DISSERTATION

ADJUSTMENT TO THE NURSING PROFESSION: A LONGITUDINAL STUDY OF CHANGES IN PERCEIVED FIT AND INDICATORS OF ADJUSTMENT

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ABSTRACT

ADJUSTMENT TO THE NURSING PROFESSION: A LONGITUDINAL STUDY OF CHANGES IN PERCEIVED FIT AND INDICATORS OF ADJUSTMENT

The current study examined the relationships between perceived Demands-Abilities Fit (DA Fit) and Person-Vocation Fit (PV Fit) and indicators of adjustment (i.e., health, attitudes, and turnover intentions) using a multiple wave longitudinal design. Based on various PE Fit theories and prior research, it was expected that improvement or worsening in perceived fit would lead to subsequent increases or decreases in the various indicators of adjustment, respectively. Additionally, it was expected that perceived fit would lead to subsequent indicators of adjustment compared to the reverse or reciprocal effects. These hypotheses were tested by following nursing students throughout nursing school as well as through the first couple of years after they became registered nurses. Results from latent growth models and autoregressive models demonstrated that the rate of change of perceived fit changed over time, DA and PV Fit were positively related to the various indicators of adjustment across time, and reciprocal relationships existed between perceived fit and health and attitudes. Implications of the results, contributions of the study, recommendations for future research, and limitations are also addressed.

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Chapter I

Introduction

Entry into any new environment requires individuals to learn and maintain behaviors that meet the demands of the environment (Ashford & Taylor, 1990; Chan, 2000). The transition from college to first career is likely challenging for all recent graduates, but this transition appears to be especially difficult for new nursing graduates. Early career nurses are faced with numerous challenges as they attempt to adjust to the new demands placed on them (Winwood, Winefield, & Lushington, 2006). The first few months are likely to be the most challenging for new nurses (Morrow, 2008) as they deal with their inexperience and try to gain the skills they lack (Winwood et al.) while engaging in their daily clinical practice. Throughout the transition process, early career nurses commonly report experiencing fear of failure, fear of responsibility, and fear of making mistakes (Kelly, 1998). The purpose of the current study is to better understand the possible causes of adjustment as individuals' transition from the role of nursing student to professional nurse with a five-wave longitudinal design.

The focus on nursing students and early career nurses is important since it appears that negative outcomes are experienced early in one's career. For example, Tully (2004) found that levels of distress were significantly high among psychiatric nursing students and these levels were so high that the students were at risk for developing physical and mental illnesses. Additionally, turnover is high among early career nurses, especially baccalaureate nurses (Dimattio, Roe-Prior, & Carpenter, 2010; Gray & Phillips, 2004; Beecroft, Dorey, & Wenten (2008). It has been found that about 54 percent of new nursing graduates reported being dissatisfied with their current job and about 50 percent reported intentions to leave their current position (Scott, Engelke, & Swanson 2008). These findings are supported by nursing literature reviews which have demonstrated dissatisfaction is a main reason for nurses intending to leave their jobs, and that nurses do not remain in their first positions very long (Dimattio, Roe-Prior, & Carpenter).

The health, attitude, and turnover issues among early career nurses have implications for the healthcare industry. The mental and physical health of nurses and nursing students have been linked to medical errors (Arimura, Imai, Okawa, Fujimura, & Yamada, 2010) and turnover intentions (Andrews & Wan, 2009). High turnover among nurses is problematic in terms of providing quality patient care (Hayes, O'Brien-Pallas, Duffield, Shamian, Buchan, Hughes, Laschinger, North, & Stone, 2000; Lum, Kervin, Clark, Reid, & Sirola, 1998; Aiken, Clarke, Sloan, Sochalski, & Silber, 2002). In addition, high turnover tends to be related to low initial productivity of new employees, decreased staff morale and productivity, and physical and emotional suffering among patients (Hayes et al., 2000). Finally, when nurses leave the nursing occupation, they take with them their knowledge and experience, which has negative consequences to hospitals and the nursing community, as a whole (Flinkman, Leino-Kilpi, & Salantera, 2010). Ensuring that baccalaureate nurses remain in the occupation is especially important since it has been suggested that these highly trained nurses possess advanced critical thinking and problem solving skills, which make them more prepared for the nursing role than non-baccalaureate trained nurses (Dimattio, Roe-Prior, & Carpenter, 2010).

Based on Person-Environment Fit (PE Fit) theories (French, Rodgers, & Cobb, 1974; French, Caplan, & Harrison, 1982; Holland, 1973; 1997; Dawis & Lofquist, 1984), the current study suggests that over time students and early career nurses would experience changes in their perceptions of fit to the nursing occupation and nursing specialties, and these changes would be related to subsequent changes in their health and attitudes. Specifically, it was expected that over time improvement in fit would be related to increases in positive outcomes, whereas worsening in fit would be associated with increases in negative outcomes. The possibility of no changes in perceived fit was also considered. In this case, it was expected that those who perceived they fit with nursing would continue to experience positive outcomes while the individuals who continued to experience lack of fit would experience negative outcomes.

The idea of changes in both perceived fit and indicators of adjustment has been previously suggested by researchers, but, as yet, has not been examined systematically. In an effort to thoroughly investigate the relationships between perceived fit and indicators of adjustment among early career nurses over time, the current study followed individuals from the start of a nursing program through their first couple of years as registered nurses. By utilizing multiple measurement occasions (i.e., waves) throughout the transition process, the current study was able to examine the relationships between perceived fit and physical and mental health, satisfaction, commitment, and turnover intentions over time both within individuals as well as among individuals.

Two specific types of PE Fit were focused on: Demands-Abilities Fit (DA Fit) and Person-Vocation Fit (PV Fit). These two types focus on the match between an individual's abilities and the demands of an environment (i.e., Demands-Abilities Fit) and the match between an individual's personality and values and an occupation's personality and values as well as the extent to which an individual's needs are being fulfilled by an occupation (i.e., Person-Vocation Fit). Both of these types of fit were examined at the occupational level (e.g., match between abilities of an individual and the demands of an occupation) and also at the specialty level (e.g., match between an individual's personality and the personality of an occupational specialty). The focus on these types of fit provided a better understanding on how each of these types were related to indicators of adjustment (i.e., mental and physical health, satisfaction, commitment, and turnover intentions) throughout the transition into the nursing occupation.

Specifically, the current study examined the relationships between perceived fit and indicators of adjustment to the nursing occupation and nursing specialties using a multiple wave longitudinal design. The design of the study allowed for the investigation of the stability and change in perceived fit as well as how changes in perceived fit over time were related to changes in mental health, physical health, occupational satisfaction, occupational commitment, and turnover intentions. The results of the study have implications for nursing education as well as for the healthcare industry as a whole by identifying possible solutions for the current adjustment issues among early career nurses.

Chapter II

Background

Overview

The overall premise of the study is individuals would be better off in the nursing occupation (e.g., healthier, more committed to the nursing occupation) if they possess certain characteristics required by the nursing occupation compared to individuals who did not possess these characteristics. This idea is based on Person Environment Fit (PE Fit), which focuses on the fit or match between characteristics of a person (i.e., the "P" component of PE Fit) and characteristics of the environment (i.e., the "E" part of PE Fit) (French et al., 1974; French et al., 1982). Commonly researched characteristics of the individual include skills, abilities, and needs, whereas the environment could be characteristics of jobs, occupations, or occupational specialties. From the broad concept of PE Fit, more specific matches between individuals and environments have been proposed. For example, researchers have examined the match between the needs of the individual and the rewards provided by the environment (Dawis & Lofquist, 1984), the abilities of the individual and the demands of the environment (French et al., 1974), and the interests of the individual and the interests of occupations (Holland, 1997).

PE Fit is not a modern concept since, as Dumont and Carson (1995) demonstrated, this idea has been around since ancient Greece, if not earlier. For instance, the concept of matching individuals to environments can be traced to the writings of Plato who suggested that individuals possess different aptitudes and skills and these differences need to be taken into account when selecting occupations. Edwards (2008) credits the modern views of PE Fit to the founder of vocational psychology, Parsons (1909), who conceptualized a model of PE Fit that focuses on characteristics of individuals (e.g., aptitudes, abilities, and ambitions) and characteristics of different vocations (e.g., compensation, opportunities). Although Parsons' research led to the contemporary viewpoint of PE Fit, Parsons' focused on developing vocational counseling and not developing a theory of PE Fit (Edwards, 2008).

Lewin's Field Theory (1935, 1951) has also been cited as helping to lay the foundation for the current PE Fit perspective. Lewin suggested that behavior is a function of both the person and environment, which is the main idea of PE Fit research. Similarly to Parsons, Lewin's work did not focus on developing a theory of PE Fit (Edwards, 2008). Researchers have since taken the idea of focusing on both the person and environment proposed by these early researchers to develop specific PE Fit theories to explain outcomes such as occupational stress (e.g., French, Caplan, & Harrison, 1982) and vocational choice (e.g., Dawis & Lofquist, 1984; Holland, 1997).

In the following sections, the concept of PE Fit is described in more detail. First, PE Fit theories on occupational stress and vocational choice are discussed. The theories are reviewed to explain the hypothesized link between PE Fit and outcomes. Additionally, the theories are utilized to explain the suspected changes in perceived fit over time as well as why these changes would result in changes in the various indicators of adjustment, as well. Each of these theories uses different terminology to describe the match between individuals and environments, different terms to describe the characteristics of each, and hypothesizes different outcomes, but together they form the basis for the hypothesized ideas proposed by the current study.

Following the discussion of the various PE Fit theories, different types of fit are reviewed since a basic knowledge of each of these types of fit help with the understanding of the specific types of fit examined in the current study. Next, how PE Fit is part of the adjustment process is outlined. Lastly, longitudinal research and empirical studies are discussed. The overall purpose of this chapter is to review various ways PE Fit has been conceptualized, and to explain the relationships between PE Fit and outcomes based on past empirical research.

PE Fit and Occupational Stress

Prior to discussing PE Fit theories of occupational stress, here is a brief review of occupational stress. A common element of many occupational stress theories is individuals go through a process where they perceive the environment, decide if it is harmful, and then experience changes in physical and mental health (e.g., Katz & Kahn, 1978) and behavior (McGrath, 1976). This process can be broken down into two main components: stressors and strains (Beehr & Newman, 1978). Occupational stressors tend to be defined as conditions or threatening situations that cause a response (Beehr & Newman). Maladaptive responses to stressors are referred to as strains (Jex & Beehr, 1991). Occupational stress researchers who use the concept of PE Fit follow this proposed process to explain occupational stress. French et al. (French & Kahn, 1962; French et al., 1974; French et al., 1982) were some of the first researchers to take this approach to study occupational stress (Caplan & Harrison, 1993) and their PE Fit theory is described below.

French et al. (French & Kahn, 1962; French et al., 1974; French et al., 1982) used the occupational stress concepts described above to develop a specific theory of PE Fit to explain occupational stress. According to their theory, individuals perceive the work environment to be "stressful" when they perceive a lack of fit. French et al. conceptualized PE Fit in two ways: the fit between the requirements of individuals (e.g., needs, values, and goals) and supplies provided by the environment (i.e., Needs-Supplies Fit; NS Fit) and the fit between the abilities of an individual and the demands of the environment (Demands-Abilities Fit; DA Fit). Adjustment is seen as a function of Needs-Supplies Fit and Demands-Abilities Fit. Specifically, French and colleagues (Caplan, Cobb, French, Harrison, Pinneau, 1980; French, et al., 1974; French, et al., 1982) hypothesized that the match between the characteristics of an individual and the environment would lead to adjustment and positive outcomes (e.g., job satisfaction). In contrast, lack of fit or misfit was proposed to lead to poor adjustment and negative outcomes including psychological (e.g., dissatisfaction), physiological (elevated cholesterol), and behavioral (e.g., smoking) strains.

Reality and perceptions. French and colleagues (French, et al., 1974; French, et al., 1982) suggested that the person and environment components of Needs-Supplies Fit and Demands-Abilities Fit can be examined based on how the person and environment truly exist (i.e., reality) or based on an individual's perceptions. The environment can be described as how the individual perceives the environment (i.e., subjective environment) or it can be described based on the actual conditions (i.e., objective environment). Similarly, a person can be broken down by how he sees himself (i.e., subjective person) or by how he actually is (i.e., objective person).

From the separation of the person and environment into reality and perceptions, French et al. (1974) developed four types of matches between the individual and environment, which can be applied to both Needs-Supplies Fit and Demands-Abilities Fit. These four types of matches include 1) objective fit or the match between the objective environment and objective person 2) subjective fit or the fit between the subjective environment and subjective person, 3) accuracy of self-assessment or the match between the objective person and subjective person and 4) contact with reality or the match between the objective environment and subjective environment. If individuals lack either Needs-Supplies Fit or Demands-Abilities Fit, French et al. suggested that individuals would be motivated to reduce their lack of fit by changing either the objective or subjective person or environment.

Although French et al. (1974) suggested that all four types of matches described above could result in increased strains due to lack of fit, they proposed that the lack of subjective fit would have the strongest influence on strains. This is because objective fit was hypothesized not to directly influence strains but instead would influence strains through subjective fit. Specifically, the objective environment and person were hypothesized to lead to their subjective counterpart. Individuals then appraise the subjective and objective environment to determine the degree of fit between the two. If individuals perceive a lack of fit between the subjective environment and person, French et al. hypothesized this would lead directly to strains, which would then lead to illnesses.

PE Fit and Vocational Choice

In addition to applying PE Fit to explain occupational stress, researchers have used the concept of PE Fit to understand individuals' choice of vocations. Specifically, vocational choice theories focus on the match between individuals' needs, interests, and abilities, and requirements of different occupations, vocations, and careers (Dawis & Lofquist, 1984; Holland, 1973; 1997). Below, two vocational choice theories, Holland's Vocational Choice Theory and Dawis and Lofquist's Theory of Work Adjustment, are described in detail.

Holland's Vocational Choice Theory. The main idea behind Holland's Vocational Choice Theory (1973; 1997) is the selection of occupations that matches an individual's interests will lead to adjustment and satisfaction. Holland suggested that individual characteristics could include interests, goals, values, and self-beliefs, whereas environments could be described in terms of task characteristics, skill requirements, and problems encountered. According to this theory, individuals and occupations can be categorized by six different interests (i.e., realistic, investigative, artistic, social, enterprising, and conventional), which are commonly referred to by their first letters: RIASEC.

When these categories are used to classify individuals, Holland (1973; 1997) referred to them as personality types and when they are used to classify environments they are referred to as model environments. Personality types can be thought of as summaries of specific individuals, and model environments are summaries of the properties of particular environments. Individuals can be categorized by their similarity to the six personality types, and environments can be classified depending on their resemblance to the six model environments. The main assumptions of this theory includes 1) individuals select environments that match their personality type, 2) different environments reinforce and reward specific abilities and interests, and 3) individuals thrive in environments congruent to their personality type. Below, personality types and model environments are described in more detail.

Personality types. Holland's (1973; 1997) theory is based on the idea that individuals gradually develop interests and abilities, which ultimately makes people more suitable for certain occupations than others. The more individuals resemble a personality type, the more they are expected to display the attributes and behaviors of that personality type. Personality types are also able to handle environmental problems and tasks of the corresponding model environment with the specific characteristics of each personality type. The personality type an individual most resembles is considered the dominant personality type. A personality profile can also be created by ranking the personality types from most resembles to least resembles.

Model environments. Environments can be classified by one of the six model environments the same way individuals are categorized by the six personality types. Holland (1973; 1997) suggested that each environment requires the skills of the matching personality type as well as provides opportunities that interest the corresponding personality type. Individuals will seek out occupations that match their personality type, which results in environments being composed of individuals with similar interests. To determine the dominant interest of an environment, the percentage of personality types in that environment can be calculated. The personality type that has the highest percentage is the classification of that environment.

Congruence between personality type and model environments. Holland (1973; 1997) suggested that congruence is determined by the relationship between personality type and model environment. Holland's use of the term congruence can be thought of similarly to French et al.'s (1974; 1982) use of the term fit. Holland hypothesized that the degree of congruence could differ depending on the characteristics of individuals and environments. Holland developed a Hexagonal Model based on the similarities between the six interest types. The distance between the types defines the amount of congruence between the individual and environment. For example, the Realistic and Investigative interests are next to each other on the Hexagonal Model, whereas the Enterprising interest is opposite Investigative. Therefore, Investigative individuals in an Investigative environment would be congruent, Investigative individuals in a Realistic environment would be less congruent, and Investigative individuals in an Enterprising environment would be the least congruent of these described situations.

Outcomes of congruence. When personality type and model environment are congruent, the resulting outcomes include job satisfaction and general well-being (Holland, 1973; 1997). Positive outcomes are expected, based on the Theory of Vocational Choice, since individuals in matching occupations will likely work with individuals with similar interests and values, which Holland suggests is rewarding to individuals. Additionally, working in matching occupations provides individuals with the opportunity to engage in tasks they have the ability to perform well, which again is expected to be rewarding.

Theory of Work Adjustment. While Holland's (1973; 1997) theory discusses possible outcomes of the congruence between individuals and vocations, the Theory of Work Adjustment (TWA) explicitly addresses how adjustment to vocations is achieved (Dawis & Lofquist, 1984; Dawis, 2005). TWA describes adjustment as a process involving individuals' interactions with the work environment to achieve and maintain a match with the environment (Dawis, 2005). TWA suggests that an individual can be viewed in terms of 1) skills or abilities and 2) needs or values. Examples of abilities and skills could include general intelligence, cognitive skills, interpersonal skills, and motor skills. Needs could include basic needs such as money or security as well as psychological needs such as need for achievement, authority, or recognition. Each of these individual characteristics was proposed to correspond to matching characteristics of the work environment: skill requirements and reinforcement capabilities to meet a person's needs (e.g., rewards). Specifically, TWA specifies two types of correspondence: the degree a person's abilities meet the environment's ability requirements, and the degree to which an individual's needs correspond to the environment's ability to supply these needs (e.g., pay, prestige, and working conditions). Correspondence between individuals and environments was proposed to lead to positive outcomes, which they described in their Predictive Model. Dawis and Lofquist also specify *how* individuals and environments *achieve correspondence* in their Process Model. Both the Predictive Model and Process Model are reviewed below.

TWA's Predictive Model. According to TWA's Predictive Model (Dawis & Lofquist, 1984), the correspondence between individuals and the work environment predict two outcomes: satisfaction (fulfillment) and satisfactoriness (competence). Satisfaction occurs when there is correspondence between an individual's needs and the rewards provided by the environment, while dissatisfaction results from lack of correspondence between an individual's needs and rewards. Satisfactoriness is a function of the correspondence between an individual's skills and the ability requirements of the environment and unsatifactoriness results from lack of correspondence between skills and ability requirements.

From the two described outcomes above, TWA suggests four possible states that can occur for the individual including satisfied and satisfactory, satisfied but unsatisfactory, dissatisfied but satisfactory, and dissatisfied and unsatisfactory (Dawis & Lofquist, 1984). The first state of satisfied and satisfactory is suggested to result in behaviors to maintain this state. In other words, individuals will engage in behaviors to maintain the correspondence between their abilities and ability requirements as well as their needs and the rewards of the environment. Engaging in these behaviors to maintain correspondence should result in the individual continuing to be satisfied as well performing satisfactory. In contrast, the other three states suggest a lack of correspondence either between ability and ability requirements or needs and rewards, and this lack of correspondence is suggested to result in behaviors to improve fit.

Overall, Dawis and Lofquist' (1984) Predictive Model suggests that satisfaction should predict an individual deciding to remain in a work environment, whereas satisfactoriness will result in an environment deciding to retain the individual. Satisfaction and satisfactoriness are proposed to predict tenure of the individual in the work environment. According to TWA, satisfaction, satisfactoriness, and tenure are the primary indicators of work adjustment.

TWA's Process Model. TWA's Predictive Model does not explain how the person and environment achieve correspondence, so Dawis and Lofquist (1984) developed the Process Model to explain the process of adjustment to the work environment (Dawis, 2005). The Process Model suggests the importance of *interactions* between individuals and environments. Interactions are defined as the actions and reactions of individuals and environments to each other. For example, a worker dissatisfied over his salary may act on the work environment by requesting a raise from management. In response to this action by the worker, management could grant the raise and as a result of this, the workers satisfaction with his salary should increase.

According to the Process Model, the interactions between individuals and environments depend on four adjustment styles including flexibility, activeness, re-activeness, and perseverance. The extent to which an individual can tolerate lack of correspondence and dissatisfaction before engaging in adjustment behaviors is referred to as flexibility. Individuals with high levels of flexibility will tolerate a great deal of lack of correspondence and will not become easily dissatisfied. In contrast, individuals low on flexibility will become dissatisfied easily. Activeness is when an individual acts on the environment to reduce the lack of correspondence to increase satisfaction. For example, individuals who lack the abilities required of the work environment could request additional trainings. Individuals could also reduce the lack of correspondence by acting on themselves, such as they could attend night school after work to increase their abilities and this would be described as re-activeness. The length of time spent engaging in behaviors to reduce lack of correspondence is referred to as perseverance. High perseverance individuals will spend a great deal of time attempting to improve correspondence, whereas individuals low on perseverance will spend less time trying to improve correspondence. Each of these styles can be used by environments as well. For instance, environments with high flexibility can tolerate lack of correspondence and unsatisfactoriness before engaging in actions to improve correspondence. High perseverance environments will spend a great deal of time attempting to improve an individual's abilities before firing the person in contrast to low perseverance environments.

All of the above described adjustment styles are part of the adjustment process. Specifically, Dawis and Lofquist (1984) suggested that the adjustment to an environment can be described as a cycle. The cycle begins with an individual becoming dissatisfied from lack of correspondence and initiating behaviors to increase correspondence. Flexibility determines the extent to which individuals will wait before becoming dissatisfied and engaging in behaviors. In an effort to reduce lack of correspondence, individuals can either attempt to change the environment (i.e., activeness) or themselves (i.e., re-activeness) or do both. For example, an individual who desires a higher salary could request a raise (i.e., activeness) as well as develop her abilities to demonstrate that she deserves a higher salary (i.e., re-activeness). If the attempts to improve correspondence are successful, such as the individual is granted the higher salary, satisfaction is expected. However, if the behaviors are not successful, individuals are expected to continue to be dissatisfied and will continue to spend time engaging in behaviors to improve correspondence. The adjustment cycle ends with the individual improving correspondence and becoming satisfied, which would indicate that the individual was able to successfully adjust to the environment. However, if correspondence cannot be improved, then this lack of adjustment, as indicated by continued dissatisfaction, will ultimately result in the individual deciding to leave the environment.

The same cycle can be described from the perspective of the environment as well. As an illustration, an employee not possessing the required abilities could result in unsatisfactoriness. The state of unsatisfactoriness could lead a supervisor to engage in behaviors to attempt to increase the employee's abilities. If these attempts are successful then correspondence should increase as well as satisfactoriness. However, if the employee cannot improve, then the supervisor may decide to fire the individual.

Conclusions

Based on the above theories, there are three main conclusions: 1) there are multiple ways to conceptualize the match between the person and environment, 2) when there is a match, positive outcomes are expected, and 3) improvement in fit appears to lead to increases in various positive outcomes. French et al. (1974) and Dawis and Lofquist (1984) conceptualized the characteristics of individuals and environments in similar terms but used different terminology to describe fit. Holland (1973; 1997) described individuals and environments in much broader terms compared to French et al. and Dawis and Lofquist. These differences in the conceptualizations of fit across theories tend to make the research on PE Fit confusing and it also demonstrates the need for researchers to clearly define their conceptualization of fit.

Regardless of the specific conceptualization, all theories proposed that fit will result in positive outcomes, while lack of fit or misfit will result in negative outcomes. French et al.'s focus was on mental and physical strains while Holland and Dawis and Lofquist emphasized satisfaction and tenure as indicators of adjustment. Additionally, these theories all imply that fit and outcomes are linked together such that if fit changes (i.e., increases or decreases) then outcomes are expected to increase or decrease accordingly. For example, based on the above, lack of fit would be expected to lead to decreased mental health, whereas improvement in fit would be expected to lead to improved mental health. This implied sequence suggests that the relationships between fit and indicators of adjustment need to be examined longitudinally.

Types of PE Fit

As demonstrated in the above section on PE Fit theories, researchers have conceptualized different ways to view the match between individuals and environments. In this section, specific matches between individuals and environments are reviewed. For each of the specific matches, the characteristics of the individual and environment are described differently. The main distinction between the various specific types of fit is the aspect of the work environment examined such as occupation, occupational specialty, job, or organization. Because of the number of different specific types of fit that have been proposed, the review below focuses on Person-Vocation Fit, Person-Specialty Fit, Person-Job Fit, and Person-Organization Fit since these types of fit are most relevant to the current study.

Person-Vocation Fit. The broadest aspect of the work environment that has been considered by PE Fit researchers is the occupation or vocation level. The examination of characteristics of individuals and occupations has been referred to as Person-Vocation Fit (PV Fit). Both Holland's (1973; 1997) Vocational Choice Theory and Dawis and Lofquist's (1984) Theory of Work Adjustment can be viewed as examining Person-Vocation Fit since both focus on matching individuals to occupations to ensure positive outcomes. As pointed out in the above section, the characteristics used to describe individuals and environments are very different between these two theories.

Person-Specialty Fit. In addition to examining individuals and occupations, researchers have also focused on occupational specialties. This type of fit is referred to as Person-Specialty Fit (PS Fit). Researchers have suggested that matching individuals with occupational specialties is important since many individuals work in specific specialties, which is not captured when only examining fit at the occupational level (Hartung & Leong, 2005). Various characteristics of occupational specialties that have been examined include interests (Borges, Savickas, & Jones, 2004) and personality traits (Borges & Gibson, 2005).

Person-Job Fit. Other researchers have focused on jobs or tasks performed at work compared to occupations. The focus on characteristics of individuals and jobs is defined as Person-Job Fit (PJ Fit). Person-Job Fit has been conceptualized in two different ways (Edwards, 1991). First, researchers have focused on knowledge, skills, and abilities matching with the requirements of a job. This type of Person-Job Fit has been labeled Demands-Abilities Fit. The second conceptualization of Person-Job Fit is matching an individual's needs, desires, or preferences with the supplies from a job, which has been labeled Needs-Supplies Fit. French et al.'s PE Fit theory on occupational stress used the terms Demands-Abilities and Needs-Supplies Fit but their focus of the work environment was not specifically on jobs or job tasks.

Person-Organization Fit. Instead of focusing on occupations or jobs, researchers have viewed the environment at the organizational level. Matching individuals with organizations is defined as Person-Organization Fit (PO Fit). Kristof (1996) suggested the person and organization could be matched on similar characteristics or needs.

Kristof's review outlined the various other ways researchers have examined organizations including values, culture, goals, and climate.

Conclusions. The function of the review on various types of fit was to demonstrate the similarities and differences between specific types of fit. The review suggests that there is a great deal of overlap regarding the characteristics used to describe individuals and environments across the various types of fit. For example, Dawis and Lofquist's (1984) conceptualization of correspondence is similar to the characteristics used to describe individuals and environments based on Person-Job Fit. Additionally, Person-Job Fit and French et al.'s (1974) conceptualization of fit use the same types of fit but the aspects of the environment differentiates the two. Due to the overlap between the specific types of fit as well as the differences within the specific types, researchers need to be clear regarding the characteristics used to describe the individual and environment. Additionally, researchers need to specify the level of the environment being examined such as occupation vs. specialty.

Based on the similarities and differences between the various types of fit, it appears that the specific types can be modified by changing the specified aspect of the environment to examine different types of matches between individuals and environments. For example, Person-Organization Fit focusing on the values of individuals and the values of organizations could be changed to focus on the occupational level or the match between an individual's values and the values of a specific occupation. For instance, Saks and Ashforth (1997) measured Person-Job Fit and Person-Organization Fit with the same item but used the words "job" and "organization", respectively. Thus, the specific types of fit can be treated somewhat flexibly based on the specific types of fit under investigation.

Adjustment Process

Regardless of the specific type of fit examined, many PE Fit researchers suggest that changes in fit should be described as an adjustment process. Specifically, adjustment occurs when there is a match between an individual and environment, and the process to achieve this match, if there is not a match already, is referred to as the adjustment process (Caplan, 1987). TWA, reviewed above, is one theory that attempted to explain the adjustment process, which Dawis and Lofquist (1984) viewed as individual's actions and reactions with the work environment to achieve and maintain a match with the environment (Dawis, 2005). Based on this viewpoint, when the person and environment do not match, negative outcomes are experienced (e.g., dissatisfaction or unsatisfactory performance), which motivates the two to work together towards changing either the person and/or environment to improve correspondence. If individuals and environments are successful at achieving correspondence, individuals are expected to experience satisfaction (e.g., Dawis, 2005). Similarly, French and colleagues (1974) suggested that individuals experiencing lack of fit could make changes to themselves or the environment in an attempt to reduce their perceived lack of fit. If the changes are successful, French et al. suggested that perceived fit as well as improved health would be expected.

Once fit is achieved, there could be changes to either the individual or environment that could result in worsening in fit and subsequent indicators of lack of adjustment. For example, a nurse could make a mistake with a patient resulting in her questioning if she has the necessary nursing skills required by the environment. An illustration of changes to an environment would be a hospital implementing substantial pay cuts causing nurses to reassess if their needs are being met by their new salary. Thus, the adjustment process can be viewed as an on-going cycle where the individual and environment are continually reacting to changes to maintain fit.

Based on the above, it appears clear that the adjustment process should be described as an on-going cycle, however, it is rather unclear how the cycle begins and what occurs throughout the cycle. Specifically, French et al. (1974), Holland (1973; 1997), and Dawis and Lofquist (1984; Dawis, 2005) seem to suggest that lack of fit and worsening in health and satisfaction are connected, but these researchers did not clearly outline the actual sequence of events. Dawis and Lofquist's (1984; Dawis, 2005) Process Model is the most descriptive of the three described theories regarding the adjustment cycle, however, the sequence of fit leading to outcomes vs. outcomes leading to perceived fit is not clearly specified. For instance, the Process Model suggests that the adjustment cycle begins with an individual perceiving lack of correspondence and experiencing dissatisfaction. However, the theory is not clear whether individuals perceive lack of correspondence and then become dissatisfied or if dissatisfaction leads individuals to perceive that they do not correspond with the environment. Additionally, the Process Model implies that successful changes to the individual and/or environment will lead to increased correspondence and subsequently increased satisfaction. Alternatively, successful changes could result in individuals experiencing an increase in satisfaction, which could then trigger individuals to perceive they fit. Overall, the Process Model, as well as the other theories, suggests that fit will lead to indicators of adjustment; however, it appears plausible that the experience of the indicators of adjustment could actually lead to adjustment.

The suggestion that indicators of adjustment could lead to adjustment is similar to the various directions of the relationships between stressors and strains outlined by occupational stress researchers. Typically, stressors are viewed as leading to strains such as job demands resulting in somatic symptoms (De Jonge, Dormann, Janssen, Dollard, Landeweerd, & Nijhuis, 2001). However, alternative hypotheses have also been examined including reverse causality or outcomes causing perceptions of stressors (e.g., Spector, Dweyer, & Jex, 1988; Zapf, Dormann, & Frese, 1996; De Jonge, Dormann, Janssen, Dollard, Landeweerd, & Nijhuis, 2001). For example, instead of conflict between coworkers leading to depression, depression could lead employees to perceive interpersonal conflict. Occupational stress researchers have also suggested reciprocal causal relationships between stressors and strains such as outcomes and the environment leading to perceptions of stressors and perceptions of stressors then leading to outcomes (Spector et al.; Zapf et al.; & De Jonge et al.). For instance, poor mental health could result in perceptions of low social support and perceptions of low social support could then result in poorer mental health. Some weak support has been found for strains leading to stressors (e.g., De Jonge et al.); however longitudinal studies examining reverse and reciprocal causation are lacking, which limits the conclusions that can be drawn. Similarly, longitudinal research examining the causal direction of the relationships between fit and various indicators of adjustment is also lacking. In the subsections below, research on indicators of adjustment is discussed, followed by a review of longitudinal research.

Indicators of Adjustment. When improvements in fit are achieved through changes to individuals or the environment, theories suggest that positive outcomes will be experienced. These positive outcomes are viewed as indicators of adjustment. The theories also suggest that lack of fit will result in negative outcomes or indicators of lack of adjustment. The implied sequence of events according to French et al. (1974) is lack of fit will lead to strains (i.e., indicators of lack of adjustment) and subsequent behaviors to improve the match between the individual and the environment. If the adjustment process is successful at improving fit, indicators of adjustment are expected, such as improvements in mental health. Similarly, TWA's Process Model suggests that lack of correspondence will result in dissatisfaction, which is viewed as an indicator of lack of adjustment. The experience of dissatisfaction will then start the adjustment cycle to resolve the lack of correspondence. If lack of correspondence is reduced then the adjustment indicator, satisfaction, is expected. Holland's (1973; 1997) Vocational Choice Theory suggests that adjustment occurs when there is congruence between individuals and occupations and this adjustment is indicated by job satisfaction and general well-being. Overall, these theories suggest that lack of fit will lead to cognitive and behavioral responses to improve fit, which, if successful, will be indicated by improvement in indicators of adjustment. Research on various specific types of fit has empirically supported that fit is related to adjustment while lack of fit has been found to be related to lack of adjustment. The research on three indicators of adjustment: health, attitudes, and turnover intentions are reviewed below.

Health. Mental and physical health as outcomes of the match between individuals and environments are common among PE Fit researchers taking an occupational stress approach to fit. For example, the core of French et al.'s (French & Kahn, 1962; French et al., 1974; French et al., 1982) PE Fit theory is lack of fit will lead to poor mental and physical health. Commonly examined indicators of poor mental and physical health include anxiety, depression, tension, and somatic symptoms (Edwards & Shipp, 2007). For example, Person-Job Fit has been found to be negatively related to poor physical symptoms among early career workers (Saks & Ashforth, 1997). Prior Person-Vocation Fit research has also found significant negative relationships between Person-Vocation Fit and indicators of poor adjustment, such as job frustration (Furnham & Walsh, 2001), somatic complaints, anxiety (Lachterman & Meir, 2004), and unhealthy behaviors (e.g., increased alcohol use) (Pithers & Soden, 1999). Similarly, Demands-Abilities Fit has been found to be negatively related to physical tension (Edwards, 1996), anxiety, and emotional exhaustion (Xie & Johns, 1995). Smith and Tziner (1998) demonstrated that fit between individuals' needs and the rewards of the work environment was negatively related to burnout and somatic complaints. Lack of fit between actual and perceived working conditions has also been found to be related to physical and mental health (Yang, Che, & Spector, 2008). Overall, French et al.'s theory, as well as empirical research, suggests that lack of various types of fit is related to mental and physical health problems.

***Attitudes*.** In addition to health, attitudes, especially satisfaction and commitment, appear to be commonly examined indicators of adjustment for various types of fit. Occupational satisfaction is a worker's level of positive affect towards his occupation. Occupational commitment is defined as an individual's feelings of attachment and loyalty to a specific occupation (Meyer, Allen, & Smith, 1993). Occupational commitment can be further broken down into affective commitment, continuance commitment, and normative commitment. Affective commitment can be described as an individual's positive emotional attachment to an occupation. Individuals high on affective commitment are likely to strongly identify with the goals of their occupation and genuinely desire to remain in the occupation. Continuance commitment includes individual's perceptions of the relative investments made towards the occupation and the costs related to seeking another occupation. An individual high on continuance commitment feels like he has to remain in the occupation because the costs associated with leaving are too high, such as having to spend time developing new skills required by different occupations. Lastly, normative commitment includes perceptions of obligations towards an occupation and therefore, individuals remain in their occupation because they perceive it as the morally right thing to do. A nurse continuing to work as a nurse because she feels that she ought to remain in this occupation is an example of normative commitment.

Both Holland's (1973; 1997) Theory of Vocational Choice and Dawis and Lofquist's (1984; Dawis, 2005) TWA emphasize that a match between individuals and environments will lead to adjustment as indicated by satisfaction. Researchers who have taken Holland's or Dawis and Lofquist's approach to PE Fit have predominantly focused on attitudes. For example, Smith and Tziner (1998) found TWA's correspondence between needs and rewards was positively related to job satisfaction. Several meta-analyses examining the relationships between Holland's vocational interests and environment's interests and satisfaction have been conducted, but overall, these studies have found weak relationships between congruence and satisfaction (Tranberg, Slane, &

Ekeberg, 1993; Tsabari, Tziner, & Meir, 2005). Meta-analyses (Assouline & Meir, 1987; Meir & Yaari, 1988) examining Person-Specialty Fit have shown that the mean correlation between Person-Specialty Fit and satisfaction appears to be around .4, which is higher than the reported .3 for the congruence between characteristics of occupations and individuals and satisfaction (Spokane, 1985). Other specific types of fit have also been found to be related to satisfaction, including Person-Vocation Fit (Feij, van der Velde, Taris, and Taris, 1999), Demands-Abilities Fit (Resick, Baltes, & Shantz, 2007), and Needs-Supplies Fit (Cable & DeRue, 2002). Additionally, Kristof-Brown et al.'s (2005) meta-analysis demonstrated that Person-Job Fit and Person-Organization Fit were both positively related to commitment. These findings demonstrate that satisfaction and commitment are both plausible outcomes of various types of fit.

Turnover intentions. The last outcome of fit examined in the present study is turnover intentions. Holland (1973; 1997) and Dawis and Lofquist (1984; Dawis, 2005) suggested that when fit cannot be achieved, the ultimate indicator of lack of adjustment will occur, which is an individual leaving the environment. Prior research supports the link between fit and turnover intentions, including Demands-Abilities Fit, which has been found to be positively related to occupational tenure and negatively related to turnover intentions (Chang, Chi, & Chuang, 2010). Person-Job Fit and Person-Organization Fit have been found to be negatively related to turnover intentions as well (Kristof-Brown et al., 2005). Based on these theories and prior researcher, lack of fit appears to be linked to turnover or at least turnover intentions.

