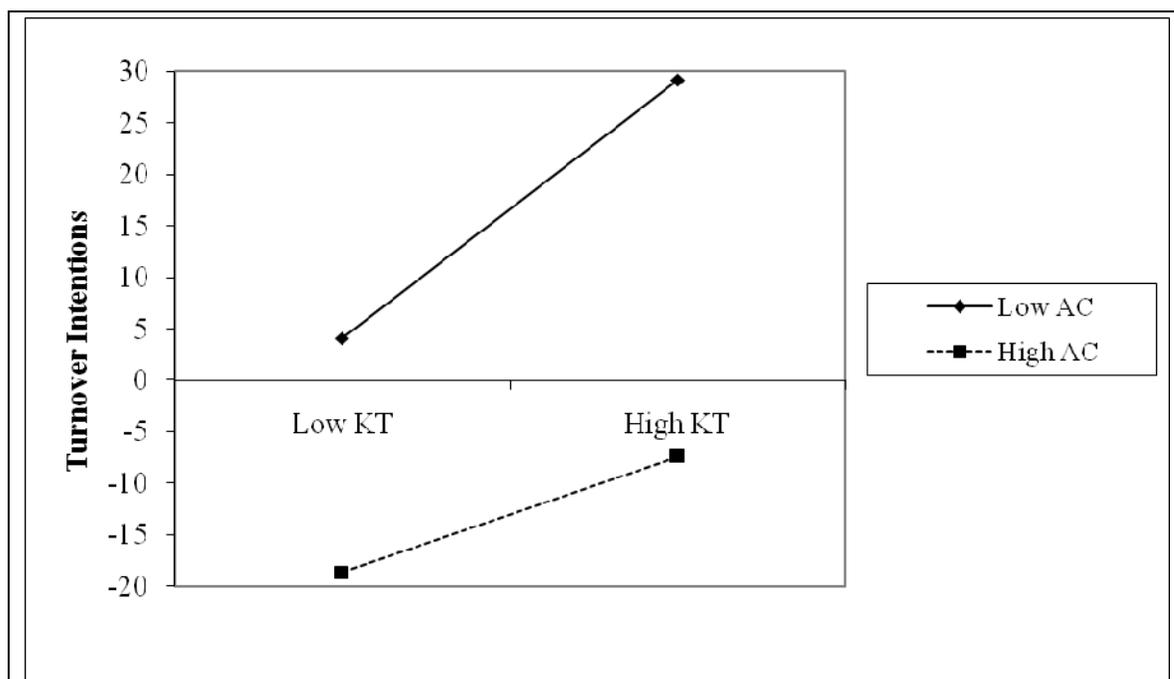


Figure 3. Interaction Effect of Trust with Mentoring/Informational on Knowledge Transfer.

