STRUCTURAL RELATIONSHIPS AMONG EXPLANATORY STYLE, ACCULTURATION, COPING STRATEGIES, AND JOB SATISFACTION OF FOREIGN-BORN ASIAN FACULTY IN THE U.S.

by

WENTING YANG

(Under the Direction of In Heok Lee)

ABSTRACT

This study examines job satisfaction and tests the structural model of job satisfaction of foreign-born, tenured and tenure-track, Asian faculty in the U.S. The hypothesized structural model includes two independent variables, explanatory style for positive events and negative events; one dependent variable, job satisfaction; and mediators, which are American cultural orientation, Asian cultural orientation, collective coping, disengagement coping, and engagement coping. A sample of 194 foreign-born, tenured and tenure-track, Asian faculty at southeastern public Research 1: Doctoral Universities participates in the study. Descriptive statistics, correlational analysis, and structural equation modeling are used to test the model fit and relationships among variables of interest. Findings support the past literature that foreign-born Asian faculty had medium levels of job satisfaction. They have the highest level of job satisfaction in independence and job variety, while the lowest level of satisfaction in salary, advancement, and policy. Intrinsic job satisfaction is significantly correlated with the explanatory style for positive events, American and Asian cultural orientations, and collective coping. Extrinsic job satisfaction is significantly correlated with the explanatory style for positive events, American and Asian cultural orientations, and

collective and engagement coping. The fit indices indicate that the hypothesized structural model had a good fit to the sample data. Predictors account for 38% of sample variance in job satisfaction. Job satisfaction is directly affected by the explanatory style for positive events and American cultural orientation. Besides, the explanatory style for positive events directly affects American and Asian cultural orientations, while the explanatory style for negative events directly affects American cultural orientation. In addition, the mediating effects of American cultural orientation on the relationship between explanatory styles for positive events and negative events and job satisfaction are significant. Contrary to expectations, the mediating effects of Asian cultural orientation and coping strategies are not found in the study. The study provides implications for the professional development of foreign-born, tenured and tenure-track, Asian faculty in public Research 1: Doctoral Universities.

INDEX WORDS: Job satisfaction, Tenure-track foreign-born Asian faculty, Explanatory style, Acculturation, Coping strategies

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CHAPTER I

INTRODUCTION

Rationale

Job satisfaction has been considered to be an important factor that greatly influences an employee's decision to remain or leave an organization (Judge, Weiss, Kammeyer-Mueller, & Hulin, 2017) and life satisfaction (Judge & Klinger, 2008). It has been reported that 77% of employees in the U.S. are not satisfied with their jobs (Mardanov, Heischmidt, & Henson, 2008). Additionally, the 2016 Employee Job Satisfaction and Engagement Survey revealed a downward trend in the level of job satisfaction from 2009 to 2013 in the U.S. and only 37% of employees felt satisfied with their jobs in 2016 (SHRM, 2016). It has been revealed that job satisfaction is a serious issue in the workplace and a challenge in organizational development. The success of an organization is highly reliant on hiring and retaining outstanding employees, which is highly correlated with the satisfactory attitudes of employees related to the working environment and other aspects of the job (Cordeiro, 2010; Judge et al., 2017). In order to achieve organizational effectiveness and improve employees' positive psychology in the workplace, great attention must be paid to the nature of job satisfaction and relevant factors influencing job satisfaction (Judge & Klinger, 2008).

Even though a number of studies have examined job satisfaction (Cordeiro, 2010; Mardanov et al., 2008), there is a need to have more understanding on faculty satisfaction (Hagedorn, 2000). Hensel (1991) also reminded researchers that job satisfaction of faculty is affecting students' and even the national well-being. Although academic jobs are regarded as stable and flexible and have short working hours, high salaries, and the freedom to do research projects as well as low stress with high social prestige, the real job situation of faculty should be revealed (Hagedorn, 2000). In fact, stress levels in

academia were high compared to other workplaces (Abouserie, 1996; Kinman, 2008; Mark & Smith, 2012; Winefield & Jarrett, 2011). University faculty, especially those individuals in tenure-track positions, are working under high pressure and required to accomplish numerous tasks, including research, teaching, applying for funding, and professional development (Abouserie, 1996). The tenure-track system, adopted by most U.S. universities, requires faculty to be highly motivated and productive. In order to be awarded tenure, which is a permanent position in the institution, faculty members make extraordinary efforts to fulfill demanding expectations (Fairweather, 2005; Jacobs & Winslow, 2004; Lazear, 1998; Schuster & Finkelstein, 2006). It has been indicated that tenure-track faculty members have high levels of stress to be productive and achieve institutional expectations (Happ & Yoder, 1991). Besides, tenured faculty members need to take great responsibilities in management positions, implementing research projects, and updating skills, which inevitably lower the job satisfaction level (Rosser, 2004). According to Klein and Takeda-Tinker (2009), universities in the U.S. are experiencing high levels of faculty turnover. Hence, in order to improve employee retention, more scholarly attention should be given to tenured and tenure-track faculty and what strategies can be used to improve their job satisfaction.

It is important to note that, within the academic workforce, Asian faculty members are often overlooked in research. In the past decade, due to changes in the immigration laws in the 1990s, a rapid increase has been seen in the number of international faculty members at higher education institutions in the U.S. (Johnson, 2006). With recognized productivity, skills, and strong academic backgrounds, international faculty are more highly valued than in the past (Morey, 2000). Furthermore, Asians were ranked as the largest population in 2011 in the U.S. among non-White faculty (U.S. Department of Education, 2014). Of Asian faculty members, 80% are foreign-born and, as such, either are non-U.S. citizens or become U.S. citizens (U.S. Department of Education, 2014). More than half of foreign-born faculty were employed at research universities (Corley & Sabharwal, 2007; Liu, 2001). However, research has found that Asian faculty members have lower satisfaction levels than their U.S.-born

colleagues (Corley & Sabharwal, 2007; Kim, Twombly, & Wolf-Wendel, 2012). With different cultural backgrounds, there is no doubt that foreign-born Asian faculty members face a number of obstacles that make them less satisfied in the workplace, such as differences in languages, social structures, political power, and interpersonal relationships (Clark, Peach, & Vertovec, 1990). Despite an increasing number of Asian faculty in the academia, few studies have focused on the job satisfaction of foreign-born Asian faculty and the important factors that influence this satisfaction. Therefore, this study focuses on foreign-born Asian faculty in hopes of determining the predictors of their job satisfaction.

Even though few studies identified the factors that influence the job satisfaction of Asian faculty members in the U.S., individual characteristics have been found to be crucial in influencing their level of job satisfaction (see Chun, Moos, & Cronkite, 2006; Dawis & Lofquist, 1984; Maslow, 1987). One of most important personal characteristics is the explanatory style, which represent the ways by which an individual habitually explains the causes of successes and failures in one's life (Seligman, 1998). Explanatory style predicts an individual's reaction to good and bad events, and whether he or she will feel helpless or persist in the face of uncontrollable circumstances (Seligman, 1998). For example, an individual with an optimistic explanatory style, which attributes causes of good events to internal, global, and stable factors, is more likely to believe that he or she has the capacity to deal with challenging situations and engage in an effective problem-solving process (Schulman, 1995). However, an individual with a pessimistic explanatory style, which attributes causes of good events to external, specific, and unstable factors, tends to self-blame, has less confidence to change the situation, and has decreased stress resistance (Fineburg, 2010). In short, explanatory style has an impact on an individual's cognitive system when that individual encounters failures or obstacles that threaten his or her job satisfaction (Phelps & Waskel, 1994; Proudfoot, Corr, Guest, & Dunn, 2009; Smith & Hall, 1999; Welbourne, Eggerth, Hartley, Andrew, & Sanchez, 2007). Understanding explanatory styles of faculty members can shed light on how they process events or handle issues that occur in the workplace. It also helps to predict faculty members'

behaviors that might be triggered by their explanatory style, including retention, turnover, or engagement to services.

Another emerging area being identified as an important determinant of job satisfaction is coping strategies, which refer to the cognitive and behavioral reactions that people have to change personal and environmental characteristics (Lazarus & Folkman, 1984; Welbourne et al., 2007). Even though there are no right or wrong ways to deal with challenging situations, some strategies may work better than others under certain circumstances (Welbourne et al., 2007). For example, active coping strategies, such as problem-solving and social support, may lead employees to find solutions to problems and view problems in a positive way, resulting in a high level of job satisfaction (Lazarus & Folkman, 1984). However, an avoidant strategy may lead to the denial within a stressful situation and a lower level of job satisfaction (Lazarus & Folkman, 1984). Therefore, the focus on coping strategies in this study may examine how job satisfaction is affected by coping strategies among faculty members.

In addition, studies have indicated that cultural differences strongly correlate with the level of job satisfaction of Asians in the U.S. (Chun et al., 2006; Kuo, 2011; Wong & Wong, 2006). When Asian faculty members move from their home countries to new countries, they must adapt to a new cultural environment and may experience changes in their beliefs, values, and behaviors (Farver, Narang, & Bhadha, 2002). This process is called acculturation (Farver et al., 2002). Acculturation may be reflected in one's cultural orientation, attitudes, cognitions, values, relationships, and psychological aspects (Berry, 2003; Hwang & Ting, 2008; Kim & Abreu, 2005). Asians may encounter a number of difficulties during acculturation due to distinct academic and social norms in the U.S. (Wang & Mallinckrodt, 2006). For example, Liu (2001) found that foreign-born faculty members had to work extra hard to prove their capacities as researchers, teachers, and colleagues because of difference barriers as manifested in communication style, accent, stereotyping and other bias related to race. However, studies indicate that acculturation is positively related to job satisfaction since an acculturated person tends to adopt culturally

appropriate behaviors and improve coping competencies, which in turn affects the pleasurable attitudes towards the job (Berry, 2006; Lee & Seligman, 1997; Wong & Wong, 2006).