Examination of Change

The view of adjustment as a process to achieve and maintain fit implies that there can be *changes within individuals* over time. Because of the focus on change across time, a longitudinal approach was necessary to examine how fit is achieved and/or maintained over time. Additionally, a longitudinal approach was necessary to clarify the direction of the relationships between fit and the various indicators of adjustment. However, not all longitudinal designs allow for the examination of change adequately (Singer & Willett, 2003). At the most basic level, examination of change requires three or more measurement occasions in which the variables of interest are collected from individuals at three or more time points (Chan, 1998). The inclusion of three or more waves (i.e., three or more measurement occasions) of data compared to just two waves allows researchers to more accurately investigate how each individual changes over time as well as examine the overall pattern of change for all individuals.

Despite the theoretical stances on the dynamic nature of PE Fit, there has been very little research that has actually examined changes in PE Fit longitudinally with three or more waves. Numerous calls have been made for future studies to utilize multiple measurement occasions (Edwards, 1991; Tinsley, 2000; Walsh, 2006) and more sophisticated statistical techniques to analyze longitudinal data (Spokane, Meir, & Catalona, 2000). It appears these pleas have not been met since a review of the prior PE Fit research over the past 30 years revealed only 12 longitudinal perceived fit studies (see Table 1). Even though 12 were identified, the majority were flawed in their examination of change over time. Four of the longitudinal studies only examined fit at one time point, which makes the examination of change impossible. Although Carless (2005) and Cable and Judge (1996) included perceived fit measures at two time points, the focus of these studies was on determinants of fit or future outcomes of fit and not on change in fit over time. Similarly, Garavan (2007) assessed fit over three waves, but the focus was on predicting fit and not on examining how fit changed over time within-individuals and among individuals. Three of the 12 studies examined changes in fit using only two measurement occasions, while the remaining two studies used three or more waves of data. Below, the weaknesses associated with two-wave designs are reviewed, followed by a discussion on the advantages of using three or more waves of data. Only the studies that examined changes in fit over time are reviewed in detail below.

Two-wave designs. Two-wave designs on the surface appear to adequately measure change since a change score between measurements taken on two separate occasions can be examined. For example, a researcher could measure fit on two occasions and demonstrate either an increase or decrease in fit between the first and second measurement occasion. The main disadvantage of examining change in this manner is that two-wave designs assume implicitly that the change in fit is a linear function. For example, based on the found change in fit between Wave 1 and Wave 2, researchers may conclude that fit increases over time; however, an additional data collection may show that fit decreased before it increased.

Furthermore, researchers may infer changes in fit between two points of data within a person. However, researchers cannot examine the speed or pattern of change for each individual over time. For instance, two individuals may show an increase in fit between two measurement occasions, but for each individual the actual pattern of change in fit or how these individuals change between the measurements could be different. One individual could have started out moderately high, decreased in fit, and then steeply increased in fit demonstrating high fit on the second measurement occasion, whereas the other individual may have also started out moderately high but gradually increased in fit between Wave 1 and 2. Overall, two-wave designs are severely limited in regard to providing information on change over time (Singer & Willett, 2003; Chan, 1998, 2003).

Previous research with two-waves. As shown in Table 1, three of the found longitudinal studies that examined changes in fit included only two data collections. Chatman (1991) found that new employees' perceptions of fit with their organization decreased from Wave 1 to Wave 2 based on a decrease in the mean fit scores. Similarly, DeRue and Morgeson (2007) concluded that Person-Role Fit decreased based on the overall mean score of fit between the first and second measurement occasion. Harms, Roberts, and Winter (2006) found no significant changes in fit. In addition to the untenable assumption of linear function in the design, all of these two wave studies are likely inconclusive because of the inadequacy of statistical approaches taken. This is because with data collected from two measurement occasions, change tends to be examined based on correlations and mean differences between fit indexes. The above approaches, however, fail to examine change within people over time. It is highly probable that some individuals actually increased in fit, others remained stable, and some decreased over time.

Three or more wave designs. The utilization of at least three data points allows researchers to examine if change over time is linear (e.g., individuals gradually increase in fit over time) as well as the pattern of change within-individuals across time. An example of non-linear change within the PE Fit context would be an individual could start out with low fit, report lower fit on the second wave, and then report high fit on the third wave of data collection. With the addition of a fourth wave of data, the researcher could examine if fit remains high or decreases after the third measurement occasion. Therefore, each additional wave provides more information on what is happening to an individual across time. Although three or more waves is a somewhat vague guideline to study change (Curran, Obeidat, & Losardo, 2010), Singer and Willett (2003) recommend researchers utilize as many waves as possible to capture the change process within cost and logistical constraints.

Three or more waves of data are also ideal for examining reverse and reciprocal relationships. Although directionality between two variables can be examined using a two wave panel design (i.e., both variables measured at both time points) and advanced statistical techniques (Zapf et al., 1996), additional waves beyond two provides researchers the opportunity to thoroughly examine the relationships between variables over time. For example, with a two wave panel design, researchers can examine whether outcomes lead to fit after six months while controlling for initial outcomes. However, with only two waves, researchers are unable to investigate whether the direction between the variables remains the same or changes over time. As an illustration, a year after an initial fit assessment, dissatisfaction could lead to worsening in perceived fit, but several months later, it could be that this decrease in perceived fit could then contribute to an increase in dissatisfaction. Thus, by utilizing several waves of data, researchers can thoroughly examine changes as well as clarify the causal direction between the variables, including reverse and reciprocal causation over time.

Previous research with three or more waves. Only two of the reviewed longitudinal studies assessed changes in fit using three to five measurement occasions, as described in Table 1. Both Schmitt, Oswald, Friede, Imus, and Merritt (2008) and Roberts and Robins (2004) utilized at least three waves of data and the recent advances in latent growth modeling to examine how individuals changed over time. Latent growth modeling is a statistical method that allows one to examine both within-individual change (i.e., how each individual changes over time) as well as inter-individual differences in change (i.e., examination of differences in change among individuals) (Singer & Willett, 2003). Latent growth modeling is reviewed in detail in the statistical analysis section.

Roberts and Robins (2004) administered surveys to the same group of undergraduates from freshman year through their senior year of college, and found that fit, as conceptualized as the match between an individual's interests and consensus judgment of the environment's resources, showed a significant difference in the pattern of change between individuals, but the effect for this was small. Overall, they concluded that PE Fit was fairly stable throughout the four years of undergraduate studies.

In contrast to Roberts and Robins (2004), Schmitt et al. (2008) found significant differences in undergraduate students' initial status of fit, conceptualized as perceived fit with the academic environment, as well significant differences in the students' rate of change over time. In other words, the students varied on their initial level of fit and showed differences in how they changed over time. It needs to be noted that for Schmitt et al. the overall means for fit at Waves 1, 2, and 3 barely changed, and the correlations between each wave were also relatively high (*r*s ranged from .53 to .63). This demonstrates the need to consider how each individual changes over time instead of only examining overall how a group of individuals change.

In addition to examining changes in fit, Schmitt et al. (2008) also examined the extent to which fit predicted various outcomes, including satisfaction as well as the direction of the relationships between fit and the outcomes. Schmitt et al. concluded that changes in fit lead to changes in satisfaction across time. They also found that changes in fit and satisfaction led to changes in GPA and intentions to transfer or drop-out of school. Lastly, Schmitt et al. concluded that the causal sequence of fit –> satisfaction –> student outcomes (e.g., GPA) better fit the data compared to the sequence of student outcomes –> satisfaction –> fit. Overall, the design of this study and latent growth modeling allowed Schmitt and his colleagues to examine 1) within individual changes in fit, 2) overall how the group of students changed over time, and 3) how changes in fit led to changes in other variables over time. Clearly, there is a need for additional multi-wave longitudinal studies to more thoroughly examine how fit changes over time.

Chapter III

Current Study

The current study examined the extent to which perceived Demands-Abilities Fit (DA Fit) and Person-Vocation Fit (PV Fit) were related to health, attitudes, and turnover intentions among individuals as they transitioned into the nursing profession. The expected relationships between fit and various indicators of adjustment were examined using a longitudinal design, assessing nursing students three times during a nursing program (i.e., Waves 1 through 3) and twice during the first two years after becoming registered nurses (i.e., Waves 4 and 5).

The study used multiple waves since it was expected that the relationships between perceived fit, health, and attitudes are part of a process that occurs over time. By gathering multiple waves of data, the study was able to examine if there were any differences regarding the students' perceptions of DA and PV Fit to the nursing occupation at the beginning of a nursing program (i.e., baseline of perceived fit at the occupation level) as well as their perceptions of DA and PV Fit to nursing specialties prior to entering the nursing profession (i.e., baseline of perceived fit at the specialty level).

Additionally, the current design allowed for the examination of differences in the pattern of change in DA and PV Fit among individuals over time, as well as the causal direction of the relationships between the perceived fit variables and indicators of adjustment over time. Although theories have proposed that PE Fit and various outcomes are part of an adjustment process, well-designed longitudinal studies to test these ideas are lacking (Schmitt et al., 2008). Thus, the design of the current study allowed for a thorough examination of the link between perceived DA and PV Fit and mental and physical health, occupational satisfaction, occupational commitment, and turnover intentions. Below, theories of PE Fit are integrated to provide rationales for each hypothesis.

French et al.'s (1974) PE Fit theory on occupational stress suggested that lack of fit, functioning as a stressor, would result in poor mental and physical health. Past cross-sectional studies have supported French et al.'s work by demonstrating that both DA and PV Fit are negatively related to anxiety, emotional exhaustion (Xie & Johns, 1995), and somatic complaints (Lachterman & Meir, 2004). Based on theory and prior research, it was expected that the DA and PV Fit at the occupation level assessed at Wave 1 and DA and PV Fit at the specialty level assessed at Wave 3 would be associated with experiences of positive mental and physical health at Wave 1 and Wave 3, respectively. In contrast, the individuals who perceived lack of DA or PV Fit at the occupation level at Wave 1 or lack of DA and PV Fit at the specialty level at Wave 3 were likely to view this lack of fit as "stressful" and, as a result, experience poor mental and physical health. Specifically, the following hypotheses are proposed.

Hypothesis 1a: Wave 1 DA and PV Fit at the occupation level are positively related to Wave 1 mental and physical health.

Hypothesis 1b: Wave 3 DA and PV Fit at the specialty level are positively related to Wave 3 mental and physical health.

In addition to French et al.'s (1974) research on fit and health, both Holland (1973; 1997) and Dawis and Lofquist (1984; Dawis, 2005) suggested that the match between individuals and environments results in positive attitudes. Holland suggested that individuals are satisfied when their interests match the interests of the environment. Similarly, Dawis and Lofquist suggested that satisfaction comes from either a match between an individual's abilities and the requirements of the environment or an individual's needs being met by the supplies of the environment. This theoretical connection between fit and attitudes has been supported empirically. DA Fit and PV Fit have both been shown to be positively related to satisfaction (e.g., Resick, Baltes, & Shantz, 2007; Feij et al., 1999). Other types of fit have also been shown to be positively related to commitment (e.g., Kristof, 1996). Based on prior research, it was expected that the individuals who perceived DA and PV Fit to the nursing occupation and nursing specialties at Wave 3 would also report positive satisfaction and commitment at Wave 3. On the other hand, individuals who perceived lack of DA and PV Fit to the nursing occupation and nursing specialties would report poor satisfaction and commitment. Based on the above, the following hypotheses are proposed.

> **Hypothesis 1c**: Wave 3 DA and PV Fit at the occupation level are positively related to Wave 3 occupational satisfaction and occupational commitment.
>
> **Hypothesis 1d**: Wave 3 DA and PV Fit at the specialty level are positively related to Wave 3 occupational commitment and occupational satisfaction.

In addition to examining the extent to which perceived fit, health, and attitudes assessed at baseline are related, the current study examined the possible rate (i.e., speed or acceleration) of change of DA and PV Fit to the nursing occupation and nursing specialties over time. Changes in DA and PV Fit to the nursing occupation and nursing specialties could occur in a similar way proposed by Person-Organization Fit researchers. Research on Person-Organization Fit suggests that Person-Organization Fit improves over time (Kristof, 1996; Cable & Parsons, 2001) as individuals learn and adopt the values and behaviors expected of the organization. Similarly, it was expected that individuals' personality and values would become similar to the characteristics of the nursing occupation and nursing specialties as individuals are socialized into the nursing occupation as well as specific nursing specialties. Additionally, individuals' skills were expected to increase as they go through the nursing program and after they start practicing as registered nurses. However, not all individuals could develop the required characteristics. For instance, it was expected that some students would develop the required skills through coursework and hands-on clinical practice and/or change their perceptions of the match between their abilities and those required of the nursing occupation. As a result, their DA Fit to the nursing occupation was expected to improve over time. In contrast, it was also expected that some students would experience worsening in their DA Fit to the nursing occupation over time because they could not develop the required skills.

Similarly, perceived DA Fit to a nursing specialty as well as PV Fit at the nursing occupation and specialty levels may also improve or worsen over time. Additionally, for both DA and PV Fit the focus on changes in fit was on the differences in the rate of change or the speed of change over time within and among participants. For example, some students could have reported gradual increases in fit, other students could have showed decreases in fit over time, and some could have reported the same level of fit throughout the entire study.

Theory suggests that changes in perceived fit should be related to changes in indicators of adjustment. French et al.'s (1974) and Dawis and Lofquist's (1984; Dawis, 2005) theories suggest that improvement in fit is expected to lead to improvements in health and attitudes, respectively. Specifically, French et al. and Dawis and Lofquist suggested the adjustment process begins when individuals and environments perceive they do not fit with one another. Individuals then attempt to increase fit, and this should subsequently result in improvements in health and attitudes. Therefore, the rate of change in fit should be related to the rate of change in indicators of adjustment. In support of these theories, Schmitt et al. (2008) found a positive relationship between academic fit and satisfaction over time. Specifically, improvement in fit with the academic environment over time was related to increases in satisfaction with the academic environment over time. In contrast, French et al. and Dawis and Lofquist hypothesized that worsening in fit would be related to increases in negative outcomes such as poor health and dissatisfaction. Thus, it was expected that the rate of change in DA and PV Fit to the nursing occupation and nursing specialties would be related to changes in mental and physical health, satisfaction, and commitment. The correspondent hypotheses are presented below.

> **Hypothesis 2a**: The rate of change of DA and PV Fit at the occupation level are positively related to the rate of change of mental and physical health.

Hypothesis 2b: The rate of change of DA and PV Fit at the occupation level are positively related to the rate of change of occupational commitment and occupational satisfaction.

Hypothesis 2c: The rate of change of DA and PV Fit at the specialty level are positively related to the rate of change of mental and physical health.

Hypothesis 2d: The rate of change of DA and PV Fit at the specialty level are positively related to the rate of change of occupational commitment and occupational satisfaction.

In addition to the rate of change of perceived fit and the indicators of adjustment being related, PE Fit theory suggests that individuals' initial fit should be related to the rate of change of outcomes. As mentioned above, Dawis and Lofquist (1984; Dawis, 2005) suggested that the adjustment cycle begins with the recognition of lack of correspondence between the individual and the environment. Similarly, French et al. (1974) proposed that lack of fit motivates individuals to improve their fit with the environment. Both Dawis and Lofquist and French et al. seem to suggest that the rate of change in the various indicators of adjustment may be dependent on whether or not an individual perceives lack of fit initially. In other words, individuals who perceive initial misfit would likely experience a faster rate of change in the outcomes than individuals who experience initial fit.

In support of the above theoretical ideas, Schmitt et al. (2008) found that students who reported lack of fit with the academic environment at the beginning of their study showed the greatest improvement in satisfaction over time compared to individuals who reported initial fit. Based on this, it was expected that there would be a relationship between fit and the various indicators of adjustment over time. It was expected that the rate of change in health and attitudes would be dependent upon individuals' initial DA and PV Fit (i.e., perceived DA and PV Fit at the occupational level at Wave 1 or at the specialty level at Wave 3). Individuals with reported low DA or PV Fit initially to the nursing occupation (Wave 1) or low DA or PV Fit to a nursing specialty initially (Wave 3) were expected to experience a faster rate of change in mental and physical health, occupational satisfaction, and occupational commitment compared to individuals who reported high DA or PV Fit initially. Based on the above, the following hypotheses are proposed.

Hypothesis 3a: Wave 1 DA and PV Fit at the occupation level predict a slower rate of change of mental and physical health compared to Wave 1 lack of DA and PV Fit.

Hypothesis 3b: Wave 3 DA and PV Fit at the occupation level predict a slower rate of change of occupational satisfaction and occupational commitment compared to Wave 3 lack of DA and PV Fit.

Hypothesis 3c: Wave 3 DA and PV Fit at the specialty level predict a slower rate of change of mental and physical health compared to Wave 3 lack of DA and PV Fit.

Hypothesis 3d: Wave 3 DA and PV Fit at the specialty level predict a slower rate of change of occupational satisfaction and occupational commitment compared to Wave 3 lack of DA and PV Fit.

Extending from the idea that the rate of change in the outcomes may be dependent on initial fit, the reverse direction has been implied by prior researchers such that the rate of change in fit likely depends on initial health and attitudes. French et al. (1974) and Dawis and Lofquist (1984; Dawis, 2005) suggested that the experience of strains, such as poor health or dissatisfaction would lead individuals to try to improve fit and if successful, individuals should experience improvement in their fit with an environment. Schmitt et al. (2008) demonstrated support for this idea with the finding that low initial satisfaction was associated with the most improvement (i.e., fastest rate of change) in fit with the academic environment compared to individuals who reported high initial satisfaction. Therefore, initial indicators of adjustment assessed at Wave 1 or Wave 3 were expected to be related to the rate of change of DA and PV Fit over time. Below are the corresponding hypotheses.

Hypothesis 4a: Wave 1 mental and physical health predict a slower rate of change of DA and PV Fit to the nursing occupation compared to Wave 1 poor mental and physical health.

Hypothesis 4b: Wave 3 occupational satisfaction and commitment predict a slower rate of change of DA and PV Fit to the nursing occupation compared to Wave 3 poor occupational satisfaction and commitment.

Hypothesis 4c: Wave 3 mental and physical health predict a slower rate of change of DA and PV Fit to a nursing specialty compared to Wave 3 poor mental and physical health.

Hypothesis 4d: Wave 3 occupational satisfaction and commitment predict a slower rate of change of DA and PV Fit to a nursing specialty compared to Wave 3 poor occupational satisfaction and commitment.

Additionally, French et al. (1974), Holland (1973; 1997), and Dawis and Lofquist (1984; Dawis, 2005) all suggested a link between fit and turnover intentions. According to these researchers, fit was suspected to be related to tenure, whereas lack of fit was proposed to be related to turnover. Cross-sectional studies have found that DA Fit is negatively related to turnover intentions and positively related to tenure (Chang, Chi, & Chuang, 2010). Additionally, Schmitt et al. (2008) found that academic fit at the beginning of their study was negatively related to initial turnover intentions. Based on these theories and research findings, it was expected that initial DA and PV Fit at the occupation level (Wave 1) and DA and PV Fit at the specialty level (Wave 3) would be negatively related to turnover intentions at Waves 4 and 5. That is, the students who initially perceived DA and PV Fit with the nursing occupation and nursing specialties would be less likely to report turnover intentions once they entered the nursing profession compared to students who perceived low DA and PV Fit initially. Based on the above theory and research, the following hypotheses are proposed.

> **Hypothesis 5a**: Wave 1 DA and PV Fit at the occupation level are negatively related to turnover intentions at Waves 4 and 5.
>
> **Hypothesis 5b**: Wave 3 DA and PV Fit at the specialty level are negatively related to turnover intentions at Waves 4 and 5.

In addition to initial fit and turnover intentions being related, French et al.'s (1974) and Dawis and Lofquist's (1984; Dawis, 2005) theories suggest that the rate of change of perceived fit and turnover intentions should also be considered. On one hand, these researchers suggested that worsening in fit would eventually result in individuals deciding to leave the environment after failing to improve their perceived fit. On the other hand, French et al. and Dawis and Lofquist suggested that improvements in fit would ultimately lead to individuals deciding to remain in an environment. In support of these ideas, Schmitt et al. (2008) found that improvement in fit was associated with a decrease in turnover intentions. Thus, it was expected that the rate of change in DA and PV Fit at the occupation and specialty level would be negatively related to turnover intentions at Waves 4 and 5. The corresponding hypotheses are presented below.

> **Hypothesis 5c**: The rate of change of DA and PV Fit at the occupation level are negatively related to turnover intentions at Waves 4 and 5.
>
> **Hypothesis 5d**: The rate of change of DA and PV Fit at the specialty level are negatively related to turnover intentions at Waves 4 and 5.

In addition to evidence of initial status of perceived fit being related to the rate of change of the various indicators of adjustment, overall PE Fit theories seem to imply a sequence of fit leading to subsequent outcomes over time. Dawis and Lofquist's (1984; Dawis, 2005) Process Models suggests that individuals assess the match between themselves and the environment, and, as a result of this assessment, experience either positive or negative outcomes. If individuals experience negative outcomes, then individuals are likely to make changes to themselves and/or the environment to improve their fit. After making these changes, individuals again assess their fit, experience outcomes, and, if necessary, make additional changes in an attempt to improve their fit. This cycle was proposed to continue while an individual remained in the environment. Therefore, according to TWA, fit was expected to predict subsequent outcomes, such as satisfaction. Similarly, French et al. (1974) and Holland (1973; 1997) seem to suggest the same sequence of perceptions of fit leading to good health and positive attitudes, respectively. Schmitt et al. (2008) specifically tested the direction of the relationships between fit and various outcomes and found support for fit predicting outcomes instead of outcomes predicting fit. Based on the above, the following hypotheses are proposed.

Hypothesis 6a: DA and PV Fit at the occupation and specialty level predict subsequent mental and physical health (i.e., Wave 1 DA and PV Fit at the occupation level predict Wave 2 mental and physical health, Wave 2 DA and PV Fit at the occupation level predict Wave 3 mental and physical health, Wave 3 DA and PV Fit at the occupation level predict Wave 4 mental and physical health, and Wave 4 DA and PV Fit at the occupation level predict Wave 5 mental and physical health. Wave 3 DA and PV Fit at the specialty level predict Wave 4 mental and physical health and Wave 4 DA and PV Fit at the specialty level predict Wave 5 mental and physical health).

Hypothesis 6b: DA and PV Fit at the occupation and specialty level predict subsequent occupational satisfaction and commitment (i.e., Wave 3 DA and PV Fit at the occupation and specialty level predict Wave 4 occupational satisfaction and commitment, and Wave 4 DA and PV Fit at the occupation and specialty level predict Wave 5 occupational satisfaction and commitment).

Hypothesis 6c: DA and PV Fit at the occupation and specialty level predict subsequent turnover intentions (i.e., Wave 3 DA and PV Fit at the occupation and specialty level predict Wave 4 turnover intentions, and

Wave 4 DA and PV Fit at the occupation and specialty level predict Wave 5 turnover intentions).

Chapter IV

Methods

Participants

The sample included nursing students at a western university. The students were recruited approximately a month after the start of a Bachelor's of Science in Nursing (BSN) program and were administered the first survey of the study (i.e., Wave 1). The participants were surveyed twice more during the nursing program: during the second or third semester (i.e., Wave 2) and then during the last month of the fifth semester (i.e., Wave 3). After the students graduated from the program, they were contacted twice more to complete follow-up surveys. The first follow-up (i.e., Wave 4) was approximately six to nine months after the participants started working as registered nurses and the last follow-up survey (i.e., Wave 5) was administered about six months after Wave 4.

Table 2 includes a timeline of the data collection and Table 3 lists the measures that were collected at each wave of the data collection. The time lags between waves (e.g., between Wave 2 and 3) were different between participants since the students progressed through the program at different rates. Therefore, the time lags for each participant were recorded and were incorporated into the statistical analyses. The difference in time lags was because approximately a third of the students were on an eighteen month completion track (i.e., five consecutive semesters), whereas the rest of the students completed the program in approximately two years. Additionally, the students graduated at three different times during the year. Thus, the number of months between

Wave 1 and each subsequent wave varied between participants. The current study is part of a larger longitudinal study that is anticipated to be completed in 2013. Only the participants who have had the opportunity to take part in all five waves of the project were included in the analyses. The sample consists of students who started in summer and fall of 2007 (i.e., Cohort 1) and summer 2008 (i.e., Cohort 2).

Table 4 includes the demographics for each wave for each cohort. Mean age is only reported for Wave 1 since age was not collected on any of the other waves. A total of 169 students participated in the Wave 1 survey (*M* age = 25.14, 89.3% Female, and 90.3% Caucasian). One-hundred forty five students agreed to participate in the study at Wave 2 (89.5% Female and 90.2% Caucasian). Wave 3 survey consisted of 154 participants (88.3% Female and 91.7% Caucasian). Sixty-five participants completed the Wave 4 survey (89.8% Female and 93.2% Caucasian) and 58 participated in the Wave 5 survey (91.1% Female and 94.6% Caucasian). For participants who started the study at Waves 2 or 3, no demographic information is provided since demographic information was only collected at Waves 1, 4, and 5. Additionally, some participants selected not to report demographics.

Attrition Analyses. Although efforts were made to maintain a high response rate throughout the study, there was attrition throughout the five waves. The response rates were highest for the first three waves of the study, which is likely because the surveys were administered in-person during school hours. However, the response rates did vary between the data collections of the first three waves for various possible reasons (e.g., students were absent the day of the data collection or studied during the data collection instead of completing the survey). The response rates for the last two waves of the project were lower compared to the first three waves. Some of this attrition can be explained by not being able to contact the participants but there are likely various other reasons for the participants deciding not to complete Wave 4 and/or Wave 5. Response rates by participation in one or more waves of data collection (e.g., response rate for individuals who participated in Waves 2, 3, and 4) are included in Table 5.

To examine variables related to attrition between the waves, separate MANOVAs with attrition status as the independent variable were conducted for the demographic variables and study variables. No significant differences between the participants at Waves 4 and 5 and those who dropped out after Wave 1 on any of the studied variables were found. Thus, the attrition appears to be more random than systematic. The data is therefore analyzed under the assumption that the data is missing at random (MAR).

Measures

Surveys for Waves 1 through 5 consisted of various measures including demographics, DA and PV Fit, mental and physical health, occupational satisfaction, occupational commitment, and turnover intentions. The demographic data included personal characteristics such as age, gender, and ethnicity. For Waves 4 and 5, the participants indicated whether they were working in a specialty they preferred with the item "Is the area or specialty area of nursing that you are currently working in your preferred area?" by marking yes or no.

Demand-Ability Fit (DA Fit) - Nursing Occupation. DA Fit with the nursing occupation was assessed at each wave of the study by the participants using a scale developed by Cable and Judge (1996) that measured Person-Job Fit (Appendix A). The 3-item scale was modified for the current study by changing "job" to "nursing profession." The students were asked to rate on a scale of 1 (not at all) to 5 (to a large extent) the extent to which they feel they possess the abilities required for the nursing profession. Higher scores represented greater perceived DA Fit with the nursing occupation whereas lower scores indicated lower perceived fit. The items include "To what extent do you believe your abilities 'match' those required by the nursing profession?", "To what extent will your future job performance suffer by your lack of expertise in skills required in nursing?", and "To what extent do you think you possess the abilities to perform successfully in the nursing profession?" Based on initial data analyses of Wave 1 survey, the item "To what extent will your future job performance suffer by your lack of expertise in skills required in nursing?" was eliminated due to its poor psychometric quality. The reliability estimates for DA Fit with the nursing occupation at W1 with all three items was .38 and with only two items it was .70. The reliability estimates for DA Fit with the nursing occupation at Wave 2, Wave 3, Wave 4, and Wav 5 were .84, .91, .85, and .90, respectively.

Demand-Ability Fit (DA Fit) - Nursing Specialty. DA Fit with a nursing specialty was assessed at Waves 3, 4, and 5 using the scale developed by Cable and Judge (1996) described above (Appendix B). The scale was modified for the current study by changing the focus of the scale to nursing specialties. The two items that were consistently used for the DA Fit to the nursing occupation scale were also used to measure DA Fit to nursing specialties. The participants were asked to rate on a scale of 1 (not at all) to 5 (to a large extent) the extent to which they feel they possess the abilities required for the nursing specialty they are currently working in. High scores on the scale represent DA Fit with a nursing specialty. The items include "To what extent do you believe your abilities 'match' those required by your nursing specialty?" and "To what extent do you think you possess the abilities to perform successfully in your nursing specialty?" The reliability estimates for DA Fit with nursing specialty at Wave 3, Wave 4, and Wave 5 were .89, .83, and .81, respectively.

Person-Vocation Fit (PV Fit) - Nursing Occupation. The participants assessed their PV Fit with the nursing occupation at Waves 1 through 5 using a five-item scale developed by Saks and Ashforth (1997) (Appendix C). The original measure assessed Person-Organization Fit but the measure was modified by changing "organization" to "nursing profession." The students were asked to rate on a scale of 1 (not at all) to 5 (to a large extent) the extent to which they feel they match the values, personality, and needs of the nursing profession. High scale scores represented PV Fit at the nursing occupation level, while low scores represented low PV Fit at the nursing occupation level. A sample item includes "To what extent does your personality match the personality or image of the nursing profession?" The reliability estimates for Wave 1, Wave 2, Wave 3, Wave 4, and Wave 5 of PV Fit with the nursing occupation were .84, .84, .90, .91, and 0.91, respectively.

Person-Vocation Fit (PV Fit) - Nursing Specialty. The participants assessed their PV Fit to a nursing specialty at Wave 3, Wave 4, and Wave 5 using a five-item scale developed by Saks and Ashforth (1997) (Appendix D). Saks and Ashforth's Person-Organization Fit measure was modified by changing the focus from organization to nursing specialty. The participants were asked to rate on a scale of 1 (not at all) to 5 (to a large extent) the extent to which they feel they match the values, personality, and needs of the nursing specialty they are currently working in. A sample item includes "To what extent does your personality match the personality or image of your nursing specialty?" High scores indicated PV Fit at the nursing specialty level. Low score represented lack of PV Fit at the nursing specialty level. The reliability estimates for PV Fit with nursing specialty at Wave 3, Wave 4, and Wave 5 were .86, .90, and .93, respectively.

Physical and mental health. Self-assessments of physical and mental health were taken by the participants on all five waves using the SF-12 (Ware, Kosinski, Turner-Bowker, & Gandek, 2002) (Appendix E). The measure included six items about physical health and six items about mental health. All of these items were rated on a scale of 1 (poor) to 5 (excellent), 1 (yes, limited a lot) to 3 (no, not limited at all), or 1 (all the time) to 5 (none of the time), depending on the item.

The first physical item asked the participants to rate their overall health. The rest of the physical items focused on physical functioning interrupting daily activities. Specifically, the measure included two items on physical functioning (e.g., Does your health now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?), two items on role physical functioning (e.g., How often have you accomplished less than you would like with your work or other regular daily activities as a result of your physical health?), and one item on bodily pain (During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?). Due to the poor psychometric performance of the physical functioning measure, following Ware and colleagues' (2002) framework, the overall health item, and the physical functioning and role physical functioning measures were combined. Cronbach's alphas for Wave 1, Wave 2, Wave 3, Wave 4, and Wave 5 physical health when the physical health items were aggregated were .67, .76, .80, .74, and .65, respectively.

The mental health items in the SF-12 consists of 1-item vitality (How much of the time during the past 4 weeks did you have a lot of energy?), 1-item social functioning (How much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?), 2-items role emotional functioning (e.g., How often have you accomplished less than you would like with your work or other regular daily activities as a result of emotional problems (such as feeling depressed or anxious)?), and 2-items mental health (e.g., How much of the time during the past 4 weeks have you felt calm and peaceful?). Again due to psychometric problems associated with the subscales, the items were combined into a single measure of mental health. The reliability estimates for Wave 1, Wave 2, Wave 3, Wave 4, and Wave 5 were .79, .78, .77, .90, and .85, respectively.

Occupational satisfaction. The participants assessed occupational satisfaction at Wave 3, Wave 4, and Wave 5 using a three-item scale modified from a job satisfaction scale developed by Cammann, Fichman, Jenkins, and Klesh (1983) (Appendix F) by changing the word “job” to “nursing profession.” The participants were asked to rate on a five-point scale, with 1 (strongly disagree) to 5 (strongly agree), the extent to which they agreed with each statement. A sample item includes “All in all, I am satisfied with my choice of the nursing profession.” The reliability estimates for occupational satisfaction at Wave 3, Wave 4, and Wave 5 were .86, .74, and .85, respectively.

Occupational commitment. Three types of occupational commitment were assessed at Waves 3 through 5 using Meyer, Allen, and Smith’s (1993) occupational commitment scale (Appendix G). The scale consists of 18 items with six items for each type of commitment: affective commitment, continuance commitment, and normative commitment. Participants were asked to rate on a scale from 1 (strongly disagree) to 5 (strongly agree) the extent to which they agreed with each item. Sample affective commitment items include "Nursing is important to my self-image" and "I regret having entered the nursing profession" (reverse coded). Sample continuance commitment items include "I have put too much into the nursing profession to consider changing now" and "There are no pressures to keep me from changing professions" (reverse coded). Sample items of normative commitment include "I do not feel any obligation to remain in the nursing profession" (reverse coded) and "I feel a responsibility to the nursing profession to continue in it." The reliability estimates for affective commitment at Wave 3, Wave 4, and Wave 5 were .85, .86, and .89, respectively. The reliability estimates for normative commitment at Wave 3, Wave 4, and Wave 5 were .79, .83, and .83, respectively. The reliability estimates for continuance commitment at Wave 3, Wave 4, and Wave 5 were.74, .86, and .81, respectively.

Turnover intentions. Turnover intentions were assessed using a three-item scale developed by Lum, Kervin, Clark, Reid, and Sirola (1998) (Appendix H). Turnover intentions were measured at Waves 4 and 5. The items were originally written in the form of questions and were revised as a Likert scale with the same format as the rest of the survey. The participants rated on a scale of 1 (strongly disagree) to 5 (strongly agree) the extent to which they agreed with each of the statements. A sample item includes "In the last few months, have you ever thought seriously about looking for a job at another hospital?" The reliability estimates for turnover intentions at Wave 4 and Wave 5 were .81 and .81, respectively.

Procedure

The data were collected over five waves. The first three waves occurred while the students were in a nursing program. Waves 4 and 5 were administered after the students graduated and were working as registered nurses. The number of months between waves does vary by cohort as well as individual participant due to differences in when the surveys were administered each year. Table 2 provides an overview of the timeline of the data collections. The Wave 1 surveys were administered summer and fall of 2007 and summer of 2008. Wave 2 surveys were administered spring 2008 and winter 2008. Wave 3 surveys were administered in December, May, and August from 2008 to 2010. Wave 4 surveys were administered summer and winter 2009 to 2010. Lastly, Wave 5 surveys were administered winter 2010, fall 2010, winter 2011, and spring 2011.

All waves of the project were completely voluntary and the participants were instructed that they could end the study at any time. The participants were solicited to participate in each wave of the project regardless if they participated in previous waves or not. Participants were not compensated for their participation; however, depending on the timing of the data collection, breakfast or lunch was occasionally provided. Confidentiality of the participants was maintained by having the participants create a unique code during the Wave 1 data collection and this code was used for all waves of the study. Only members of the research team have access to the names and unique codes of the participants and this information is kept on a password protected network drive.

The first wave (i.e., Month = 0 or baseline) was during the first month of a nursing program. The decision regarding the timing of this measurement occasion was made so the students would have enough experience in the program to be able to answer the questions but the students would not be too far into the program that the environment would have too much of an influence on their responses. During the administration of Wave 1, a research assistant described the overall study as well as the first wave of the project. The participants read and signed a consent form, completed a contact sheet with their permanent address and email, and then completed the survey. The Wave 1 surveys were generally administered during a lunch break and it took approximately 30 to 50 minutes to complete.

Wave 2 was generally administered in the mornings during the students' second or third semester in the nursing program (i.e., time after Wave 1 = 5 to 11 months). The Wave 2 surveys were administered by research assistants towards the end of the semester. The students were told about the project and then read and signed a consent form. The survey took approximately 20 minutes to complete.

At the end of the fifth, and final semester in the nursing program, the students were administered Wave 3 (i.e., time after Wave 1 = 18 to 23 months). The fifth semester was an important milestone for the nursing students since it was the last time they were students and upon graduation they took on the role of registered nurse. The instructor of the nursing course explained the project, discussed the follow-up surveys, and administered the surveys to her students. The students again read and signed a consent form that included the subsequent waves of the study. The students also provided their contact information and an alternative contact so they could be reached for the follow-up surveys. The participants were sent thank you cards after they graduated to congratulate them on their graduations as well as to thank them for their participation while in nursing school. The Wave 3 survey took approximately 20 minutes to complete.

Wave 4 was administered six to nine months after the students graduated from the nursing program (i.e., time after Wave 1 = 26 to 30 months). The decision of selecting a range in months after Wave 3 was made because there tends to be a lag in between graduation and the start of work. After graduation, the students are required to take a board exam. Once they pass the exam, they go through an orientation at the hospital they are hired at. Six to nine months after graduation gave the students time to take the exam and go through the orientation, as well as provided them some time initially as registered nurses. The Wave 4 survey took approximately 15 minutes to complete.

The last wave of the study (i.e., Wave 5) was administered approximately a year after graduation (i.e., time after Wave 1 = 32 to 36 months). Turnover literature in the nursing field has shown that turnover is high among early career nurses, especially during the first year (Gray & Phillips, 1994). Therefore, a year into the occupation should be a critical time during a nurse's career in regards to turnover intentions. The Wave 5 survey took approximately 15 minutes to complete.