It is also worthy to note that job satisfaction of tenured and tenure-track Asian faculty members cannot be understood solely from the characteristics of the person or his or her environment (Chun et al., 2006). Instead, it is a process that requires a person with certain attributes to react to a changing environment in such a way that leads to the person's behavioral and psychological shifts (Lazarus & Folkman, 1987). Therefore, emphasizing the dynamic interplay of variables is essential when attempting to understand job satisfaction. In this study, a structural model consisting of dimensions of explanatory style, acculturation, coping strategies, and their relationships with job satisfaction was investigated in order to understand how these variables relate to each other among foreign-born Asian faculty members.

Purpose Statement

The purpose of this study was to examine job satisfaction and the structural model of job satisfaction. The population are Asian faculty members who were foreign-born and employed as tenured and tenure-track college or university professors in public Research 1: Doctoral Universities based on the Carnegie Classification of Institutions of Higher Education. The hypothesized structural model includes dimensions of explanatory style, acculturation, coping strategies, and job satisfaction. Job satisfaction was defined as one's pleasurable affective condition deriving from the fit between the person and the environment (Dawis & Lofquist, 1984). Job satisfaction was categorized as intrinsic and extrinsic job satisfaction (Weiss et al., 1967). The explanatory style was defined as the way by which individuals explain the causes of good and bad life events (Seligman, 1998). Explanatory style for positive and negative events were two dimensions of the explanatory style. Acculturation was defined as the amount of mainstream cultural values and behaviors that are adopted by an individual when he or she encounters a different culture (Berry, 2005). American and Asian cultural orientations, as two dimensions of acculturation, were measured in the study. American cultural orientation was the level of American cultural values that the person adopted, while Asian cultural orientation was the level of Asian cultural

values that the person maintained (Berry, 2005). Coping strategies were defined as the efforts that employees made to change negative situations (Chun, Moos, & Cronkite, 2006). Three dimensions of coping strategies were included in this study: engagement, disengagement, and collective coping. Engagement coping involves active efforts to solve problems, disengagement coping involves indirect actions to regulate one's emotions, and collective coping is defined as a way by which to solve problems by seeking support from in-group members (Zhang, 2000). Explanatory styles for positive and negative events were used as the independent variables, while job satisfaction was used as the dependent variable. American and Asian cultural orientations as well as engagement, disengagement, and collective coping were used as the mediators.

Research Questions

1. What are job satisfaction, explanatory styles, acculturation, and coping strategies of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?

   a. job satisfaction included the following dimensions: intrinsic and extrinsic satisfaction
   b. explanatory styles included: the explanatory style for positive events and the explanatory style for negative events
   c. acculturation included: American cultural orientation and Asian cultural orientation
   d. coping strategies included: engagement coping, disengagement coping, and collective coping

2. Does the measurement model in the study well-represent the latent constructs?

3. What is the plausible pattern of relationships among explanatory styles (i.e., for positive and negative events), acculturation (i.e., American and Asian cultural orientation), coping strategies (i.e., engagement, disengagement, and collective coping), and job satisfaction (i.e., intrinsic and extrinsic satisfaction) of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?

a. Are explanatory styles for positive and negative events associated with job satisfaction?
b. Are explanatory styles for positive and negative events associated with American and Asian cultural orientation?
c. Are explanatory styles for positive and negative events associated with engagement, disengagement, and collective coping?
d. Are American and Asian cultural orientations associated with job satisfaction?
e. Are American and Asian cultural orientations associated with engagement, disengagement, and collective coping?
f. Are engagement, disengagement, and collective coping associated with job satisfaction?
g. If explanatory styles for positive and negative events are associated with job satisfaction, do American and Asian cultural orientations as well as engagement, disengagement, and collective coping serve as mediators to the relationship?

Theoretical Framework

The theoretical framework that undergirded the current study was the theory of work adjustment (Dawis & Lofquist, 1984). The theory of work adjustment was designed to conceptualize and assess work adjustment, which is the process to achieve the fit between the person and environment (Dawis & Lofquist, 1984). It also maintains that job satisfaction is derived from the balance between the person and his or her work environment. In this relationship, the work environment requires individuals to have the skills and abilities necessary to perform job tasks, while individuals require compensation for work performance. Therefore, job satisfaction, in the theory of work adjustment, is defined as the degree to which a person's abilities and values are matched with characteristics of the job (Dawis & Lofquist, 1984). Since the conceptualization of job satisfaction is based on the interaction between the person and the environment, job satisfaction is presented using two dimensions: intrinsic and extrinsic satisfaction. Intrinsic satisfaction is an individual's pleasurable attitudes towards internal or personal factors in the

workplace, while extrinsic satisfaction is one's positive attitudes towards external factors that originate from the job itself (Dawis & Lofquist, 1984).

The theory of work adjustment stresses the importance of personal factors, including skills, experience, behaviors, psychology, and values, in influencing job satisfaction (Dawis & Lofquist, 1984). It acknowledges that personal characteristics determine the extent to which an individual can tolerate any lack of correspondence between person and environment and ability to alter reinforcers of job satisfaction (Dawis & Lofquist, 1984). Explanatory style is one of the most important psychological attributes that an individual possesses. Seligman (1998) indicates that explanatory style is the way one explain why a particular event happens. Explanatory style can predict one's degree of helplessness and the persistence in the face of failure, and hopefulness in the face of success (Fineburg, 2010). Specifically, individuals with higher levels in the explanatory style for negative events tend to think the occurrence of failure is due to personal factors and this failure influences other aspects of the life, which leads to people's inner feeling of powerlessness and inability to change the negative situations (Fineburg, 2010; Peterson, 1991). In contrast, individuals with higher levels of explanatory style for positive events tend to think the success is due to personal factors and will resume happening, which leads to an increased optimism and chances to succeed (Seligman, 1998). Studies have revealed that higher levels of explanatory styles for positive events are linked to increasing levels of job satisfaction, while higher levels of explanatory styles for negative events are linked to decreasing levels of job satisfaction (Fineburg, 2010; Phelps & Waskei, 1994; Welbourne et al., 2007).

Furthermore, the theory of work adjustment claims that an individual may use some forms of adjustment when there is a lack of correspondence between the person and the environment (Dawis & Lofquist, 1984). For example, an individual may try to change behaviors and cultural values to suit the environment. Berry (2005) also states that when coming into contact with a different cultural context, an individual with certain personal characteristics may change or keep the cultural values to adjust to the environment, which is the process of acculturation. It has been reported that a higher level of

acculturation to the American culture allows Asian employees to adapt to and feel satisfied with their jobs, while individuals who adhere to Asian cultures in the U.S. encounter more obstacles and feel dissatisfied with their jobs (Leong & Chou, 1994).

In addition, personal factors, including explanatory styles, are highly connected with acculturation (Peterson, 1991). An optimistic attitude toward self-identity and openness to a different environment, which reflects a higher level of explanatory style for positive events, can help a person increase his or her engagement in mainstream activities and more quickly adapt to the mainstream culture. However, a negative attitude toward one's self and placing blame on the environment for the failure situations reflects a higher level of explanatory style for negative events, which increases a person's adherence to his or her heritage culture (Peterson, 1991). Therefore, acculturation may mediate the relationship between explanatory style and job satisfaction.

Other than acculturation, coping strategies is another form of adjustment to increase job satisfaction (Dawis & Lofquist, 1984). Coping strategies are defined as the cognitive and behavioral efforts that an individual makes to change external and internal situations in order to meet the demands and solve conflicts derived from difficulties (Folkman & Lazarus, 1980). In addition, growing attention has been paid to the different types of coping strategies, such as problem-based coping, avoidance coping, and social support (Lazarus & Folkman, 1980; Sarid, Yaari, & Margalith, 2004). To this extent, problem-focused coping has been shown to have a positive impact on an individual's ability to overcome and manage stress, which, in turn, improves one's well-being (Carver, Scheier, & Weintraub, 1989). In contrast, passive coping strategies, such as venting one's frustration and using avoidance, may be less useful to meet the demands of the stressful situation and decrease one's level of satisfaction (Carver et al., 1989).

In addition, Chun et al. (2006) indicates that personal values affect coping strategies and coping strategies are intervening factors in the relationship between personal factors and well-being (Chun et al., 2006). It implies that coping strategies are likely to mediate the impact of explanatory styles for positive

and negative events on job satisfaction. Berry (2005) also emphasizes that acculturation leads to behavioral shifts, including coping strategies, which, in turn, influence psychological adjustment and well-being. For instance, an individual who has high involvement with the mainstream culture tends to employ coping strategies used in the mainstream culture. In contrast, an individual who keeps his or her heritage cultural relationships and activities is more likely to maintain coping strategies that are valued in the heritage group (Chun et al., 2006; Kuo, 2011). Nguyen and colleagues (2007) further mentioned that coping strategies that are emphasized in the mainstream culture would be effective in helping individuals to alter challenging situations when one encounters a different culture.

Based on the theory of work adjustment, job satisfaction is affected by personal factors and adjustment strategies. Even though explanatory styles are personal factors, coping strategies and acculturation are forms of adjustment, few studies describe their influences on job satisfaction. In order to test their specific relationships, the current study aimed to assess the structural model, consisting of explanatory styles, acculturation, coping strategies, and job satisfaction. This study further examined the structural model, built upon the theory of work adjustment, among foreign-born Asian faculty to give implications for this particular population.