For both Waves 4 and 5, the instructor that administered Wave 3 emailed the students to solicit participation. The instructor sent the participants an email explaining the study and a SurveyMonkey link to the online survey. The first page of the online survey was a cover letter explaining in more detail the nature of the project. After reading the cover letter, the students were instructed to click "Next" to complete the survey. For the participants who could not be reached by email, they were sent a hard copy of the survey. The mailed surveys included all materials that the participants who completed the surveys online received as well as a self-addressed envelope to send back the survey once it was filled out. For Waves 4 and 5, participants who had not completed the surveys by the set deadline were sent a reminder email with the link to the survey.

Chapter V

Statistical Analysis

Three types of statistical analyses were conducted. First, descriptive statistics (i.e., ranges, means, standard deviations, reliabilities, and correlations) were examined for each variable including DA and PV Fit, mental health, physical health, occupational satisfaction, occupational commitment, and turnover intentions. Second, the hypotheses were examined using two analyses: latent growth modeling (LGM) and autoregressive models. Latent growth models and autoregressive models are two common methods to examine longitudinal data (Schmitt et al., 2008; Schlueter, Davidov, & Schmidt, 2007; Bollen & Curran, 2004). Since latent growth modeling is a relatively new approach, a detailed description is provided below, followed by a review of autoregressive models.

Latent Growth Modeling

Growth modeling allows one to examine both within-individual change as well as inter-individual differences in change. Specifically, the goals of LGM are to parsimoniously describe how each individual changes over time and to identify differences among individuals that explain the intra-individual differences over time (Chan, Ramey, Ramey, & Schmitt, 2000). For the current study, growth modeling was used to examine 1) how each individual's DA and PV Fit and indicators of adjustment changed over time, 2) how changes in DA and PV Fit and indicators of adjustment differed among individuals, and 3) the extent to which rate of change in DA and PV Fit were related to the rate of change in the adjustment indicators.

Prior to explaining the models specified, the two levels of a multilevel model for change are reviewed since they provide the foundation for the type of latent growth analyses used in the current study. The first level of analysis (Level-1) focuses on changes within-individuals, while the second level of analysis (Level-2) focuses on the average growth trajectories, as well as patterns of change, as a function of predictors (Singer & Willett, 2003). Level-1 and Level-2 Models are explained in detail below.

Level-1 Model. At Level-1, each individual's growth trajectory (i.e., intra-individual change) of a particular variable of interest is modeled by an intercept ($_{0i}$) and a slope ($_{1i}$), with time (i.e., Wave_{ij}) as the only predictor, where *i* represents individuals, and *j* denotes number of waves. The goal of the Level-1 Model is to describe the shape of each individual's trajectory. The Level-1 Model can be summarized as: $Y_{ij} = \pi_{0i} + \pi_{1i}(\text{Wave}_{ij}) + \varepsilon_{ij}$. The model describes the intra-individual change in variable Y_{ij} (e.g., mental health) for individual *i* across *j* waves.

For the current study, variables measured at Wave 1 (or Wave 3) represented the initial status (i.e., intercept). Subsequent waves after Wave 1 (or Wave 3) were used to assess the rate of change or speed of change (i.e., slope). For example, each individual's initial PV Fit to the nursing occupation at Wave 1 was modeled by an estimated intercept of the above linear function. In addition, the rate of change of PV Fit from Waves 1 through 5 was modeled by a slope of the above linear function. Additionally, the function includes within-individual deviations (i.e., ε_{ij}) that describes the error associated with the observed score of individual *i* on wave *j*.

Level-2 Model. At the Level-2 analysis, the average trajectory of change and differences in the way individuals change were examined. For instance, the average trajectory of change in PV Fit would represent how overall participants tend to change in PV Fit from Wave 1 to Wave 5. Regarding differences in how individuals change, there could be differences in how changes in fit vary among participants. For example, for three participants in the study, one could always report high levels of fit, the second individual could report low levels, and the third individual may vary in their perceived fit over all five waves. All of the above patterns can be examined by finding out: 1) the average intercept and slope for all the participants, and 2) how much participants differ from the average intercept and slope. Overall, the Level-2 Model can be described by a fixed effect (i.e., γ_{00} or γ_{10}) and a random effect or person-specific residual (i.e., ζ_{0i} or ζ_{1i}), as represented by:

$$\pi_{0i} = \gamma_{00} + \zeta_{0i},$$

$$\pi_{1i} = \gamma_{10} + \zeta_{1i},$$

Where π_{0i} is defined as the average predicted intercept in the population (γ_{00}) plus the extent to which individuals differ from this average intercept (ζ_{0i}). For example, for PV Fit, γ_{00} is the average initial PV Fit for all individuals. It does not vary among individuals (i.e., a fixed effect). The parameter ζ_{0i} represents the extent to which the participants differ from the average initial PV Fit, and it varies among individuals (i.e., a random effect).

Where π_{1i} is defined as the average rate of change in the population (γ_{10}) plus the extent to which an individual *i*'s rate of change differs from the average rate of change (ζ_{1i}). For example, γ_{10} represents the predicted average rate of change of PV Fit such as a positive γ_{10} would suggest that, on average, PV Fit increases from Waves 1 to 5. The random effect, ζ_{1i}, would capture the extent to which individuals' differ from the average rate of change of PV Fit.

Testing the hypotheses. To examine Hypotheses 1, 2, 3, 4, and 5, LGM analyses were conducted in multiple stages. Initially, exploratory models were tested to examine the variance in each variable separately. Models were tested without including time to examine if there was systematic variance in the variables to warrant including predictors such as time. For each variable, the total variance was partitioned to examine if there was systematic variation within and among individuals to justify the inclusion of predictors. For example, if there was no significant variation among individuals (i.e., Level-2) in initial PV Fit then considering predictors to explain between-person variance in PV Fit would not have made sense. If the between-person variance was significant, the inclusion of predictors such as time was then warranted. The model without time as a predictor is defined as:

Level-1 Equation: $Y_{ij} = \pi_{0i} + \varepsilon_{ij}$

Level-2 Equation: $\pi_{0i} = \gamma_{00} + \zeta_{0i}$

Combined Form: $Y_{ij} = \gamma_{00} + (\zeta_{0i} + \varepsilon_{ij})$

Next, the variance in initial status and/or rate of change of the variables was examined to affirm if adding predictors, as specified by the hypotheses, was worthwhile. Once the above significant between-person variance was verified, time was added in as a predictor to examine if variables of interest changed across time, and if there were significant differences among individuals on the initial status. Specifically, time was added as a predictor of each of the variables and this model is defined as:

Level-1: $Y_{ij} = \pi_{0i} + \pi_{1i}(\text{Wave}_{ij}) + \varepsilon_{ij}$

Level-2: $\pi_{0i} = \gamma_{00} + \zeta_{0i}$

$\pi_{1i} = \gamma_{10} + \zeta_{1i}$

Combined form: $Y_{ij} = \gamma_{00} + \gamma_{10}(\text{Wave}_{ij}) + (\zeta_{0i} + \zeta_{1i} + \varepsilon_{ij})$

The above analyses informed the amount of variance in each variable attributable to differences among individuals, the percentage of within-individual variance explained by time, and if there was significant variation in initial status and/or rate of change. The variance components were assessed to determine if there was significant variability in the initial status and/or rate of change. For example, if it was found that DA Fit did not change over time then adding in mental health to explain changes in DA Fit over time would not have made sense. If significant variance was found then additional predictors could be considered to explain the variability. The variance from the models for each variable was also used as a benchmark to be compared to the variance from the LGMs specified by the hypotheses to determine if the predictors were explaining additional variance in the variables beyond time. Overall, the results from both of these exploratory models were assessed to determine if predictors should be added to the models in an attempt to explain addition variance.

After demonstrating sufficient justification to include additional predictors, multiple LGMs were fit to the data. All of the specified growth models were estimated in MPlus version 6.1 (Muthen and Muthen, 1998-2010). For all of the models, time was treated as a random effect to allow for the individually varying times of observation (i.e., different time lags for each wave for each individual) using the tscores option of Mplus. The fit of the models was compared using the Bayesian Information Criterion (BIC) and

Akaike's Information Criterion (AIC), where a smaller BIC and AIC indicates a better fit. Unstandardized parameter estimates were reported.

The treatment of time as a random effect is a relatively new approach, which has been made possible due to advances in statistical software (Hertzog & Nesselroade, 2003; Mehta & West, 2000). This treatment of time ties in with the multilevel approach to the study of change described in the previous paragraphs and differs from the conventional structural equation model (SEM) approach to LGMs. Traditionally, LGMs using the SEM approach assume that the data is collected at exactly the same time for all participants. However, when the data is not collected at identical measurement occasions, as was the case for the current study, the estimates are likely to be inaccurate because the expected means, variances, and covariances among the various outcomes at each measurement occasion will likely vary for each individual (Mehta & West). In cases where data from participants is collected at varying times, a multilevel approach is necessary since the multilevel approach focuses on the individual (i.e., individual means and variances) compared to the sample as a whole (i.e., sample means and variances). With the multilevel approach, growth models are fit to the data based on individual means, covariances, and variances.

As an overview, multiple models including the growth parameters of one fit variable and one outcome were fit to the data to test the hypotheses. Specifically, each LGM model included initial fit and rate of change of fit (e.g., DA Fit at the occupational level) predicting initial status of an outcome variable (e.g., initial mental health) and rate of change of the outcome (e.g., rate of change of mental health). BIC and AIC were examined to assess the overall fit of each fit-and-outcome model, such as a model for DA

Fit at the occupational level and mental health. The fixed effects and variance components of each fit-and-outcome model were also examined. The covariances focused on included 1) the relationships between initial fit and initial status of each outcome (Hypothesis 1), 2) the relationships between rate of change in fit and the rate of change in each outcome (Hypothesis 2), 3) initial fit (or an outcome) predicting the rate of change in an outcome (or rate of change in fit) (Hypotheses 3 and 4), and 4) the relationships between initial fit and rate of change in fit and turnover intentions at Waves 4 and 5 (Hypothesis 5). The reported results include the effects estimates, as well as the associated *p*-values for each of the estimates, to determine if the relationships between initial status, and/or rate of change of each fit and outcome combination were significant. Figures 1 through 3 illustrate the expected relationships between fit and the indicators of adjustment.

For Hypothesis 1, the effects estimates for initial DA and PV Fit and initial status of each outcome were examined. Initial fit was represented as π_{0i}, and initial status of the outcomes was represented as π'_{0i}. The significance of the covariance for the intercepts (represented as $\gamma_{\pi 0 \pi' 0}$) was examined to determine if there was a significant association between the average level of initial fit and the average level of initial status of each outcome. For instance, a significant positive covariance between initial DA Fit at the occupational level and initial mental health would suggest that individuals who reported higher DA Fit at the beginning of the nursing program also tended to report higher mental health at the beginning of the nursing program.

For Hypothesis 2, the fixed effects and random effects estimates for the rate of change of DA or PV Fit and an outcome were assessed. The significance of the covariance for the slope of fit (π_{1i}) and the slope (π'_{1i}) of an outcome, represented as $\gamma_{\pi 1 \pi' 1}$, determined if the rate of change in fit was related to the rate of change in each outcome. For instance, a significant positive covariance for the rate of change of DA Fit at the occupation level and mental health would suggest that individuals who experienced more rapid growth in fit experienced more rapid growth in mental health.

For Hypotheses 3 and 4, the relationships between initial status and rates of change were examined. For Hypothesis 3, initial DA or PV Fit (π_{0i}) was included as a predictor of the rate of change in each outcome (π'_{1i}). In other words, the slopes of each outcome were regressed on the intercept of the fit variables. For example, the slope of occupational commitment was regressed on the intercept of DA Fit at the occupation level at Wave 3 to determine if the rate of change of commitment was dependent on initial DA Fit. Similarly, for Hypothesis 4, initial status of each of the outcomes (π'_{0i}) was included as a predictor of the rate of change of the fit variables (π_{1i}). For example, the slope of DA Fit at the occupation level was regressed on the intercept of occupational commitment at Wave 3 to determine the extent to which the rate of change in DA Fit was dependent upon one's initial occupational commitment.

The random effects were examined to establish if the intercepts and slopes of fit and each outcome co-varied. Specifically, a negative covariance between initial fit and the rate of change of the outcomes would suggest that individuals who started out lower on fit also tended to report the most improvement in the outcomes, while the individuals who started out higher on fit tended to report the least improvement in the outcomes. Similarly, the covariance between initial status of the outcomes and rate of change of fit was examined to determine if individuals who started with poor health or attitudes tended to report the most improvement in fit compared to individuals who started with positive health and attitudes.

For Hypothesis 5 regarding the relationships between initial fit (π_{0i}) and rate of change of the fit variables (π_{1i}) and turnover intentions, turnover intentions at Waves 4 and 5 were included as outcome variables. The relationships between the intercepts of DA and PV Fit at the occupation level and specialty level and turnover intentions reported at Waves 4 ($\gamma_{\pi 0\mathrm{TURNOVER4}}$) and 5 ($\gamma_{\pi 0\mathrm{TURNOVER5}}$) were examined to determine if one's initial fit was related to turnover intentions after entering the nursing profession. Additionally, the estimates of the slopes of DA and PV Fit and turnover intentions at Waves 4 ($\gamma_{\pi 1\mathrm{TURNOVER4}}$) and 5 ($\gamma_{\pi 1\mathrm{TURNOVER5}}$) were examined to assess if the rate of change of fit was related to one's turnover intentions after becoming a nurse.

Autoregressive Models

Autoregressive models were used as an additional tool to assess the causal direction between perceived fit and the indicators of adjustment over the five waves. The main assumption of autoregressive models is that each variable is a function of the variable's score at the previous time point, plus random error (Schlueter, Davidov, & Schmidt, 2007; Hertzog & Nesselroade, 2003). The term, autoregressive, refers to a variable at each time point being regressed on the same variable at the previous time point, such as Wave 2 PV Fit at the occupation level being regressed on Wave 1 PV Fit at the occupation level (Bollen & Curran, 2004). For autoregressive models, stability coefficients represent the amount of change in the rank order of individuals between at least two time points (Hertzog & Nesselroade, 2003). Therefore, this approach is different than the previously described LGM approach since autoregressive models capture aggregate change over time compared to individual-level change.

The equation for an autoregressive model with one variable (e.g., PV Fit at the occupation level) is: $\eta_{ij} = \alpha_{j} + \beta_{j,j-1}\,\eta_{i,j-1} + \zeta_{ij}$, where *i* represents individuals and *j* indicates measurement occassion. For this model, α_j is interpreted as the initial level (i.e., intercept) of PV Fit at the occupation level at Wave *j*. $\beta_{j,j-1}$ denotes the autoregressive parameter or the influence of the prior value of PV Fit at the occupation level for individual *i* at Wave *j* (i.e., $\eta_{i,j-1}$) on the current PV Fit at the occupation level (i.e., η_{ij}). The equation also includes random error (i.e., ζ_{ij}).

When two or more constructs are included in an autoregressive model, cross-lagged effects between the variables can be examined. Cross-lagged effects refer to the longitudinal prediction of a variable (e.g., occupational satisfaction) from another variable (e.g., PV Fit at the occupation level) controlling for the autoregressive prediction of the variable from itself (i.e., occupational satisfaction) (Bollen & Curran, 2004). Below is the equation for an autoregressive model with two variables, such as PV Fit at the occupation level and occupational satisfaction.

$$y_{ij} = \alpha_{yj} + \beta_{yj,\,yj-1}\,y_{i,j-1} + \beta_{zj,zj-1}z_{i,j-1} + \varepsilon_{yij}$$

This equation indicates that occupational satisfaction (i.e., *y*) at Wave *j* is a function of the initial level (i.e., α_{yj}), the weighted influence of *y* at Wave *j* – 1, the weighted influence of *z* (e.g., PV Fit at the occupation level) at Wave *j* – 1, and random error, ε_{yij}. This equation can also be written to predict z_{ij} (e.g., PV Fit at the occupation level). Overall, autoregressive models were examined to investigate the amount of aggregate change in the variables, as well as whether there were cross-lagged effects from perceived fit to the indicators of adjustment and from the indicators of adjustment to perceived fit over the five waves.

To test the autoregressive models, multiple models of perceived fit and indicator of adjustment pairs were tested. Specifically, for each fit and outcome combination, four models were compared to determine which causal direction between the variables best fit the data. The first model consisted of a fit variable predicting itself over time as well as an indicator of adjustment predicting itself over time (e.g., Wave 1 DA Fit predicting Wave 2 DA Fit and Wave 1 mental health predicting Wave 2 mental health). The second model consisted of the paths specified in the first model, as well as paths from perceived fit, predicting subsequent indicators of adjustment (e.g., Wave 1 DA Fit predicting Wave 2 mental health), while the third model included the paths from the first model, as well as the paths for the reverse causal direction of indicators of adjustment, predicting perceived fit (e.g., Wave 1 mental health predicting Wave 2 DA Fit). Lastly, the fourth model examined reciprocal effects by including the paths from the first model as well as both cross-lagged paths of the second and third models (e.g., Wave 1 DA Fit predicting Wave 2 mental health and Wave 1 mental health predicting Wave 2 DA Fit). Fit indices were also examined to determine which specific model demonstrated the best fit to the data.

In addition to examining the fit indices, the significance of each path linking a fit variable and indicator of adjustment at each adjacent wave was examined. For example, for the second model examining DA Fit at the specialty level predicting subsequent occupational satisfaction, the significance of each of the cross-lagged paths (i.e., Wave 3 DA Fit at the specialty level predicting Wave 4 occupational satisfaction and Wave 4 DA Fit at the specialty level predicting Wave 5 occupational satisfaction) was examined to determine whether or not DA Fit at the specialty level was positively related to subsequent occupational satisfaction over time.

In summary, the model comparisons, fit indices, and significance of each specific path linking a fit variable and indicator of adjustment were utilized to determine if the causal sequence of perceived fit predicting the indicators of adjustment was supported or if alternative sequences (e.g., indicators of adjustment predicting perceived fit) better supported the data. Figures 4 through 6 illustrate the described autoregressive models for perceived fit and each indicator of adjustment.

Chapter VI

Results

The results are divided into several sections. In the first section, the descriptive statistics of the studied variables are presented. Following that, the distribution of the scores over the five waves is described. The results of the latent growth models (LGM) for the relationships between the fit variables and indicators of adjustment are presented in the following section. The results of the autoregressive analyses focusing on the direction of the relationship between the variables are presented last.

Descriptive Statistics

Prior to examining the specific hypotheses, the means, standard deviations, and correlations between the variables were examined. The means of the fit variables, as well as mental and physical health, were towards the high end of the possible range of scores for each wave (see Table 6). The participants, overall, reported fairly high occupational satisfaction for Waves 3, 4, and 5. Regarding occupational commitment, the reported means for affective commitment were close to the maximum possible score. Continuance commitment and normative commitment were also towards the high end of the possible range of scores. Based on the size of the means, normative commitment appeared to be the least endorsed of the three types of commitment. The means for turnover intentions at Waves 4 and 5 were towards the middle of the possible range of scores. Based on the actual range of scores reported, there appears to be some variability in perceptions of fit and the indicators of adjustment.

In addition to examining the means, correlations were also examined to get a sense of the general pattern of the relationships between the variables. DA Fit and PV Fit at the occupation and specialty level appeared to be moderately consistent across the five waves based on the wave-to-wave correlations ranging from .22 to .74 (see Table 7). Each type of perceived fit at the occupation level appeared to be positively related to the corresponding type of fit at the specialty level. The correlations between DA Fit at the occupation level and specialty level and PV Fit at the both levels tended to be moderate suggesting that modifying the point of reference (e.g., occupation level to specialty level) does change the construct slightly. Regarding the associations between DA and PV Fit, the correlations tended to be small to moderate indicating that both types of fit are similar but still should be considered as distinct constructs.

Tables 8, 9, and 10 include the relationships between the fit variables and the indicators of adjustment. As shown in Table 8, both types of fit at the occupation and specialty level tended to be positively correlated with mental and physical health (*r*s ranged from .3 to .5). DA and PV Fit at the occupation and specialty level also appeared to be moderately positively related to occupational satisfaction across time (*r*s ranged from .3 to .6) (see Table 9). Similarly, both types of fit at the occupation and specialty level appeared to be positively related to affective commitment (*r*s around .5 or .6). In contrast, DA and PV Fit did not appear to be related to normative commitment. Only PV Fit at the occupation level was found to be related to normative commitment but this relationship was not consistent across time. Interestingly, PV Fit at the occupation level and both types of fit at the specialty level were negatively associated with turnover intentions about a year after participants started their nursing careers (see Table 10).

Distribution of Scores Overtime

Prior to examining the LGMs, scatterplots for the individual participants, and the sample as a whole, were created to examine the distribution of scores over time. The purpose of examining the scatterplots was to explore any variation in scores across time, which would imply change over time. Additionally, the visual examination of the scatterplots would suggest if non-linear trajectories were warranted, and these non-linearly trajectories would subsequently be examined statistically to determine which trajectory best fit the data.

For DA Fit and PV Fit at the occupation level, based on the distribution of scores, the implied change over time appeared to be quadratic or cubic instead of linear. Similarly, the distribution of scores for DA Fit and PV Fit at the specialty level appeared to have a quadratic trajectory. The scatterplots also suggested that mental and physical health appeared to change in a quadratic or cubic pattern, while the attitudes showed a quadratic trajectory. In summary, there was variability between participants in terms of the distribution of scores over time, and overall, it appeared that quadratic and cubic trajectories, in addition to linear trajectories, needed to be considered.

Results of Latent Growth Models

To examine the hypotheses regarding initial status and rate of change for fit and the indicators of adjustment, a series of latent growth models were examined sequentially. First, exploratory models that did not include time as a predictor were tested. Next, exploratory models with time added in as a predictor were examined. Lastly, multiple LGMs were examined to test Hypotheses 1, 2, 3, 4, and 5. The results of these models are described in detail below.

As described earlier, LGMs allow for the examination of the average predicted initial status (i.e., intercepts) as well as the extent to which individuals differ from this average. In addition, LGMs explore the average rate of change (i.e., slopes) and whether individuals significantly differ from the average rate of change. In the following analyses, a quadratic term was included in some of the models, in addition to the intercept and slope, to test the quadratic trajectories. When testing quadratic trajectories, slopes represent the instantaneous rate of change from the initial status (Singer & Willett, 2003), while quadratic terms represent the acceleration or deceleration in the rate of change.

Exploratory models. Two series of exploratory models were tested to examine if there was enough variations in the variables to warrant testing the specific hypotheses. The first series of exploratory models did not include time as a predictor and were tested to determine if there was systematic variance in the variables to warrant including time as a predictor. Systematic variance was determined by intraclass correlation coefficients (ICC), which reflect the relative magnitude of the within person and among person variance. Based on the ICCs (ranging from .27 to .67), it was determined that there was significant variance among individuals in initial status to justify the inclusion of time as a predictor to explain differences among participants.

Results of modeling each variable with time as a predictor were reported in Tables 11, 12, and 13. The purpose of these models was to examine if the variables changed across time and if there were significant differences among individuals on initial status. Additionally, non-linear trajectories were also tested at this stage to determine the trajectories to be included when examining the specific hypotheses. To determine if adding non-linear trajectories provided a better fit to the data, fit indices, AIC and BIC, were examined. A reduction in these indices from a linear model to a non-linear model indicated that including a non-linear term (e.g., quadratic term) improved model fit. It needs to be noted that for some of the analyses, AIC decreased while BIC increased, which made the determination of the necessity of a quadratic term difficult. In cases where the fit indices conflicted, AIC was given more consideration because BIC assigns a greater penalty to model complexity (Arbuckle, 2007). In other words, BIC tends to favor linear models compared to complex models, such as those with quadratic trajectories. Although parsimonious models ideally should be selected, based on the distribution of scores from the scatterplots, non-linear models were also explored. Thus, improvement in model fit was still considered when BIC increased as long as AIC decreased.

For the variables that were examined over five waves of data, quadratic and cubic terms were included in the models. However, none of the models that included the cubic term could be identified, so only the results for the linear and quadratic trajectories were reported in the remaining sections. When testing the models with time as a predictor, a linear model (i.e., model with only an intercept and slope) was compared to a model with a quadratic term (i.e., model with intercept, slope, and quadratic term) to determine if the addition of the non-linear trajectory improved model fit. Then, the variance in the intercept, slope, and quadratic term (for cases when a quadratic term provided the best fit) were examined. The variance components of the best fitting model were examined to determine if there was significant variance in initial status and/or rate of change to warrant the testing of subsequent hypotheses.

For DA Fit at the occupation level and both types of fit at the specialty level, AIC decreased when the quadratic term was included in the models, but BIC increased (see Table 11). Based on giving more consideration to AIC, it appears that the quadratic term improved the fit of these models. In contrast, there was a consistent pattern for PV Fit at the occupation level. Both AIC and BIC were smaller for the model with the quadratic trajectory compared to the model with only the linear trajectory.

Regarding variations of the fit variables among participants across time, it was found that individuals significantly varied in terms of their initial status and instantaneous rate of change of DA Fit at the occupation level. However, no significant variance was found for the initial status, instantaneous rate of change, or quadratic term for DA Fit at the specialty level and PV Fit at both levels. In other words, the non-significant results suggest that individuals did not significantly differ in initial status and rate of change among these variables.

For the indicators of adjustment, the inclusion of the quadratic trajectory improved fit for the exploratory model that included occupational satisfaction. As shown in Table 13, AIC for occupational satisfaction decreased with the inclusion of the quadratic trajectory, but BIC increased, which suggests that the quadratic trajectory possibly improved the fit of the model. For the health (see Table 12) and commitment variables (see Table 13), AIC and BIC increased when the quadratic term was added, indicating that the linear model provided the best fit for the data for these variables.

Based on the variance components of the exploratory indicators of adjustment models, it was found that individuals varied significantly in initial status of mental health and significantly differed in both initial status and rate of change for physical health.

Regarding the commitment variables, individuals significantly differed in initial status of both affective and normative commitment. Participants significantly differed in initial status and rate of change for continuance commitment, also. The occupational satisfaction model with just the linear trajectory suggested that individuals varied in both initial status and rate of change, but when the quadratic model was tested, none of the variance components were significant. Overall, these results suggest that, among the majority of the indicators of adjustment variables, there was significant variance in initial status among participants, and for some of the variables, there were also significant differences in the rate of change.

The results of the above exploratory models, which included time as a predictor, provided evidence that there were significant variations in initial status and rate of change of at least some of the variables, so LGMs for each of the subsequent hypotheses were tested. In the following sections, LGM results for each hypothesis are presented. Both linear and quadratic trajectories were tested, when appropriate, based on the following steps. First, a model with one fit variable and one indicator of adjustment that included only linear trajectories was fit to the data. Second, when examining variables that demonstrated a non-linear trajectory, a quadratic term was added to the fit-indicator of adjustment model.

Hypothesis 1. Hypothesis 1 was tested to examine the extent to which Wave 1 perceived fit at the occupation level was positively related to Wave 1 health (1a) as well as if Wave 3 perceived fit at the specialty level was positively related to Wave 3 health (1b). Hypothesis 1c was tested to examine if Wave 3 perceived fit at the occupation level was positively related to Wave 3 attitudes, and Hypothesis 1d focused on the extent to which Wave 3 perceived fit at the specialty level was positively related to Wave 3 attitudes. For both types of fit at the occupation level, the covariances between the intercepts of the fit variables and the health variables were not significant indicating that initial perceived fit at the occupation level was not related to initial mental and physical health (see Tables 14 and 15). Thus, no support was found for Hypothesis 1a. As shown in Tables 16 and 17, the covariances between the intercepts for DA Fit and PV Fit at the specialty level and mental health were significant. Similarly, the covariances between the intercepts for both types of fit at the specialty level and physical health were significant. This suggests that at Wave 3, both types of fit at the specialty level were positively related to Wave 3 mental and physical health, so Hypothesis 1b was supported.

Partial support was found for Hypotheses 1c and 1d regarding the relationships between initial perceived fit and initial attitudes based on significant covariances between the intercepts of perceived fit and intercepts of the attitude variables. Specifically, both initial DA Fit and PV Fit at the occupation level were positively related to initial occupational satisfaction (see Tables 18 and 19) and affective commitment (see Tables 22 and 23). In addition, both initial DA Fit and initial PV Fit at the specialty level were also positively related to initial occupational satisfaction (see Tables 20 and 21) and initial affective commitment (see Tables 24 and 25). However, both initial fit at the occupation and specialty levels were not related to continuance and normative commitment. Overall, as shown in Tables 18 through 25, Hypotheses 1c and 1d regarding the relationships between initial perceived fit and initial attitudes were partially supported.

Hypothesis 2. Hypothesis 2 was tested to examine if the rate of change of DA and PV Fit at the occupation level was positively related to the rate of change of health (2a) and attitudes (2b). Additionally, Hypothesis 2 examined the extent to which the rate of change of perceived fit at the specialty level was positively related to the rate of change of health (2c) and attitudes (2d). Overall, none of the covariances between the slopes of DA and PV Fit at the occupation level or specialty level and mental or physical health were significant (see Tables 14, 15, 16, and 17), which failed to support Hypothesis 2a and 2c. In contrast to these findings, the rate of change of the perceived fit variables and the rate of change of some of the attitude variables were significant, which provides partial support for Hypotheses 2b and 2d (see Tables 18 to 25). The rate of change for PV Fit at both the occupation and specialty level were positively related to occupational satisfaction (see Tables 19 and 21). The rate of change for PV Fit at the specialty level was positively associated with the rate of change of affective commitment (see Table 25). Additionally, the covariances between the slope of affective commitment and the quadratic terms of DA Fit and PV Fit at the occupation level were significant (see Tables 22 and 23). In other words, improvement in affective commitment was related to the acceleration of the rate of improvement of DA and PV Fit at the occupation level.

Hypothesis 3. The covariances between initial perceived fit at the occupation level and the rate of change of health (3a) and attitudes (3b) as well as the covariances between initial perceived fit at the specialty level and the rate of change of health (3c) and attitudes (3d) were examined to test Hypothesis 3. As shown in Table 17, the only relationship that was found to be significant was between the intercept of PV Fit at the specialty level and the slope of mental health, which indicates that individuals with higher initial PV Fit at the specialty level showed the most improvement in mental health compared to individuals who started with lower initial PV Fit. However, it was predicted that initial PV Fit would predict a slower rate of change in mental health. Thus, no support was found for Hypothesis 3 (see Tables 14 to 25).

Hypothesis 4. As outlined in Hypothesis 4, it was expected that initial health and attitudes would predict a slower rate of change of perceived fit at the occupation and specialty level compared to initial poor health and attitudes (see Tables 14 to 25). In contrast to expectations, initial mental health was found to be positively related to the rate of change of DA and PV Fit at the occupation (see Tables 14 and 15) and specialty level (see Tables 16 and 17), and initial physical health was found to be positively related to the rate of change of DA Fit at the specialty level (see Table 16). These findings contradict Hypotheses 4a and 4c, since they suggest that individuals with higher initial mental and physical health, compared to poor mental and physical health, showed the most improvement in perceived fit.

However, the relationships between initial health and the quadratic terms for perceived fit provided support for Hypotheses 4a and 4c. Specifically, as shown in Tables 14 through 17, the intercept of mental health was found to be significantly negatively related to the quadratic terms of DA and PV Fit at the occupation and specialty level. Similarly, Wave 3 physical health was significantly negatively related to the quadratic term of DA Fit at the specialty level (see Table 16). These negative covariances between initial health and the quadratic terms for perceived fit suggest that the initial increases in perceived fit associated with good health did not persist over time. In other words, individuals who initially reported good health also tended to report eventual diminishing of the rate of improvement of perceived fit over time.

Overall, these results provide partial support for Hypotheses 4a and 4c. However, contrary to expectations, initial attitudes (i.e., satisfaction and commitment) were not significantly related to the rate of change of perceived DA and PV Fit at the occupation level and specialty level (see Tables 18 through 25). Thus, Hypotheses 4b and 4d were not supported.

Hypothesis 5. Additionally, it was expected that initial DA and PV Fit at the occupation (5a) and specialty level (5b) would be negatively related to turnover intentions and that the rate of change of DA and PV Fit at the occupation (5c) and specialty level (5d) would be negatively related to turnover intentions. As shown in Tables 26 and 27, Hypothesis 5a was not supported since initial DA and PV Fit at the occupation level were not significantly related to turnover intentions at Waves 4 and 5. Initial DA Fit at the specialty level was significantly negatively related to turnover intentions at Wave 5 but not Wave 4 (see Table 28). However, since initial PV Fit at the specialty level was not related to turnover intentions at either wave, Hypothesis 5b was only partially supported (see Table 29).

Regarding the relationships between the rate of change of perceived fit and turnover intentions, again only partial support was found. The rate of change of DA and PV Fit at the occupation level was not found to be related to turnover intentions, so Hypothesis 5c was not supported (see Tables 26 and 27). However, as shown in Tables 28 and 29, the slopes of DA and PV Fit at the specialty level were found to be negatively related to turnover intentions at Wave 4, suggesting that individuals who initially increased in DA and PV Fit at the specialty level were less likely to report turnover intentions at Wave 4, compared to individuals who did not experience an initial increase in DA Fit at the specialty level. Thus, Hypothesis 5d was partially supported.

Results of the Autoregressive Analyses

To examine the causal direction between DA and PV Fit and the indicators of adjustment, autoregressive models were examined. As mentioned earlier, for each perceived fit and indicator of adjustment pair (e.g., DA Fit at the occupation level and mental health), four models were compared to evaluate which model provided the best fit to the data. The first model (i.e., Model 1) included each construct at Wave 1 predicting the same construct at Wave 2, and so on. For example, for DA Fit at the occupation level and mental health, Model 1 included paths from Wave 1 DA Fit at the occupation level to Wave 2 DA Fit at the occupation level, Wave 2 DA Fit at the occupation level to Wave 3 DA Fit at the occupation level, through Wave 4 DA Fit at the occupation level to Wave 5 DA Fit at the occupation level. Additionally, Model 1 included paths from Wave 1 mental health to Wave 2 mental health through Wave 4 mental health to Wave 5 mental health. Next, a model (i.e., Model 2) with all of the paths from Model 1, as well as cross-lagged paths from a fit variable to subsequent indicators of adjustment, were examined (e.g., path from Wave 1 DA Fit at the occupation level to Wave 2 mental health). The third model (i.e., Model 3) included reverse cross-lagged paths from the indicators of adjustment to a fit variable (e.g., path from Wave 1 mental health to Wave 2 DA Fit at the occupation level) and the paths from Model 1. The last model (i.e., Model 4) tested reciprocal relationships by including the paths from Models 1 through 3. The purpose of using the autoregressive models was to test the hypothesis that perceived fit leads to subsequent indicators of adjustment over time.

The determination of the causal sequence of perceived fit to the indicators of adjustment was based on three pieces of information. First, the significance of the paths included for each model (e.g., for Model 2, each cross-lagged path from perceived fit at one wave predicting an indicator of adjustment at the adjacent wave) was examined to determine if over time, perceived fit predicted the indicators of adjustment, the indicators of adjustment predicted perceived fit, or if both directions explained the data. Additionally, to determine which direction best fit the data, significant differences between the four models were examined for each perceived fit and indicator of adjustment pair. Scaled-chi-square difference tests (Satorra, 2000) were used to compare the four models instead of the traditional chi-square difference tests. This is because the MLR estimator was used to handle any non-normality in the data, but by using the MLR estimator, traditional chi-square difference tests are inappropriate. Specifically, non-normality tends to inflate goodness-of-fit test statistics (Kaplan, 2000), so a scaling correction factor reflecting the amount of average kurtosis distorting the test statistic under analysis needs to be included to correct the traditional chi-square value for non-normality (Bryant & Satorra, in press). This is done by dividing the chi-square value for the model by the scaling correction factor, which produces a scaled-chi-square. The purpose of testing the nested models was to determine if the hypothesized direction of perceived fit leading to the various outcomes best fit the data or if alternative hypotheses better explained the data. Model fit was also determined by examining the fit indices, CFI and RMSEA. The following subsections describe each of the tested models for each pair of perceived fit and indicators of adjustment.

Hypothesis 6a. Hypothesis 6a addressed the causal direction of the relationships between DA and PV Fit at the occupation and specialty level and mental and physical health. The paths between the variables at each subsequent wave (e.g., path from Wave 1 DA Fit at the occupation level to Wave 2 DA Fit at the occupation level) are displayed in Tables 30 through 37. For PV Fit at the occupation level and mental health, the only path that was statistically significant was Wave 2 PV Fit at the occupation level to Wave 3 mental health (see Table 32). For the paths in the reverse direction, Wave 1 mental health to Wave 2 PV Fit at the occupation level, and Wave 2 mental health to Wave 3 PV Fit at the occupation level were positive and significant. As shown in Table 34, the path from Wave 4 DA Fit at the specialty level to Wave 5 mental health was positive and significant, while the paths from mental health to DA Fit at the specialty level were also significant. The path of Wave 3 mental health to Wave 4 DA Fit at the specialty level was positive, while the path from Wave 4 mental health to Wave 5 DA Fit at the specialty level was negative. Regarding PV Fit at the specialty level, there was only one significant positive path from Wave 3 mental health to Wave 4 PV Fit at the specialty level (see Table 36). The above results provide mixed support for the hypothesis that perceived fit leads to subsequent mental health.

The paths linking perceived fit and physical health were relatively not supportive of Hypothesis 6a. Only the paths from physical health to PV Fit at the occupation level (see Table 33) and physical health to DA Fit at the specialty level (see Table 35) were significant. Both of these paths were negative suggesting that physical health was negatively correlated with PV Fit at the occupation level and DA Fit at the specialty level across time.

After examining the paths linking the variables at adjacent waves, the four models were compared to determine which model overall explained the data the best. The first model comparison was between Model 1 (i.e., no cross-lagged paths) and Model 2 (i.e., cross-lagged paths from perceived fit to health) to evaluate whether or not the cross-lagged paths provided a better account of the data compared to not including any cross-lagged paths. The comparisons showed that the difference between Model 1 and Model 2 was significant for mental health and DA (Model 1 vs. Model 2: $\Delta\chi^2(4) = 9.98$, $p < .05$) and PV Fit (Model 1 vs. Model 2: $\Delta\chi^2(4) = 10.33$, $p < .05$) at the occupation level (see Tables 30 and 32) and DA Fit at the specialty level (Model 1 vs. Model 2: = 6.63, $p < .05$) (see Table 34). For PV Fit at the occupation level and physical health, the paths from PV Fit at the occupation level to physical health improved model fit (Model 1 vs. Model 2: $\Delta\chi^2(4) = 10.23$, $p < .05$) (see Table 33). These results suggest that the models with the cross-lagged effects (i.e., Model 2) improved model fit beyond not having any cross-lagged effects (i.e., Model 1). Therefore, there is statistical evidence for the sequence of DA and PV Fit at the occupation level and DA Fit at the specialty level leading to subsequent mental health over time and PV Fit at the occupation level leading to physical health over time.

Next, Model 1 and the model with reverse cross-lagged paths (i.e., Model 3) were compared to determine if the data supported the alternative sequence of health leading to subsequent perceived fit over time. For DA Fit at the occupation level (see Table 30) and both types of fit at the specialty level (see Tables 34 and 36) and mental health, Model 3 provided a better account of the data compared to Model 1 (DA Fit at the occupation level: Model 1 vs. Model 3: $\Delta\chi^2(4) = 12.96$, $p < .05$; DA Fit at the specialty level: Model

1 vs. Model 3: $\Delta\chi^2(2) = 9.50$; $p < .05$; PV Fit at the specialty level: Model 1 vs. Model 3: $\Delta\chi^2(2) = 11.59$; $p < .05$). For DA Fit at the specialty level and physical health, Model 1 and Model 3 were also significantly different (Model 1 vs. Model 3: $\Delta\chi^2(2) = 8.39$; $p < .05$) (see Table 35). The above results suggest that mental health led to subsequent DA Fit at the occupation level and DA and PV Fit at the specialty level, while physical health led to DA Fit at the specialty level over time.

Model 1 and Model 4 were also compared to determine if reciprocal cross-lagged paths (i.e., paths from perceived fit to health and paths from health to perceived fit) provided a better account of the data compared to no cross-lagged paths. For mental health, Model 1 and Model 4 were significantly different for PV Fit at the occupation level (Model 1 vs. Model 4: $\Delta\chi^2(8) = 18.73$, $p < .05$) (see Table 32) and DA Fit at the specialty level (Model 1 vs. Model 4: $\Delta\chi^2(4) = 19.00$, $p < .05$) (see Table 34). For physical health, Models 1 and 4 were only significantly different for PV Fit at the occupation level (Model 1 vs. Model 4: $\Delta\chi^2(8) = 17.35$, $p < .05$) (see Table 33). Thus, for PV Fit at the occupation level and DA Fit at the specialty level and health, the data supports including paths in both directions. In other words, there is evidence that perceived fit leads to mental and physical health as well as mental and physical health leading to subsequent perceived fit.

The fourth set of model comparisons was between Models 2 and 4 to evaluate if the inclusion of the reverse cross-lagged paths improved model fit beyond only having cross-lagged paths from perceived fit to health. For mental health, significant differences between the models were found for DA Fit at the occupation level (Model 2 and Model 4: $\Delta\chi^2(4) = 15.52$, $p < .05$) (see Table 30), DA Fit at the specialty level (Model 2 and Model

4: $\Delta\chi^2(2) = 13.29$; $p < .05$) (see Table 34), and PV Fit at the specialty level (Model 2 and Model 4: $\Delta\chi^2(2) = 10.62$; $p < .05$) (see Table 36). For physical health, Models 2 and 4 were only significantly different for DA Fit at the specialty level (Model 2 and Model 4: $\Delta\chi^2(2) = 7.57$; $p < .05$) (see Table 35). Based on the results above, at least for some of the types of perceived fit, the reverse cross-lagged paths are needed to explain the relationships between perceived fit and health over time.

Finally, Models 3 and 4 were compared to examine if the cross-lagged paths from perceived fit to health improved model fit beyond the model with just the reverse cross-lagged paths. Significant differences were found for DA Fit at the occupation level (Model 3 vs. Model 4: $\Delta\chi^2(4) = 11.66$; $p < .05$) (see Table 30), PV Fit at the occupation level (Model 3 vs. Model 4: $\Delta\chi^2(4) = 10.03$, $p < .05$) (see Table 32), and DA Fit at the specialty level (Model 3 vs. Model 4: $\Delta\chi^2(2) = 9.49$; $p < .05$) (see Table 34) and mental health. Additionally, the cross-lagged paths improved model fit compared to the model with just the reverse cross-lagged paths for PV Fit at the occupation level and physical health (Model 3 vs. Model 4: $\Delta\chi^2(4) = 13.27$; $p < .05$) (see Table 33). These results indicate that there was improvement in model fit if the cross-lagged paths from perceived fit to health were included with the reverse cross-lagged paths.

After examining the significant differences between the models, fit indices were examined to determine which of the four models demonstrated the best fit to the data. Based on the fit indices, the best fitting model varied between the perceived fit and health pairs. For DA Fit at the occupation (see Table 30) and specialty level (see Table 34) and mental health, Model 4 showed the best fit to the data compared to the other three models examined, which provides support for reciprocal relationships between DA Fit at both levels and mental health. Models 2 and 4 fit the data well for PV Fit at the occupation level and mental health (see Table 32). Thus, for PV Fit at the occupation level, it appears that PV Fit leads to mental health as well as possible reciprocal relationships between PV Fit at the occupation level and mental health. For PV Fit at specialty level and mental health, Model 3 was the best fitting model compared to the other models (see Table 36). Similarly, for DA Fit at the specialty level and physical health, as shown in Table 35, Model 3 provided the best account of the data. The results regarding Model 3 providing the best fit to the data suggests that mental health leads to subsequent PV Fit at the specialty level, while physical health leads to subsequent DA Fit at the specialty level.

Overall, the autoregressive analyses results for DA and PV Fit at the occupation and specialty level and both health variables were mixed. Based on the results, it appears that DA and PV Fit predicted health over time. Health was also shown to predict DA and PV Fit at both levels over time. The above results provide partial support for Hypothesis 6a that DA and PV Fit at the occupation and specialty level predict subsequent mental and physical health across time.

Hypothesis 6b. Similarly to the results regarding Hypothesis 6a, the findings for DA and PV Fit at the occupation and specialty level predicting subsequent attitudes are mixed (see Tables 38 to 53). In terms of the relationships between the variables at each adjacent wave, the results provide the most support for perceived fit leading to subsequent attitudes compared to the reverse direction. As shown in Tables 38 and 39, DA and PV Fit at the occupation level significantly and positively influenced occupational satisfaction over time. The paths from PV Fit at the occupation level to affective commitment (see Table 45) and one path from PV Fit at the specialty level to affective commitment (see Table 51) were also positive and significant. DA Fit at the specialty level was found to be significantly and positively related to subsequent continuance commitment (see Table 49), while PV Fit at the specialty level was positively related to normative commitment (see Table 53). For DA Fit at the specialty level and normative commitment, one of the paths from DA Fit at the specialty level to normative commitment was positive and significant, while one path from normative commitment to DA Fit at the specialty level was negative and significant (see Table 50). In summary, the results support that at least some of the types of fit predict subsequent occupational satisfaction, affective commitment, continuance commitment, and normative commitment over time. In addition, only one of the reverse paths was significant, so little support was found for the reverse hypothesis.

Following the examination of the direction of the relationships between DA and PV Fit and adjacent attitudes, the four models were compared for each perceived fit and attitude pair. For the model comparisons between Model 1 and Model 2 for perceived fit and occupational satisfaction, significant differences were found for DA Fit at the occupation level (Model 1 vs. Model 2: $\Delta\chi^2(2) = 6.22$, $p < .05$) (see Table 38), PV Fit at the occupation level (Model 1 vs. Model 2: $\Delta\chi^2(2) = 17.26$, $p < .05$) (see Table 39), and PV Fit at the specialty level (Model 1 vs. Model 2: $\Delta\chi^2(2) = 22.51$; $p < .05$) (see Table 41). Similarly, Model 2 was significantly different compared to Model 1 for PV Fit at the occupation (see Table 45) and specialty level (see Table 51) and affective commitment (PV Fit at the occupation level: Model 1vs. Model 2: $\Delta\chi^2(2) = 24.33$, $p < .05$; PV Fit at the specialty level: Model 1 vs. Model 2: $\Delta\chi^2(2) = 11.78$; $p < .05$). Models 2 consisting of cross-lagged paths from DA Fit at the specialty level to continuance commitment

(Model 1 vs. Model 2: $\Delta\chi^2(2) = 7.93$; $p < .05$) (see Table 49) and DA Fit at the specialty level to normative commitment (Model 1 vs. Model 2: $\Delta\chi^2(2) = 6.95$; $p < .05$) (see Table 50) were also significantly different than the models without cross-lagged paths. Overall, results of the above model comparisons provided support for the importance of the inclusion of cross-lagged paths from perceived fit to attitudes. In other words, the results provide statistical evidence that perceived fit leads to subsequent attitudes, at least for some perceived fit and attitude pairs.

Additionally, the comparisons between Models 1 and 3 provided support for the reverse cross-lagged paths from attitudes to perceived fit. Specifically, for DA Fit at the occupation level and continuance commitment (see Table 43), Model 3 was found to fit the data significantly better than Model 1 (Model 1 vs. Model 3: $\Delta\chi^2(2) = 6.68$, $p < .05$). Model 3 also provided a better fit to the data than Model 1 for DA Fit at the specialty level and affective commitment (Model 1 vs. Model 3: $\Delta\chi^2(2) = 6.68$, $p < .05$) (see Table 48) and for DA Fit at the specialty level and normative commitment (Model 1 vs. Model 3: $\Delta\chi^2(2) = 4.59$; $p < .05$) (see Table 50). Thus, based on the above results, there is evidence that continuance commitment leads to DA Fit at the occupation level over time as well as affective and normative commitment lead to subsequent DA Fit at the specialty level.

Some support was also found for reciprocal relationships between perceived fit and attitudes over time. The inclusion of both cross-lagged paths significantly improved model fit beyond having no cross-lagged paths for PV Fit at both levels and occupational satisfaction (PV Fit at the occupation level: Model 1 vs. Model 4: $\Delta\chi^2(4) = 56.76$, $p < .05$; PV Fit at the specialty level: Model 1 vs. Model 4: $\Delta\chi^2(4) = 19.63$; $p < .05$) (see Tables

39 and 41) and PV Fit at both levels and affective commitment (PV Fit at the occupation level: Model 1 vs. Model 4: $\Delta\chi^2(4) = 27.03$, $p < .05$; PV Fit at the specialty level: Model 1 vs. Model 4: $\Delta\chi^2(4) = 11.06$; $p < .05$) (see Tables 45 and 51). Additionally, Model 4 was significantly different than Model 1 for DA Fit at the specialty level and normative commitment (Model 1 vs. Model 4: $\Delta\chi^2(4) = 11.91$; $p < .05$) (see Table 50). Therefore, PV Fit at the occupation and specialty level leads to subsequent occupational satisfaction and affective commitment, but both of these attitudes also lead to subsequent PV Fit at both levels. The results also provide evidence for reciprocal relationships between DA Fit at the specialty level and normative commitment.

In addition to comparing the models with cross-lagged paths against the model with no cross-lagged paths, Models 2 and 4 were also compared to evaluate if the reverse cross-lagged paths improved model fit beyond the model with just the cross-lagged paths from perceived fit to attitudes. It was found that for DA Fit at the occupation level, the reverse cross-lagged paths improved model fit for affective commitment (Model 2 vs. Model 4: $\Delta\chi^2(2) = 6.24$, $p < .05$) (see Table 42) and continuance commitment (Model 2 vs. Model 4: $\Delta\chi^2(2) = 6.24$, p < .05) (see Table 43). For DA Fit at the specialty level and normative commitment, the inclusion of reverse paths provided a better fit compared to Model 2 (Model 2 vs. Model 4: $\Delta\chi^2(2) = 5.32$; $p < .05$) (see Table 50). These results provide evidence that the reverse cross-lagged paths are needed to explain the relationships between DA Fit at the occupation level and affective and continuance commitment. Additionally, the reverse cross-lagged paths provided a better account of the data for DA Fit at the specialty level and normative commitment.

The last set of model comparisons for perceived fit and attitudes was between the model with both cross-lagged paths and the model with just the reverse cross-lagged paths. Model 4 was found to be significantly different than Model 3 for PV Fit at the occupation and specialty level and occupational satisfaction (PV Fit at the occupation level: Model 3 vs. Model 4: $\Delta\chi^2(2) = 95.29$, $p < .05$; PV Fit at the specialty level: Model 3 vs. Model 4: $\Delta\chi^2(2) = 18.80$, $p < .05$) (see Tables 39 and 41), for PV Fit at the occupation and specialty level and affective commitment (PV Fit at the occupation level: Model 3 vs. Model 4: $\Delta\chi^2(2) = 20.26$, $p < .05$; PV Fit at the specialty level: Model 3 vs. Model 4: $\Delta\chi^2(2) = 9.78$; $p < .05$) (see Tables 45 and 51), and PV Fit at the occupation level and normative commitment (Model 3 vs. Model 4: $\Delta\chi^2(2) = 4.34$, $p < .05$) (see Table 47). Additionally, for DA Fit at the specialty level, the difference tests between Model 3 and Model 4 for continuance (Model 3 vs. Model 4: $\Delta\chi^2(2) = 6.95$; $p < .05$) (see Table 49) and normative commitment (Model 3 vs. Model 4: $\Delta\chi^2(2) = 7.97$; $p < .05$) (see Table 50) were significant. Overall, these results suggest that the inclusion of the cross-lagged paths from perceived fit to attitudes improved model fit compared to the model with just the reverse cross-lagged paths from attitudes to perceived fit.

Examination of the fit indices provided additional support for the hypothesis that perceived fit influences attitudes compared to the reverse. Specifically, based on the fit indices, Models 2 and 4 provided the best fit to the data for PV Fit at both the occupation and specialty level and occupational satisfaction and affective commitment (see Tables 39, 41, 45, and 51). Model 2 provided the best account of the data for DA Fit at the specialty level and continuance commitment (see Table 49), while Model 4 provided the best fit for DA Fit at the specialty level and normative commitment (see Table 50).

Therefore, either the models with just the cross-lagged paths from perceived fit to attitudes were the best fitting models or the models that included the reciprocal paths provided the best fit to the data. It needs to be noted that the fit indices for the rest of the models examining perceived fit and attitudes were too similar to be compared, so conclusions regarding the best fitting models for the rest of the fit-attitude pairs could not be determined.

Overall, the results for the autoregressive analyses for the fit variables and the attitude variables were mixed. DA Fit at the occupation level and PV Fit at both the occupation and specialty level led to subsequent occupational satisfaction over time. PV Fit at both the occupation level and specialty level also were found to lead to adjacent affective commitment. These results provide evidence for the causal sequence of perceived fit leading to subsequent attitudes. Additionally, affective commitment was found to lead to adjacent DA Fit at the occupation level, which provides support for the reverse hypothesis. Limited support was found for the relationships between DA and PV Fit and the other two commitment variables. Additionally, it should be noted that the fit variables and normative and continuance commitment were not highly correlated, so any of the found relationships between these variables could be spurious. In summary, the findings provide partial support for Hypothesis 6b.

Hypothesis 6c. The last set of autoregressive analyses are displayed in Tables 54 through 57 and examined the direction of the relationships between DA and PV Fit at the occupation and specialty level and turnover intentions. Beginning with the relationships between the variables at each adjacent wave, the only paths that were significant were the paths from Wave 4 PV Fit at both levels to Wave 5 turnover intentions (see Tables 55 and 57). These negative, significant paths suggested that PV Fit at the occupation and specialty level led to subsequent turnover intentions compared to turnover intentions predicting PV Fit at the occupation or specialty level.

Similarly to the found significant paths from PV Fit to turnover intentions, the model comparisons provided the most support for the cross-lagged paths from PV Fit to turnover intentions compared to the reverse or reciprocal relationships. As shown in Tables 55 and 57, the inclusion of the cross-lagged paths from PV Fit at the occupation and specialty level to turnover intentions improved model fit beyond the model without any cross-lagged paths (PV Fit at the occupation level: Model 1 vs. Model 2: $\Delta\chi^2(1) = 7.44$, $p < .05$; PV Fit at the specialty level: Model 1 vs. Model 2: $\Delta\chi^2(1) = 8.48$; $p < .05$). For PV Fit at the specialty level, Model 4 was also significantly different than Model 1, which suggests that the inclusion of reciprocal paths provided a better account of the data compared to not including cross-lagged paths (Model 1 vs. Model 4: $\Delta\chi^2(2) = 9.72$, $p < .05$). For PV Fit at the occupation and specialty level, the models with both cross-lagged paths (Model 4) improved model fit beyond the model with just the reverse cross-lagged paths (PV Fit at the occupation level: Model 3 vs. Model 4: $\Delta\chi^2(2) = 6.38$, $p < .05$; PV Fit at the specialty level: Model 3 vs. Model 4: $\Delta\chi^2(1) = 7.72$, $p < .05$). In terms of the fit indices, Models 2 and 4 provided the best account of the data for PV Fit at the occupation and specialty level. Overall, these results suggest that the models that included the paths from PV Fit to turnover intentions provided a better account of the data compared to the models without these paths.

In conclusion, although no support was found for DA Fit at the occupation or specialty level predicting turnover intentions, support was found for the sequence of PV

Fit at both levels leading to subsequent turnover intentions over time. Specifically, the results provided support for the causal direction of PV Fit at the occupation and specialty level to turnover intentions compared to turnover intentions predicting PV Fit. Overall, the above results provide some support for Hypothesis 6c.

Chapter VII.

Discussion

The current study had two main objections: a) to examine whether potential changes in perceived fit to the nursing occupation and nursing specialties over time were related to changes in various indicators of adjustment and b) to investigate the directionality of the relationships between perceived fit and indicators of adjustment. As mentioned in the introduction section, the challenges and strains that nursing students and early career nurses experience have been well documented (e.g., Tully, 2004; Winwood, Winefield, & Lushington, 2006; Scott, Engelke, & Swanson 2008; Dimattio, Roe-Prior, & Carpenter, 2010; Gray & Phillips, 2004). The current study adds to this line of research by taking a longitudinal approach to examining the transition into the nursing profession. Although theories (French, Rodgers, & Cobb, 1974; French, Caplan, & Harrison, 1982; Holland, 1973; 1997; Dawis & Lofquist, 1984) and prior research (e.g., Schmitt et al., 2008) have suggested that changes in perceived fit are related to changes in various outcomes, a thorough investigation of these changes has yet to be conducted until now.

Changes in Perceived Fit

In addition to addressing specific hypotheses, the design of the current study allowed for a systematic examination of perceived fit. Regarding differences in initial status and rate of change, nursing students exhibited similar initial perceptions of PV Fit at the occupation level and both types of fit at the specialty level, as well as similar average rate of change for these types of fit over time. However, nursing students significantly differed in their perceptions of possessing the abilities required to meet the demands of the profession (i.e., DA Fit at the occupation level) during their first semester of their nursing program. Significant differences in the nursing students' instantaneous rate of change of DA Fit at the occupation level was also found indicating that not all students initially improved in their perceptions of possessing the skills and abilities required of the nursing profession.

Regarding the overall average changes of perceived fit, for DA and PV Fit at the occupation level, based on the positive initial rate of change, the nursing students tended to show initial improvement of perceptions of fit to the nursing occupation while in nursing school. Similarly, Schmitt et al. (2008) found that undergraduates' perceptions of fit to the academic environment increased throughout college. Thus, it appears that the academic environment may help foster positive perceptions of fit. However, the current study also found that the increasing trend in perceived fit at the occupation level tended to slow down as the students transitioned into the profession. DA and PV Fit at the specialty level also tended to show an initial decrease after the students entered into the nursing profession, but the rate of improvement in perceived fit at the specialty level tended to accelerate over time.

Overall, the above findings suggest that perceptions of fit to the nursing occupation change after nursing students start working as registered nurses. Specifically, the current study found that individuals tended to report lower levels of perceived fit at Wave 4 compared to the other waves suggesting that perceptions of fit decrease only after a few months for an early career nurse. Similarly, Chatman (1991) and Cable and Judge

(1997) found that perceived Person-Organization Fit decreased after job seekers started working for an organization. Within the nursing context, research has shown that early career nurses tend to experience conflict after they begin working since their pre-held idealistic beliefs of nursing do not match with the realities they face (Price, 2009). Based on the nursing studies, perceptions of fit related to the nursing occupation could decrease after individuals enter nursing since their perceptions of nursing could not match with the objective working conditions. It could also be that the academic environment is substantially different than the working environment, so the shock of the work environment could contribute to the decrease in perceptions. Additional research is needed to understand why perceptions of fit decrease after individuals transition into a new environment.

Overall Relationships between Perceived Fit and Indicators of Adjustment

Perceived fit and health. The first two hypotheses focused on the relationships between initial perceived fit and initial indicators of adjustment and the rate of change of perceived fit and the rate of change of the indicators of adjustment. For perceived fit and health, it was found that initial perceptions of fit to a nursing specialty were positively associated with both mental and physical health at the last semester of a nursing program. As suggested by French et al.'s PE Fit theory of occupational stress (French & Kahn, 1962; French et al., 1974; French et al., 1982) positive outcomes were expected when individuals perceived a match between their characteristics and the characteristics of the environment. Therefore, initial perceived fit being related to initial health provides support for the PE Fit theory of occupational stress. Additionally, the results of the current study support the previous cross-sectional studies (e.g., Lachterman & Meir, 2004; Xie & Johns, 1995) that have demonstrated relationships between DA and PV Fit and health outcomes.

However, in contrast to expectations, the increases in perceived fit were not found to be related to increases in mental and physical health. This contradicts French et al. (French et al., 1974; French et al., 1982) who proposed that improvement in perceived fit should lead to improvement in health. The lack of support could have been due to the lack of variability found for the rate of change of the perceived fit and health variables. Additional studies with larger sample sizes need to be conducted before conclusions are made regarding the relationships between changes in perceived fit and changes in health over time.

Perceived fit and attitudes. The positive relationships between initial fit and initial attitudes, as well between the rate of change of perceived fit and rate of change of attitudes found in the present study, provides support for Holland's (1973; 1997) Vocational Choice Theory and Dawis and Lofquist's (1984; Dawis, 2005) TWA. The results regarding the relationships between initial fit and attitudes, which are consistent with prior cross-sectional studies (Kristof, 1996; Resick, Baltes, & Shantz, 2007; Feij et al., 1999), suggest the importance of matching individuals and environments to achieve positive attitudes. Additionally, similarly to Schmitt et al.'s findings (2008) that improvement in academic fit was related to increases in satisfaction with the academic environment over time, the nurses in the current study that increased in PV Fit also increased in occupational satisfaction and affective commitment. This result provides support for Dawis and Lofquist's (1984; Dawis, 2005) Process Model, which proposed that successful improvements in the correspondence between the individual and environment would lead to improvements in attitudes.

Direction of Relationships between Perceived Fit and Indicators of Adjustment

Perceived fit and health. The direction of the relationships between perceived fit and health was also examined. Based on the LGMs, initial PV Fit at the specialty level was positively related to improvement in mental health over time. Additionally, initial mental health was positively related to DA and PV Fit at the occupation and specialty level over time. The autoregressive analyses supported the expected direction of fit influencing subsequent health, as well as demonstrating reciprocal relationships between perceived fit and health.

The above results regarding the direction of perceived fit influencing health was expected based on occupational stress research. Within occupational stress research, it has been assumed that the relationships between stressors and strains (e.g., poor health) are one-directional. That is, stressors influence strains experienced at a later time point (De Lange, Taris, Kompier, Houtman, & Bongers, 2004). French et al.'s PE Fit theory (French, Rodgers, & Cobb, 1974; French, Caplan, & Harrison, 1982) is one such occupational stress theory that proposes that when an individual and environment do not match (i.e., stressor), strains are expected over time. The current study took a positive approach to the assumed direction between stressors and strains by demonstrating that perceptions of fit lead to positive health.

Although it appears that the main assumption within occupational stress research, including French et al.'s work (French, Rodgers, & Cobb, 1974; French, Caplan, & Harrison, 1982), is that stressors cause strains, alternative hypotheses have been proposed and examined. For example, the reverse direction of strains leading to stressors has been suggested, such as depression could result in increased conflicts between coworkers, which could ultimately lead to more social stressors at work (Zapf, Dormann, & Frese, 1996). For the current study, support was found for this reverse hypothesis. For example, health was found to lead to subsequent changes in perceived fit. This reverse causal relationship also support French et al. proposition that the experience of strains would lead to attempts to improve fit, and if successful, individuals would perceive improvement in their fit with the environment.

Most importantly, instead of finding support for one-directional relationships, such as fit leading to health *or* health leading to fit, the present results provide support for reciprocal relationships between fit and health. Similarly, other longitudinal studies have found support for reciprocal relationships between stressors and strains, including stressors leading to poor health and poor health leading to stressors (e.g., Ibrahim, Smith, & Muntaner, 2009; van der Heijden, Demerouti, Bakker, & Hasselhorn, 2008). The implication of the support for reciprocal relationships is that the simple occupational stress process suggested by occupational stress researchers of stressors leading to strains (Beehr & Newman, 1978) does not accurately capture how stressors and strains jointly influence each other. Instead, bi-directional relationships would be more appropriate propositions in occupational stress theories. Similarly, fit researchers should consider revising PE Fit theories to address the reciprocal relationships between fit and health.

Below are some plausible reasons for the found reciprocal relationships between perceived fit and health. Perceived fit and health could jointly influence each other over time due to actual or perceived changes of the work environment (De Lange et al., 2004).

For example, a healthy nursing student may volunteer to participate in additional activities, and with the additional experience, the individual may perceive she fits even better with the nursing occupation compared to unhealthy nursing students. Healthy nursing students, compared to unhealthy nursing students, may also have more friends or get more support from faculty, which also may influence their perceptions of fit. Similarly, De Lange et al. (2004) suggested that positive mental health could result in fewer stressors, since healthy workers may receive more support or be assigned more interesting tasks compared to unhealthy workers. Another possibility is that perceptions of the environment could explain the direction of health to perceived fit. Unhealthy workers may perceive the work environment more negatively compared to healthy workers and over time may report increased stressors because of their negative outlook on life (De Lange et al., 2004; Spector, Zapf, Chen, & Frese, 2000). Within the fit context, unhealthy nurses may view the work environment more negatively compared to healthy workers and over time, this may decrease their perceptions of fit. In contrast, healthy workers may view the world in an increasingly positive fashion and perceive their life, including their fit, better over time (De Lange et al., 2004; Fletcher, 2003). However, more longitudinal research is needed in order to truly clarify the reasons for the reciprocal relationships between perceived fit and health.

Perceived fit and attitudes. The lack of support for initial perceived fit being related to changes in attitudes and initial attitudes being related to changes in perceived fit was unexpected based on the ideas proposed by Dawis and Lofquist (1984; Dawis, 2005). However, the majority of the autoregressive analyses provided support for perceived fit leading to occupational satisfaction and affective commitment compared to the reverse, which at least provides some support for TWA.

The lack of agreement between the LGM and autoregressive analysis results in the present study may be attributed to the attitudinal measures and context at the last three waves (i.e., occupational setting), which did not match the first half of the current study (i.e., school setting). Additionally, when the measures and context matched in specificity (i.e., the last two waves), the response rates were lower than the previous waves. Thus, it is suggested that additional studies with larger sample sizes and additional waves after individuals enter the nursing profession be conducted in order to clarify the direction of the relationships between perceived fit at the occupation and specialty level and occupational attitudes.

Perceived fit and turnover intentions. In terms of the relationships between perceived fit and turnover intentions, mixed support was found. Initial perceptions of DA Fit at the occupation level was positively related to early career nurses deciding to remain in the occupation six months after starting their first position. LGMs provided support for improvement in both types of fit at the specialty level being negatively related to turnover intentions. The autoregressive analysis results provided support for the expected direction of PV Fit at the occupation and specialty level leading to subsequent intentions to remain in the occupation.

The above findings were expected since French et al. (French, Rodgers, & Cobb, 1974; French, Caplan, & Harrison, 1982), Dawis and Lofquist (1984; Dawis, 2005), and Holland (1973; 1997) all suggested that eventually lack of fit would lead to turnover, whereas perceived fit would lead to tenure in an environment. In addition, the negative relationship between perceived fit and turnover intentions has been empirically supported (e.g., Chang, Chi, & Chuang, 2010; Schmitt et al., 2008). Our findings suggest the need to focus on nursing students and early career nurses perceptions of fit with the nursing occupation and nursing specialties.

Although a directional relationship between perceptions of fit and turnover intentions was found in the current study, additional studies are needed to clarify the relationships between perceived fit and turnover intentions. For example, Schmitt et al. (2008) found that satisfaction mediated the relationship between perceived fit with the academic environment and students deciding to remain in the academic environment. Lack of perceived fit to the nursing occupation may also lead to poor attitudes, such as job dissatisfaction and lack of commitment, the two most commonly cited predictors of turnover among nurses (Lum, Kervin, Clark, Reid, & Sirola, 1998; Lu, Lin, Wu, Hsieh, & Chang, 2002), which in turn may lead to turnover. Perceptions of fit to the nursing occupation could result in individuals being more satisfied and committed to the profession, which could then lead to tenure within the profession.

Practical Implications

Although not all of the hypotheses were supported, overall, the above results suggest that perceptions of fit to the nursing occupation and nursing specialties are beneficial in terms of positive outcomes among nursing students and early career nurses. Thus, one recommendation based on these overall findings is that future interventions could focus on improving and/or maintaining perceptions of fit. For nursing students, nursing educators could identify students who lack perceptions of fit and work with these students in an effort to improve their perceptions. Possible interventions could include nursing schools developing mentoring programs for students who lack perceived fit or providing them with more opportunities to practice their skills, which could possibility increase their perceptions of possessing the required characteristics of the nursing occupation. To address the idealistic views of nursing (Price, 2009), nursing schools could continually portray the benefits of nursing while acknowledging the possible challenges their students will likely experience once they begin working. Thus, by deflating initial expectations towards the nursing occupation held by nursing students, early career nurses may enter the profession with more realistic expectations, as well as be more prepared for the realities of the profession. Additionally, these interventions could help ensure that individuals enter the nursing profession in good health and are committed to the nursing profession, which in turn may help early career nurses adjust better during the first months as registered nurses.

In addition to ensuring that nursing students maintain perceptions of fit to the occupation throughout nursing school, future interventions need to focus on the decrease in perceived fit after individuals enter into the nursing profession. Entry into any new environment (e.g., starting a new program or job) will likely lead to experiences of new challenges and situations, which individuals have to learn to adapt to in order to adjust to the environment. Thus, a decrease in perceptions of fit after nursing students transition into the nursing profession is somewhat expected. This is supported by Person-Organization Fit research that has found that Person-Organization Fit decreases after job seekers start working for an organization (Chatman, 1991; Cable & Judge, 1997). Because a decrease in perceptions of fit may be somewhat inevitable after transitioning into any new environment, interventions should be developed to help workers, particularly early career individuals, deal with the reality shock of their new environment.

Based on prior nursing research, there appears to be certain unique experiences of early career nurses, which may help explain the reality shock experienced by new nurses. Although nursing students are required to gain exposure to clinical practice, interact with experienced nurses, and spend time in the hospital setting before they become registered nurses, it is possible that nursing students are not receiving a full picture of the profession until they actually start working full-time. As mentioned above, nursing studies have found that early career nurses tend to experience dissonance when their assumptions about nursing do not match with the realities of nursing (Price, 2009). Studies of nursing students have shown that students tend to view nursing as a profession that will allow them to "care for others," and "make a difference" (Price; Mackintosh, 2006). However, Price (2009) found that early career nurses can become somewhat cynical towards the nursing profession. For example, early career nurses tended to describe experienced nurses as "hardened" or "uncaring" (Price). Other studies have found that early career nurses develop poor attitudes towards their patients after negative experiences (e.g., treating patients who try to act worse than they are) as well as become overwhelmed by the amount of care they are required to deliver (Mackintosh). Verbal abuse by experienced nurses in the form of judging, criticizing, and condescension has also been reported by early career nurses (Rowe & Sherlock, 2005). All of these negative experiences could explain why nursing students and early career nurses' views of nursing differ. Additionally, the current finding of a decrease in perceptions of fit suggests that the participants in the current study possibly experienced similar negative early career experiences documented by these previous nursing studies.

Based on the past and current findings regarding the decrease of fit perceptions after transitioning into a new career, it seems logical to focus on how to change early career work experiences to prevent or at least mitigate the drop in perceptions of fit. Specifically, it is suggested that hospitals should focus on creating more positive socialization experiences for early career nurses in an effort to help them transition into their new nursing roles. New employees tend to change their values to reflect the values of their organization (Kristof, 1996) when they are taught by the incumbents the values and expected behaviors within the environment (Louis, 1980). From the description of experienced nurses, as “uncaring” (Price, 2009) as well as the verbal abuse from experienced nurses towards early career nurses (Rowe & Sherlock, 2005), experienced nurses appear to be passing on negative views towards the nursing occupation to early career nurses. Thus, interventions should focus on getting experienced nurses to take on a more supportive role towards early career nurses. For instance, experienced nurses could be trained to adopt more adaptive coping strategies, which may help deal with the issue of verbal abuse (Rowe & Sherlock). Hospitals could also train experienced nurses to be mentors to early career nurses. In addition to helping early career nurses develop more positive relationships with experienced nurses, experienced nurses taking on a more supportive role may help early career nurses handle the difficult negative nursing experiences they likely face on a daily basis. Many of the negative experiences nurses face cannot be eliminated (e.g., death of a patient), but having supportive role models may help early career nurses learn how to effectively deal with these situations. Overall, these interventions focus on environmental changes implemented by hospitals, which could address the decrease in perceptions of fit to the occupation found in the present study.

Recommendations for Future Research

Examination of entire adjustment process. Although the interventions suggested above were based on the findings of the current study, researchers are cautioned due to the mixed support for the hypothesized relationships. Specifically, it needs to be noted that the relationships between perceived fit and the various indicators of adjustment are not as straightforward as implied by the various PE Fit theories, or as reported by prior cross-sectional studies. Thus, it is recommended that researchers conduct additional studies to clarify what is going on during the entire process of adjustment (e.g., clarify how perceptions of fit are formed and how these perceptions change in the context of interactions between individuals and environments).

As mentioned previously, the various PE Fit theories suggested that fit is achieved and maintained through actions and reactions of individuals and environments to each other. Similarly, social cognitive theory suggested that individuals "…are both products and producers of their environment" (Wood & Bandura, 1989, p. 362), or stated differently, actions by individuals influence situations and these situations then influence individuals' subsequent thoughts and actions (Bandura, 1986). Thus, in order to actually expand upon the various PE Fit theories, researchers need to examine the interactions between individuals and environments.

In order to gain a better understanding of the interactions between individuals and environments, research needs to be conducted focusing on identifying the individual characteristics as well as the environmental factors that contribute to fit. According to social cognitive theory, personal factors (i.e., cognition, affect, and physiological functioning), environmental factors (i.e., social and physical environment), and behavior are connected and cannot be understood in isolation from each other (Bandura, 1986; Wood & Bandura, 1989). Framing this within the context of PE Fit, perceptions of fit are likely formed from individuals assessing their affect (e.g., satisfaction) as well as from cues in the environment (e.g., support from faculty and other students). However, an added complexity to this is that individuals and environments are proposed to continually act and react to each other (Dawis, 2005), so the person and environment factors that contribute to perceptions of fit at one time point may or may not be the same factors at a different time point. For example, a nurse may decide that she is dissatisfied because of her workload. The nurse could attempt to make changes to the environment (e.g., ask for additional resources) and/or make changes to herself (e.g., learn time management strategies to more effectively handle her workload). These changes to either the environment and/or herself subsequently changes the factors she will consider when reassessing her fit with the environment. Thus, it is suggested that additional longitudinal research be conducted assessing the factors that individuals consider when assessing fit to determine a) the different person and environment components that are considered when assessing fit, b) whether these factors are the same or different at various time points and c) whether these factors are consistent across individuals.

In order to clarify the entire adjustment process, research is also needed to understand what individuals and environments actually do in order to change the individual and/or the environment. This recommendation is based on French et al.

(French, et al., 1974; French, et al., 1982) and Dawis and Lofquist (1984; Dawis, 2005) who all suggested that when individuals perceive they do not match with the environment, they will attempt to make changes to themselves and/or the environment in an attempt to reduce their perceived lack of fit. Dawis and Lofquist did propose adjustment styles as part of their Process Model to explain the possible interactions between individuals and environments. For example, re-activeness describes individuals that act on themselves (e.g., participating in additional trainings to increase their abilities) to reduce the lack of correspondence between their abilities and the demands of the environment. However, an effective measure of these proposed adjustment styles have yet to be developed. Thus, it is suggested that researchers attempt to understand the actual behaviors as well as the thoughts and feelings that are considered when individuals attempt to change themselves and/or the environment to improve their fit. Additionally, the Process Model also proposed that the environment can act on individuals, so additional work should also focus on strategies environments use to modify fit.

As mentioned in the introduction, the adjustment process should be viewed as an on-going process involving individuals and environments reacting to each other to maintain fit. Although the current study as well as similar longitudinal fit studies (e.g., Schmitt et al., 2008) have been able to demonstrate that perceptions of fit can and do change over time, more recognition of adjustment as a continuous process is greatly needed. More specifically, it is recommended that future studies examine how perceptions of fit are formed, as well as the cognitive and behavioral responses from individuals and environments, to improve fit over time to gain a better understanding of the entire adjustment process.