Significance of Study

As the workforce in the higher education becomes more diverse and an increasing number of Asian faculty step into U.S. universities, there is a need to be a voice for foreign-born, tenured and tenure-track faculty in educational research. Taking account of the contributions that are made by Asian faculty in research, teaching, and society, their personal well-beings are influential in the success of higher education institutions (Bland, Center, Finstad, Risbey, & Staples, 2006). Since they are working in an environment that requires outstanding performance and the accomplishment of multiple tasks, job satisfaction becomes an important element that motivates this group to be productive, achieve professional development, and improve teaching quality (Rosser, 2004). Hence, it is significant to have deeper understanding of the job satisfaction of tenured and tenure-track, Asian faculty in the U.S.

Furthermore, the results of this study give important implications for the improvement of job satisfaction of tenured and tenure-track, Asian faculty based on the explanatory style and coping strategies. First, this study tested the correlation between the explanatory style and job satisfaction of tenured and tenure-track, Asian faculty. It helps enrich the perspectives on how tenured and tenure-track, Asian faculty feel satisfied with their jobs based on the perceived good and bad events happening in their lives. It also helps tenured and tenure-track, Asian faculty adjust their explanatory styles in order to improve their pleasurable attitudes toward their working environments, interpersonal relationship with colleagues, and the job itself.

In addition, the examination of the relationship between coping strategies and job satisfaction broaden the research in vocational behaviors and psychology. It also gives suggestions on what types of coping strategies are effective for Asian faculty within a U.S. university setting. A close examination of acculturation also support professional development programs in higher education institutions to assist Asian faculty to obtain job satisfaction and acculturation in the workplace. In addition, the structural model that is proposed in this study will not only examine the rigidity of the theory of work adjustment, but also provide new insights for existing theories and future research in job satisfaction of foreign-born Asian faculty in higher education.

CHAPTER II

LITERATURE REVIEW

The purpose of this chapter is to present the related literature on job satisfaction. The review consists of the theoretical framework undergirding this study, job satisfaction of Asian faculty, factors included in the study, and an introduction of foreign-born, tenured and tenure-track, Asian faculty in the U.S.

Theory of Work Adjustment

Early work on the theory of work adjustment was completed at the University of Minnesota in the Work Adjustment Project (Dawis & Lofquist, 1984). The Work Adjustment Project aimed to develop tools for assessing the work adjustment potential for vocational rehabilitation and evaluating the degree of work adjustment of employees. The theory of work adjustment maintains that work is conceptualized as the interaction between the person and the work environment (Dawis & Lofquist, 1984). In this relationship, the work environment requires individuals to bring skills and abilities to perform tasks and the individuals require preferred work conditions and compensation for work performance (Dawis & Lofquist, 1984). In addition, the environment and individuals need to meet each other's requirements (Dawis & Lofquist, 1984).

The degree of work adjustment is indicated by the satisfaction of the individual with the work environment and by the satisfaction of the work environment with the individual (Dawis & Lofquist, 1984). Satisfactoriness is an external factor indicating the degree to which the individual can meet job demands, such as a worker's performance appraised by his or her supervisor (Dawis & Lofquist, 1984). Satisfaction is an internal factor indicating the extent to which the job meets the requirements of the

individual, such as a worker's satisfaction toward office conditions (Dawis & Lofquist, 1984). According to Dawis and Lofquist (1984), the structure and characteristics of the person and the work environment can be described in the same terms and assessed using the same dimensions, which makes it possible to measure the correspondence and continuous interactions between the person and the work environment. The structure of the work environment can be described by skill requirements and needs reinforcers, which are stimulus conditions that influence the individual's satisfaction (Dawis & Lofquist, 1984). Personality structure can be described by skills and needs (Dawis & Lofquist, 1984).

The theory of work adjustment has adapted the concept of job satisfaction in Herzberg and colleagues' (1959) theory. Herzberg et al. (1959) believe that job satisfaction is a multidimensional attitude derived from a person's response to the job. They compiled the components of job satisfaction and found two main categories of predictors: motivators and hygiene factors. Specifically, the work itself, responsibilities, achievements, and advancements, which are labeled as motivators, lead to job satisfaction. Internal factors increase job satisfaction by stimulating employees' motivations. In contrast, environmental factors, such as company policy, administration, interpersonal relationships, working conditions, and technical supervision, are labeled as hygiene factors and lead to job dissatisfaction.

Dawis and Lofquist (1984) concluded that job satisfaction is the attitude and affective reactions toward the degree of the correspondence between an individual's needs and the job's requirements. Since job satisfaction is related to the person and the environment, it has two dimensions: intrinsic and extrinsic satisfaction. Intrinsic satisfaction is highly related to the internal or personal factors that affect satisfaction, whereas extrinsic satisfaction is linked to the external factors that originate from the job itself, such as policies (Dawis & Lofquist, 1984). Several instruments have been used to measure job satisfaction, including the Minnesota Satisfaction Questionnaire (MSQ). The MSQ was developed in the Work Adjustment Project at the University of Minnesota in 1957. It was designed as a diagnostic tool for assessing work adjustment. Weiss et al. (1967) stated that the MSQ was developed based on the theory of

work adjustment, indicating that job satisfaction originates from the correspondence between the person and the environment.

The MSQ consists of 100 items in the long form and 20 items in the short form. The instrument measures satisfaction with 20 reinforcers in the work environment that are relevant to the 20 psychological needs of the employee (Dawis & Lofquist, 1984). These 20 reinforcers have been categorized into two dimensions: internal and external reinforcement factors (Weiss et al., 1967). Internal reinforcement factors, which measure intrinsic job satisfaction, consist of ability utilization, achievement, activity, advancement, compensation, co-workers, creativity, independence, moral values, social service, social status, and working conditions. External reinforcement factors, which measure extrinsic job satisfaction, consist of environmental reinforcers, such as authority, company policies and practices, recognition, responsibility, security, relationships with supervisors, and job variety (Weiss et al., 1967). The instrument also defines overall satisfaction as the composite level of intrinsic and extrinsic satisfaction. Therefore, the two dimensions of job satisfaction (i.e., intrinsic and extrinsic satisfaction) were measured by the MSQ in the study.

Based on the theory of work adjustment, one's psychology and behaviors affects the response to the stimulus conditions and the level of job satisfaction (Dawis & Lofquist, 1984). As one of psychological attributes, explanatory style is considered as an important predictor that affects an individual's response to the environment and satisfaction level (Abramson, Seligman, & Teasdale, 1978). Explanatory style is the way by which individuals interpret events and it influences emotions and behaviors (Seligman, 1998). An individual who has a strong tendency to attribute good events to internal, stable, and global causes, or attribute bad events to external, specific, and unstable causes, is likely to have a positive explanatory style. Conversely, an individual who has a strong tendency to attribute good events to external, unstable, and specific causes, or attribute bad events to internal, stable, and global causes is likely to have a negative explanatory style. (Demetriou, 2011; Furnham, Sadka, & Brewin, 1992). With an understanding of one's explanatory style, it is possible to identify a person's cognitive

style and his or her likelihood to develop hopefulness and hopelessness. This understanding also gives researchers a pathway by which to examine how a positive explanatory style enhances the occurrence of positive outcomes as well as how to remediate pessimistic symptoms.

Another constructs that are important in this study are acculturation and coping strategies. Psychologists believe that the individual responds to different stimulations in a variety of ways, that is, the individual makes psychological and behavioral adjustments to achieve the correspondence with the environment (Dawis & Lofquist, 1984). Based on Miller (2007), acculturation is the cultural adjustment that occurs when an individual meets a different culture. Berry (2005) explains that acculturation is indicated by two dimensions. The first one is mainstream cultural orientation, which is the extent to which an individual values and seeks contact with the mainstream culture. The second one is heritage cultural orientation, which is the extent to which an individual maintains and values the heritage culture. Acculturation is influenced by personal variables, including explanatory style, and also affects personal well-being (Berry, 2005). For example, when living in a new culture, a person who has a weak attachment to his or her heritage culture may experience more problems in regard to his or her psychological and emotional well-being. In contrast, a person who has a weak connection with the mainstream culture may encounter more difficulties in regard to his or her sociocultural adaptation, which is the ability to perform culturally appropriate social skills and behaviors.

As one way of adjustment, coping strategies are considered to be important in achieving job satisfaction. Coping strategies are the cognitive and behavioral adjustments that an individual takes to tackle problems under stressful situations (Lazarus & Folkman, 1984). Chun et al. (2006) claims that coping strategies mediates the relationship between personal factors and well-being. Specifically, under individualistic cultural contexts, using active or engagement coping can positively enhance the relationship between positive personal factors and pleasurable outcomes. In contrast, using passive or disengagement coping may intensify the relationship between negative personal factors and not

pleasurable outcomes (Chun et al., 2006). In addition, acculturation affects the specific coping strategy an individual adopts to achieve positive outcomes (Chun et al., 2006).

Most of job satisfaction research focused on the population without experiences in moving to new countries and encountering different cultures (e.g. Mamiseishvili & Rosser, 2011; Rosser, 2004; Rosser, 2011). Therefore, this study was expected to focus on foreign-born Asian faculty who experience cultural conflicts and determine their job satisfaction. What's more, even though the theory of work adjustment provides an overview on how personal factors and consequent adjustments work together to achieve job satisfaction, few studies have focused on the influence of explanatory style, acculturation, and coping strategies. Undergirded by the theory of work adjustment, specific relationships among explanatory style, acculturation, coping strategies, and job satisfaction of foreign-born Asian faculty (Figure 2.1) were tested in the study.