Understanding actual and perceived fit. In order to meet the recommendation of the need for a better understanding of the entire adjustment process, more research is needed focusing on understanding the connections between subjective (i.e., perceptions) and objective fit (i.e., reality). As previously mentioned, the overall finding of the current study is that perceptions of fit are beneficial as indicated by positive outcomes, which supports both theory and prior subjective fit research. However, instead of taking the findings associated with subjective fit as evidence that researchers should only focus on perceptions, additional research is needed to understand the connections between perceptions and reality and how the relationship between the two are related to subsequent outcomes. That is, “whether actual and perceived [fit] are the same constructs, simply measured differently, or whether they are two distinct constructs is an empirical question that deserves further investigation” (Kristof, p. 11, 1996).

As mentioned earlier, French et al. (French, et al., 1974; French, et al., 1982) suggested that the person and environment could be examined based on how they truly exist or based on an individual’s perceptions. Additionally, the actual person and environment was proposed to lead to their subjective counterpart, which individuals then appraise to determine the degree of fit between the two. Thus, strains were expected based on lack of perceived fit compared to an individual and/or the environment actually lacking certain characteristics. Based on this, it makes sense to study perceived fit since perceptions are what is suggested to cause outcomes. However, since perceptions are formed based on reality, by not capturing actual fit, researchers seem to be missing key parts of the nomological networks surrounding the various fit constructs.

One line of research that will help establish the nomological networks of various fit constructs is the examination of the relationships between actual and perceived fit. Based on French et al. (French, et al., 1974; French, et al., 1982) one would expect that there would be a relationship between actual and perceived fit. However, the findings regarding the relationships between actual and perceived fit have been mixed. A two-wave study examining both subjective and objective DA and PV Fit to the nursing occupation failed to find convergent validity of both measures (Sampson, 2009). Similarly, Ravlin and Ritchie (2009) also found that actual and perceived organizational fit were not related. Although other studies have found a relationship between actual and perceived fit, the relationships have been weak (Cable & Judge, 1997; Kristof-Brown & Stevens, 2001). These findings suggest that actual and perceived fit are distinct constructs, instead of the same construct, measured differently. However, additional studies need to be conducted that include both actual and perceived fit before conclusions can be made regarding the relationships between these constructs.

Another way to establish the nomological networks around actual and perceived fit is to examine differences in the relationships between actual and perceived fit and various outcomes. Although some research has already examined this, as with the above findings regarding the relationships between actual and perceived fit, the relationships between these constructs and outcomes have also been mixed. First, the effect sizes tend to be larger for perceived fit than actual fit (Resick, Baltes, & Shantz, 2007). Second, some researchers have found support for actual fit influencing outcomes through perceived fit while others have found that actual fit directly influences outcomes. Researchers have found some support for French et al.'s (French, et al., 1974; French, et al., 1982) hypothesis that the relationships between actual fit and outcomes are mediated by perceived fit (Judge & Cable, 1997; Dineen, Ash, & Noe, 2002). Other studies have shown that actual organizational fit is directly related to organizational outcomes including attitudes such as commitment and satisfaction (Ravlin & Ritchie, 2006; O'Reilly, Chatman, & Caldwell, 1991) as well as intentions to stay (McCulloch & Turban, 2007; O'Reilly et al.). Additionally, studies have found that actual fit and perceived fit demonstrate different relationships with various outcomes. For example, Haywood and Elliot (2011) found that actual and perceived fit with one's religious congregation were related to life satisfaction, but perceived fit was also related to health. Another study found that actual DA and PV Fit to the nursing occupation were not related to mental or physical health, whereas perceived DA and PV Fit to the nursing occupation were positively related to health (Sampson, 2009).

One challenge that makes it difficult to develop conclusions regarding actual and perceived fit includes the multiple types of fit that have been studied (e.g., person-vocation fit, person-organization fit, person-group fit, person-team fit). This is a challenge since the vast number of various types of fit investigated makes it difficult to establish nomological networks of the various fit constructs. It could be that for certain types of fit (e.g., person-organization fit), actual and perceived fit are related, whereas for other types of fit (e.g., PV Fit at the occupation level), actual and perceived fit are unrelated. Additionally, the differences between actual and perceived fit and various outcomes may be dependent upon the type of fit examined. On a positive note, fit research studying various aspects of the match between the person and environment has greatly advanced the knowledge of the field of PE Fit. However, researchers should make an effort to study actual and perceived fit of commonly examined types of fit so that fit researchers can begin to establish nomological networks around actual and perceived fit for the various types of studied PE Fit. Additionally, the establishment of nomological networks could also help with the development of interventions since researchers would be able to target interventions (e.g., change actual and/or perceived fit of various types of fit) based on the desired outcomes (e.g., satisfaction, performance, or tenure).

Contributions

Studied entire transition into the nursing profession. In addition to the implications of the findings, the study provides some major contributions to the research on PE Fit. First, the study followed individuals from the time they entered a nursing program through their second year of employment. This contributes to research, since it allowed for the examination of perceptions of fit across time, which broadens the current understanding of adjustment to the nursing occupation.

Examining individuals while they are in nursing school is critical to gain a better understanding of the maladjustment issues experienced by some nursing students (e.g., Tully, 2004), which is important not only in terms of empirical knowledge, but is valuable information for nursing educators as well. As mentioned above, researchers could use the knowledge gained from fit research targeted at nursing students to design interventions to improve and/or maintain perceptions of fit to the nursing occupation among nursing students. Additionally, collecting data from individuals prior to entering the nursing profession is important since it sets a baseline to be compared to after individuals start working.

While it is important to follow individuals in nursing school to gain a better understanding of adjustment, the consequences associated with maladjustment among early career nurses (e.g., high turnover; Scott et al., 2008; Dimattio et al., 2010) demonstrates the need to continue to follow-up after the students graduate. As previously mentioned, preventing turnover among baccalaureate nurses is critical, since turnover can affect patient care, staff morale (Hayes et al., 2000), and has consequences to the healthcare industry as a whole (Flinkman, Leino-Kilpi, & Salantera, 2010). Thus, the healthcare industry depends upon researchers to gain a better understanding of the initial adjustment to the nursing occupation, so possible solutions can be developed.

Thoroughly examined relationships between perceived fit and indicators of adjustment. Another contribution of the current study is the use of two different methodology, LGMs and autoregressive analysis, to thoroughly understand the relationships between perceptions of fit and indicators of adjustment. Both approaches are commonly used to analyze longitudinal data; however, they are rarely used in combination, especially within PE Fit research (Schmitt et al., 2008). By utilizing both methods, the current study was able to address different theoretical questions.

LGMs and autoregressive analyses each addressed different hypotheses. The use of LGMs was to understand both within-individual change as well as change among individuals. Although LGMs provided some indication regarding directionality, such as examining if initial perceived fit led to subsequent changes in indicators of adjustment and vice versa, LGMs do not allow for the examination of lagged effects between the variables across each time point. Thus, autoregressive analyses were conducted to examine the cross-lagged effects between perceived fit and indicators of adjustment at each subsequent wave. Based on theory and prior research, it was expected that there would be direct relationships between perceived fit and the indicators of adjustment (i.e., perceived fit would lead to subsequent indicators of adjustment). However, alternative hypotheses were also tested, such as reverse relationships (i.e., indicators of adjustment leading to perceived fit) and reciprocal relationships (i.e., perceived fit influencing indicators of adjustment and indicators of adjustment influencing perceived fit).

Overall, the use of both approaches provided the opportunity to thoroughly examine the relationships between perceived fit and various indicators of adjustment, which is a major gap in PE Fit research. Various theories and prior research have implied that fit and indicators of adjustment change over time, but little longitudinal work has been conducted to examine these suspected changes. Additionally, theories have implied that fit causes the various indicators of adjustment, although this has rarely been systematically studied. The findings from the current study provided evidence that perceived fit does influence subsequent outcomes. More interestingly, the study also demonstrated that the direction of the relationships depended upon the type of fit and outcome being investigated. Specifically, for some fit and outcome combinations, the expected direction of perceived fit influencing subsequent outcomes (e.g., PV Fit at the occupation level and mental health) was found, but for other combinations, reciprocal relationships were found (e.g., DA Fit at the occupation level and mental health). These findings indicate that each type of fit needs to be treated as a separate construct. Additionally, the findings demonstrate that the desired outcome needs to be considered (e.g., increasing mental health or affective commitment) when selecting the type of fit to focus on. In summary, the current study contributes to PE Fit research by demonstrating that the direction of the relationships between fit and outcomes are not straightforward as previously believed.

Limitations

Common method variance. Despite the significant strengths and contributions of the current study, the results and interpretations require a discussion of the possible limitations that should be addressed by future research. First, the study relied on a single source of data collection. One problem with solely relying on single source data is that it brings up the issue of common method variance or the variance shared by variables due to the same method used for the data collection. Studies that use only one source could be misleading since the common method could have a systematic effect on the observed relationship between variables. In other words, the observed relationship could be explained by the common method compared to a true relationship between the variables. On a positive note, having time lags between waves lessens some of the concerns regarding common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, time lags do not completely eliminate the threats of common method variance. Although some researchers have argued that common method variance is not as problematic as previously suggested (e.g., Spector, 2006; Lindell & Whitney, 2001), including additional sources of data, such as objective measures of fit and indicators of adjustment, would address the criticisms associated with relying on a single source.

Attrition. A second limitation that should be overcome in future research is the attrition seen in the current study, especially after the individuals entered into the nursing profession. Although attempts were made to keep the response rates high after the participants graduated, only approximately 35 percent of the original sample participated in the last two waves. Analyses were conducted to determine whether the participants who remained in the study were different from those who dropped out. No significant differences were found for any of the variables. Based on these analyses it was concluded that the attrition was likely more random compared to systematic. However, it is possible that the longitudinal data violated the missing at random (MAR) assumption, which in turn biases the results.

A second issue related to the high attrition is the current study was unable to establish if the participants who did not respond at Waves 4 and 5 left the nursing profession or not. Similarly to other studies, turnover intentions compared to actual turnover was used as a proxy predictor of actual turnover. Using intentions is reasonable since intentions have been found to predict behaviors (Ajzen, 1991). However, it would vastly broaden the current understanding of the relationship between perceived fit and actual turnover if researchers examined both turnover intentions and actual turnover. Future researchers should consider voluntary (i.e., employee's decision to leave) and involuntary turnover (i.e., employer's decision to terminate employment relationship) since the causes and consequences of both of these types of turnover are likely to be different (Shaw, Delery, Jenkins, & Gupta, 1998). In terms of the PE Fit context, perceived misfit might be more related to voluntary turnover than involuntary turnover, whereas actual misfit might be more related to involuntary turnover. Additional work is needed to tease apart the causes of both types of turnover and how each type is related to various types of PE Fit. Overall, the PE Fit theories reviewed for the current study all suggested that turnover will eventually occur if individuals are unable to achieve fit with their environment.

Characteristics of sample. A final shortcoming of the current study is that the sample consisted of mostly Caucasian females recruited from one university in the western United States. The sample does reflect the demographic characteristics of registered nurses in the United States (i.e., 94.2 percent females, 81.8 percent Caucasian; Health Resources and Services Administration (HRSA), 2004). The sample characteristics also parallel other nursing studies (e.g., Laschinger, Leiter, Day, & Gilin, 2009; Leiter & Maslach, 2009). However, to help ensure that the results are generalizable to minorities and male nurses, future attempts need to be made to recruit more heterogeneous samples such as recruiting participants from predominantly minority or more diverse universities.

In addition to recruiting minority nursing students, attempts should be made to include more male nursing students. Based on a national study of nurses collected in 1992, 1996, and 2000, early career male nurses are reporting higher turnover compared to female nurses (Sochalski, 2002). The turnover rates increased between 1992 and 2000 for both males and females, but the acceleration was greater for male nurses. The same study also found that male nurses tended to be less satisfied than female nurses. Thus, male nurses appear to be experiencing similar maladjustment issues reported among female nurses. Future studies should recruit from multiple universities in an effort to increase the sample size of male participants. If more male participants are included, then differences in perceived fit and indicators of adjustment between male and female nurses could be examined to determine if males and females follow a similar adjustment process or not. Overall, future research should recruit participants from multiple universities to increase the variability in demographics of the samples to examine whether the found results are generalizable across various demographic groups as well as across nursing programs.

Conclusions

Overall, the results contribute to the field of PE Fit in several ways. The study is one of the first studies to systematically examine PE Fit theories using both multiple waves of data and advanced statistical techniques. By taking advantage of a longitudinal design and advanced methodological approaches, the study was able to clarify the proposed relationships between perceived fit and indicators of adjustment over time. The study demonstrated that perceptions of fit do change over time, but instead of changing at a constant rate, the rate of change of perceived fit appears to change over time. Additionally, PE Fit theories and prior research have emphasized that PE Fit will lead to indicators of adjustment over time. However, the current study demonstrated that reciprocal relationships exist between perceived fit and health and attitudes. Thus, perceived fit influences outcomes and outcomes influence perceptions of fit. Additional research is needed to replicate these findings.

These findings have important practical implications since the results can help nursing educators and nurse administrators begin to understand why some nurses experience maladjustment whereas others appear to adjust. It is suggested that a better understanding of the entire adjustment process is needed so that interventions can be developed to help individuals achieve and maintain fit over time. Additionally, it is suggested that environmental changes be made within hospitals so early career nurses transition into a more supportive environment. Because this is one of the first studies to examine perceived fit and indicators of adjustment over time, additional studies need to continue to examine PE Fit over multiple waves to broaden the current limited understanding of the nature of PE Fit. In conclusion, the findings help support PE Fit theories as well as help clarify the actual relationships between perceived fit and various indicators of adjustment over time.

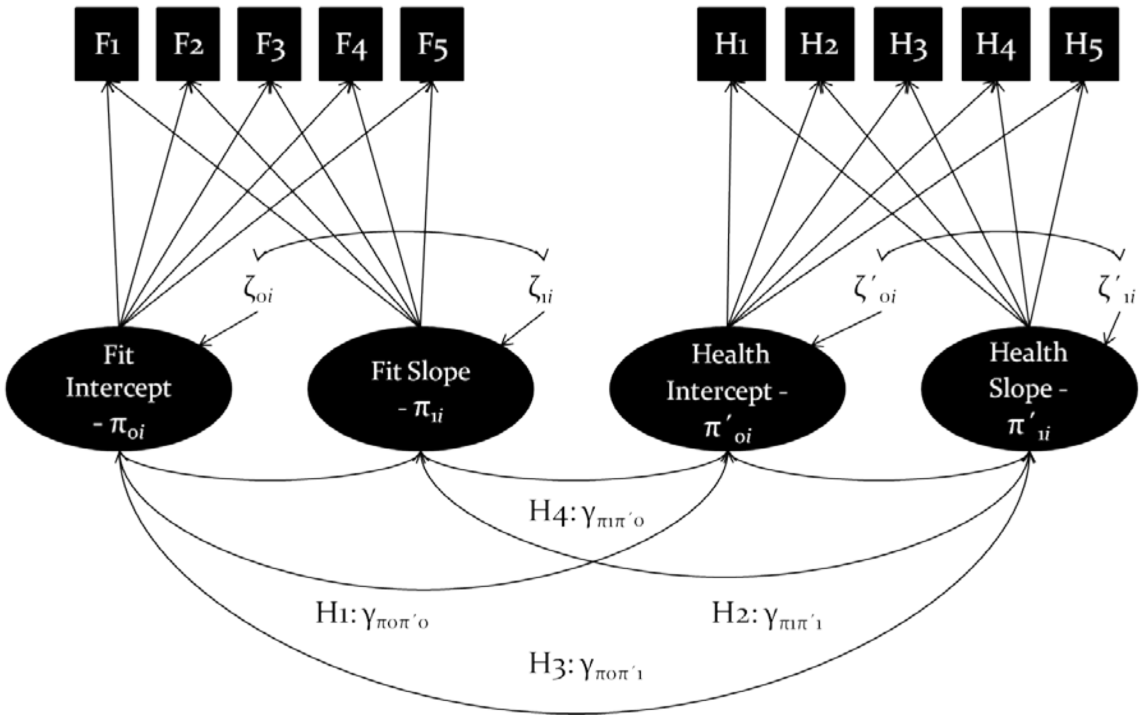

Figure 1. Latent growth model of relationships between perceived fit and health.

Note. $F_{1\text{-}5}$ = Perceived fit measured at Waves 1 through 5; $H_{1\text{-}5}$ = Health measured at Waves 1 through 5; Fit Intercept = Initial perceived fit; Health Intercept = Initial health; Fit Slope = Rate of change of perceived fit; Health Slope = Rate of change of health. H1 examines the relationship between initial perceived fit and initial health. H2 examines the relationship between the rate of change of perceived fit and the rate of change of health. H3 examines the relationship between initial perceived fit and the rate of change of health. H4 examines the relationship between initial health and the rate of change of perceived fit.

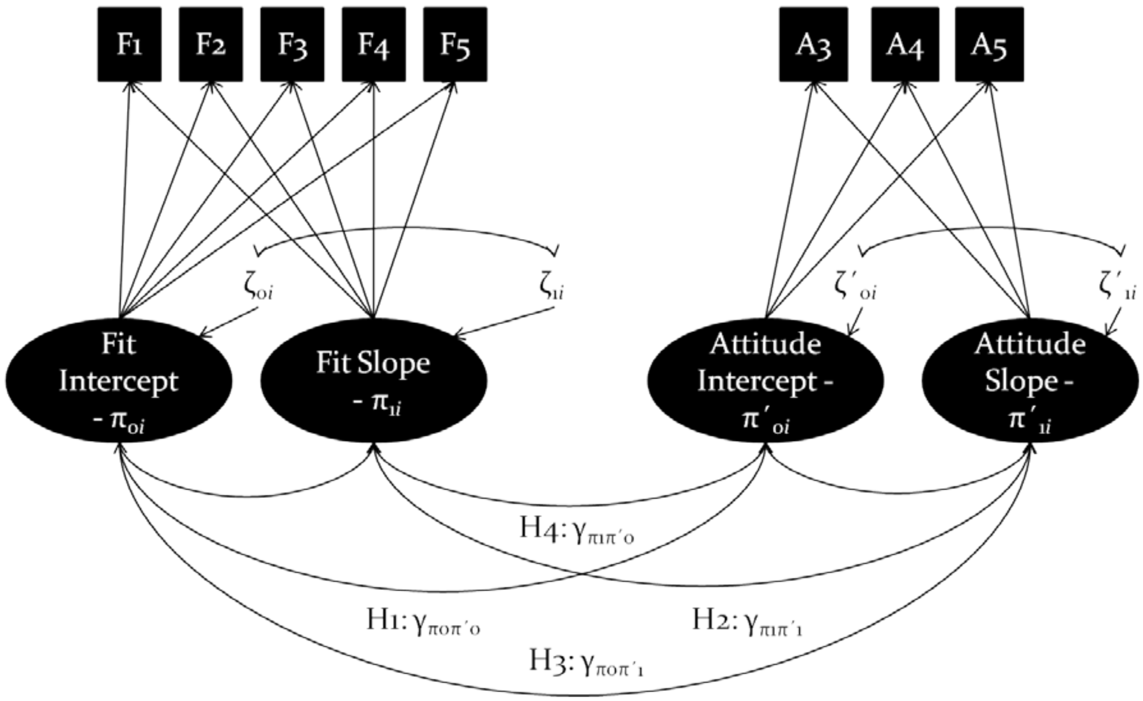

Figure 2. Latent growth model of relationships between perceived fit and attitudes.

Note. $F_{1\text{-}5}$ = Perceived fit measured at Waves 1 through 5; $A_{3\text{-}5}$ = Attitudes measured at Waves 3 through 5; Fit Intercept = Initial perceived fit; Attitude Intercept = Initial attitudes; Fit Slope = Rate of change of perceived fit; Attitude Slope = Rate of change of attitudes. H1 examines the relationship between initial perceived fit and initial attitudes. H2 examines the relationship between the rate of change of perceived fit and the rate of change of attitudes. H3 examines the relationship between initial perceived fit and the rate of change of attitudes. H4 examines the relationship between initial attitudes and the rate of change of perceived fit.

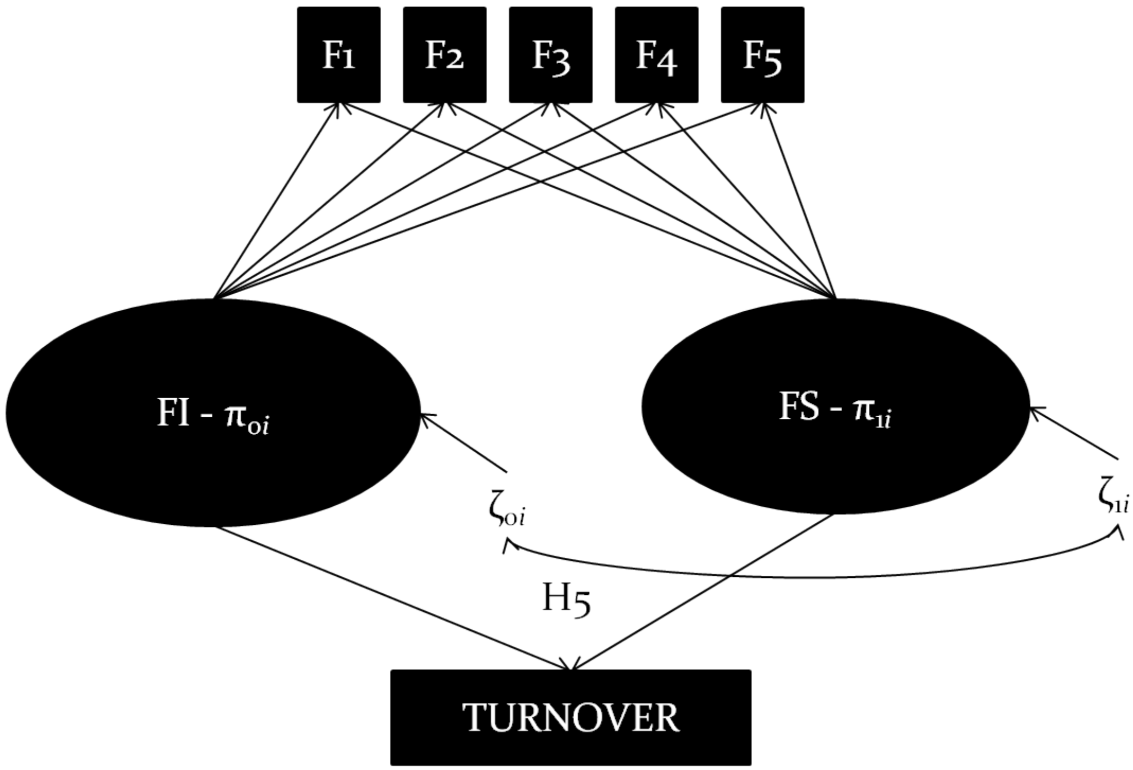

Figure 3. Latent growth model of relationships between perceived fit and turnover intentions.

Note. $F_{1\text{-}5}$ = Perceived fit measured at Waves 1 through 5; Turnover = Turnover intentions measured at Waves 4 and 5; FI = Initial perceived fit; FS = Rate of change of perceived fit. H5 examines the relationship between initial perceived fit and turnover intentions as well as the relationship between the rate of change of perceived fit and turnover intentions.

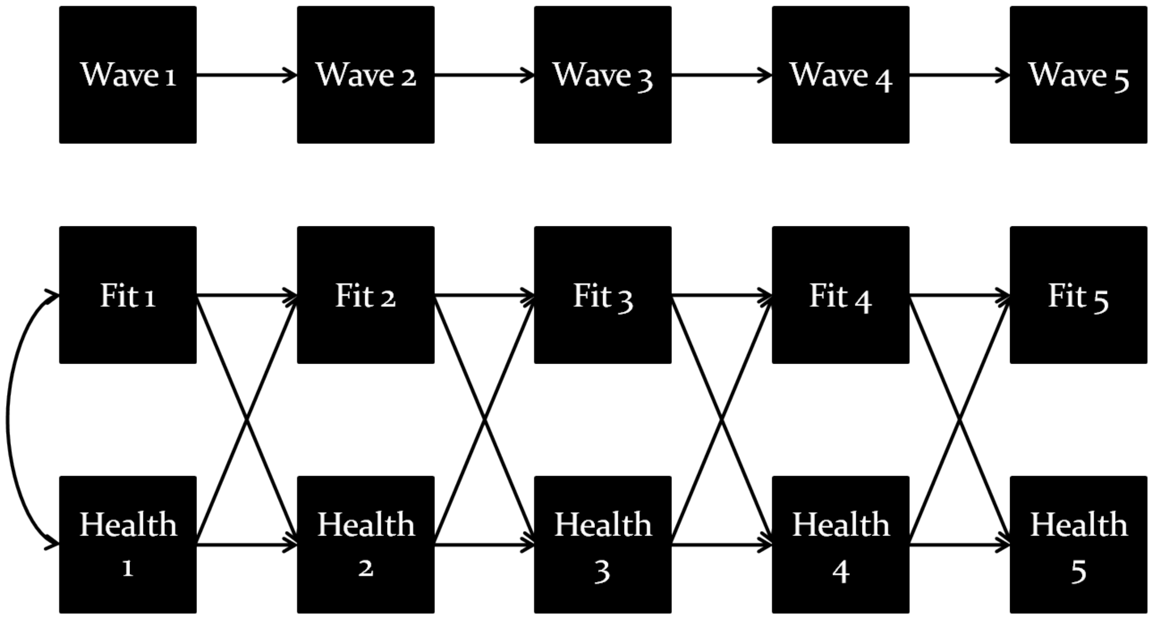

Figure 4. Autoregressive model of relationships between perceived fit and health.

Note. $\text{Fit}_{1\text{-}5}$ = Perceived fit measured at Waves 1 through 5; $\text{Health}_{1\text{-}5}$ = Health measured at Waves 1 through 5.

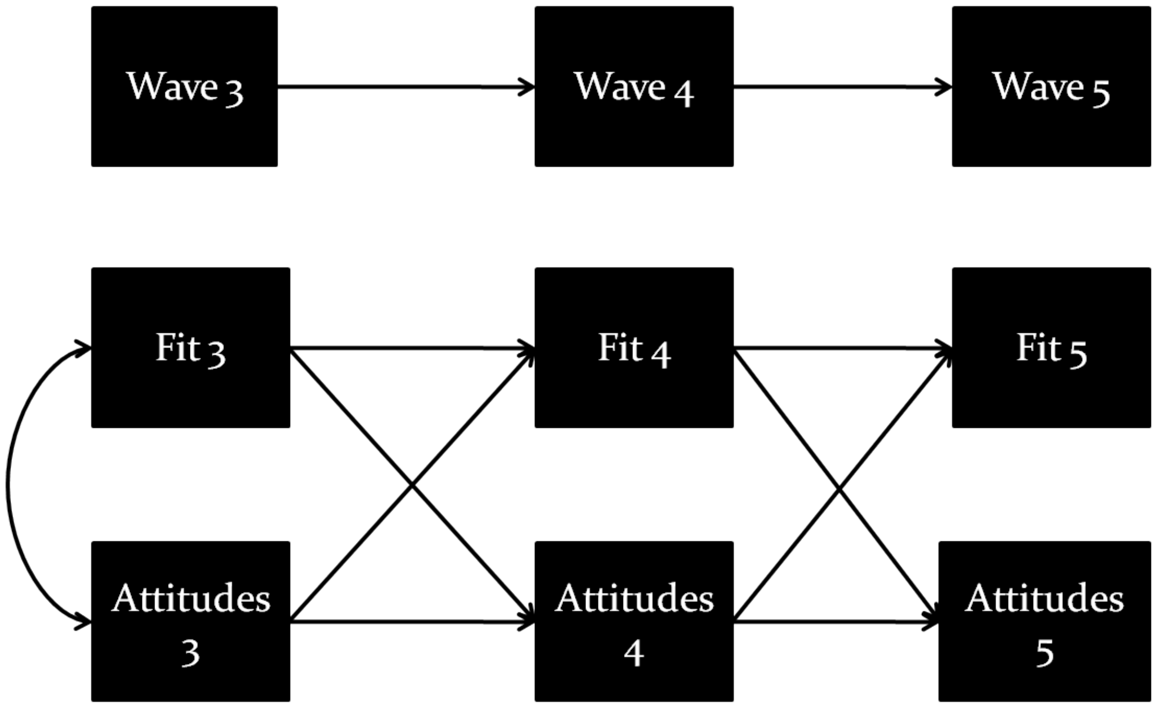

Figure 5. Autoregressive model of relationships between perceived fit and attitudes.

Note. $Fit_{3\text{-}5}$ = Perceived fit measured at Waves 3 through 5; $Attitudes_{3\text{-}5}$ = Attitudes measured at Waves 3 through 5.

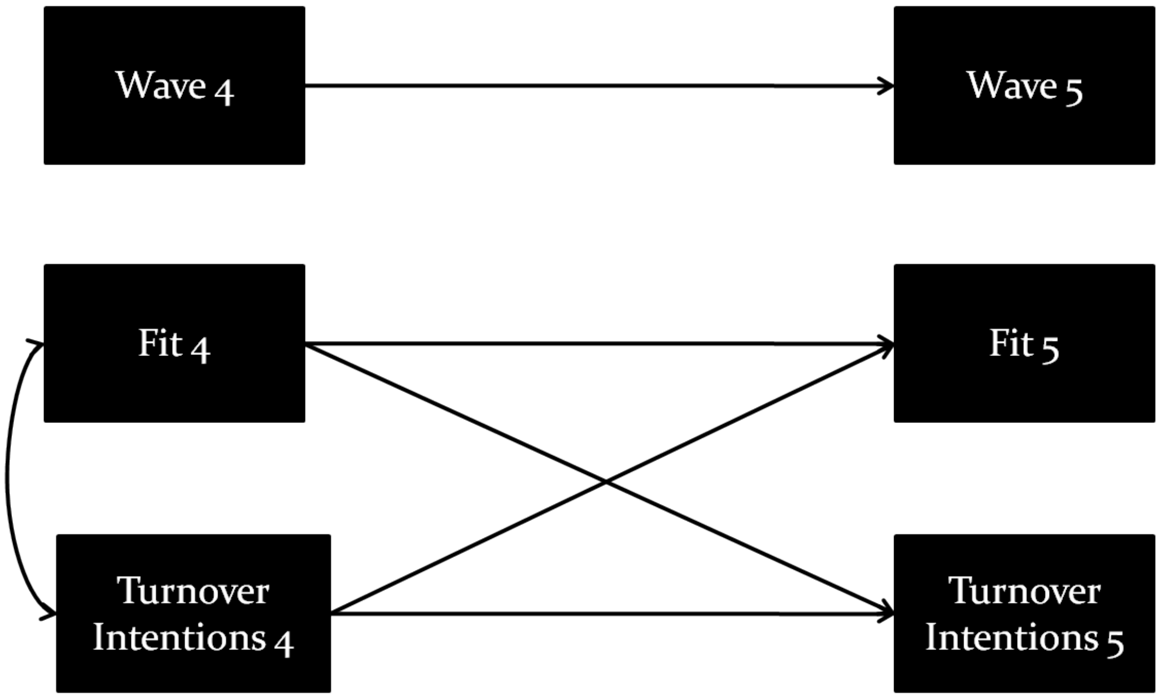

Figure 6. Autoregressive model of relationships between perceived fit and turnover intentions.

Note. $\text{Fit}_{4\text{-}5}$ = Perceived fit measured at Waves 4 and 5; $\text{Turnover Intentions}_{4\text{-}5}$ = Turnover Intentions measured at Waves 4 and 5.

Table 1

Summary of Longitudinal Studies of Fit

Article	# of Waves	# of Times Fit Measured	Population	Conceptualization of Fit	Statistical Analyses to Assess Change	Conclusions regarding changes in Fit
Chatman (1991)	2	2	N = 171 junior audit workers	Person-Organization Fit: match between the values of an individual and values of the organization	Multiple regression analyses	Perceptions of PO Fit decreased over time
Cable & Judge (1997)	3	2	N = 273 job seekers	Person-Organization Fit: perceptions of fit between individuals' values and organization's values Person-Job Fit: perceptions of match between individuals' abilities and job's requirements	Multiple regression analyses	Job seekers who placed more emphasis on PO Fit experienced greater PO Fit after entry than job seekers who placed less emphasis on PO Fit
Saks & Ashforth (1997)	2	1	N = 350 university graduates	Person-Job Fit: perceptions of fit to one's job Person-Organization Fit: perceptions of fit to one's organization	Change not assessed	Changes in fit not examined
Cable & DeRue (2002)	2	1	N= 187 managers and 135 supervisors/peers of the managers	Person-Organization Fit: perceptions of fit between individuals' values and values of an organization Needs-Supplies Fit: perceptions of job fulfilling one's needs Demands-Abilities Fit: perceptions of fit between one's skills and abilities and demands of a job	Change not assessed	Changes in fit not examined
Vigoda & Cohen (2002)	2	1	N = 303 employees	Person-Organization Fit: perceptions of match between individual knowledge, skills, and abilities and job requirements; match between individual needs and reward structure of organization; match between values of individual and values of organization; match between individual personality and personality of organization	Change not assessed	Changes in fit not examined
Roberts & Robins (2004)	4	4	N = 305 university undergraduate students	Alpha Fit: match between subjective values and consensus judgment of resources Beta Fit: match between subjective values and subjective resources	Correlations and Latent Growth Modeling	Alpha fit increased over time but effect size small Beta fit moderately stable over time

Continued.

Table 1 Continued

Article	# of Waves	# of Times Fit Measured	Population	Conceptualization of Fit	Statistical Analyses to Assess Change	Conclusions regarding changes in Fit
Carless (2005)	4	2	N = 193 job seekers W1, 140 W2, 81 W3, 34 W4	Person-Job Fit: perceptions of fit between knowledge, skills, and abilities and job requirements Person-Organization Fit: perceptions of fit between values, goals, and personality of individual and values, goals, and personality of organization	Change not assessed	Changes in fit not examined
Harms, Roberts, & Winter (2006)	2	2	N = 191 university undergraduate students	Beta Fit: match between student's needs and subjective ratings of environment's ability to meet needs Alpha Fit: student's needs and objective ratings of environment's ability to meet needs	Correlations and paired *t*-tests	Alpha and Beta Fit moderately stable across time
Garavan (2007)	3	3	N = 137 graduates of a training and development program	Person-Organization Fit: perceptions of fit between individuals' values and values and culture of an organization	Change not assessed	Changes in fit not examined
DeRue, & Morgeson (2007)	5	2	N = 205 undergraduate students and 43 MBA students	Person-Team Fit: perceptions of fit to one's team Person-role Fit: Perceptions of fit to one's role on a team	Multiple regression analyses	Person-team fit stable over time Person-role fit decreased over time
Schmitt, Oswald, Friede, Imus, & Merritt (2008)	3	3	N = 1174 incoming university freshman	Academic fit: perceptions of fit to the academic environment	Multivariate Latent Growth Models	Changes in academic fit led to changes in satisfaction
Tak (2010)	2	1	N = 297 newcomer employees	Person-Job Fit: perceptions of job fitting one's interests Person-Organization Fit: perceptions of possessing characteristics common to the organization Person-Supervisor Fit: perceptions of possessing characteristics common to one's supervisor	Change not assessed	Changes in fit not examined

Table 2

Timeline of Data Collection by Wave and Cohort

	2007	2008	2009	2010	2011
January					
February				Cohort 1 Wave 5	Cohort 2 Wave 5
March					
April			Cohort 2 Wave 2	Cohort 1 Wave 4	
May		Cohort 1 Wave 2	Cohort 1 Wave 3	Cohort 2 Wave 3	Cohort 2 Wave 5
June	Cohort 1 Wave 1	Cohort 2 Wave 1			
July			Cohort 1 Wave 4		
August			Cohort 1 Wave 3	Cohort 1 Wave 5	
September	Cohort 1 Wave 1			Cohort 2 Wave4	
October					
November		Cohort 2 Wave 2		Cohort 1 Wave 5	
December		Cohort 1 Wave 3	Cohort 2 Wave3 Cohort 1 Wave 4	Cohort 2 Wave 4	

Table 3

List of Measures by Wave

Measures	**Wave 1**	**Wave 2**	**Wave 3**	**Wave 4**	**Wave 5**
DA Fit - Occupation	X	X	X	X	X
PV Fit - Occupation	X	X	X	X	X
DA Fit - Specialty			X	X	X
PV Fit - Specialty			X	X	X
Mental Health	X	X	X	X	X
Physical Health	X	X	X	X	X
Occupational Satisfaction			X	X	X
Occupational Commitment			X	X	X
Turnover Intentions				X	X

Table 4

Demographic Description for Waves 1 through 5 by Cohort

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
Cohort 1 *	N = 99	N = 89	N = 88	N = 41	N = 31
Gender					
Male	12.10%	12.30%	13.40%	9.80%	10%
Female	87.90%	87.70%	86.60%	90.20%	90%
Ethnicity					
Asian American	4.20%	5%	3.70%	4.90%	
African American	1%				
Hispanic American	3.10%	1.30%	2.50%	4.90%	3.40%
Native Hawaiian/ Pacific Islander	1%	1.30%	1.20%		
Caucasian	87.50%	88.80%	88.90%	90.20%	96.60%
Other	3.10%	3.80%	3.70%		
Age **					
Mean (*SD*)	24.22 (6.33)				
Cohort 2 *	N = 69	N = 56	N = 66	N = 24	N = 26
Gender					
Male	8.70%	7.70%	9.50%	4.20%	7.70%
Female	91.30%	92.30%	90.50%	95.80%	92.30%
Ethnicity					
Asian American	2.90%	1.90%	1.60%	4.20%	3.80%
Hispanic American	1%	3.80%	1.60%		
Caucasian	94.20%	92.30%	95.20%	95.80%	96.20%
Other	1.40%	1.90%	1.60%		
Age **					
Mean (*SD*)	26.47 (6.73)				

Note. * Gender and Ethnicity were only collected at Waves 1, 4, and 5 so reported Ns may be less than the total sample size for each wave. ** Age was only assessed at Wave 1.