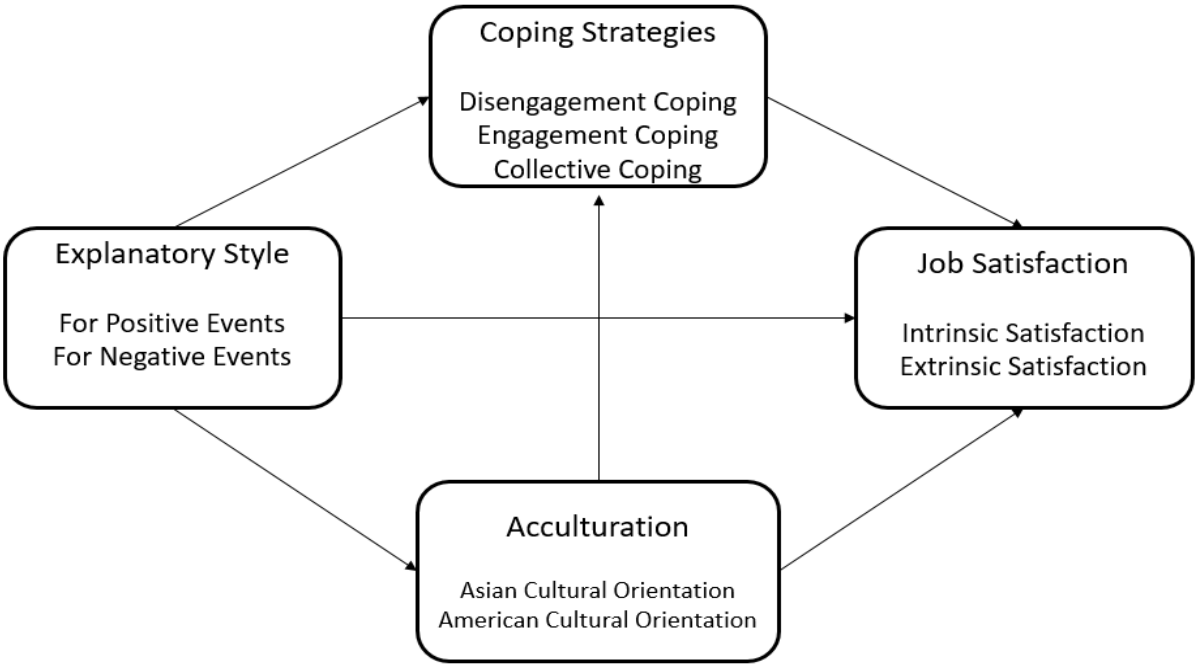

Figure 2.1. Proposed relationships among explanatory style, acculturation, coping strategies, and job satisfaction in the study

Job Satisfaction of Faculty

Given the increased concern related to well-being in academia, studies have examined the job satisfaction of faculty members from different perspectives. Research has indicated that job satisfaction significantly influences faculty members' productivity, and the job satisfaction level is one of the most important factors that reflects the effectiveness and performance of today's universities (Mamiseishvili & Rosser, 2011). A satisfactory attitude toward one's job motivates a faculty member to pursue better performance and decrease absenteeism (Herzberg et al., 1959; Mamiseishvili & Rosser, 2011). Thus, understanding the faculty's job satisfaction levels can provide important implications for higher education policies and help diagnose strategies that can be used to improve faculty members' well-being.

With the awareness of the importance of faculty job satisfaction, some studies have examined with which aspects of the job faculty members are satisfied and dissatisfied. Rice and Austin (1988) mentioned that the funding support for faculty to join professional development events contributes to an increasing level of job satisfaction because it helps the faculty members thrive in teaching and research by learning from their peers. Johnsrud and Rosser (2002) suggested that departmental support, such as office support, research materials, library access, and teaching and graduate assistants, helps faculty members reduce burdens, which are considered time-consuming or time wasting. Furthermore, Rosser (2004) and Hagedorn (2000) indicated that faculty members were not satisfied with their salaries and benefit plans, which is a big issue relating to faculty's turnover.

In addition, tenured and tenure-track faculty members are thought of as leading stressful lives than non-tenure-track faculty members. In Mamiseishvili and Rosser's (2011) study, tenure-track faculty members were not satisfied with their jobs since they had pressure to publish, develop teaching qualities, and maintain professional networks. However, Rosser (2004) used the 1999 National Study of Postsecondary Faculty data set with a nationally representative sample of 12,755 full-time faculty members at Research 1: Doctoral Universities in the U.S. to discover that, junior faculty members were positive about advising, course load, benefits, and salary. The reason is that junior faculty members may

have low expectations or might not fully understand how departmental and external resources can help them achieve professional success. In addition, departments tend to protect new faculty members' time in regard to service and activities, which allows them to spend more time on teaching and research (Rosser, 2004). Rosser (2004) also showed that tenured professors had low levels of job satisfaction because tenured faculty may have more pressure related to seeking funding, serving on committees, requests to update skills, and course load responsibilities (Rosser, 2004).

Some studies have used the MSQ to evaluate job satisfaction among different populations and in different locations. For example, Winkler (1982) measured the level of job satisfaction of university faculty members by using the MSQ short-form. A sample of 336 faculty members from 22 universities joined the survey. The respondents stated that the items that influenced their job satisfaction the most were autonomy, academic freedom, independence, and teaching or advising excellent students. Differences in faculty job satisfaction existed and faculty in agriculture had the highest mean job satisfaction. No statistical significance existed when comparing rank, age, and tenure.

Swafford and Legg (2009) conducted a study to predict which aspects of a radiation therapy educator's job lead to job satisfaction. The study involved a sample of 90 radiation therapy educators teaching at the certificate, associate, and baccalaureate degree levels. It was revealed that ability utilization, institutional support, compensation, and job characteristics were important determinants of job satisfaction among the respondents.

Lacy and Sheehan (1997) explored the job satisfaction of academic staff, who were engaged in both teaching and research in eight countries: Australia, Germany, Hong Kong, Israel, Mexico, Sweden, UK, and U.S. Job satisfaction was revealed in relationships with colleagues, job security, and the opportunity to pursue their own ideas (Lacy & Sheehan, 1997). They found that the majority of faculty members indicated that they were satisfied with the courses they teach, whereas respondents from Germany, Australia, UK, Hong Kong, and the U.S. showed dissatisfaction with the way by which their institutions were managed. Almost half of the respondents were dissatisfied with their promotion

opportunities (Lacy & Sheehan, 1997). Additionally, respondents from research universities had lower satisfaction than academics from other universities in the aspects of job security and expectations for promotion (Lacy & Sheehan, 1997).

Jacob and Winslow (2004) examined faculty members' job satisfaction using data from a sample of 10,116 full-time faculty members who worked at four-year institutions. The results revealed that faculty members were not satisfied with their jobs when their workloads were driven by institutional and professional demands. In addition, the more hours a faculty member reported working, the more likely he or she was to complain about his or her excessive workload.

Even though some studies have examined the internal and external factors that influence job satisfaction, a lack of research exists that assesses faculty members' job satisfaction based on the theory of work adjustment. Therefore, this study aims to fill this gap by expanding on the literature and gaining a deeper understanding of the faculty members' job satisfaction based on the theory of work adjustment.

Factors Influencing Job Satisfaction

Research has found numerous factors that influence job satisfaction. According to the theory of work adjustment and relevant literature, explanatory style, acculturation, and coping strategies have inevitable impacts on job satisfaction. The literature reviews of each variable and the relationship between job satisfaction, explanatory style, acculturation, and coping strategies are presented as below.

Explanatory Style

The theory of work adjustment proposes that job satisfaction, a trait-based construct, is highly influenced by personal traits, including one's attributions of life events (Dawis & Lofquist, 1984). In addition, the relationship between explanatory style and job satisfaction has been examined by several studies. For instance, it was proposed that an individual who attributes the occurrences of positive events to internal, stable, and global reasons tends to restore and increase his or her hopefulness, which increases his or her expectations toward the future and causes positive consequences (Abramson, 1989). In contrast,

an individual who attributes the occurrences of negative events to internal, stable, and global reasons tends to feel hopeless. Hopelessness causes people to generate negative characteristics about themselves that they regard as important when it comes to changing unpleasant life conditions (Abramson, 1989). In other words, an individual who exhibits a positive explanatory style in the occurrence of good events is more likely to obtain psychological and emotional benefits, while an individual who exhibits a negative explanatory style in the occurrence of bad events will find such benefits difficult to obtain.

Welbourne and colleagues (2007) tested the relationship between explanatory style and job satisfaction. A sample size of 190 registered nurses and licensed practical nurses joined the survey by answering questions from the Occupational Attributional Style Questionnaire and MSQ. They obtained a composite score for explanatory style and found that intrinsic job satisfaction was positively influenced by explanatory style, while extrinsic job satisfaction was not. They further explained that intrinsic job satisfaction, as an internal perception, may be more subject to one's explanatory style, whereas extrinsic satisfaction tended to be externally caused, less controllable, and unlikely to change. The lack of a significant relationship may also exist because the study focused on explanatory style as a single dimension, which makes it impossible to examine the specific effects of different dimensions of explanatory style on job satisfaction. Therefore, this study focuses on a dichotomy of the definition of explanatory style.

Researchers are always looking for a better way to measure explanatory style and the utility of constructs (Higgins, Zumbo, & Hay, 1999; Peterson, 1991). The Attributional Style Questionnaire (Peterson et al., 1982) was designed in order to assess the explanations of bad and good events. The questionnaire includes six positive and six negative events. The respondents give answers for each event along three dimensions: internal-external, stable-unstable, and global-specific (Liu & Bates, 2014; Peterson et al., 1982). The score of the explanatory style for positive events is generated from the sum of the internal, stable, and global scores for the good events, whereas the explanatory style for negative events is the sum of the internal, stable, and global scores for the bad events (Higgins et al., 1999). A high

score for the explanatory style for positive events indicates a tendency to explain causes in optimistic ways. While a high score for the explanatory style for negative events indicates a higher likelihood to explain events in pessimistic ways.