Table 5

Response Rates by Participation in One Wave, Two Waves, Three Waves, Four Waves, or Five Waves

Wave	Total *N*	Cohort 1 *N*	Cohort 2 *N*
1	169	100	69
2	145	89	56
3	154	88	66
4	65	41	24
5	58	31	27
1 and 2	134	83	51
1 and 3	146	83	63
1 and 4	60	37	23
1 and 5	57	31	26
2 and 3	124	71	53
2 and 4	52	34	18
2 and 5	35	20	15
3 and 4	59	35	24
3 and 5	56	30	26
4 and 5	42	24	18
1, 2, and 3	121	70	51
1, 2, and 4	50	33	17
1, 2, and 5	48	27	21
1, 3, and 4	57	34	23
1, 3, and 5	55	30	25
1, 4, and 5	41	24	17
2, 3, and 4	49	31	18
2, 3, and 5	48	26	22
2, 4, and 5	35	20	15
3, 4, and 5	41	23	18
1, 2, 3, and 4	47	30	17
1, 2, 3, and 5	47	26	21
1, 3, 4, and 5	40	23	17
2, 3, 4, and 5	34	19	15
1, 2, 3, 4, and 5	33	19	14

Table 6

Means, Standard Deviations, and Ranges for all Studied Variables

Variable	*M*	*SD*	Possible Range	Actual Range	*N*
<u>DA Fit - Occupation</u>					
DA Fit W1	8.93	1.11	2 to 10	5 to 10	168
DA Fit W2	9.00	1.05	2 to 10	5 to 10	145
DA Fit W3	9.25	1.03	2 to 10	5 to 10	153
DA Fit W4	8.66	1.38	2 to 10	4 to 10	62
DA Fit W5	8.86	1.29	2 to 10	6 to 10	58
<u>PV Fit - Occupation</u>					
PV Fit W1	21.90	2.76	5 to 25	13 to 25	168
PV Fit W2	22.34	2.47	5 to 25	14 to 25	145
PV Fit W3	22.91	2.54	5 to 25	13 to 25	153
PV Fit W4	21.51	3.61	5 to 25	10 to 25	62
PV Fit W5	21.55	3.43	5 to 25	11 to 25	58
<u>DA Fit - Specialty</u>					
DA Fit W3	9.09	1.22	2 to 10	4 to 10	152
DA Fit W4	8.16	1.48	2 to 10	4 to 10	62
DA Fit W5	8.58	1.35	2 to 10	5 to 10	57
<u>PV Fit - Specialty</u>					
PV Fit W3	22.50	2.49	5 to 25	15 to 25	154
PV Fit W4	19.63	4.08	5 to 25	8 to 25	62
PV Fit W5	19.95	4.36	5 to 25	7 to 25	58
<u>Mental Health</u>					
Mental Health W1	22.25	3.54	6 to 30	9 to 29	168
Mental Health W2	23.28	3.16	6 to 30	12 to 29	144
Mental Health W3	22.76	3.48	6 to 30	8 to 28	154
Mental Health W4	22.27	4.22	6 to 30	8 to 27	64
Mental Health W5	23.23	3.67	6 to 30	13 to 28	56
<u>Physical Health</u>					
Physical Health W1	23.33	2.08	6 to 30	16 to 26	168
Physical Health W2	23.33	2.36	6 to 30	16 to 26	144
Physical Health W3	22.95	2.66	6 to 30	15 to 26	154
Physical Health W4	22.00	2.76	6 to 30	12 to 25	62
Physical Health W5	22.75	2.47	6 to 30	15 to 26	56

Continued.

Table 6 Continued

Variable	*M*	*SD*	Possible Range	Actual Range	*N*
Occupational Satisfaction					
Occupational Satisfaction W3	13.49	1.71	3 to 15	6 to 15	154
Occupational Satisfaction W4	12.95	2.03	3 to 15	7 to 15	64
Occupational Satisfaction W5	13.19	1.99	3 to 15	6 to 15	57
Affective Commitment					
Affective Commitment W3	26.85	3.00	6 to 30	15 to 30	154
Affective Commitment W4	26.10	3.84	6 to 30	12 to 30	52
Affective Commitment W5	25.86	3.62	6 to 30	14 to 30	58
Normative Commitment					
Normative Commitment W3	19.00	4.29	6 to 30	6 to 29	154
Normative Commitment W4	18.58	5.12	6 to 30	6 to 30	52
Normative Commitment W5	18.44	4.99	6 to 30	6 to 29	58
Continuance Commitment					
Continuance Commitment W3	20.52	4.42	6 to 30	7 to 30	153
Continuance Commitment W4	22.15	4.74	6 to 30	6 to 30	52
Continuance Commitment W5	21.79	4.22	6 to 30	8 to 29	58
Turnover Intentions					
Turnover Intentions W4	6.63	3.82	3 to 15	3 to 15	51
Turnover Intentions W5	6.67	3.28	3 to 15	3 to 15	58

Table 7

Correlations between DA and PV Fit at the Occupation and Specialty Level

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Wave 1															
1. DA Fit - Occ.															
2. PV Fit - Occ.	.33*														
Wave 2															
3. DA Fit - Occ.	.41*	.35*													
4. PV Fit - Occ.	.26*	.62*	.49*												
Wave 3															
5. DA Fit - Occ.	.23*	.28*	.38*	.46*											
6. PV Fit - Occ.	.15	.57*	.38*	.65*	.65*										
7. DA Fit - Spec.	.31*	.17*	.47*	.28*	.57*	.36*									
8. PV Fit - Spec.	.28*	.48*	.51*	.55*	.60*	.65*	.60*								
Wave 4															
9. DA Fit - Occ.	.33*	.50*	.39*	.42*	.42*	.73*	.38*	.41*							
10. PV Fit - Occ.	.29*	.70*	.35*	.60*	.41*	.74*	.32*	.45*	.71*						
11. DA Fit - Spec.	.23	.27*	.18	.20	.28*	.47*	.36*	.30*	.73*	.48*					
12. PV Fit - Spec.	.18	.28*	.09	.27	.21	.30*	.09	.22	.45*	.61*	.60*				
Wave 5															
13. DA Fit - Occ.	.41*	.26	.34*	.33*	.60*	.42*	.56*	.46*	.34*	.40*	.35*	.14			
14. PV Fit - Occ.	.42*	.61*	.25	.51*	.32*	.61*	.19	.35*	.47*	.73*	.40*	.34*	.50*		
15. DA Fit - Spec.	.36*	.10	.39*	.33*	.41*	.13	.54*	.39*	.34*	.20	.46*	.22	.64*	.25	
16. PV Fit - Spec.	.31*	.51*	.32*	.49*	.22	.32*	.21	.36*	.34*	.60*	.55*	.68*	.33*	.58*	.55*

Note. Occ. indicates fit at the occupation level. Spec. represents fit at the specialty level. *N*s range from 40 to 168. * $p < .05$ (two-tailed).

Table 8

Correlations between DA and PV Fit at the Occupation and Specialty Level and Mental and Physical Health

	Wave 1		**Wave 2**		**Wave 3**		**Wave 4**		**Wave 5**	
	MH	PH	MH	PH	MH	PH	MH	PH	MH	PH
Wave 1										
1. DA Fit - Occ.	.00	.08	-.12	.09	.07	.05	-.06	.10	.19	.08
2. PV Fit - Occ.	.03	.05	.06	.20*	.15	.18*	.12	.09	.19	.16
Wave 2										
3. DA Fit - Occ.	.17	.13	.14	.18*	.19*	.17	-.12	-.12	.02	.06
4. PV Fit - Occ.	.04	.12	.20*	.24*	.36*	.26*	.17	.12	.15	.04
Wave 3										
5. DA Fit - Occ.	.05	.03	.08	.06	.15	.21*	.04	.06	.16	.28*
6. PV Fit - Occ.	.13	.08	.10	.10	.23*	.31*	.24	.23	.27*	.20
7. DA Fit - Spec.	.15	.05	.05	.07	.15	.18*	.02	.00	.20	.04
8. PV Fit - Spec.	.10	.01	.07	-.01	.29*	.20*	.05	-.01	.14	.05
Wave 4										
9. DA Fit - Occ.	.45*	.04	.28	.22	.23	.23	.37*	.27*	.53*	.28
10. PV Fit - Occ.	.21	.02	.23	.29*	.33*	.09	.39*	.18	.37*	.14
11. DA Fit - Spec.	.43*	.09	.43*	.34*	.25	.21	.41*	.37*	.50*	.36*
12. PV Fit - Spec.	.30*	.08	.20	.21	.39*	.02	.54*	.24	.31	.11
Wave 5										
13. DA Fit - Occ.	.15	.01	.11	-.05	.05	-.01	-.05	.03	.28*	.10
14. PV Fit - Occ.	.05	.06	.14	.11	.17	.07	.25	.18	.44*	.21
15. DA Fit - Spec.	.27*	-.02	.01	-.09	.12	-.07	.00	.04	.41*	.08
16. PV Fit - Spec.	.23	.06	.15	.15	.23	.02	.30	.16	.38*	.13

Note. Occ. represents fit at the occupation level. Spec. indicates fit at the specialty level. MH represents mental health. PH represents physical health. *N*s range from 39 to 168. * $p < .05$ (two-tailed).

Table 9

Correlations between DA and PV Fit at the Occupation and Specialty Level and Occupational Satisfaction and Commitment

	Wave 3				Wave 4				Wave 5			
	OS	AC	NC	CC	OS	AC	NC	CC	OS	AC	NC	CC
Wave 1												
1. DA Fit - Occ.	.19*	.18*	.02	.08	.20	.21	.22	.12	.25	.37*	.42*	-.13
2. PV Fit - Occ.	.40*	.45*	.17*	.13	.51*	.53*	.26	.17	.44*	.58*	.31*	.12
Wave 2												
3. DA Fit - Occ.	.34*	.34*	-.01	.06	.36*	.40*	.03	.01	.27	.26	.09	.02
4. PV Fit - Occ.	.42*	.52*	.10	.12	.58*	.65*	.02	.12	.53*	.63*	.18	.12
Wave 3												
5. DA Fit - Occ.	.44*	.44*	.10	.12	.34*	.41*	.00	.20	.29*	.22	.04	-.09
6. PV Fit - Occ.	.62*	.69*	.15	.06	.60*	.64*	.12	.07	.40*	.46*	.24	.00
7. DA Fit - Spec.	.26*	.29*	-.04	-.04	.26*	.23	.05	.23	.17	.22	.13	.19
8. PV Fit - Spec.	.45*	.44*	.08	.02	.52*	.50*	.08	.10	.37*	.41*	.17	.12
Wave 4												
9. DA Fit - Occ.	.34*	.48*	.01	-.23	.62*	.44*	.04	-.08	.20	.31	.21	-.08
10. PV Fit - Occ.	.32*	.55*	.17	.06	.78*	.75*	.20	.12	.53*	.64*	.33*	.13
11. DA Fit - Spec.	.18	.27*	-.01	-.29	.47*	.44*	.00	-.17	.29	.40*	.26	-.09
12. PV Fit - Spec.	.09	.18	.02	-.03	.55*	.54*	.06	.01	.36*	.46*	.25	.11
Wave 5												
13. DA Fit - Occ.	.25	.33*	-.03	-.13	.28	.42*	-.04	-.05	.35*	.38*	.02	-.14
14. PV Fit - Occ.	.31*	.55*	.35*	.06	.61*	.62*	.29	.04	.61*	.74*	.37*	-.11
15. DA Fit - Spec.	-.13	.02	-.04	-.07	.12	.06	-.30	-.12	.23	.26	-.07	.02
16. PV Fit - Spec.	-.01	.18	.18	.11	.44*	.44*	.11	.01	.54*	.69*	.21	.06

Note. Occ. represents fit at the occupation level. Spec. represents fit at the specialty level. OS indicates occupational satisfaction. AC represents affective commitment. NC represents normative commitment. CC represents continuance commitment. Ns range from 34 to 153. * $p < .05$ (two-tailed).

Table 10

Correlations between DA and PV Fit at the Occupation and Specialty Level and Turnover Intentions

	Wave 4	Wave 5
	Turnover Intentions	Turnover Intentions
Wave 1		
1. DA Fit - Occ.	-.01	-.10
2. PV Fit - Occ.	-.05	-.34*
Wave 2		
3. DA Fit - Occ.	.16	-.17
4. PV Fit - Occ.	-.16	-.49*
Wave 3		
5. DA Fit - Occ.	.09	-.11
6. PV Fit - Occ.	-.02	-.25
7. DA Fit - Spec.	.08	-.15
8. PV Fit - Spec.	.03	-.16
Wave 4		
9. DA Fit - Occ.	-.23	-.29
10. PV Fit - Occ.	-.29*	.52*
11. DA Fit - Spec.	-.43*	-.39*
12. PV Fit - Spec.	-.59*	-.68*
Wave 5		
13. DA Fit - Occ.	.04	-.19
14. PV Fit - Occ.	-.26	-.48*
15. DA Fit - Spec.	-.29	-.27*
16. PV Fit - Spec.	-.50*	-.67*

Note. Occ. indicates fit at the occupation level. Spec. represents fit at the specialty level. W4 represents Wave 4 and W5 represents W5. *N*s ranged from 35 to 58. * $p < .05$ (two-tailed).

Table 11

Exploratory Models with Time as the only Predictor of DA and PV Fit at the Occupation and Specialty Level

	Occupation Level				**Specialty Level**			
	Model 1a[a] PV Fit Linear	Model 1b[a] PV Fit Quad.	Model 2a[a] DA Fit Linear	Model 2b[a] DA Fit Quad.	Model 3a[b] PV Fit Linear	Model 3b[b] PV Fit Quad.	Model 4a[b] DA Fit Linear	Model 4b[b] DA Fit Quad.
Fixed Effects								
Intercept	22.12* (.24)	20.64* (.39)	9.01* (.09)	8.62* (.18)	22.45* (.22)	22.50* (.24)	9.05* (.11)	9.08* (.10)
Slope	.07 (.09)	1.46* (.31)	.00 (.03)	.37* (.14)	-1.98* (.35)	-5.81* (1.86)	-.38* (.12)	-1.94* (.54)
Quad.		-.26* (.06)		-.06* (.02)		2.82* (1.30)		1.11* (.36)
Random Effects								
Intercept Variance	4.12* (1.22)	8.06 (6.36)	.24 (.29)	2.98* (1.30)	3.36 (3.02)	1.33 (20.05)	.76 (.86)	.82 (.44)
Slope Variance	.08 (.17)	2.15 (2.72)	.02 (.03)	1.02* (.53)	6.52 (3.64)	16.11 (77.37)	.14 (.55)	1.35 (5.84)
Quad. Variance		.07 (.07)		.02 (.02)		7.38 (22.38)		.49 (2.14)
Intercept - Slope Covariance	.00 (.41)	-2.84 (4.12)	.03 (.07)	-1.66* (.79)	.45 (2.24)	4.46 (39.79)	.06 (.64)	.01 (1.23)
Intercept - Quad. Covariance		.50 (.62)		.25* (.12)		-1.92 (18.42)		.00 (.75)
Slope - Quad. Covariance		-.38 (.41)		-.14 (.08)		-8.78 (39.82)		-.74 (3.53)
Fit Indices								
AIC	2675.84	2652.46	1738.35	1730.53	1344.69	1342.50	870.89	869.81
BIC	2708.21	2697.77	1770.71	1775.84	1368.98	1378.94	895.08	906.10

Note. Superscript a indicates model based on initial status at Wave 1. Superscript b indicates model based on initial status at Wave 3. Intercepts represent initial status at Wave 1 or Wave 3 depending upon model. For Models 1a, 2a, 3a, and 4a, slope represents rate of change between waves. For Models 1b, 2b, 3b, and 4b, slope represents instantaneous rate of change from the initial status. Quad. indicates quadratic term, which represents the acceleration or deceleration of the effect of the variable. Reported values are unstandardized parameter estimates with standard error in parentheses. N for DA and PV Fit Occ = 188. N for DA Fit Spec = 152. N for PV Fit Spec = 154. * indicates $p < .05$ (two-tailed).

Table 12

Exploratory Models with Time as the only Predictor of Mental and Physical Health

	Mental Health		**Physical Health**	
	Model 1a Linear	Model 1b Quad.	Model 2a Linear	Model 2b Quad.
Fixed Effects				
Intercept	22.22* (.31)	22.14* (.51)	23.59* (.19)	23.52* (.30)
Slope	.22* (.10)	.29 (.40)	-.22* (.07)	-.16 (.23)
Quad.		-.01 (.07)		-.01 (.04)
Random Effects				
Intercept Variance	7.18* (2.62)	8.24 (12.88)	3.26* (.91)	7.03 (3.93)
Slope Variance	.24 (.17)	1.09 (5.34)	.28* (.10)	1.55 (1.35)
Quad. Variance		.07 (.13)		.02 (.04)
Intercept - Slope Covariance	-.52 (.60)	-1.47 (7.88)	-.38 (.23)	-2.66 (2.23)
Intercept - Quad. Covariance		.27 (1.09)		.31 (.30)
Slope - Quad. Covariance		-.26 (.79)		-.16 (.20)
Fit Indices				
AIC	3032.60	3039.23	2548.34	2555.06
BIC	3064.97	3084.54	2580.71	2600.37

Note. Intercepts represent initial status at Wave 1. For Models 1a and 2a, slope represents rate of change between waves. For Models 1b and 2b, slope represents instantaneous rate of change from the initial status. Quad. indicates quadratic term, which represents the acceleration or deceleration of the effect of the variable. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 13

Exploratory Models with Time as the only Predictor of Occupational Satisfaction and Occupational Commitment

	Satisfaction		**Affective Commitment**		**Normative Commitment**		**Continuance Commitment**	
	Model 1a Linear	Model 1b Quad.	Model 2a Linear	Model 2b Quad.	Model 3a Linear	Model 3b Quad.	Model 4a Linear	Model 4b Quad.
Fixed Effects								
Intercept	13.48* (.14)	13.48* (.17)	26.85* (.24)	26.85* (.24)	18.99* (.34)	18.99* (.35)	20.58* (.35)	20.53* (.36)
Slope	-.19 (.21)	-.65 (.78)	-.73* (.33)	-1.60 (1.04)	-.54 (.34)	-.28 (1.16)	.85* (.38)	3.28* (1.35)
Quad.		.35 (.55)		.64 (.73)		-.24 (.79)		-1.73 (.94)
Random Effects								
Intercept Variance	1.64* (.64)	.82 (5.12)	8.26* (3.69)	7.23* (3.49)	10.50* (2.40)	16.60* (4.10)	14.26* (4.00)	10.15* (2.52)
Slope Variance	1.94* (.86)	11.46 (22.50)	4.92 (3.32)	7.30 (11.17)	1.97 (1.92)	51.44* (24.58)	6.42* (2.24)	6.10* (1.43)
Quad. Variance		6.09 (6.04)		5.01 (9.01)		14.93* (7.48)		3.78 (2.59)
Intercept - Slope Covariance	-.64 (.46)	1.17 (10.40)	-2.40 (2.81)	4.54 (5.68)	3.16* (1.41)	-6.56 (8.62)	-2.63 (3.33)	7.49* (1.71)
Intercept - Quad. Covariance		-.84 (4.90)		-4.44 (3.43)		3.28 (4.53)		-5.28* (2.13)
Slope - Quad. Covariance		-7.81 (11.55)		-4.50 (9.79)		-27.38 (13.54)		-3.41* (1.04)
Fit Indices								
AIC	1063.46	1059.84	1329.3	1335.26	1454.76	1460.04	1477.49	1480.91
BIC	1087.75	1096.28	1353.6	1371.7	1479.05	1496.48	1501.79	1517.35

Note. Intercepts represent initial status at Wave 3. For Models 1a, 2a, 3a, and 4a slope represents rate of change between waves. For Models 1b, 2b, 3b, and 4b slope represents instantaneous rate of change from the initial status. Quad. indicates quadratic term. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 14

Growth Models of Hypothesized Relationships between DA Fit at the Occupational Level and Health

	Mental Health		**Physical Health**	
	Model 1 Linear	Model 2 DA Fit (Quad.) and MH (Linear)	Model 1 Linear	Model 2 DA Fit (Quad.) and PH (Linear)
Covariances				
I DA Fit - I Health	-.03 (.40)	-1.19 (.87)	.27 (.22)	.25 (.51)
S DA Fit - S Health	.04 (.03)	.07 (.09)	.02 (.02)	.08 (.05)
I DA Fit - S Health	.03 (.37)	.09 (.09)	.08 (.28)	-.04 (.06)
I Health - S DA Fit	.02 (.02)	.15* (.08)	-.02 (.03)	-.02 (.11)
I DA Fit - S DA Fit	.00 (.09)	-1.50 (.79)	.02 (.08)	-1.63* (.77)
I Health - S Health	-.68 (.61)	-.67 (.56)	-.40 (.22)	-.37 (.22)
I DA Fit - Q DA Fit		.22 (.12)		-.01 (.01)
S DA Fit - Q DA Fit		-.12 (.08)		-.15 (.08)
I Health - Q DA Fit		-.03* (.01)		.00 (.02)
S Health - Q DA Fit		.00 (.02)		-.01 (.01)
Fit Indices				
AIC	4767.98	4760.93	4286.68	4278.61
BIC	4845.65	4858.02	4364.36	4375.71

Note. I represents the intercept or initial status at Wave 1. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. MH represents Mental Health. PH represents Physical Health. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 15

Growth Models of Hypothesized Relationships between PV Fit at the Occupation Level and Health

	Mental Health		Physical Health	
	Model 1 Linear	Model 2 PV Fit (Quad.) and MH (Linear)	Model 1 Linear	Model 2 PV Fit (Quad.) and PH (Linear)
Covariances				
I PV Fit - I Health	.70 (1.00)	-1.88 (1.49)	.61 (.59)	.00 (.91)
S PV Fit - S Health	.18* (.07)	-.08 (.31)	.05 (.04)	.07 (.13)
I PV Fit - S Health	.01 (.07)	.09 (.08)	.02 (.04)	.03 (.05)
I Health - S PV Fit	.00 (.04)	.35* (.15)	-.03 (.05)	.15 (.20)
I PV Fit - S PV Fit	-.17 (.46)	-1.87 (3.91)	.05 (.40)	-2.57 (3.95)
I Health - S Health	-.69 (.64)	-.44 (.56)	-.41 (.25)	-.40 (.23)
I PV Fit - Q PV Fit		.35 (.58)		.46 (.59)
S PV Fit - Q PV Fit		-.18 (.39)		-.32 (.40)
I Health - Q PV Fit		-.07* (.03)		-.04 (.04)
S Health - Q PV Fit		.05 (.05)		.00 (.02)
Fit Indices				
AIC	5690.44	5664.47	5222.56	5200.63
BIC	5768.11	5761.56	5300.23	5297.73

Note. I represents the intercept or initial status at Wave 1. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. MH represents Mental Health. PH represents Physical Health. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 16

Growth Models of Hypothesized Relationships between DA Fit at the Specialty Level and Health

	Model 1 Linear	Model 2 DA Fit (Quad.) and MH (Linear)	Model 1 Linear	Model 2 DA Fit (Quad.) and PH (Linear)
Covariances				
I DA Fit - I Health	.75* (.38)	.63* (.32)	.50* (.24)	.46* (.23)
S DA Fit - S Health	.03 (.22)	.04 (.38)	-.06 (.12)	.06 (.23)
I DA Fit - S Health	.15 (.32)	.08 (.16)	.21 (.21)	.17 (.10)
I Health - S DA Fit	.04 (.06)	.75* (.23)	.00 (.06)	.55* (.21)
I DA Fit - S DA Fit	.02 (.73)	-.63 (.65)	.06 (.49)	-.29 (.82)
I Health - S Health	.24 (.35)	.29 (.25)	.66* (.31)	.67* (.28)
I DA Fit - Q DA Fit		.35 (.42)		.15 (.56)
S DA Fit - Q DA Fit		-.91 (.81)		-.88 (2.05)
I Health - Q DA Fit		-.51* (.17)		-.36* (.15)
S Health - Q DA Fit		.04 (.28)		-.08 (.15)
Fit Indices				
AIC	3592.63	3580.77	3208.27	3206.14
BIC	3659.45	3665.81	3275.08	3291.17

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. MH represents Mental Health. PH represents Physical Health. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 17

Growth Models of Hypothesized Relationships between PV Fit at the Specialty Level and Health

	Model 1 Linear	Model 2 PV Fit (Quad.) and MH (Linear)	Model 1 Linear	Model 2 PV Fit (Quad.) and PH (Linear)
Covariances				
I PV Fit - I Health	1.88* (.54)	1.77* (.56)	.90* (.43)	.89* (.44)
S PV Fit - S Health	-.13 (.34)	.44 (1.37)	-.23 (.26)	-.55 (.92)
I PV Fit - S Health	.25* (.12)	.13 (.13)	.11 (.08)	.13 (.10)
I Health - S PV Fit	.32* (.17)	1.02* (.39)	.29 (.22)	.56 (.63)
I PV Fit - S PV Fit	1.08 (.75)	-1.25 (9.27)	-.15 (1.99)	-.67 (6.48)
I Health - S Health	-.12 (.29)	.15 (.34)	.71* (.27)	.69* (.27)
I PV Fit - Q PV Fit		.67 (5.00)		.43 (3.52)
S PV Fit - Q PV Fit		-15.67 (23.09)		-18.51 (25.38)
I Health - Q PV Fit		-.51* (.26)		-.16 (.46)
S Health - Q PV Fit		-.12 (.90)		.15 (.60)
Fit Indices				
AIC	4058.22	4058.56	3679.42	3680.22
BIC	4125.04	4143.60	3746.23	3765.26

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. MH represents Mental Health. PH represents Physical Health. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 18

Growth Models of Hypothesized Relationships between DA Fit at the Occupation Level and Occupational Satisfaction

	Model 1 Linear	Model 2 DA Fit (Quad.) and OS (Linear)	Model 3 DA Fit (Linear) and OS (Quad.)	Model 3 Both Quad.
Covariances				
I DA Fit - I OS	.71* (.18)	.76* (.21)	.71 (.13)	.75* (.13)
S DA Fit - S OS	.02 (.05)	.07 (.08)	.02 (.98)	-.15 (.73)
I DA Fit - S OS	.19 (.36)	.00 (.39)	.31 (1.38)	.33 (1.68)
I OS - S DA Fit	.08* (.04)	.05 (.05)	.10 (.36)	.06 (.22)
I DA Fit - S DA Fit	.02 (.05)	.08 (.07)	.01 (.26)	.07 (.17)
I OS - S OS	-.58 (.38)	-.55 (.40)	.07 (10.14)	-.20 (10.15)
I DA Fit - Q DA Fit		.02 (.04)		.02 (.09)
S DA Fit - Q DA Fit		.01 (.04)		.01 (.04)
I OS - Q DA Fit		-.03 (.03)		-.03 (.10)
S OS - Q DA Fit		.06 (.06)		-.15 (.73)
I OS - Q OS			-.29 (4.68)	-.10 (4.73)
S OS - Q OS			-8.64 (12.50)	-8.85 (13.71)
I DA Fit - Q OS			-.11 (1.04)	-.25 (1.19)
S DA Fit - Q OS			-.01 (.54)	.15 (.43)
Q DA Fit - Q OS				.10 (.26)
Fit Indices				
AIC	2575.61	2574.35	2576.45	2576.43
BIC	2642.42	2659.38	2661.48	2682.72

Note. I represents the intercept or initial status at Wave 1. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. OS represents Occupational Satisfaction. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154.
* indicates p < .05 (two-tailed).

Table 19

Growth Models of Hypothesized Relationships between PV Fit at the Occupation Level and Occupational Satisfaction

	Model 1 Linear	Model 2 PV Fit (Quad.) and OS (Linear)	Model 3 PV Fit (Linear) and OS (Quad.)	Model 4 Both Quad.
Covariances				
I PV Fit - I OS	2.49* (.49)	2.62* (.52)	2.46* (.50)	2.58* (.44)
S PV Fit - S OS	.20 (.12)	.46* (.20)	.39 (3.98)	.26 (.95)
I PV Fit - S OS	.12 (.11)	.04 (.12)	.30 (.67)	.20 (.53)
I OS - S PV Fit	.17* (.07)	.01 (.12)	.16 (.16)	.03 (.20)
I PV Fit - S PV Fit	.04 (.17)	.20 (.20)	.02 (.28)	.16 (.52)
I OS - S OS	-.75* (.33)	-.59* (.29)	-1.08 (2.26)	-.81 (8.76)
I PV Fit - Q PV Fit		.14 (.18)		.10 (.63)
S PV Fit - Q PV Fit		.30* (.12)		.31 (.24)
I OS - Q PV Fit		-.11 (.08)		-.10 (.24)
S OS - Q PV Fit		.25 (.15)		.17 (.84)
I OS - Q OS			.24 (.73)	.17 (4.11)
S OS - Q OS			-8.44 (65.54)	-8.51 (10.24)
I PV Fit - Q OS			-.15 (.46)	-.15 (.42)
S PV Fit - Q OS			-.13 (2.73)	.10 (.67)
Q PV Fit - Q OS				.05 (.51)
Fit Indices				
AIC	3389.14	3359.70	3389.85	3364.62
BIC	3455.95	3444.74	3474.88	3470.92

Note. I represents the intercept or initial status at Wave 1. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadradic term or the acceleration or deceleration of the effect of the variable. OS represents Occupational Satisfaction. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 20

Growth Models of Hypothesized Relationships between DA Fit at the Specialty Level and Occupational Satisfaction

	Model 1 Linear	Model 2 DA Fit (Quad.) and OS (Linear)	Model 3 DA Fit (Linear) and OS (Quad.)	Model 4 Both Quad.
Covariances				
I DA Fit - I OS	-.76* (.39)	.53* (.20)	.56* (.19)	.54* (.20)
S DA Fit - S OS	.10 (.26)	1.07 (.76)	.27 (2.23)	5.02* (2.44)
I DA Fit - S OS	.18 (.36)	.13 (.19)	.42 (1.70)	.01 (1.04)
I OS - S DA Fit	-.24 (.13)	.65 (.46)	-.24 (.81)	.51 (.44)
I DA Fit - S DA Fit	.16 (.96)	-.91 (1.54)	.17 (.68)	-.51 (1.25)
I OS - S OS		-.65 (.47)	-1.04 (13.02)	-.57 (2.83)
I DA Fit - Q DA Fit		.61 (.88)		.40 (.73)
S DA Fit - Q DA Fit		-2.75 (3.36)		-2.42 (2.73)
I OS - Q DA Fit		-.68 (.36)		-.60 (.38)
S OS - Q DA Fit		-.66 (.47)		-3.17 (1.98)
I OS - Q OS			.23 (6.12)	-.03 (1.79)
S OS - Q OS			-9.79 (15.17)	-9.66 (22.65)
I DA Fit - Q OS			-.18 (1.30)	.07 (.74)
S DA Fit - Q OS			-.15 (1.26)	-3.02 (1.67)
Q DA Fit - Q OS				1.91 (1.32)
Fit Indices				
AIC	1920.75	1913.84	1921.44	1911.35
BIC	1981.49	1992.80	2000.40	2011.57

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. OS represents Occupational Satisfaction. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 21

Growth Models of Hypothesized Relationships between PV Fit at the Specialty Level and Occupational Satisfaction

	Model 1 Linear	Model 2 PV Fit (Quad.) and OS (Linear)	Model 3 PV Fit (Linear) and OS (Quad.)	Model 3 Both Quad.
Covariances				
I PV Fit - I OS	1.97* (.46)	1.94* (.45)	1.91* (.36)	1.90* (.36)
S PV Fit - S OS	1.71* (.80)	.81 (1.51)	.99 (4.19)	10.20 (19.91)
I PV Fit - S OS	.14 (.14)	.13 (.16)	.88 (1.19)	.57 (2.42)
I OS - S PV Fit	-.52 (.49)	.41 (1.14)	-.48 (1.36)	-.15 (2.90)
I PV Fit - S PV Fit	1.35 (1.34)	-2.25 (9.24)	1.44 (4.52)	.20 (32.97)
I OS - S OS	-.46 (.25)	-.45 (.33)	-1.99 (10.08)	-.58 (14.17)
I PV Fit - Q PV Fit		2.19 (5.30)		.56 (16.28)
S PV Fit - Q PV Fit		-13.18 (21.06)		-13.49 (47.00)
I OS - Q PV Fit		-.73 (.82)		-.42 (2.58)
S OS - Q PV Fit		.75 (.92)		-5.58 (9.98)
I OS - Q OS			.97 (4.80)	.15 (6.97)
S OS - Q OS			-8.13 (11.80)	-7.82 (16.71)
I PV Fit - Q OS			-.58 (.80)	-.36 (1.56)
S PV Fit - Q OS			.38 (2.42)	-6.89 (13.57)
Q PV Fit - Q OS				4.55 (6.63)
Fit Indices				
AIC	2344.85	2344.48	2344.58	2341.65
BIC	2405.59	2423.44	2423.54	2441.87

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. OS represents Occupational Satisfaction. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 22

Growth Models of Hypothesized Relationships between DA Fit at the Occupation Level and Occupational Commitment

	Affective		**Normative**		**Continuance**	
	Model 1 Linear	Model 2 DA Fit (Quad.) and AC (Linear)	Model 1 Linear	Model 2 DA Fit (Quad.) and NC (Linear)	Model 1 Linear	Model 2 DA Fit (Quad.) and CC (Linear)
Covariances						
I DA Fit - Comm.	1.31*	1.36*	.07	.26	.17	.31
	(.31)	(.36)	(.29)	(.32)	(.35)	(.35)
S Da Fit - Comm.	-.04	.15	-.18	-.12	.10	-.02
	(.09)	(.12)	(.13)	(.16)	(.14)	(.18)
I DA Fit - S Comm.	.50	-.19	.99	.74	-.27	.05
	(.59)	(.65)	(.55)	(.63)	(.61)	(.67)
I Comm. - S DA Fit	.04	.03	.00	-.20	-.01	-.01
	(.02)	(.02)	(.01)	(.01)	(.01)	(.02)
I DA Fit - S DA Fit	.03	.08	.08	.14*	.08	.13*
	(.05)	(.07)	(.05)	(.07)	(.05)	(.07)
I Comm. - S Comm.	-2.53	-1.63	1.72	1.61	-1.89	-1.74
	(2.80)	(2.78)	(2.21)	(2.17)	(3.69)	(3.47)
I DA Fit - Q DA Fit		.01		.02		.02
		(.03)		(.04)		(.04)
S DA Fit - Q DA Fit .		.01		.01		.01
		(.02)		(.04)		(.05)
I Comm. - Q DA Fit		-.01		-.02		.00
		(.01)		(.01)		(.01)
S Comm. - Q DA Fit		.21*		.11		-.10
		(.08)		(.09)		(.10)
Fit Indices						
AIC	2841.91	2838.17	3010.05	3007.94	3036.87	3036.78
BIC	2908.73	2923.21	3076.86	3092.98	3103.68	3121.81

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadradic term or the acceleration or deceleration of the effect of the variable. Comm. represents Occupational Commitment. AC represents Affective Commitment. NC represents Normative Commitment. CC represents Continuance Commitment. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 23

Growth Models of Hypothesized Relationships between PV Fit at the Occupation Level and Occupational Commitment

	Affective		Normative		Continuance	
	Model 1 Linear	Model 2 PV Fit (Quad.) and AC (Linear)	Model 1 Linear	Model 2 PV Fit (Quad.) and NC (Linear)	Model 1 Linear	Model 2 PV Fit (Quad.) and CC (Linear)
Covariances						
I PV Fit - I Comm.	5.15*	5.25*	1.67	1.50	.54	.55
	(1.00)	(1.03)	(1.18)	(1.14)	(1.00)	(.93)
S PV Fit - S Comm.	.18	.72	.13	-.01	.16	-.33
	(.24)	(.40)	(.27)	(.37)	(.33)	(.42)
I PV Fit - S Comm.	.10	-.10	.16	.01	-.04	-.02
	(.16)	(.17)	(.15)	(.12)	(.16)	(.17)
I Comm. - S PV Fit	.09*	.07	.00	.08	-.04	-.01
	(.04)	(.06)	(.03)	(.05)	(.03)	(.06)
I PV Fit - S PV Fit	-.04	-.15	.28	.02	.33	.17
	(.18)	(.23)	(.25)	(.30)	(.26)	(.31)
I Comm. - S Comm.	-2.36	-.75	2.36	1.50*	-1.61	-1.59
	(1.81)	(1.42)	(2.30)	(1.14)	(3.69)	(3.63)
I PV Fit - Q PV Fit		-.02		-.23		-.15
		(.20)		(.24)		(.24)
S PV Fit - Q PV Fit		.37*		.27*		.33*
		(.13)		(.14)		(.16)
I Comm. - Q PV Fit		-.02		.04		.01
		(.04)		(.03)		(.03)
S Comm. - Q PV Fit		.64*		.18		-.22
		(.26)		(.26)		(.29)
Fit Indices						
AIC	3632.78	3596.99	3880.73	3854.66	3906.63	3884.46
BIC	3699.59	3682.02	3947.54	3939.69	3973.44	3969.50

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. Comm. represents Occupational Commitment. AC represents Affective Commitment. NC represents Normative Commitment. CC represents Continuance Commitment. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 24

Growth Models of Hypothesized Relationships between DA Fit at the Specialty Level and Occupational Commitment

	Affective		**Normative**		**Continuance**	
	Model 1 Linear	Model 2 DA Fit (Quad.) and AC (Linear)	Model 1 Linear	Model 2 DA Fit (Quad.) and NC (Linear)	Model 1 Linear	Model 2 DA Fit (Quad.) and CC (Linear)
Covariances						
I DA Fit - I Comm.	1.08*	1.05*	-.16	-.20	-.26	-.20
	(.35)	(.35)	(.36)	(.35)	(.48)	(.47)
S DA Fit - S Comm.	.33	2.06	-.36	1.47	-.46	-.42
	(.29)	(1.33)	(.49)	(1.70)	(.52)	(1.46)
I DA Fit - S Comm.	.06	-.05	.87	.83	1.24	1.22*
	(.36)	(.29)	(.53)	(.60)	(.74)	(.50)
I Comm. - S DA Fit	-.08	.20	-.05	.09	-.01	-.25
	(.04)	(.27)	(.05)	(.19)	(.05)	(.22)
I DA Fit - S DA Fit	.13	-.66	.05	.40	-.01	-.24
	(.22)	(1.17)	(.26)	(.84)	(.36)	(.61)
I Comm. - S Comm.	-2.69	-2.48	2.29	2.12*	-1.85	-2.06
	(2.50)	(2.39)	(2.18)	(.90)	(3.86)	(3.84)
I DA Fit - Q DA Fit		.48		-.25		.13
		(.69)		(.45)		(.43)
S DA Fit - Q DA Fit		-1.84		-1.72		-1.54
		(2.24)		(2.07)		(2.91)
I Comm. - Q DA Fit		-.21		-.11		.18
		(.20)		(.14)		(.16)
S Comm. - Q DA Fit		-1.25		-1.23		.02
		(.86)		(1.16)		(1.04)
Fit Indices						
AIC	2187.26	2184.73	2327.98	2325.02	2350.65	2351.12
BIC	2248.00	2263.69	2388.72	2403.98	2411.39	2430.08

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadradic term or the acceleration or deceleration of the effect of the variable. Comm. represents Occupational Commitment. AC represents Affective Commitment. NC represents Normative Commitment. CC represents Continuance Commitment. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 25

Growth Models of Hypothesized Relationships between PV Fit at the Specialty Level and Occupational Commitment

	Affective		Normative		Continuance	
	Model 1 Linear	Model 2 PV Fit (Quad.) and AC (Linear)	Model 1 Linear	Model 2 PV Fit (Quad.) and NC (Linear)	Model 1 Linear	Model 2 PV Fit (Quad.) and CC (Linear)
Covariances						
I PV Fit - I Comm.	3.30*	3.32*	.62	.79	.13	.20
	(.80)	(.80)	(.89)	(.89)	(.87)	(87)
S PV Fit - S Comm.	3.44*	1.26	-.75	4.34	-.95	4.31
	(1.44)	(3.47)	(1.29)	(5.04)	(1.33)	(4.77)
I PV Fit - S Comm.	.21	.19	.54	.39	.34	.24
	(.19)	(.25)	(.62)	(.54)	(.51)	(.40)
I Comm. - S PV Fit	-.06	-.12	.09	-.37	.06	-.15
	(.16)	(.59)	(.13)	(.47)	(.16)	(.48)
I PV Fit - S PV Fit	.45	-.80	.90	1.16	.73	1.56
	(1.79)	(6.72)	(1.84)	(7.84)	(2.18)	(6.92)
I Comm. - S Comm.	-2.81	-2.29	2.18	1.64	-1.81	-2.29
	(2.44)	(2.15)	(2.29)	(1.54)	(3.83)	(3.39)
I PV Fit - Q PV Fit		.60		-.69		-.90
		(2.94)		(4.17)		(3.71)
S PV Fit - Q PV Fit		-13.75		-21.32		-21.93
		(11.34)		(21.85)		(22.90)
I Comm. - Q PV Fit		.04		.34		.16
		(.41)		(.34)		(.34)
S Comm. - Q PV Fit		1.59		-3.27		-3.68
		(2.06)		(2.80)		(2.82)
Fit Indices						
AIC	2608.27	2609.32	2802.96	2802.07	2828.92	2828.18
BIC	2669.01	2688.28	2863.7	2881.03	2889.66	2907.14

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadradic term or the acceleration or deceleration of the effect of the variable. Comm. represents Occupational Commitment. AC represents Affective Commitment. NC represents Normative Commitment. CC represents Continuance Commitment. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 26

Growth Models of Hypothesized Relationships between DA Fit at the Occupation Level and Turnover Intentions

	Model 1 Linear	Model 2 DA Fit (Quad.) and TI
Covariances		
I DA Fit - S DA Fit	.04 (.07)	-1.65* (.79)
I DA Fit - TI W4	.93 (.91)	1.25 (1.51)
I DA Fit - TI W5	-.73 (.75)	-1.09 (1.17)
S DA Fit - TI W4	.14 (.31)	-.29 (1.06)
S DA Fit - TI W5	-.19 (.20)	.20 (.84)
I DA Fit - Q DA Fit		.25* (.12)
S DA Fit - Q DA Fit		-.14 (.08)
Q DA Fit - TI W4		.11 (.19)
Q DA Fit - TI W5		-.08 (.15)
Fit Indices		
AIC	2329.78	2325.12
BIC	2388.04	2402.79

Note. I represents the intercept or initial status at Wave 1. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. TI represents Turnover Intentions. W4 indicates Wave 4. W5 indicates Wave 5. Reported values are unstandardized parameter estimates with standard error in parentheses. $N = 188$.
* indicates $p < .05$ (two-tailed).

Table 27

Growth Models of Hypothesized Relationships between PV Fit at the Occupation Level and Turnover Intentions

	Model 1 Linear	Model 2 PV Fit (Quad.) and TI
Covariances		
I PV Fit - S PV Fit	-.02 (.39)	-2.71 (4.52)
I PV Fit - TI W4	1.76 (2.63)	1.95 (3.72)
I PV Fit - TI W5	-2.32 (1.27)	-4.09 (2.63)
S PV Fit - TI W4	-.37 (.86)	-.77 (2.56)
S PV Fit - TI W5	-.44 (.46)	1.23 (2.23)
I PV Fit - Q PV Fit	.	.48 (.69)
S PV Fit - Q PV Fit		-.35 (.45)
Q PV Fit - TI W4		.10 (.39)
Q PV Fit - TI W5		-.30 (.38)
Fit Indices		
AIC	3256.27	3236.65
BIC	3314.53	3314.33

Note. I represents the intercept or initial status at Wave 1. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadratic term or the acceleration or deceleration of the effect of the variable. TI represents Turnover Intentions. W4 indicates Wave 4. W5 indicates Wave 5. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 28

Growth Models of Hypothesized Relationships between DA Fit at the Specialty Level and Turnover Intentions

	Model 1 Linear	Model 2 DA Fit (Quad.) and TI
Covariances		
I DA Fit - S DA Fit	-.15 (.57)	-.55 (.84)
I DA Fit - TI W4	1.22 (1.15)	1.37 (.91)
I DA Fit - TI W5	-1.22* (.59)	-1.20* (.56)
S DA Fit - TI W4	-1.03 (.74)	-5.75* (2.89)
S DA Fit - TI W5	-.20 (.51)	-1.01 (1.92)
I DA Fit - Q DA Fit		.27 (.55)
S DA Fit - Q DA Fit		-2.05 (1.83)
Q DA Fit - TI W4		3.28 (1.87)
Q DA Fit - TI W5		.71 (1.39)
Fit Indices		
AIC	1442.04	1436.46
BIC	1490.42	1502.99

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadradic term or the acceleration or deceleration of the effect of the variable. TI represents Turnover Intentions. W4 indicates Wave 4. W5 indicates Wave 5. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 152. * indicates p < .05 (two-tailed).

Table 29

Growth Models of Hypothesized Relationships between PV Fit at the Specialty Level and Turnover Intentions

	Model 1 Linear	Model 2 PV Fit (Quad.) and TI
Covariances		
I PV Fit - S PV Fit	.21 (1.52)	-1.85 (3.91)
I PV Fit - TI W4	.83 (2.74)	1.82 (2.15)
I PV Fit - TI W5	-1.69 (1.74)	-1.93 (1.59)
S PV Fit - TI W4	-2.99* (1.43)	-14.62* (6.93)
S PV Fit - TI W5	-5.21* (1.83)	-5.15 (5.37)
I PV Fit - Q PV Fit		1.32 (2.90)
S PV Fit - Q PV Fit		-24.43 (23.57)
Q PV Fit - TI W4		8.36 (4.87)
Q PV Fit - TI W5		.32 (3.89)
Fit Indices		
AIC	1885.00	1877.77
BIC	1933.59	1944.59

Note. I represents the intercept or initial status at Wave 3. For Model 1, S represents the slope or rate of change between waves. For Model 2, S represents the instantaneous rate of change from the initial status. For Model 2, Q represents the quadradic term or the acceleration or deceleration of the effect of the variable. TI represents Turnover Intentions. W4 indicates Wave 4. W5 indicates Wave 5. Reported values are unstandardized parameter estimates with standard error in parentheses. N = 154. * indicates p < .05 (two-tailed).

Table 30

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Mental Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit To MH	Model 3 Cross-lagged Paths: MH to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W1 → DA Fit W2	.42* (.10)	.42* (.10)	.42* (.09)	.42* (.09)	
DA Fit W2 → DA Fit W3	.38* (.07)	.37* (.07)	.37* (.07)	.37* (.07)	
DA Fit W3 → DA Fit W4	.50* (.14)	.49* (.15)	.47* (.15)	.46* (.16)	
DA Fit W4 → DA Fit W5	.36* (.18)	.43* (.15)	.44* (.14)	.52* (.11)	
MH W1 → MH W2	.52* (.08)	.52* (.08)	.52* (.08)	.52* (.08)	
MH W2 → MH W3	.44* (.07)	.43* (.08)	.44* (.07)	.42* (.08)	
MH W3 → MH W4	.60* (.09)	.60* (.10)	.61* (.09)	.60* (.10)	
MH W4 → MH W5	.67* (.08)	.60* (10)	.64* (.09)	.53* (.09)	
DA Fit W1 → MH W2		-.09 (.07)		-.10 (.07)	
DA Fit W2 → MH W3		.16 (.09)		.16 (.09)	
DA Fit W3 → MH W4		-.02 (.15)		-.04 (.15)	
DA Fit W4 → MH W5		.33* (.12)		.36* (.12)	
MH W1 → DA Fit W2			.19* (07)	.20* (.07)	
MH W2 → DA Fit W3			.03 (.08)	.03 (.08)	
MH W3 → DA Fit W4			.24 (.16)	.25 (.16)	
MH W4 → DA Fit W5			-.19 (.13)	-.24 (.13)	
Fit Indices					
χ^2 (df)	122.46* (35)	113.63* (31)	109.31* (31)	98.25* (27)	
CFI	.63	.65	.67	.70	
RMSEA	.12	.12	.12	.12	
Model Comparison					
Model 1 vs. Model 2					9.98* (4)
Model 1 vs. Model 3					12.96* (4)
Model 1 vs. Model 4					24.38 (8)
Model 2 vs. Model 4					15.52* (4)
Model 3 vs. Model 4					11.66* (4)

Note. MH represents mental health. W1 represents Wave 1. W2 represents Wave 2. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 31

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Physical Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to PH	Model 3 Cross-lagged Paths: PH to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W1 → DA Fit W2	.42* (.10)	.42* (.10)	.42* (.10)	.42* (.10)	
DA Fit W2 → DA Fit W3	.38* (.07)	.37* (.07)	.38* (.07)	.37* (.07)	
DA Fit W3 → DA Fit W4	.50* (.14)	.50* (.14)	.50* (.14)	.50* (.14)	
DA Fit W4 → DA Fit W5	.45* (.14)	.45* (.14)	.50* (.12)	.50* (.12)	
PH W1 → PH W2	.58* (.07)	.58* (.07)	.58* (.070	.58* (.07)	
PH W2 → PH W3	.48* (.09)	.47* (.09)	.48* (.09)	.47* (.09)	
PH W3 → PH W4	.60* (.10)	.60* (.10)	.60* (.10)	.61* (.10)	
PH W4 → PH W5	.67* (.10)	.66* (.11)	.65* (.10)	.63* (.12)	
DA Fit W1 → PH W2		.08 (.06)		.08 (.06)	
DA Fit W2 → PH W3		.10 (.08)		.10 (.08)	
DA Fit W3 → PH W4		-.02 (.11)		-.05 (.12)	
DA Fit W4 → PH W5		.05 (.15)		.09 (.16)	
PH W1 → DA Fit W2			.12 (.07)	.11 (.07)	
PH W2 → DA Fit W3			.00 (.09)	.00 (.09)	
PH W3 → DA Fit W4			.08 (.12)	.09 (.12)	
PH W4 → DA Fit W5			-.24 (.13)	-.25 (.14)	
Fit Indices					
χ^2 (df)	111.49* (35)	109.11* (31)	106.29* (31)	105.02* (27)	
CFI	.67	.67	.68	.67	
RMSEA	.11	.12	.11	.12	
Model Comparison					
Model 1 vs. Model 2					3.26 (4)
Model 1 vs. Model 3					5.2 (4)
Model 1 vs. Model 4					8.84 (8)
Model 2 vs. Model 4					5.53 (4)
Model 3 vs. Model 4					3.78 (4)

Note. PH represents physical health. W1 represents Wave 1. W2 represents Wave 2. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 32

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Mental Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to MH	Model 3 Cross-lagged Paths: MH to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W1 → PV Fit W2	.64* (.06)	.64* (.06)	.64* (.06)	.64* (.06)	
PV Fit W2 → PV Fit W3	.67* (.05)	.67* (.05)	.67* (.05)	.67* (.05)	
PV Fit W3 →PV Fit W4	.75* (.09)	.76* (.09)	.72* (.10)	.71* (.10)	
PV Fit W4 → PV Fit W5	.71* (.08)	.72* (.08)	.71* (.08)	.74* (.10)	
MH W1 → MH W2	.52* (.08)	.52* (.08)	.53* (.08)	.52* (.08)	
MH W2 → MH W3	.44* (.07)	.39* (.08)	.44* (.07)	.39* (.08)	
MH W3 → MH W4	.59* (.09)	.56* (.10)	.61* (.09)	.58* (.10)	
MH W4 → MH W5	.66* (.07)	.66* (.06)	.66* (.08)	.65* (.08)	
PV Fit W1 → MH W2		.07 (.11)		.07 (.11)	
PV Fit W2 → MH W3		.28* (.10)		.28* (.09)	
PV Fit W3 → MH W4		.12 (.15)		.10 (.15)	
PV Fit W4 → MH W5		.01 (.14)		.03 (.15)	
MH W1 → PV Fit W2			.11* (.05)	.11* (.05)	
MH W2 → PV Fit W3			.03 (.07)	.02 (.07)	
MH W3 → PV Fit W4			.20* (.10)	.19* (.09)	
MH W4 → PV Fit W5			-.04 (.11)	-.05 (.12)	
Fit Indices					
χ^2 (df)	99.10* (35)	89.26*(31)	90.23* (31)	81.00* (27)	
CFI	.81	.83	.82	.84	
RMSEA	.10	.10	.10	.10	
Model Comparison					
Model 1 vs. Model 2					10.33* (4)
Model 1 vs. Model 3					8.15 (4)
Model 1 vs. Model 4					18.73* (8)
Model 2 vs. Model 4					7.72 (4)
Model 3 vs. Model 4					10.03* (4)

Note. MH represents mental health. W1 represents Wave 1. W2 represents Wave 2. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 33

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Physical Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to PH	Model 3 Cross-lagged Paths: PH to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W1 → PV Fit W2	.64* (.06)	.64* (.06)	.64* (.06)	.64* (.06)	
PV Fit W2 → PV Fit W3	.67* (.05)	.67* (.05)	.68* (.05)	.68* (.05)	
PV Fit W3 → PV Fit W4	.75*(.09)	.75* (.09)	.76* (.08)	.77* (.09)	
PV Fit W4 → PV Fit W5	.71* (.08)	.71* (.09)	.72* (.08)	.72* (.08)	
PH W1 → PH W2	.58* (.07)	.57* (.08)	.58* (.07)	.57*(.08)	
PH W2 → PH W3	.48* (.09)	.46* (.09)	.48* (.09)	.45* (.09)	
PH W3 → PH W4	.60* (.10)	.57* (.10)	.60* (.10)	.58* (.10)	
PH W4 → PH W5	.65* (.10)	.65* (.10)	.65* (.10)	.65* (.10)	
PV Fit W1 → PH W2		.18 (.10)		.17 (.10)	
PV Fit W2 → PH W3		.16 (.08)		.16 (.08)	
PV Fit W3 → PH W4		.08 (.10)		.09 (.10)	
PV Fit W4 → PH W5		.01 (.09)		.00 (.10)	
PH W1 → PV Fit W2			.09 (.06)	.09 (.06)	
PH W2 → PV Fit W3			-.05 (.07)	-.05 (.07)	
PH W3 → PV Fit W4			-.14* (.07)	-.14* (.07)	
PH W4 → PV Fit W5			.03 (.09)	.03 (.09)	
Fit Indices					
χ^2 (df)	106.73* (35)	96.85* (31)	98.55* (31)	88.78* (27)	
CFI	.79	.81	.81	.82	
RMSEA	.10	.11	.11	.11	
Model Comparison					
Model 1 vs. Model 2					10.23* (4)
Model 1 vs. Model 3					6.17 (4)
Model 1 vs. Model 4					17.35* (8)
Model 2 vs. Model 4					6.16 (4)
Model 3 vs. Model 4					13.27* (4)

Note. PH represents physical health. W1 represents Wave 1. W2 represents Wave 2. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 188. * indicates p < .05 (two-tailed).

Table 34

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Mental Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to MH	Model 3 Cross-lagged Paths: MH to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.48* (.11)	.64* (.15)	.46* (.10)	.47* (.10)	
DA Fit W4 → DA Fit W5	.45* (.12)	.46* (.11)	.55* (.11)	.66* (.08)	
MH W3 → MH W4	.60* (.09)	.75* (.17)	.61* (.09)	.60* (.09)	
MH W4 → MH W5	.68* (.07)	.50* (.08)	.64* (.09)	.51* (.09)	
DA Fit W3 → MH W4		.12 (.41)		.01 (.12)	
DA Fit W4 → MH W5		.67* (.25)		.36* (.11)	
MH W3 → DA Fit W4			.29* (.12)	.29* (.11)	
MH W4 → DA Fit W5			-.24* (.10)	-.29* (.10)	
Fit Indices					
χ^2 (df)	32.07* (9)	25.42* (7)	23.13* (7)	14.22* (5)	
CFI	.74	.79	.82	.90	
RMSEA	.13	.13	.12	.11	
Model Comparison					
Model 1 vs. Model 2					6.63* (2)
Model 1 vs. Model 3					9.50* (2)
Model 1 vs. Model 4					19.00* (4)
Model 2 vs. Model 4					13.29* (2)
Model 3 vs. Model 4					9.49* (2)

Note. MH represents mental health. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 35

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Physical Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to PH	Model 3 Cross-lagged Paths: PH to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.49* (.10)	.49* (.10)	.47* (.10)	.47* (.10)	
DA Fit W4 → DA Fit W5	.55* (.09)	.56* (.09)	.61* (.08)	.61* (.08)	
PH W3 → PH W4	.59* (.10)	.60* (.10)	.59* (.10)	.61* (.10)	
PH W4 → PH W5	.67* (.10)	.65* (.11)	.65* (.10)	.61* (.12)	
DA Fit W3 → PH W4		-.07 (.09)		-.10 (.09)	
DA Fit W4 → PH W5		.06 (.16)		.11 (.17)	
PH W3 → DA Fit W4			.08 (.10)	.09 (.11)	
PH W4 → DA Fit W5			-.29* (.09)	-.30* (.09)	
Fit Indices					
χ^2 (df)	45.05* (9)	49.34* (7)	36.18* (7)	41.77* (5)	
CFI	.60	.53	.68	.59	
RMSEA	.16	.19	.16	.21	
Model Comparison					
Model 1 vs. Model 2					.68 (2)
Model 1 vs. Model 3					8.39* (2)
Model 1 vs. Model 4					6.80 (4)
Model 2 vs. Model 4					7.57* (2)
Model 3 vs. Model 4					.92 (2)

Note. PH represents physical health. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 36

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Mental Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to MH	Model 3 Cross-lagged Paths: MH to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.37* (.14)	.37* (.14)	.28* (.13)	.27* (.14)	
PV Fit W4 → PV Fit W5	.66* (.09)	.65* (.09)	.71* (.10)	.70* (.09)	
MH W3 → MH W4	.60* (.09)	.60* (.11)	.61* (.09)	.62* (.10)	
MH W4 → MH W5	.68* (.08)	.69* (.07)	.66* (.08)	.68* (.09)	
PV Fit W3 → MH W4		-.01 (.14)		-.02 (.13)	
PV Fit W4 → MH W5		-.06 (.12)		-.03 (.13)	
MH W3 → PV Fit W4			.39* (.09)	.38* (.09)	
MH W4 → PV Fit W5			-.13 (.11)	-.13 (.12)	
Fit Indices					
χ^2 (df)	24.60* (9)	25.53* (7)	15.20* (7)	15.88* (5)	
CFI	.82	.78	.90	.87	
RMSEA	.10	.13	.09	.12	
Model Comparison					
Model 1 vs. Model 2					0.33 (2)
Model 1 vs. Model 3					11.59* (2)
Model 1 vs. Model 4					8.54 (4)
Model 2 vs. Model 4					10.62* (2)
Model 3 vs. Model 4					.07 (2)

Note. MH represents mental health. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 37

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Physical Health

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to PH	Model 3 Cross-lagged Paths: PH to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.36* (.14)	.36* (.14)	.36* (.14)	.36* (.14)	
PV Fit W4 → PV Fit W5	.66* (.09)	.65* (.09)	.66* (.09)	.65* (.09)	
PH W3 → PH W4	.59* (.11)	.59* (.11)	.59* (.10)	.59* (.11)	
PH W4 → PH W5	.66* (.10)	.66* (.09)	.65* (.10)	.66* (.10)	
PV Fit W3 → PH W4		-.04 (.13)		-.04 (.13)	
PV Fit W4 → PH W5		-.07 (.10)		-.07 (.10)	
PH W3 → PV Fit W4			-.04 (.11)	-.05 (.12)	
PH W4 → PV Fit W5			-.04 (.13)	-.03 (.13)	
Fit Indices					
χ^2 (df)	21.58* (9)	21.28* (7)	21.13* (7)	20.90* (5)	
CFI	.82	.79	.80	.74	
RMSEA	.09	.11	.11	.12	
Model Comparison					
Model 1 vs. Model 2					.50 (2)
Model 1 vs. Model 3					.24 (2)
Model 1 vs. Model 4					.93 (4)
Model 2 vs. Model 4					.38 (2)
Model 3 vs. Model 4					.63 (2)

Note. PH represents physical health. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. $N = 161$. * indicates $p < .05$ (two-tailed).

Table 38

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Occupational Satisfaction

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to OS	Model 3 Cross-lagged Paths: OS to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.51* (.13)	.52* (.13)	.42* (.16)	.43* (.16)	
DA Fit W4 → DA Fit W5	.46* (.13)	.45* (.14)	.46* (.15)	.41* (.19)	
OS W3 → OS W4	.43* (.13)	.31* (.14)	.44* (.13)	.32* (.14)	
OS W4 → OS W5	.57* (.17)	.61* (.17)	.57* (.19)	.62* (.19)	
DA Fit W3 → OS W4		.29* (.14)		.29 (.15)	
DA Fit W4 → OS W5		-.08 (.12)		-.09 (.14)	
OS W3 → DA Fit W4			.21 (.12)	.20 (.12)	
OS W4 → DA Fit W5			-.02 (.19)	.06 (.21)	
Fit Indices					
χ^2 (df)	65.53* (9)	61.55* (7)	68.17* (7)	72.65* (5)	
CFI	.23	.26	.17	.08	
RMSEA	.20	.22	.23	.29	
Model Comparison					
Model 1 vs. Model 2					6.22* (2)
Model 1 vs. Model 3					3.03 (2)
Model 1 vs. Model 4					8.58 (4)
Model 2 vs. Model 4					2.68 (2)
Model 3 vs. Model 4					5.60 (2)

Note. OS represents occupational satisfaction. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 39

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Occupational Satisfaction

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to OS	Model 3 Cross-lagged Paths: OS to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	1.05* (.12)	1.05* (.12)	1.08* (.12)	1.08* (.12)	
PV Fit W4 → PV Fit W5	.63* (.11)	.68* (.10)	.53* (.15)	.63* (.13)	
OS W3 → OS W4	.52* (.18)	.14 (.15)	.52* (.18)	.14 (.15)	
OS W4 → OS W5	.61* (.19)	.43* (.18)	.64* (.19)	.36 (.21)	
PV Fit W3 → OS W4		.45* (.09)		.45* (.09)	
PV Fit W4 → OS W5		.14 (.09)		.28* (.10)	
OS W3 → PV Fit W4			-.06 (.14)	-.09 (.13)	
OS W4 → PV Fit W5			.28 (.31)	.14 (.34)	
Fit Indices					
χ^2 (df)	98.96* (9)	44.59* (7)	102.35* (7)	46.18* (5)	
CFI	.34	.72	.30	.70	
RMSEA	.25	.18	.29	.23	
Model Comparison					
Model 1 vs. Model 2					179.26* (2)
Model 1 vs. Model 3					.24 (2)
Model 1 vs. Model 4					56.76* (4)
Model 2 vs. Model 4					.40 (2)
Model 3 vs. Model 4					95.29* (2)

Note. OS represents occupational satisfaction. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 40

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Occupational Satisfaction

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to OS	Model 3 Cross-lagged Paths: OS to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.49* (.10)	.49* (.10)	.47* (.10)	.48* (.10)	
DA Fit W4 → DA Fit W5	.55* (.09)	.56* (.09)	.59* (.09)	.61* (.09)	
OS W3 → OS W4	.42* (.13)	.37* (.13)	.42* (.13)	.37* (.13)	
OS W4 → OS W5	.61* (.17)	.60* (.18)	.59* (.18)	.58* (.19)	
DA Fit W3 → OS W4		.22 (.12)		.21 (.12)	
DA Fit W4 → OS W5		.03 (.14)		.05 (.15)	
OS W3 → DA Fit W4			.06 (.10)	.06 (.10)	
OS W4 → DA Fit W5			-.17 (.13)	-.16 (.14)	
Fit Indices					
χ^2 (df)	28.88* (9)	24.70* (7)	25.94* (7)	22.13* (5)	
CFI	.62	.66	.64	.67	
RMSEA	.12	.13	.13	.15	
Model Comparison					
Model 1 vs. Model 2					3.72 (2)
Model 1 vs. Model 3					2.00 (2)
Model 1 vs. Model 4					5.02 (4)
Model 2 vs. Model 4					1.31 (2)
Model 3 vs. Model 4					2.98 (2)

Note. OS represents occupational satisfaction. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. $N = 161$. * indicates $p < .05$ (two-tailed).

Table 41

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Occupational Satisfaction

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to OS	Model 3 Cross-lagged Paths: OS to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.36* (.14)	.40* (.13)	.35* (.13)	.38* (.12)	
PV Fit W4 → PV Fit W5	.62* (.09)	.66* (.09)	.58* (.09)	.59* (.12)	
OS W3 → OS W4	.42* (.13)	.24* (.11)	.43* (.13)	.24* (.11)	
OS W4 → OS W5	.57* (.16)	.55* (.19)	.61* (.16)	.60* (.20)	
PV Fit W3 → OS W4		.50* (.10)		.50* (.09)	
PV Fit W4 → OS W5		.11 (.15)		.07 (.16)	
OS W3 → PV Fit W4			.04 (.11)	.02 (.11)	
OS W4 → PV Fit W5			.16 (.15)	.16 (.17)	
Fit Indices					
χ^2 (df)	39.42* (9)	20.41* (7)	38.14* (7)	19.88* (5)	
CFI	.60	.82	.59	.80	
RMSEA	.15	.11	.17	.14	
Model Comparison					
Model 1 vs. Model 2					22.51* (2)
Model 1 vs. Model 3					1.28 (2)
Model 1 vs. Model 4					19.63* (4)
Model 2 vs. Model 4					1.17 (2)
Model 3 vs. Model 4					18.80* (2)

Note. OS represents occupational satisfaction. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 42

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Affective Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to AC	Model 3 Cross-lagged Paths: AC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.50* (.14)	.50* (.14)	.30 (.21)	.30 (.21)	
DA Fit W4 → DA Fit W5	.43* (.15)	.44* (.14)	.31 (.21)	.26 (.22)	
AC W3 → AC W4	.61* (.10)	.53* (.15)	.62* (.10)	.51* (.16)	
AC W4 → AC W5	.54* (.18)	.52* (.18)	.57* (.17)	.57* (.17)	
DA Fit W3 → AC W4		.19 (.17)		.25 (.19)	
DA Fit W4 → AC W5		.07 (.11)		.00 (.12)	
AC W3 → DA Fit W4			.41 (.21)	.41 (.21)	
AC W4 → DA Fit W5			.23 (.18)	.31 (.22)	
Fit Indices					
χ^2 (df)	39.38* (9)	38.92* (7)	34.61* (7)	43.06* (5)	
CFI	.53	.50	.57	.41	
RMSEA	.15	.17	.16	.22	
Model Comparison					
Model 1 vs. Model 2					1.87 (2)
Model 1 vs. Model 3					6.68* (2)
Model 1 vs. Model 4					9.12 (4)
Model 2 vs. Model 4					6.24* (2)
Model 3 vs. Model 4					2.17 (2)

Note. AC represents affective commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 43

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Continuance Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to CC	Model 3 Cross-lagged Paths: CC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.50* (.14)	.50* (.14)	.52* (.13)	.52* (.13)	
DA Fit W4 → DA Fit W5	.46* (.14)	.46* (.14)	.46* (.14)	.47* (.14)	
CC W3 → CC W4	.60* (.07)	.59* (.07)	.60* (.07)	.59* (.08)	
CC W4 → CC W5	.72* (.08)	.73* (.08)	.72* (.08)	.72* (.09)	
DA Fit W3 → CC W4		.13 (.12)		.15 (.13)	
DA Fit W4 → CC W5		.00 (.08)		-.02 (.08)	
CC W3 → DA Fit W4			-.31* (.10)	-.31* (.09)	
CC W4 → DA Fit W5			.05 (.12)	.07 (.13)	
Fit Indices					
χ^2 (df)	39.57* (9)	39.03* (7)	31.77* (7)	32.67* (5)	
CFI	.66	.64	.72	.69	
RMSEA	.15	.17	.15	.19	
Model Comparison					
Model 1 vs. Model 2					1.84 (2)
Model 1 vs. Model 3					6.68* (2)
Model 1 vs. Model 4					9.12 (4)
Model 2 vs. Model 4					6.24* (2)
Model 3 vs. Model 4					2.17 (2)

Note. CC represents continuance commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. $N = 161$. * indicates $p < .05$ (two-tailed).

Table 44

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Normative Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to NC	Model 3 Cross-lagged Paths: NC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.50* (.14)	.50* (.14)	.50* (.13)	.50* (.13)	
DA Fit W4 → DA Fit W5	.44* (.15)	.44* (.14)	.44* (.15)	.46* (.14)	
NC W3 → NC W4	.68* (.06)	.68* (.06)	.68* (.06)	.68* (.06)	
NC W4 → NC W5	.83* (.05)	.83* (.06)	.83* (.05)	.82* (.06)	
DA Fit W3 → NC W4		.02 (.10)		.00 (.10)	
DA Fit W4 → NC W5		.12 (.07)		.13 (.08)	
NC W3 → DA Fit W4			.01 (.18)	.02 (.18)	
NC W4 → DA Fit W5			-.13 (.12)	-.15 (.13)	
Fit Indices					
χ^2 (df)	37.18* (9)	33.33* (7)	50.37* (7)	51.64* (5)	
CFI	.75	.77	.62	.59	
RMSEA	.14	.15	.20	.24	
Model Comparison					
Model 1 vs. Model 2					2.77 (2)
Model 1 vs. Model 3					.34 (2)
Model 1 vs. Model 4					2.51 (4)
Model 2 vs. Model 4					.65 (2)
Model 3 vs. Model 4					3.24 (2)

Note. NC represents normative commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 45

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Affective Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to AC	Model 3 Cross-lagged Paths: AC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.75* (.09)	.76* (.09)	.63* (.12)	.63* (.12)	
PV Fit W4 → PV Fit W5	.64* (.11)	.71* (.09)	.49* (.15)	.69* (.11)	
AC W3 → AC W4	.59* (.11)	.20 (.16)	.62* (.10)	.22 (.16)	
AC W4 → AC W5	.52* (.20)	.28 (.19)	.58* (.17)	.32 (.19)	
PV Fit W3 → AC W4		.53* (.14)		.52* (.15)	
PV Fit W4 → AC W5		.39* (.16)		.36* (.14)	
AC W3 → PV Fit W4			.19 (.11)	.18 (.11)	
AC W4 → PV Fit W5			.27 (.16)	.04 (.13)	
Fit Indices					
χ^2 (df)	52.05* (9)	27.72* (7)	45.28* (7)	25.02* (5)	
CFI	.68	.84	.71	.85	
RMSEA	.17	.14	.18	.16	
Model Comparison					
Model 1 vs. Model 2					24.33* (2)
Model 1 vs. Model 3					6.77 (2)
Model 1 vs. Model 4					27.03* (4)
Model 2 vs. Model 4					2.70 (2)
Model 3 vs. Model 4					20.26* (2)

Note. AC represents affective commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 46

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Continuance Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to CC	Model 3 Cross-lagged Paths: CC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.76* (.09)	.76* (.09)	.76* (.09)	.75* (.09)	
PV Fit W4 → PV Fit W5	.72* (.08)	.71* (.09)	.73* (.08)	.72* (.08)	
CC W3 → CC W4	.60* (.07)	.60* (.07)	.60* (.07)	.60* (.07)	
CC W4 → CC W5	.72* (.08)	.71* (.09)	.72* (.08)	.72* (.09)	
PV Fit W3 → CC W4		.04 (.09)		.04 (.09)	
PV Fit W4 → CC W5		.04 (.07)		.04 (.07)	
CC W3 → PV Fit W4			.04 (.10)	.04 (.10)	
CC W4 → PV Fit W5			-.06 (.09)	-.06 (.09)	
Fit Indices					
χ^2 (df)	8.08 (9)	7.17 (7)	7.75 (7)	6.70 (5)	
CFI	1.00	.99	.99	.99	
RMSEA	.00	.01	.03	.05	
Model Comparison					
Model 1 vs. Model 2					.44 (2)
Model 1 vs. Model 3					.47 (2)
Model 1 vs. Model 4					.99 (4)
Model 2 vs. Model 4					.53 (2)
Model 3 vs. Model 4					.52 (2)

Note. CC represents continuance commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 47

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Normative Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to NC	Model 3 Cross-lagged Paths: NC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.76* (.09)	.76* (.09)	.74* (.09)	.75* (.09)	
PV Fit W4 → PV Fit W5	.70* (.09)	.71* (.09)	.67* (.10)	.68* (.10)	
NC W3 → NC W4	.68* (.06)	.68* (.06)	.68* (.06)	.68* (.07)	
NC W4 → NC W5	.83* (.06)	.81* (.07)	.83* (.05)	.81* (.06)	
PV Fit W3 → NC W4		.00 (.08)		.00 (.08)	
PV Fit W4 → NC W5		.12 (.07)		.11 (.06)	
NC W3 → PV Fit W4			.07 (.07)	.07 (.07)	
NC W4 → PV Fit W5			.15 (.10)	.14 (.10)	
Fit Indices					
χ^2 (df)	22.37* (9)	18.74* (7)	18.98* (7)	15.30* (5)	
CFI	.91	.92	.92	.93	
RMSEA	.10	.10	.10	.11	
Model Comparison					
Model 1 vs. Model 2					3.32 (2)
Model 1 vs. Model 3					2.83 (2)
Model 1 vs. Model 4					6.88 (4)
Model 2 vs. Model 4					3.53 (2)
Model 3 vs. Model 4					4.34* (2)

Note. NC represents normative commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 48

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Affective Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to AC	Model 3 Cross-lagged Paths: AC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.49* (.10)	.49* (.10)	.46* (.11)	.46* (.11)	
DA Fit W4 → DA Fit W5	.54* (.10)	.55* (.10)	.60* (.09)	.62* (.09)	
AC W3 → AC W4	.61* (.10)	.61* (.11)	.61* (.10)	.61* (.11)	
AC W4 → AC W5	.60* (.16)	.56* (.18)	.57* (.17)	.52* (.19)	
DA Fit W3 → AC W4		.01 (.10)		-.03 (.11)	
DA Fit W4 → AC W5		.15 (.14)		.17 (.14)	
AC W3 → DA Fit W4			.10 (.18)	.09 (.17)	
AC W4 → DA Fit W5			-.22 (.13)	-.24 (.14)	
Fit Indices					
χ^2 (df)	22.93* (9)	19.77* (7)	21.06* (7)	17.38* (5)	
CFI	.77	.79	.76	.79	
RMSEA	.10	.11	.11	.12	
Model Comparison					
Model 1 vs. Model 2					2.09 (2)
Model 1 vs. Model 3					2.56 (2)
Model 1 vs. Model 4					5.13 (4)
Model 2 vs. Model 4					2.84 (2)
Model 3 vs. Model 4					2.57 (2)

Note. AC represents affective commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 49

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Continuance Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to CC	Model 3 Cross-lagged Paths: CC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.49* (.10)	.49* (.10)	.47* (.10)	.47* (.10)	
DA Fit W4 → DA Fit W5	.56* (.10)	.57* (.09)	.54* (.10)	.56* (.09)	
CC W3 → CC W4	.61* (.07)	.63* (.06)	.61* (.07)	.63* (.06)	
CC W4 → CC W5	.72* (.08)	.73* (.08)	.72* (.08)	.73* (.08)	
DA Fit W3 → CC W4		.28* (.10)		.29* (.10)	
DA Fit W4 → CC W5		.09 (.12)		.06 (.12)	
CC W3 → DA Fit W4			-.25 (.16)	-.24 (.16)	
CC W4 → DA Fit W5			.01 (.13)	.04 (.14)	
Fit Indices					
χ^2 (df)	31.14* (9)	23.16* (7)	31.03* (7)	25.22* (5)	
CFI	.74	.81	.72	.76	
RMSEA	.12	.12	.15	.16	
Model Comparison					
Model 1 vs. Model 2					7.93* (2)
Model 1 vs. Model 3					2.80 (2)
Model 1 vs. Model 4					9.34 (4)
Model 2 vs. Model 4					2.54 (2)
Model 3 vs. Model 4					6.95* (2)

Note. CC represents continuance commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 50

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Normative Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to NC	Model 3 Cross-lagged Paths: NC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W3 → DA Fit W4	.49* (.10)	.49* (.10)	.50* (.10)	.50* (.10)	
DA Fit W4 → DA Fit W5	.56* (.10)	.57* (.09)	.57* (.10)	.59* (.08)	
NC W3 → NC W4	.68* (.06)	.68* (.06)	.68* (.06)	.68* (.06)	
NC W4 → NC W5	.83* (.05)	.83* (.06)	.83* (.06)	.82* (.06)	
DA Fit W3 → NC W4		.06 (.11)		.03 (.11)	
DA Fit W4 → NC W5		.19* (.09)		.21* (.09)	
NC W3 → DA Fit W4			.03 (.15)	.04 (.15)	
NC W4 → DA Fit W5			-.30* (.11)	-.33* (.11)	
Fit Indices					
χ^2 (df)	31.65* (9)	24.69* (7)	28.32* (7)	20.36* (5)	
CFI	.80	.84	.81	.87	
RMSEA	.13	.13	.14	.14	
Model Comparison					
Model 1 vs. Model 2					6.95* (2)
Model 1 vs. Model 3					4.59* (2)
Model 1 vs. Model 4					11.91* (4)
Model 2 vs. Model 4					5.32* (2)
Model 3 vs. Model 4					7.97* (2)

Note. NC represents normative commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 51

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Affective Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to AC	Model 3 Cross-lagged Paths: AC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.33* (.14)	.35* (.14)	.28 (.15)	.32* (.14)	
PV Fit W4 → PV Fit W5	.58* (.10)	.66* (.09)	.55* (.09)	.63* (.11)	
AC W3 → AC W4	.60* (.11)	.43* (.14)	.61* (.11)	.43* (.14)	
AC W4 → AC W5	.53* (.15)	.51* (.15)	.59* (.17)	.56* (.19)	
PV Fit W3 → AC W4		.37* (.12)		.37* (.12)	
PV Fit W4 → AC W5		.20 (.13)		.16 (.16)	
AC W3 → PV Fit W4			.10 (.17)	.07 (.16)	
AC W4 → PV Fit W5			.13 (.13)	.10 (.16)	
Fit Indices					
χ^2 (df)	24.09* (9)	13.68 (7)	22.47* (7)	13.06* (5)	
CFI	.83	.92	.83	.91	
RMSEA	.10	.08	.12	.10	
Model Comparison					
Model 1 vs. Model 2					11.78* (2)
Model 1 vs. Model 3					1.48 (2)
Model 1 vs. Model 4					11.06* (4)
Model 2 vs. Model 4					.71 (2)
Model 3 vs. Model 4					9.78* (2)

Note. AC represents affective commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 52

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Continuance Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to CC	Model 3 Cross-lagged Paths: CC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.37* (.14)	.38* (.13)	.37* (.14)	.38* (.13)	
PV Fit W4 → PV Fit W5	.67* (.08)	.66* (.09)	.67* (.09)	.66* (.09)	
CC W3 → CC W4	.61* (.07)	.60* (.07)	.61* (.07)	.60* (.07)	
CC W4 → CC W5	.73* (.08)	.72* (.09)	.72* (.08)	.71* (.10)	
PV Fit W3 → CC W4		.04 (.12)		.05 (.12)	
PV Fit W4 → CC W5		.16 (.10)		.16 (.10)	
CC W3 → PV Fit W4			-.02 (.15)	-.01 (.15)	
CC W4 → PV Fit W5			.04 (.09)	.04 (.09)	
Fit Indices					
χ^2 (df)	7.21 (9)	4.37 (7)	6.82 (7)	4.01 (5)	
CFI	1.00	1.00	1.00	1.00	
RMSEA	.00	.00	.00	.00	
Model Comparison					
Model 1 vs. Model 2					3.03 (2)
Model 1 vs. Model 3					.13 (2)
Model 1 vs. Model 4					3.20 (4)
Model 2 vs. Model 4					.10 (2)
Model 3 vs. Model 4					3.02 (2)

Note. CC represents continuance commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates $p < .05$ (two-tailed).