How many dimensions of explanatory style should be included in the research? Some studies have focused on using one dimension of explanatory style (e.g. Welbourne, Eggerth, Hartley, Andrew, & Sanchez, 2007). Peterson (1991) argued that, even though there is a trend to use one score of explanatory style, this composite score makes it impossible to test specific roles of individual dimensions of the explanatory style. Some studies have also used the composite scores of internality, globality, and stability (e.g., Fineburg, 2010; Welbourne et al., 2007). Peterson (1991) further indicated that, in order to use the three dimensions of explanatory style, the relationship between the outcome and specific dimensions should be justified. In addition, when a higher order variable, a so-called latent variable with three indicators, is formed, it is important to ensure that the three dimensions have similar levels of ratings, otherwise, we cannot make sure that the participant possesses each attribute or that each attribute influences the outcome with equal importance. Furthermore, studies have revealed that stability and globality correlated highly with each other, whereas internality was independent of the other dimensions (e.g., Fineburg, 2010). Additionally, the low reliability coefficient of internality, which ranged from .30 to .60, has raised concerns in some studies (Fineburg, 2010; Furnharm, Sadka, & Brewin, 1992). This reliability indicates that internality, as a single dimension, has a high level of variability. Therefore, treating explanatory style as a latent variable, as indicated by the three dimensions, may violate the assumption of the latent variable argument.

In the current study, explanatory styles for positive and negative events was used for two reasons. The first reason is that explanatory styles for positive and negative events might have different structures. Corr and Gray (1996) tested the factor structure of ASQ using a varimax rotated principal component analysis. They found that the two-factor structure existed in the explanatory style for positive events, whereas a single factor structure existed in the explanatory style for negative events. Higgins and colleges

(1999) also reported different patterns for negative and positive events. For negative events, internality was independent of stability and globality. However, it was highly correlated with globality for positive events. Therefore, it is more reliable to use the composites of explanatory style for positive and negative events than the three-factor structure.

The second reason is that the correlates of the explanatory style for positive events are opposite to or do not correlate with the explanatory style for negative events. Peterson (1991) indicated that the explanatory style for positive events had a weak relationship with the absence of depressive symptoms. In contrast, the explanatory style for negative events had a strong relationship with the presence of depressive symptoms. Peterson (1991) assumed that the explanatory style for positive events directly affected an individual's response to good outcomes, while indirectly affected the individual's response to bad outcomes. In other words, the level of one's satisfaction is directly influenced by explanatory style for positive events, while indirectly influenced by the explanatory style for negative events. Therefore, the current study proposed that explanatory styles for good and bad events may have positive and negative relationships with job satisfaction, respectively. However, different variations may exist in the two relationships.

Acculturation

The current study focused on two dimensions of acculturation: American cultural orientation and Asian cultural orientation. A person who moves to a new culture would be able to adapt successfully to mainstream society, while maintaining strong heritage norms and connections with in-group members (Berry, 2005). Besides, empirical research has demonstrated the association between acculturation and job satisfaction (e.g. Berry, 2005; Berry, 2006; Chen, 1996; Leong, 2001). Based on the theory of work adjustment, a high acculturation value indicates a strong fit between the person and the mainstream cultural environment, leading to psychological well-being (Dawis & Lofquist, 1984). Berry (2006) stated that acculturated individuals engage in behaviors and practices of the dominant culture, therefore gaining cultural knowledge and developing positive adaptation.

Leong (2001) tested the relationship between acculturation and job satisfaction of 39 Asian Americans at two major companies who attended career development workshops. The results revealed that employees who had higher level of acculturation tended to be more satisfied with their jobs. Similarly, Chen (1996) examined the relationship among work values, acculturation, and job satisfaction of 167 Chinese professionals in New York, New Jersey, and Connecticut in the U.S. The result revealed that they had strong connections with both the Chinese and assimilated American cultures. However, the participants were found to have low level of job satisfaction.

In addition, Nguyen and colleagues (2007) studied the role of acculturation using the mentoring-career satisfaction model with a data set of 139 Asian Pacific Islander American (APIA) faculty. The results showed that an individual's level of acculturation had a direct influence on perceived career satisfaction. In addition, participants who were home culture oriented received more mentoring support from APIA mentors than less Asian Pacific Islander -oriented faculty. In contrast, the participants who were American culture oriented received less mentoring support from APIA mentors than other mentors. Nguyen et al. (2007) also found that, among foreign-born faculty, Asian Pacific Islander cultural orientation predicted higher levels of career satisfaction.

Moreover, personal traits, including the explanatory style, influence a person's level of acculturation (Berry, 2006; Dawis & Lofquist, 1984). Specifically, people with high levels of explanatory style for positive events have the characteristics in their identities to take initiatives to change the environment and engage in new activities to explore opportunities (Peterson, 1991). A higher level of explanatory style for positive events motivates an individual to expose to the mainstream social activities and assimilate mainstream cultural values. However, people with high levels of explanatory style for negative events tend to blame the environment, which makes it impossible for them to engage in the life practices of mainstream culture (Peterson, 1991). Thus, it is likely that they have low levels of acculturation to the mainstream culture, but retain high levels of heritage cultural identity. Wong, Kim, and Tran (2015) investigated the relationship between the adherence to Asian culture and attribution

among a sample of 238 Asian-Americans and found that adherence to Asian values and the tendency to attribute bad events to internal factors were positively related.

Since theories and studies have supported that explanatory style influences acculturation and acculturation affects job satisfaction, it is also interesting to examine the mediating role of acculturation in this study. On one hand, both American and Asian cultural orientations may support the relationship between explanatory style for positive events and job satisfaction. According to Yeh et al. (2006), Asian Americans who maintain strong Asian values and are interconnected with their ethnic group could still obtain positive psychological state. Therefore, an adherence to Asian cultural values may strengthen the positive effect of a positive explanatory style on job satisfaction. People with positive explanatory styles tend to absorb new cultural values and engage in mainstream activities, increasing their mainstream cultural identities, while obtaining higher levels of satisfaction. On the other hand, American and Asian cultural orientations may lessen the negative relationship between a pessimistic explanatory style and job satisfaction because American and Asian cultural orientation may help an individual achieve a better well-being, even though he or she holds a pessimistic attitude toward the conflicts and environment.

Coping Strategies

Under different cultural contexts, different patterns exist in coping strategies (Chun et al., 2006). Specifically, individuals with a collectivistic orientation may attribute stressful events to external environments or bad luck and rely on passive or cognitive coping strategies to control their internal states, such as emotions (Choi & Nisbett, 1998). Individuals from individualistic cultures tend to blame themselves for bad events and engage in active or approach-focused coping strategies, such as analyzing the situation and making plans to solve problems (Choi & Nisbett, 1998). In general, the mainstream culture in the U.S. is individualistic, whereas the culture in Asia is recognized as collectivistic (Hofstede, 1980). Chun et al. (2006) also pointed out that a change in cultural values leads to a change in coping strategies. For instance,

acculturation affects variations in coping strategies. With the same origin of collectivistic culture, people living in an individualistic country may use more active coping strategies than those individuals who live in the home country (Yoshihama, 2002).

Zhang (2000) investigated the factor structure of the coping strategies of overseas Chinese professionals. She developed a composite coping measure with 43 items, including 24 items from a revised version of the Ways of Coping Scale (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986), five items from the Chinese Ways of Coping Scale (Chan, 1994), three items from Relationship-focused Coping (O'Brien & DeLongis, 1996), and 11 items related to collective coping based on a literature review. A maximum likelihood analysis using an Oblimin rotation, which allowed intercorrelations among dimensions, yielded a three-factor solution, which determined three dimensions of coping strategies: engagement, disengagement, and collective coping. The internal consistencies for engagement, disengagement, and collective coping were .78, .70, and .90, respectively. The percentage of the common variance for engagement, disengagement, and collective coping was 33%, 27%, and 40%, respectively.

Since foreign-born Asian faculty have roots in collectivistic culture, it is critical to consider cultural elements in coping strategies. Therefore, the current study mainly focused on three dimensions of coping strategies: engagement, disengagement, and collective coping. Engagement coping, similar to problem-focused coping, involves active efforts to examine causes, make plans, take actions, and solve problems by changing the environment or the person (Zhang, 2000). Disengagement coping does not directly change the problem or situation, but, instead, regulates emotional responses (Zhang, 2000). Individuals who use disengagement coping tend to suppress feelings, self-deny, and avoid the problem without intentions to find solutions (Zhang, 2000). Collective coping is consistent with the collectivistic culture that

emphasizes group effort as a strength (Zhang & Long, 2006). It has been indicated that collective coping includes a respect for authority, forbearance, family support, social networks, and intracultural coping. Collective coping, more than receiving social support, means that an individual solves the problem by involving all members of the ethnic group. It emphasizes the tendency of an individual to attach to the in-group's norms and behaviors to cope. Yeh et al. (2006) pointed out that Asians do not tend to seek support from professionals, colleagues, or strangers. Instead, they prefer to not share their problems with outsiders.

Individuals from different cultures show different patterns of coping strategies. Individuals from individualistic cultures have greater senses of internal loci of control and primary control than those individuals from collectivistic cultures (Chun et al., 2006). People from individualistic cultures are expected to use more approach-focused coping, such as engagement coping, to change the external environment to achieve their goals. In contrast, individuals from collectivistic cultures tend to have greater external loci of control and are expected to rely on avoidance-focused coping, such as disengagement coping, which allows them to solve problems by changing internal states. Individuals from collectivistic cultures are likely to maintain collective coping when they move to individualistic cultures. For example, Zhang (2000) found that overseas Chinese professionals had a great tendency to use collective coping. Nguyen, Huynh, and Lonergan-Garwick (2007) investigated the coping strategies of a sample of 139 faculty who self-identified as APIA and found that the participants tended to use passive coping strategy and accept support from people with the same culture orientations.