Table 53

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Normative Commitment

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to NC	Model 3 Cross-lagged Paths: NC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W3 → PV Fit W4	.36* (.14)	.37* (.14)	.36* (.14)	.37* (.14)	
PV Fit W4 → PV Fit W5	.65* (.09)	.66* (.09)	.64* (.09)	.65* (.09)	
NC W3 → NC W4	.68* (.06)	.67* (.06)	.68* (.06)	.67* (.06)	
NC W4 → NC W5	.83* (.06)	.82* (.06)	.83* (.05)	.82* (.06)	
PV Fit W3 → NC W4		.08 (.09)		.08 (.09)	
PV Fit W4 → NC W5		.16* (.08)		.16* (.08)	
NC W3 → PV Fit W4			.02 (.14)	.03 (.14)	
NC W4 → PV Fit W5			.06 (.11)	.06 (.10)	
Fit Indices					
χ^2 (df)	14.34 (9)	9.03 (7)	14.35* (7)	8.77 (5)	
CFI	.95	.98	.93	.96	
RMSEA	.06	.04	.08	.07	
Model Comparison					
Model 1 vs. Model 2					5.90 (2)
Model 1 vs. Model 3					.26 (2)
Model 1 vs. Model 4					5.49 (4)
Model 2 vs. Model 4					.34 (2)
Model 3 vs. Model 4					5.96 (2)

Note. NC represents normative commitment. W3 represents Wave 3. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 161. * indicates p < .05 (two-tailed).

Table 54

Results of Autoregressive Analyses of DA Fit at the Occupation Level and Turnover Intentions

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to NC	Model 3 Cross-lagged Paths: NC to DA Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W4 → DA Fit W5	.33 (.18)	.37* (.16)	.37* (.17)	.43* (.14)	
TI W4 → NC W5	.67* (.09)	.65* (.10)	.64* (.09)	.62* (.10)	
DA Fit W4 → TI W5		-.12 (.13)		-.15 (.14)	
TI W4 → DA Fit W5			.21 (.13)	.24 (.13)	
Fit Indices					
χ^2 (df)	3.67 (2)	3.50 (1)	1.36 (1)	.00* (0)	
CFI	.93	.90	.99	1.00	
RMSEA	.10	.18	.07	.00	
Model Comparison					
Model 1 vs. Model 2					.84 (1)
Model 1 vs. Model 3					2.52 (1)
Model 1 vs. Model 4					3.67 (2)
Model 2 vs. Model 4					3.50 (1)
Model 3 vs. Model 4					1.36 (1)

Note. TI represents turnover intentions. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 81. * indicates $p < .05$ (two-tailed).

Table 55

Results of Autoregressive Analyses of PV Fit at the Occupation Level and Turnover Intentions

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to NC	Model 3 Cross-lagged Paths: NC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W4 → PV Fit W5	.63* (.13)	.69* (.10)	.61* (.15)	.70* (.12)	
TI W4 → NC W5	.65* (.09)	.57* (.10)	.65* (.09)	.57* (.11)	
PV Fit W4 → TI W5		-.32* (.11)		-.32* (.12)	
TI W4 → PV Fit W5			-.02 (.15)	.02 (.15)	
Fit Indices					
χ^2 (df)	5.93* (2)	.02 (1)	6.38* (1)	.00* (0)	
CFI	.91	1.00	.88	1.00	
RMSEA	.16	.00	.26	.00	
Model Comparison					
Model 1 vs. Model 2					7.44* (1)
Model 1 vs. Model 3					.02 (1)
Model 1 vs. Model 4					5.93 (2)
Model 2 vs. Model 4					.02 (1)
Model 3 vs. Model 4					6.38* (1)

Note. TI represents turnover intentions. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 81. * indicates p < .05 (two-tailed)

Table 56

Results of Autoregressive Analyses of DA Fit at the Specialty Level and Turnover Intentions

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: DA Fit to NC	Model 3 Cross-lagged Paths: NC to DA Fit	Model 4 Both Cross-lagged	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
DA Fit W4 → DA Fit W5	.49* (.12)	.50* (.11)	.47* (.14)	.49* (.14)	
TI W4 → NC W5	.64* (.09)	.58* (.13)	.64* (.09)	.58* (.13)	
DA Fit W4 → TI W5		-.16 (.14)		-.15 (.14)	
TI W4 → DA Fit W5			-.03 (.17)	-.01 (.18)	
Fit Indices					
χ^2 (df)	1.33 (2)	.00 (1)	1.24 (1)	0* (0)	
CFI	1.00	1.00	.99	1.00	
RMSEA	.00	.00	.05	.00	
Model Comparison					
Model 1 vs. Model 2					1.32 (1)
Model 1 vs. Model 3					.03 (1)
Model 1 vs. Model 4					1.33 (2)
Model 2 vs. Model 4					.00 (1)
Model 3 vs. Model 4					1.24 (1)

Note. TI represents turnover intentions. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 80. * indicates p < .05 (two-tailed).

Table 57

Results of Autoregressive Analyses of PV Fit at the Specialty Level and Turnover Intentions

	Model 1 No Cross-lagged Paths	Model 2 Cross-lagged Paths: PV Fit to NC	Model 3 Cross-lagged Paths: NC to PV Fit	Model 4 Both Cross-lagged Paths	$\Delta\chi^2$ (Δdf)
Parameter Estimate					
PV Fit W4 → PV Fit W5	.50* (.13)	.62* (.10)	.42* (.13)	.60* (.11)	
TI W4 → TI W5	.62* (.09)	.45* (.11)	.66* (.09)	.46* (.11)	
PV Fit W4 → TI W5		-.40* (.13)		-.39* (.14)	
TI W4 → PV Fit W5			-.17 (.14)	-.04 (.14)	
Fit Indices					
χ^2 (df)	9.72* (2)	.07 (1)	7.72* (1)	.00* (0)	
CFI	.88	1.00	.89	1.00	
RMSEA	.22	.00	.29	.00	
Model Comparison					
Model 1 vs. Model 2					8.48* (1)
Model 1 vs. Model 3					1.36 (1)
Model 1 vs. Model 4					9.72* (2)
Model 2 vs. Model 4					.07 (1)
Model 3 vs. Model 4					7.72* (1)

Note. TI represents turnover intentions. W4 represents Wave 4. W5 represents Wave 5. Reported results are standardized parameter estimates with standard errors in parentheses. N = 80. * indicates p < .05 (two-tailed).

References

Aiken, L. H., Clarke, S. P., Sloan, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *Journal of the American Medical Association, 288*, 1987-1993.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179-211.

Andrews, D. R., & Wan, T. W. H. (2009). The importance of mental health to the experience of job strain: An evidence-guided approach to improve retention. *Journal of Nursing Management*, *17*, 340-351.

Arbuckle, J. L. (1996). Full information estimation in the presence of incomplete data. In G. A. Marcoulides & R. E. Schumacker (Eds.), *Advanced Structural Equations Modeling: Issues and Techniques* (pp. 243-277). Mahwah, NJ: Erlbaum.

Arimura, M., Imai, M., Okawa, M., Fujimura, T., & Yamada, N. (2010). Sleep, mental health status, and medical errors among hospital nurses in Japan. *Industrial Health*, *48*, 811-817.

Ashford, S. J., & Taylor, M. S. (1990). Adaptation to work transitions: An integrative approach. In G. Ferris and K. Rowland (Eds.), *Research in Personnel and Human Resources Management*, (pp. 1-39). Greenwich, CT: JAI Press, Inc.

Assouline, M., & Meir, E. I. (1987). Meta-analysis of the relationship between congruence and well-being measures. *Journal of Vocational Behavior*, *31*, 319-332.

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.

Beecroft, P. C., Dorey, F., & Wenten, M. (2008). Turnover intention in new graduate nurses: A multivariate analysis. *Journal of Advanced Nursing*, *62*, 41-52.

Beehr, T. A. & Newman, J. E. (1978). Job stress, employee health, and organizational effectiveness: A facet analysis, model, and literature review. *Personnel Psychology, 31*, 665-699.

Bollen, K. A., & Curran, P. J. (2004). Autoregressive latent trajectory (ALT) models: A synthesis of two traditions. *Sociological Methods & Research*, *32*, 336-383.

Borges, N. J., & Gibson, D. D. (2005). Personality patterns of physicians in person-oriented and technique-oriented specialties. *Journal of Vocational Behavior, 67*, 4-20.

Borges, N. J., Savickas, M. L., & Jones, B. J. (2004). Holland's Theory applied to medical specialty choice. *Journal of Career Assessment*, *12*, 188-206.

Bryant, F. B., & Satorra, A. (in press). Principles and practice of scaled difference chi-square testing. *Structural Equation Modeling*.

Cable, D. M., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology, 87*, 875-884.

Cable, D. M. & Judge, T. A. (1996). Person-organizational fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes*, *67*, 294-311.

Cable, D. M., & Parsons, C. K. (2001). Socialization tactics and person-organization fit. *Personnel Psychology*, *54*, 1-23.

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1983). Assessing attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis, & C. Cammann (Eds.), *Assessing Organizational Change: A Guide to Methods, Measures, and Practices*. New York: John Wiley.

Caplan, R. D. (1987). Person-Environment Fit theory and organizations: Commensurate dimensions, time perspectives, and mechanisms. *Journal of Vocational Behavior*, *31*, 248-267.

Caplan, R. D., Cobb, S., French, J. R. P., Harrison, R. V., & Pinneau, S. R. (1980). *Job demands and worker health: Main effects and occupational differences*. Ann Arbor: Institute for Social Research. (Originally published as HEW Publication No. (NIOSH) 75-106, 1975.)

Caplan, R. D., & Harrison, R. V. (1993). Person-Environment Fit Theory: Some history, recent developments, and future directions. *Journal of Social Issues*, *49*, 253-275.

Carless, S. A. (2005). Person-job fit versus person-organization fit as predictors of organizational attraction and job acceptance intentions: A longitudinal study. *Journal of Occupational and Organizational Psychology*, *78*, 411-429.

Chan, D. (2003). Data analysis and modeling longitudinal processes. *Group & Organizational Management*, *28*, 341-365.

Chan, D. (2000). Conceptual and empirical gaps in research on individual adaptation at work. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology,* (pp. 143-164). New Jersey: John Wiley & Sons, Ltd.

Chan, D. (1998). The conceptualization and analysis of change over time: An integrative approach incorporating longitudinal mean and covariance structure analysis (LMACS) and multiple indicator latent growth modeling (MLGM). *Organizational Research Methods*, *1*, 421-482.

Chan, D., Ramey, S., Ramey, & Schmitt, N. (2000). Modeling intraindividual changes in children's social skills and at school: A multivariate latent growth approach to understanding between-settings differences in children's social skill development. *Multivariate Behavioral Research*, *35*, 365-396.

Chang, H., Chi, N., & Chuang, A. (2010). Exploring the moderating roles of perceived person-job fit and person-organization fit on the relationship between training investment and knowledge workers' turnover intentions. *Applied Psychology: An International Review*, *59*, 566-593.

Chatman, J. A. (1991). Matching people and organizations: Selection and socialization in public accounting firms. *Administrative Science Quarterly, 36,* 459-484.

Curran, P. J., Obeidat, K., & Losardo, D. (2010). Twelve frequently asked questions about growth curve modeling. *Journal of Cognition and Development*, *11*, 121-136.

Dawis, R. V. (2005). The Minnesota Theory of Work Adjustment. In S. D. Brown, & R. W. Lent (Eds.), *Career Development and Counseling: Putting Theory and Research to Work,* (pp. 3-23). New Jersey: John Wiley & Sons, Inc.

Dawis, R. V., & Lofquist, L. H. (1984). *A Psychological Theory of Work Adjustment*. Minneapolis: University of Minnesota Press.

De Jonge, J., Dormann, C., Janssen, P. P. M., Dollard, M. F., Landeweerd, J. A., & Nijhuis, F. J. N. (2001). Testing reciprocal relationships between job characteristics and psychological well-being: A cross-lagged structural equation model. *Journal of Occupational and Organizational Psychology*, *74*, 29-46.

De Lange, A. H., Taris, T. W., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2004). The relationships between work characteristics and mental health: Examining normal, reversed, and recipriocal relationships in a 4-wave study. *Work & Stress*, *18*, 149-166.

DeRue, D. S., & Morgeson, F. P. (2007). Stability and change in person-team and person-role fit over time: The effects of growth satisfaction, performance and general self-efficacy. *Journal of Applied Psychology, 92*, 1242-1253.

Dimattio, M. J. K., Roe-Prior, P., & Carpenter, D. R. (2010). Intent to stay: A pilot study of baccalaureate nurses and hospital nurses. *Journal of Professional Nursing*, *26*, 278-286.

Dineen, B. R., Ash, S. R., & Noe, R. A. (2002). A web of applicant attraction: Person-organization fit in the context of web-based recruitment. *Journal of Applied Psychology*, *87*, 723-734.

Dumont, F., & Carson, A. D. (1995). Precursors of vocational psychology in ancient civilizations. *Journal of Counseling & Development*, *73*, 371-378.

Edwards, J. E. (2008). Person-environment fit in organizations: An assessment of theoetical progress. *The Academy of Management Annals*, *2*, 167-230.

Edwards, J. E. (1996). An examination of competing versions of the person-environment fit approach to stress. *Academy of Management Journal*, *39*, 292-339.

Edwards, J. E. (1991). Person-job fit: A conceptual integration, literature review, and methodological critique. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology*, (pp. 284-357). New Jersey: John Wiley & Sons, Ltd.

Edwards, J. R., & Shipp, A. J. (2007). The relationship between Person-Environment Fit outcomes: An integrative theoretical review. In C. Ostroff and T. A. Judge (Eds.), *Perspectives on Organizational Fit*, (pp. 209-258). San Fransico: Jossey-Bass.

Feij, J. A., van der Velde, M. E. G., Taris, R., Taris, T. W. (1999). The development of person-vocation fit: A longitudinal study among young employees. *International Journal of Selection and Assessment*, *7*, 12-25.

Fletcher, B. C. (2003). A fit approach to work and stress. In M. J. Schrabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *The Handbook of Work & Health Psychology* (pp. 549-568). Chichester: John Wiley.

Flinkman, M., Leino-Kilpi, H., & Salantera, S. (2010). Nurses' intention to leave the profession: Integrative review. *Journal of Advanced Nursing*, *66*, 1422-1434.

French, R. P., Caplan, R. D., & Harrison, R. V. (1982). *The Mechanisms of Job Stress and Strain*. Chichester: John Wiley & Sons.

French, J. R. P., & Kahn, R. L. (1962). A programmatic approach to studying the industrial environment and mental health. *Journal of Social Issues*, *18*, 1-48.

French, J. R. P., Rodgers, W., & Cobb, S. (1974). Adjustment as Person-Environment Fit. In G. V. Coelho, D. A. Hamburg, & J. E. Adams, *Coping and Adaption*. New York: Basic Books, Ind.

Furnham, A., & Walsh, J. (2001). Consequences of person-environment incongruence: absenteeism, frustration, and stress. *The Journal of Social Psychology, 131*, 187-204.

Garavan, T. N. (2007). Using assessment centre performance to predict subjective person-organization (P-O) fit. *Journal of Managerial Psychology*, *22*, 150-167.

Gray, A. M., & Phillips, V. L. (2004). Turnover, age, and length of service: A comparison of nurses and other staff in the National Health Service. *Journal of Advanced Nursing*, *19*, 819-827.

Harms, P. D., Roberts, B. W., & Winter, D. (2006). Becoming the Harvard Man: Person-Environment Fit, personality development, and academic success. *Personality and Social Psychology Bulletin*, *32*, 851-865.

Hartung, P. J., & Leong, F. T. L. (2005). Introduction: Career specialty choice. *Journal of Vocational Behavior*, *67*, 1-3.

Hayes, L. J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, H. K. S., North, N., Stone, P. W. (2000). Nurse turnover: A literature review. *International Journal of Nursing Studies*, *43*, 237-263.

Haywood, R. D., & Elliott, M. (2011). Subjective and objective fit in religious congregations: Implications for well-being. *Group Processes & Intergroup Relations*, *14*, 127-139.

Health Resources and Services Administration. (2004). *The registered nurse population: Findings from the 2004 national sample survey of registered nurses*. Retrieved April 25th, 2009, from http://bhpr.hrsa.gov/healthworkforce/rnsurvey04/appendixa.htm#1

Hertzog, C., & Nesselroade, J. R. (2003). Assessing psychological change in adulthood: An overview of methodological issues. *Psychology and Aging*, *18*, 639-657.

Holland, J. L. (1997). *Making Vocational Choices: A Theory of Vocational Personalities and Work Environment*. New Jersey: Prentice-Hall.

Holland, J. L. (1973). *Making Vocational Choices: A Theory of Vocational Personalities and Work Environment*. New Jersey: Prentice-Hall.

Ibrahim, S., Smith, P., & Muntaner, C. (2009). A multi-group cross-lagged analyses of work stressors and health using Canadian National sample. *Social Science & Medicine*, *68*, 49-59.

Jex, S. M. & Beehr, T. A. (1991). Emerging theoretical and methodological issues in the study of work-related stress. *Research in Personnel and Human Resource Management*, *9*, 311-365.

Kaplan, D. (2000). *Structural Equation Modeling: Foundations and Extensions*. Thousand Oaks, CA: Sage.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.

Kelly, B. (1998). Preserving moral integrity: A follow-up study with new graduate nurses. *Journal of Advanced Nursing*, *28*, 1134-1145.

Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, *49*, 1-49.

Kristof-Brown, A. L., Zimmerman, R. D., Johnson, E. C. (2005). Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, *58*, 281-342.

Lachterman, B., & Meir, E. I. (2004). The impact of work setting congruence on well-being. *Journal of Career Assessment*, *12*, 150-168.

Laschinger, H. K. S., Leiter, M., Day, A., & Gilin, D. (2009). Workplace empowerment, incivility, and burnout. Impact of staff recruitment and retention outcomes. *Journal of Nursing Management*, *17*, 302-311.

Leiter, M. P., & Maslach, C. (2009). Nurse turnover: The mediating role of burnout. *Journal of Nursing Management*, *17*, 331-339.

Lewin, K. (1951). *Field Theory in Social Science*. New York: Harper.

Lewin, K. (1935). *A Dynamic Theory of Personality*. New York: McGraw-Hill.

Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, *86*, 114-121.

Louis, M. R. (1980). Surprise and sense making: What newcomers experience in entering unfamiliar organizational settings. *Administrative Science Quarterly*, *25*, 226-251.

Lu, K., Lin, P., Wu, C., Hsieh, Y., & Chang, Y. (2002). The relationships among turnover intentions, professional commitment, and job satisfaction of hospital nurses. *Journal of Professional Nursing*, *18*, 214-219.

Lum, L., Kervin, J., Clark, K., Reid, F., & Sirola, W. (1998). Explaining nursing turnover intent: Job satisfaction, pay satisfaction, or organizational commitment? *Journal of Organizational Behavior*, *19*, 305-320.

Mackintosh, C. (2006). Caring: The socialisation of pre-registration student nurses: A longitudinal qualitative descriptive study. *International Journal of Nursing Studies*, *43*, 953-962.

McCulloch, M. C., & Turban, D. B. (2007). Using person-organization fit to select employees for high-turnover jobs. *International Journal of Selection and Assessment*, *15*, 63-71.

McGrath, J. E. (1976). Stress and behavior in organizations. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology*, (pp. 1351-1396). Chicago: Rand McNally.

Mehta, P. D., & West, S. G. (2000). Putting the individual back into individual growth curves. *Psychological Methods*, *5*, 23-43.

Meir, E. I., & Yaari, Y. (1988). The relationship between congruent specialty choice within occupations and satisfaction. *Journal of Vocational Behavior*, *33*, 99-117.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology, 78,* 538-551.

Morrow, S. (2008). New graduate transitions: Leaving the nest, joining the flight. *Journal of Nursing Management*, *17*, 278-287.

Muthen, L. K., & Muthan, B. O. (1998-2010). *Mplus User's Guide* (6th ed.). Muthen & Muthen:Los Angeles, CA.

O'Reilly, C. A., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, *34*, 487-516.

Parsons, F. (1967). *Choosing a vocation*. New York: Agathon. (Original work published in 1909).

Pithers, R. T. & Soden, R. (1999). Person-environment fit and teacher stress. *Educational Research*, *41*, 51-61.

Podsakoff, P. M., Mackenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879-903.

Price, S. L. (2009). Becoming a nurse: A meta-study of early professional socialization and career choice in nursing. *Journal of Advanced Nursing*, *65*, 11-19.

Ravlin, E. C., & Ritchie, C. M. (2006). Perceived and actual organizational fit: Multiple influences on attitudes. *Journal of Managerial Issues*, *18*, 175-192.

Resick, C. J., Baltes, B. B., & Shantz, C. W. (2007). Person-organization fit and work-related attitudes and decisions: Examining interactive effects with job fit and conscientiousness. *Journal of Applied Psychology*, *92*, 1446-1455.

Roberts, B. W., & Robins, R. W. (2004). Person-Environment Fit and its implications for personality development: A longitudinal study. *Journal of Personality*, *72*, 89-110.

Rowe, M. M., & Sherlock, H. (2005). Stress and verbal abuse in nursing: Do burned out nurses eat their young? *Journal of Nursing Management*, *13*, 242-248.

Saks, A. M., Ashforth, B. E. (1997). A longitudinal investigation of the relationships between job information sources, applicant perceptions of fit, and work outcomes. *Personnel Psychology*, *50*, 395-426.

Sampson, J. M. (2009). *Fitting with the nursing profession: A longitudinal study examining fit and health of future nurses*. Unpublished master’s thesis, Colorado State University, Fort Collins, CO.

Satorra, A. (2000). Scaled and adjusted restricted tests in multisample analysis of moment structurs. In D. D. H. Heijmails, D. S. G. Pollock, & A. Satorra (Eds.), *Innovations in Multivariate Statistical Analysis: A Festschrift for Heinz Neudecker* (pp. 223-247). Dordrecht, The Netherlands: Kluwer Academic Publishers.

Schluter, E., Davidov, E., Schmidt, P. (2007). Applying autoregressive cross-lagged and latent growth models to a three-wave panel study. In K. van Montfort, H. Oud, & A. Satorra (Eds.), *Longitudinal models in the behavioral and related sciences* (pp. 315-336). Mahwah, New Jersey: Lawrence Erlbaum Publishers, EAM Book Series.

Schmitt, N., Oswald, F. L., Friede, A., Imus, A., & Merritt, S. (2008). Perceived fit with an academic environment: Attitudinal and behavioral outcomes. *Journal of Vocational Behavior*, *72*, 317-335.

Scott, E. S., Engelke, M. E., & Swanson, M. (2008). New graduate nurse transitioning: Necessary or nice? *Applied Nursing Research*, *21*, 75-83.

Shaw, J. D., Delery, J. E., Jenkins, G. D., & Gupta, N. (1998). An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal*, *41*, 511-525.

Singer, J. D., & Willett, J. B. (2003). *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. Oxford University Press: New York.

Smith, D., & Tziner, A. (1998). Moderating effects of affective disposition and social support on the relationship between Person-Environment Fit and strain. *Psychological Reports*, *82*, 963-983.

Sochalski, J. (2002). Nursing shortage redux: Turning the corner on an enduring problem. *Health Affairs*, *21*, 157-164.

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods*, *9*, 221-232.

Spector, P. E., Dwyer, D. J., & Jex, S. M. (1988). Relation of job stressors to affective, health, and performance outcomes: A comparison of multiple data sources. *Journal of Applied Psychology*, *73*, 11-19.

Spector, P. E., Zapf, D., Chen, P. Y., Frese, M. (2000). Why negative affectivity should not be controlled in job stress research: Don't throw out the baby with the bath water. *Journal of Organizational Behavior*, *21*, 79-95.

Spokane, A. R. (1985). A review of research on person-environment congruence in Holland's theory: A review and reconsideration. *Journal of Vocational Behavior*, *57*, 137-187.

Spokane, A. R., Meir, E. I., & Catalona, M. (2000). Person-Environment congruence and Holland's Theory: A review and reconsideration. *Journal of Vocational Behavior*, *57*, 137-187.

Tinsley, H. E. A. (2000). The congruence myth: An analysis of the efficacy of the Person-Environment Fit Model. *Journal of Vocational Behavior*, *56*, 147-179.

Tranberg, O., Slane, S., & Ekeberg, S. E. (1993). The relation between interest congruence and satisfaction: A meta-analysis. *Journal of Vocational Behavior*, *42*, 253-264.

Tsabari, O., Tziner, A., & Meir, E. I. (2005). Updated meta-analysis on the relationship between congruence and satisfaction. *Journal of Career Assessment*, *13*, 216-232.

Tully, A. (2004). Stress, sources of stress and ways of coping among psychiatric nursing students. *Journal of Psychiatric and Mental Health Nursing*, *11*, 43-47.

Van der Heijden, B. I. J. M., Demerouti, E., Bakker, A. B., & Hasselhorn, H. (2008). Work-home interference among nurses: Reciprocal relationships with job demands and health. *Journal of Advanced Nursing*, *62*, 572-584.

Walsh, W. B. (2006). The 2005 Leona Tyler Award Address: Person-Environment psychology and work: Theory, implications, and issues. *The Counseling Psychologist*, *34*, 443-456.

Ware, JE Jr., Kosinski, M., Turner-Bowker, D. M., Gandek, B. (2002). *How to score version 2 of the SF-12 health survey*. Lincoln, RI: QualityMetric Incorporated.

Winwood, P. C., Winefield, A. H., & Lushington, K. (2006). Work-related fatigue and recovery: The contribution of age, domestic responsibilities, and shiftwork. *Nursing and Healthcare Management and Policy*, *56*, 438-449.

Wood, R., & Bandura, A. Social Cognitive Theory of organizational management. *Academy of Management Review*, *14*, 361-384.

Xie, J. L., & Johns, G. (1995). Job scope and stress: Can job scope be too high? *Academy of Management Journal*, *38*, 1288-1309.

Yang, L., Che, H., & Spector, P. E. (2008). Job stress and well-being: An examination from the view of person-environment fit. *Journal of Occupational and Organizational Psychology*.

Zapf, D., Dormann, C., Frese, M. (1996). Longitudinal studies in organizational stress research: A review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology*, *1*, 145-169.

Appendix A

DA Fit at the Occupation Level

The following three questions are in regard to the extent to which you feel that you have the abilities required by the *nursing profession.*

Please circle the number of your response.	**Not at All**	**To a Little Extent**	**To Some Extent**	**To a Moderate Extent**	**To a Large Extent**
1. To what extent do you believe your abilities ‘match’ those required by the nursing profession?	1	2	3	4	5
2. To what extent will your future job performance suffer by your lack of expertise in skills required in nursing?*	1	2	3	4	5
3. To what extent do you think you possess the abilities to perform successfully in the nursing profession?	1	2	3	4	5

*Item removed after first administration of Wave 1 in 2007.

Appendix B

DA Fit at the Specialty Level

The following questions are about the nursing specialty area <u>THAT YOU CURRENTLY WORK IN</u>. These questions are <u>not</u> about the nursing profession in general.

Please circle the number of your response.	**Not at All**	**To a Little Extent**	**To Some Extent**	**To a Moderate Extent**	**To a Large Extent**
1. To what extent do you believe your abilities 'match' those required by your **nursing specialty**?	1	2	3	4	5
2. To what extent do you think you possess the abilities to perform successfully in your **nursing specialty**?	1	2	3	4	5

Appendix C

PV Fit at the Occupation Level

The following questions are in regard to the extent to which you feel you "match" the values and personality of the *nursing profession* based on what you know or think you know about the profession.

Please circle the number of your response.	**Not at All**	**To a Little Extent**	**To Some Extent**	**To a Moderate Extent**	**To a Large Extent**
1. To what extent are the values of the nursing profession similar to your own?	1	2	3	4	5
2. To what extent does your personality match the personality or image of the nursing profession?	1	2	3	4	5
3. To what extent does the nursing profession fulfill your needs?	1	2	3	4	5
4. To what extent is the nursing profession a good match for you?	1	2	3	4	5
5. To what extent does your nursing profession measure up to the kind of profession you were seeking?	1	2	3	4	5

Appendix D

PV Fit at the Specialty Level

The following questions are about the nursing specialty area THAT YOU CURRENTLY WORK IN. These questions are not about the nursing profession in general.

Please circle the number of your response.	**Not at All**	**To a Little Extent**	**To Some Extent**	**To a Moderate Extent**	**To a Large Extent**
1. To what extent are the values of your **nursing specialty** similar to your own?	1	2	3	4	5
2. To what extent does your personality match the personality or image of your **nursing specialty**?	1	2	3	4	5
3. To what extent does your **nursing specialty** fulfill your needs?	1	2	3	4	5
4. To what extent is your **nursing specialty** a good match for you?	1	2	3	4	5
5. To what extent does your **nursing specialty** measure up to the kind of specialty you were seeking?	1	2	3	4	5

Appendix E

SF-12

The following questions are about your health. Please mark your responses with an "X."

1. In general, how would you rate your overall health? **__Excellent __Very good__ Good __ Fair__ Poor**

2. Does your current health status now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf? **_Yes, limited a lot _Yes, limited a little _No, not limited at all**

3. Does your current health status limit you in climbing several flights of stairs? **_Yes, limited a lot _Yes, limited a little _ No, not limited at all**

4. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? **__ Not at all ___A little bit __ Moderately __Quite a bit __Extremely**

The following questions refer to your experiences during the PAST FOUR WEEKS. Please circle your response.	**None of the Time**	**A Little of the Time**	**Some of the Time**	**Most of the Time**	**All of the Time**
5. How often have you accomplished <u>less</u> than you would like with your work or other regular daily activities <u>as a result of your physical health</u>?	1	2	3	4	5
6. How often have you been limited in the <u>kind</u> of work you do or other activities <u>as a result of your physical health status</u>?	1	2	3	4	5
7. How often have you accomplished <u>less</u> than you would like with your work or other regular daily activities <u>as a result of emotional problems (such as feeling depressed or anxious)</u>?	1	2	3	4	5
8. How often have you done work or activities <u>less carefully than usual as a result of any emotional problems (such as feeling depressed or anxious)</u>?	1	2	3	4	5
9. How much of the time during the past 4 weeks have you felt calm and peaceful?	1	2	3	4	5
10. How much of the time during the past 4 weeks did you have a lot of energy?	1	2	3	4	5
11. How much of the time during the past 4 weeks have you felt downhearted and depressed?	1	2	3	4	5
12. How much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?	1	2	3	4	5

Appendix F

Occupational Satisfaction

Please use the rating scale below to describe the extent to which you agree or disagree with each statement. There are no right or wrong answers.

Please circle the number of your response	**Strongly Disagree**	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
1. In general, I don't like my choice of the nursing profession.	1	2	3	4	5
2. All in all, I am satisfied with my choice of the nursing profession.	1	2	3	4	5
3. In general, I like working in the nursing profession.	1	2	3	4	5

Appendix G

Occupational Commitment

Please use the rating scale below to describe the extent to which you agree or disagree with each statement. There are no right or wrong answers.

Please circle the number of your response	**Strongly Disagree**	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
1. Nursing is important to my self-image.	1	2	3	4	5
2. I regret having entered the nursing profession.	1	2	3	4	5
3. I am proud to be in the nursing profession.	1	2	3	4	5
4. I dislike being a nurse.	1	2	3	4	5
5. I do not identify with the nursing profession.	1	2	3	4	5
6. I am enthusiastic about nursing.	1	2	3	4	5
7. I have put too much into the nursing profession to consider changing now.	1	2	3	4	5
8. Changing professions now would be difficult for me to do.	1	2	3	4	5
9. Too much of my life would be disrupted if I were to change my profession.	1	2	3	4	5
10. It would be costly for me to change my profession now.	1	2	3	4	5
11. There are no pressures to keep me from changing professions.	1	2	3	4	5
12. Changing professions now would require considerable personal sacrifice.	1	2	3	4	5
13. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time.	1	2	3	4	5
14. I do not feel any obligation to remain in the nursing profession.	1	2	3	4	5

Please circle the number of your response	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
15. I feel a responsibility to the nursing profession to continue in it.	1	2	3	4	5
16. Even if it were to my advantage, I do not feel that it would be right to leave nursing now.	1	2	3	4	5
17. I would feel guilty if I left nursing.	1	2	3	4	5
18. I am in nursing because of a sense of loyalty to it.	1	2	3	4	5

Appendix H

Turnover Intentions

The following questions pertain to your current job. Please use the rating scale below to describe the extent to which you agree or disagree with each question.

Please circle the number of your response.	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**
1. In the last few months have you ever thought seriously about looking for a nursing job at another hospital?	1	2	3	4	5
2. In the last few months have you ever thought seriously about looking for a non-nursing job?	1	2	3	4	5
3. Taking everything into consideration, how likely is it that you will make a serious effort to find a new job within the next year?	1	2	3	4	5