Chun et al. (2006) suggested that coping strategies may be influenced by explanatory style. Individuals who attribute the causes of good events to internal, stable, and global factors and bad events to external, unstable, and specific factors have strong tendencies to be persistent in finding solutions, have an adaptive responsive pattern, make efforts to change the environment, focus on self-improvement (Chang & Edwards, 2015). Therefore, people with positive explanatory styles are more likely to engage in active coping behaviors and seek social support. In contrast, individuals who attribute good events to

external, unstable, and specific factors and bad events to internal, stable, and global factors tend to accept the situation, avoid confrontations, and control internal expectations and desires in order to solve conflicts (Chang & Edwards, 2015). Thus, we can speculate that negative explanatory styles are related to disengagement coping.

The influence of acculturation on coping strategies has been proposed. One perspective is that individuals who are from and have strong adherence to a collectivistic culture tend to use disengagement rather than engagement coping (Berry, 2005). For example, Chang (2001) found that Asian Americans were less likely to use engagement coping and more likely to rely on avoidance and social withdrawal to cope with stress than European Americans. However, some research has shown that it is possible for an individual who is highly acculturated into the dominant society to have increased coping competencies, which means that highly acculturated individuals may master a broader range of coping strategies with higher proficiency (Roesch, Wee, & Vaughn, 2006). For example, Wong et al. (2015) found that Asian Americans had a higher tendency to use engagement coping than disengagement coping. Yeh and colleagues (2006) also asserted that individuals who engaged in the practices of the American culture would be pulled to use active coping because it is more prevalent in an individualistic society.

Asians who adhere to the collectivistic culture may continue to have strong connections to their ethnic groups when they move to individualistic cultures. Since people from collectivistic cultures possess interpersonal self-identify and value the importance of being a part of a group, they are likely to seek help from the group, maintain harmony by meeting the needs of others, and adjust their behaviors to the group norm rather than take direct actions to solve problems (Yeh et al., 2006). Zhang (2000) also found that overseas Chinese professionals had a high frequency of using collective coping. Therefore, Asian cultural orientation is assumed to be related to collective coping.

Studies have revealed the important relationship between coping strategies and job satisfaction. Problem-focused coping can buffer the impact of stress by influencing an individual's ability to use available coping resources and appropriate coping strategies to increase satisfaction (Chun et al., 2006;

Sarid, Yaari, & Margalith, 2004). Problem-focused coping is also likely to enhance an individual's ability to overcome and manage stress and protect an individual's well-being (Carver, Scheier, & Weintraub, 1989). However, the tendency to focus only on passive coping strategies, such as self-blame and avoidance, may be less useful in regard to meeting the demands of the situation and increasing one's level of satisfaction (Carver et al., 1989).

Interestingly, some studies found that avoidant or passive coping strategies were positively associated with job satisfaction (i.e. Boey, 1998; Yoshihama, 2000). For example, Boey (1998) examined the role of coping strategies in decreasing work stress among 1,043 nurses in Singapore. He found that problem-focused coping was the strategy that was most frequently used by participants. In addition, nurses who perceived less job satisfaction tended to use avoidance coping, such as quitting the job. Yoshihama (2002) studied the coping strategies of Japan-American women and found that the perceived effectiveness of passive coping strategies was related to lower levels of psychological distress in the more collectivistic Japanese-American women born in Japan, while the perceived effectiveness of active coping strategies was related to lower levels of psychological distress in the more individualistic Japanese-American women born in the U.S. In addition, active coping strategies had negative impacts on the psychological well-being of Japan-born women in the U.S.

In addition, it is surprising that a negative relationship between active coping strategies and job satisfaction was revealed. Zhang (1999) conducted a study to test a model of stress and coping for overseas Chinese professionals. The results showed a negative relationship between active coping strategies and changes in job satisfaction among the female participants. Long and colleagues (1992) claimed that the negative relationship between active coping and job satisfaction suggested that active coping strategies, such as hard work and effort, may not necessarily bring success at work, but would increase exhaustion for women and dissatisfaction with their jobs. Therefore, the impacts of avoidant coping strategies and problem-focused coping strategies may vary based on different situations and may be more complicated when an individual moves from a collectivistic culture to an individualistic culture.

Personal traits influence coping strategies, which, in turn, affect psychological well-being, indicating that coping strategies play a mediating role in the relationship (Chun et al., 2006). It is assumed that people who interpret life events in positive ways are more likely to use engagement coping to seek solutions to conflicts in the workplace. In contrast, people who construe life events in negative ways tend to avoid conflicts, leading to negative psychological outcomes. In Welbourne et al.'s (2007) study, the meditational effect of coping strategies on the relationship between explanatory style and job satisfaction was tested among 190 nurses. The results showed that the indirect effects of both avoidant and problem-focused coping strategies were statistically significant, indicating that the two variables serve as mediators in the relationship between explanatory style and job satisfaction. For the extrinsic job satisfaction, only problem-focused coping mediated the relationship.

Little research has been focused on the mediating effect of collective coping. However, collective coping, as one dimension of coping strategies, may intervene in the relationship between personal traits and well-being (Chun et al., 2006; Zhang, 2001). For example, a person with a positive explanatory style tends to perceive seeking support from his or her ethnic group as a possible way to solve problem, which, in turn, will achieve better psychological outcomes. However, a person with a negative explanatory style tends to perceive seeking support as wasting time or helpless, which leads to depressive psychological outcomes.

Introduction of Foreign-born Asian Faculty in the U.S.

Asia consists of 49 countries, including China, Japan, South Korea, Indonesia, and Philippines. Since Azerbaijan, Georgia, Kazakhstan, Russian, and Turkey have territory in both Asia and Europe, they will not be included in this study. In addition, even though variations exist in Asian cultures, Hofstede's (1980) landmark cross-national study claims country-level variations in western culture and Asian culture. Asian culture, when compared with the culture in the U.S., is much less individualistic and more collectivistic (Hofstede, 1980). This study focused on Asian culture as a culture in contrast to western culture instead of emphasizing specific differences between the cultures.

The immigration of Asians to the U.S. dates back to the mid-18th century and then Asians were not allowed to enter the country until 1965 (Varma, 2004). Due to a lack of a labor force, an Asian workforce were brought back to the U.S. in the mid-19th century (Varma, 2004). Since the mid-19th century Asians in the U.S. have begun to pursue educational opportunities in science and engineering and obtain employment to permanently stay in the U.S. Until 1992, when the Chinese Student Protection Act opened the gates for Chinese students to come to the U.S. and obtain citizenship, a large number of Asians came to the country on temporary work visa prior to attempting to get their green cards (Varma, 2004).

Today, Asians choose to move to the U.S. for several reasons. The first reason is to achieve a higher education degree. The Institute of International Education (2015) revealed that 52% of the 974,926 international students in the U.S. in 2014 and 2015 were from China, India, and South Korea, with China making up about 60% of that subtotal. The second reason is to join the professional labor force (Varma, 2004). A large number of international students choose to stay in the U.S. for employment after graduation. In 2015, there were 93,416 Asian students holding Optional Practical Training, which is temporary employment directly related to non-citizen international students' major areas of study in universities (Institute of International Education, 2015). Furthermore, according to data from 2013 and 2014, about 56% of international faculty were from Asia and about 74% of these individuals focused on science, technology, engineering, and math (STEM) (Institute of International Education, 2015). This study only focused on foreign-born Asian faculty, which are defined as a group of Asians who were born in Asia, but are working in U.S. universities as full-time faculty members. Some of these individuals have obtained citizenships or green cards, while the rest are in the country on work visas.

Foreign-born faculty in the U.S. experience high levels of stress for several reasons (Collins, 2008), including different worldviews, familial relationships, religious beliefs, political views, and cultural norms (Collins, 2008). Cultural differences in the workplace may result in misunderstandings between these individuals and their colleagues. They also have challenges in regard to coping with

problems, and foreign-born faculty have previously expressed their disappointment in lack of support from the department (Collins, 2008). The difficulties that foreign-born faculty encountered at the workplace were also found in a study conducted by Kim and colleagues (2012). They used data from the Survey of Doctorate Recipients with a sample of 14,543 international faculty in the U.S. and compared the satisfaction levels between U.S. and non-U.S. citizen Asian faculty, indicating that non-U.S. citizen faculty were significantly less satisfied with institutional demands (Kim, Twombly, & Wolf-Wendel, 2012). Moreover, international faculty were less satisfied with their interactions with their students, which may be due to a lack of familiarity with the students' characteristics (Kim et al., 2012).

Foreign-born faculty members have to work extra hard to prove their capacities as outstanding scholars, especially when they are trying to obtain tenure positions (Kim, Wolf-Wendel, & Twombly, 2011; Liu, 2001). Asian faculty members need to face the pressure coming from the appointment in higher education institutions. It is difficult for them to balance their responsibilities in teaching, research, and services (Hermanowicz, 2003). Studies have found that foreign-born Asian faculty were significantly less satisfied with the job than U.S. faculty (Kim et al., 2011; Kim et al., 2012; Liu, 2001). It is also interesting to note that foreign-born and foreign-educated Asian faculty were significantly satisfied with their working conditions, but less satisfied with their salary and benefits (Kim et al., 2012).

Interestingly, it is worth noting that foreign-born Asian faculty were more productive than their U.S. colleagues (Kim et al., 2011). Compared with their non-tenure-track and U.S.-born counterparts, while foreign-born, tenured and tenure-track, Asian faculty members published more articles, worked more hours per week, spent more time out of class with students, and were more committed to their institutions, they were less satisfied with their jobs (Bland et al., 2006). However, because of their language and communication skills, they were also less likely to be present in authority and decision-making positions (Tang, 1993). In short, foreign-born, tenured and tenure-track, Asian faculty members make up an important group in the professoriate. Even though this group has been studied in the past,

many important factors related to their job satisfaction are still undiscovered. Therefore, this study aims to understanding this group of people and their academic lives.

To summarize, this study was undergirded by the theory of work adjustment. Explanatory style for positive events was assumed to influence American and Asian cultural orientations, coping strategies, and job satisfaction, separately. The explanatory style for negative events was assumed to influence American cultural orientation, coping strategies, and job satisfaction. Asian cultural orientation may influence collective coping and job satisfaction, while American cultural orientation may influence engagement coping and job satisfaction. Coping strategies may also affect job satisfaction. American and Asian cultural orientation may serve as mediators between explanatory styles for positive and negative events and job satisfaction. Coping strategies may serve as mediators between explanatory styles and job satisfaction.

With a growing number of Asian faculty in the U.S. and increasing diversity in academia, a need exists to investigate their job satisfaction and its relationships to relevant factors. This study aims to fill this gap in the existing literature in order to examine the impacts of explanatory style, coping strategies, and acculturation on their levels of job satisfaction.

CHAPTER III

METHOD

This chapter begins by providing the purpose of the study and the study's research questions. The remainder of the chapter describes the method used in this study and is organized into the following sections: (a) purpose and research questions, (b) research design, (c) participants, (d) instrumentation, (e) procedure, and (f) structural equation modeling.

Purpose and Research Questions

The purpose of this study was to examine the structural model of job satisfaction using a sample of Asian faculty members who were foreign-born and employed as tenured and tenure-track college or university professors in public Research 1: Doctoral Universities. The structural model includes the explanatory style for positive events and negative events, American and Asian cultural orientation, engagement, disengagement, and collective coping, as well as job satisfaction. The study aimed at answering the following questions:

1. What are job satisfaction, explanatory styles, acculturation, and coping strategies of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?

   a. job satisfaction included the following dimensions: intrinsic and extrinsic satisfaction
   b. explanatory styles included: explanatory style for positive events and explanatory style for negative events
   c. acculturation included: American cultural orientation and Asian cultural orientation
   d. coping strategies included: engagement coping, disengagement coping, and collective coping

2. Does the measurement model in the study well-represent the latent constructs?

3. What is the plausible pattern of relationships among explanatory styles (i.e., for positive and negative events), acculturation (i.e., American and Asian cultural orientation), coping strategies (i.e., engagement, disengagement, and collective coping), and job satisfaction (i.e., intrinsic and extrinsic satisfaction) of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?

a. Are explanatory styles for positive and negative events associated with job satisfaction?
b. Are explanatory styles for positive and negative events associated with American and Asian cultural orientation?
c. Are explanatory styles for positive and negative events associated with engagement, disengagement, and collective coping?
d. Are American and Asian cultural orientations associated with job satisfaction?
e. Are American and Asian cultural orientations associated with engagement, disengagement, and collective coping?
f. Are engagement, disengagement, and collective coping associated with job satisfaction?
g. If explanatory styles for positive and negative events are associated with job satisfaction, do American and Asian cultural orientations as well as engagement, disengagement, and collective coping serve as mediators to the relationship?

Research Design

To achieve the research purpose, a correlational design was used in the study. Correlational research design involves collecting data and testing the statistical relationships among variables of interest (Gall, Gall, & Borg, 2006). Researchers cannot manipulate independent variables or randomly assign participants to groups (Kerlinger, 1986). However, correlational designs allow researchers to collect data on two or more variables and compare them in a large group of individuals. By examining the entire data group, researchers are able to determine the form, direction, type, and degree of the relationship, as well

as the existence of the extreme scores (Creswell, 2014). Correlational designs also allow researchers to understand what happened in the past or what happens overtime without a direct intervention (Creswell, 2014). Independent and dependent variables in correlational research can be quantitative or categorical (Johnson & Christensen, 2016). Even though a large number of complex correlational techniques are developed recently, research design should be guided by rigid theoretical framework, rather than statistical techniques (Creswell, 2014).

Purposes of Correlational Designs

Correlational designs have three objectives including description, prediction, and explanation. The main purpose of descriptive research is to give accurate descriptions of variables in a specific situation or relationships that exist among variables. For the descriptive purpose, researchers randomly select a sample from the population of interest in the study, examine characteristics of the sample, and infer those characteristics of the sample to the population. The second objective, prediction, aims to predict the future status of dependent variables based on independent variables in the study (Johnson & Christensen, 2016). Since the design is used to predict the future performance, predictors are measured at one time and the outcome variable is measured at a later date (Creswell, 2014). The third objective, explanation, seeks to test hypotheses or theories that explain how and why each variable is connected in a specific situation (Johnson & Christensen, 2016). In the explanatory design, the data are collected at one time because the research focus is not about the past or future situation of participants (Creswell, 2014). Path modeling, one form of the explanatory design, allows the testing of a hypothesized model describing the associations among variables (Johnson & Christensen, 2016; Schumacker & Lomax, 2010). Path models are built based on the existing literature or theories and depict relationships among variables (Johnson & Christensen, 2016). Path models are also called structural models (Johnson & Christensen, 2016). A path or structural model was hypothesized in this study to test relationships among the explanatory style, coping strategies, acculturation, and job satisfaction.

The current study focused on two of the three purposes of correlational designs, description and explanation. First, the research aimed at describing the explanatory style, acculturation, coping strategies, and job satisfaction of tenured and tenure-track Asian faculty in the U.S. Second, the study focused on testing relationships among the explanatory style, coping strategies, acculturation, and job satisfaction.

Advantages and Disadvantages

The correlational research design, when compared with experimental and quasi-experimental designs, has advantages in the ability to measure and analyze a large number of variables in a single study (Gall et al., 2006). Second, correlational studies allow researchers to measure variables in everyday life events, whereas experimental designs need to manipulate variables in a laboratory setting (Johnson & Christensen, 2016).

However, correlational studies have two limitations, directionality and third-variable problems. Directionality refers to the possibility that variables cause each other's changes (Creswell, 2014). Tracz (1992) indicated that causal effect can be inferred when two variables are tested in temporal order, two variables are correlated, and other causes are controlled in the study. Therefore, even though results might show a correlation statistically significant, it still lacks of evidence for a cause-and-effect relationship. In path or structural models, the significance of influence rather than causal effect is assumed or interpreted by direct and indirect effects among variables (Schumacker & Lomax, 2010). Causal assumptions, however, are made by testing models in longitudinal studies, examining parameters, and controlling other factors that affect the model (Collins & Horn, 1992; Schumacker & Lomax, 2010). Therefore, the interpretation of data in this study focused on associations among variables, instead of cause-and-effect relationships. The second limitation is the possibility that unmeasured variables cause changes in measured variables (Creswell, 2014). To minimize this negative influence, variables in the study were selected based on the review of theories and recognized as unique and important constructs for tenured and tenure-track Asian faculty in the U.S.

Internal and External Validity

For this study, internal and external validity were addressed. Internal validity is defined as the extent that researchers correctly make inferences about the population based on the sample (Creswell, 2014). Main internal validity threats in the current study were selection and instrumentation. First, the threat of selection indicates that participants who are selected may have certain characteristics and lead to certain outcomes in the research (Creswell, 2014). To minimize the selection threat, potential participants who met the inclusion criteria in the study were invited to participate. The second threat, instrumentation, occurs when the measurement has a low reliability and has inadequate construct validity (Onwuegbuzie, 2000). The instrumentation was selected based on the existing literature. In addition, the reliabilities were tested and corresponding revisions were made in the pilot study. Besides, participants were encouraged to be honest and precise in answering questions (Salant & Dillman, 1994).

The third threat, multicollinearity, occurs when two or more independent variables are highly correlated (Mason & Perreault, 1991). Multicollinearity leads to inaccurate estimates of coefficients and standard errors, which causes problems in estimation and inferences. As reliability increases, accuracy of estimation increases and the failure to detect an effect that is present decreases (Grewal et al., 2004). In this study, the examination of the correlation matrix among independent variables and variance inflation factors (VIF) were two tools to detect multicollinearity before testing a structural model. If the correlations of independent variables are below .85, it means there is no strong relationships among predictors (Garson, 2007). Furthermore, VIF is the measure of how much variance of the path regression coefficient is inflated with the existence of predictor variables in the model (Mendenhall & Sincich, 2012). When VIF is 1, it indicates that there is no correlation among predictors and the variance is not inflated. A VIF above 4 means that risks of multicollinearity may exist, while a VIF above 10 indicates multicollinearity surely exists and the correction is needed (Mendenhall & Sincich, 2012).

External validity is the degree of generalizability of the result to other people and situations (Gall et al., 2006). This study focused on Asian faculty at public Research 1: Doctoral Universities in the U.S., so the conclusion was not generalized beyond this social group of interest (Creswell, 2014).

Participants

The population for the current study consisted of foreign-born, tenured and tenure-track, Asian faculty in public Research 1: Doctoral Universities in the U.S. Purposive sampling, a nonrandom sampling technique, was used to recruit participants to join the study. By using purposive sampling, the inclusion criteria of the potential participants were specified and the potential participants were asked to participate; when enough participants were obtained, no more participants were asked to join the study (Johnson & Christensen, 2016). Two advantages exist to using purposive sampling. First, it reduces the risk of including participants who do not meet the inclusion criteria. By sending all potential participants invitations to the survey, the study filtered out faculty members who were not foreign-born tenured and tenure-track Asian at Research 1: Doctoral Universities. Second, purposive sampling increases the possibility that every potential participant will join the survey. However, the disadvantage of purposive sampling is that it is a nonrandom sampling method, which limits the ability to generalize the results (Johnson & Christensen, 2016). Therefore, this study will not generalize the results beyond the population of interest.

In this study, the data were collected from 2,542 foreign-born, tenured and tenure-track, Asian faculty members at southeastern public Research 1: Doctoral Universities. Based on purposive sampling, inclusion criteria including appointment, place of birth, institution designation, and type of institution were explained in the following paragraphs.

First, the participants were tenured and in tenure-track appointments. Appointment types have important impacts on faculty members' productivity, commitment, and job satisfaction (Bland, Center, Finstad, Risbey, & Staples, 2006). Two types of appointment exist in higher education institutions:

tenure-track, and non-tenure-track. Tenure-track appointments are for full-time faculty who have achieved tenure status in universities and hold the title of associate professor or professor, as well as those individuals seeking tenure and hold the title of assistant professor. Non-tenure-track appointments are non-tenurable appointments for full-time faculty (Euben, 2002). The number of non-tenure-track faculty is much smaller than that of tenured and tenure-track faculty, especially in public research institutions (Euben, 2002). Tenured and tenure-track faculty need to demonstrate their excellence in teaching, research, and services, as well as establish a record of publications and a good reputation as scholars.

Second, the participants needed to be foreign-born Asians in the U.S., which meant that they were living in U.S., but were born in Asian countries. According to National Center for Education Statistics, Asian faculty members were the largest population among non-White faculty members in 2009-2013 (Snyder, de Brey, & Dillow, 2016). In addition, more foreign-born Asian faculty worked in academia than U.S.-born Asian faculty. Over a half of foreign-born Asian faculty were focusing on Science, Technology, Engineering, and Mathematics areas, while most U.S.-born Asian faculty specialized in business area (Snyder et al., 2016). Foreign-born and U.S.-born Asians have great differences in levels of acculturation to mainstream culture. Therefore, this study only focused on foreign-born Asians.

Third, the participants must have been employed in a Research 1: Doctoral University in the U.S. The institution type is based on the Carnegie Classification of universities. These universities offer similar types of degree programs and receive similar amounts of federal money (Middaugh, 2001). They offer a full range of baccalaureate to doctorate programs, award 50 or more doctoral degrees each year, and receive $40 million or more in federal funding yearly. Tenured and tenure-track faculty in Research 1: Doctoral Universities are assigned similar responsibilities in research, teaching, and services (Bland et al., 2006).

Fourth, the participants had to be employed at a southeastern public research institution. Public institutions are supported by public funds and controlled by the state, whereas private institutions are controlled by individuals or non-governmental agencies. Faculty in public and private research

institutions have different teaching loads, working conditions, salary, and fringe benefits.(Vesilind, 1999). Therefore, potential participants for this study were foreign-born, tenured and tenure-track, Asian faculty at southeastern public Research 1: Doctoral Universities.

According to the Carnegie Classification of universities, there are 29 public Research 1: Doctoral Universities in the southeastern U.S. By browsing the universities' websites and public directories, the email addresses of faculty who hold educational degrees in Asia and self-identified as foreign-born Asians were obtained. The institutions and corresponding number of faculty members who were contacted for the study are listed in Table 3.1. To further exclude participants who did not meet the inclusion criteria, the required background of the participants, i.e. tenured and tenure-track, and foreign-born Asian, was clearly mentioned in the survey cover letter. In addition, based on answers in the demographics session of the instrument, only one participant who self-identified as non-tenure-track faculty was excluded.

Table 3.1

States, Institutions, and Faculty Number in the Sample

States	Institution	Faculty Number	Participants	Response Rate
Alabama	Auburn University	106	15	14%
	University of Alabama at Birmingham	62	9	15%
	University of Alabama	74	8	11%
Florida	University of Florida	31	7	23%
	Florida International University	50	3	6%
	University of South Florida	167	12	7%
	Florida State University	159	14	9%
Georgia	Georgia State University	56	3	5%
	Georgia Institute of Technology	219	13	6%
	University of Georgia	135	19	14%
	Georgia Southern University	79	5	6%
Kentucky	University of Kentucky	46	7	7%
	University of Louisville	41	6	6%
Mississippi	University of Mississippi	41	6	15%
	University of Southern Mississippi	35	3	9%
	Mississippi State University	103	12	12%

North Carolina	North Carolina State University	85	6	7%
	University of North Carolina at Chapel Hill	46	10	22%
South Carolina	University of South Carolina-Columbia	147	15	10%
	Clemson University	110	10	9%
Tennessee	University of Memphis	63	6	10%
	University of Tennessee, Knoxville	94	8	9%
Virginia	Old Dominion University	80	3	4%
	Virginia Commonwealth University	72	8	11%
	University of Virginia	51	2	4%
	Virginia Polytechnic Institute and State University	155	14	9%
West Virginia	West Virginia University	72	7	10%
Arkansas	University of Arkansas Main Campus	72	12	17%
Louisiana	Louisiana State University and Agricultural and Mechanical College	91	8	9%
Total Number		2,542	251	10%

As a result, 251 participants with a 10% of response rate replied the survey. Through the data screening and deleting cases with more than 75% missing values, a total of 194 responses were included in the data analysis. It was consistent with the past studies (Sax, Gilmartin, & Bryant, 2003; Schonlau, Fricker, & Elliott, 2016) that found surprisingly low response rates among Asians, Asian Americans, and university faculty asked to participate to studies via online surveys. Besides, the study used structural equation modeling, which mainly focus on determining relationships among constructs (Hoyle, 2012). Once the sample size meets the minimum requirement, it is reasonable to interpret the result based on valid responses. Furthermore, in order to prove that eliminating cases did not mislead the data analysis and final result, the means of intrinsic, extrinsic, and overall job satisfaction in all cases with 251 responses and non-missing cases with 194 responses were compared using paired sample t-test. If the difference is not significant, it indicates that the removal of cases does not distort the result (Enders, 2010).

Instrumentation

Four questionnaires were used in this study. The questionnaires are: (1) the short form Minnesota Satisfaction Questionnaire, (2) The Composite Coping Measure, (3) Attributional Style Questionnaire,

and (4) Vancouver Index of Acculturation. A description and accompanying details are provided for each questionnaire.

Job Satisfaction

In this study, the Minnesota Satisfaction Questionnaire (MSQ) short form (Weiss et al., 1967) was adapted to measure job satisfaction. The MSQ was developed in the Work Adjustment Project at the University of Minnesota in 1957. It was designed as a diagnostic tool for assessing the work adjustment. Weiss et al. (1967) stated that the MSQ was developed based on the theory of work adjustment, indicating job satisfaction originating from the correspondence between the person and the environment. Job satisfaction in the instrument is defined as the positive emotional state or attitude deriving from the approval of internal and external factors of one's job (Weiss et al., 1967).

The MSQ measures two subscales of job satisfaction, intrinsic satisfaction and extrinsic satisfaction (Weiss et al., 1967). Items measuring intrinsic satisfaction refer to personal reinforcers, whereas those measuring extrinsic satisfaction refer to environmental reinforcers. The respondent needs to indicate the level of satisfaction he or she is with the reinforcer on the present job (Weiss et al., 1967). Specifically, intrinsic satisfaction items include ability utilization, achievement, activity, advancement, compensation, co-workers, creativity, independence, moral values, social service, social status, and working conditions. Extrinsic satisfaction items include authority, company policies and practices, recognition, responsibility, security, supervision-human relations, supervision-technical, and variety (Weiss et al., 1967).

The questionnaire is written on a fifth-grade knowledge level (Weiss et al., 1967). The short form includes 20 items (Weiss et al., 1967). It requires about 5 minutes to complete, while the long form includes 100 items and requires about 20 minutes to finish. According to Yammarino, Skinner, and Childers (1991), long questionnaires may decrease response rate. It is also recommended to use reduced-length versions of questionnaires when scales are validated (Staton, Sinar, Balzer, & Smith, 2002). The

short form has been validated and used repeatedly in research studies. Therefore, the short form, instead of the long form, was used to assess job satisfaction in this study.

Responses are measured on a 5-point Likert scale (1= *very dissatisfied*, 2= *dissatisfied*, 3= *neither satisfied nor dissatisfied*, 4= *satisfied*, and 5= *very satisfied*) (Weiss et al., 1967). Intrinsic satisfaction involves 12 items, and one example is "Being able to keep busy all the time". Extrinsic satisfaction involves 8 items, and an example is "My pay and the amount of work I do". Mean values of intrinsic and extrinsic satisfaction were obtained to analyze the measurement and structural model. Therefore, the possible score of each dimension of job satisfaction ranged from 1.00 to 5.00. In addition, to identify the level of job satisfaction, Weiss et al.'s (1967) scoring thresholds were used. A percentage score of 75 or higher represents a high degree of satisfaction; a percentage score of 25 or lower represents a low level of satisfaction; and a percentile score ranging from 26 to 74 represents a medium level of satisfaction (Weiss et al., 1967). In other words, the mean value of 2.00 or lower represents a low level of satisfaction, a mean value between 2.04 and 3.96 represents a medium level of satisfaction, and a mean value of 4.00 and above represents a high level of satisfaction.

In addition, permission to use MSQ and modification in items were requested to ensure the instrument was appropriate for Asian faculty in the professoriate. Johnson (2004) and Cypert (2009) also requested for changes in the use of MSQ. The following questions should be changed to reflect the university setting:

1. Question 4: Change from "The chance to be 'somebody' in the community" to "The chance to be "somebody" in the university".
2. Question 5: Change from "The way my boss handles his/her workers" to "The way my dean gets along with his/her colleagues".
3. Question 6: Change from "The competence of my supervisor in making decisions" to "The competence of my dean in making decisions".

4. Questions 12: Change from “The way company policies are put into practice” to “The way university policies are put into practice”.

According to Weiss et al. (1967), the MSQ short form has been administered among assemblers, clerks, engineers, janitors and maintenance men, machinists, and salesmen. The reliability coefficient ranges from .84 to .91 for intrinsic satisfaction, .77 to .82 for extrinsic satisfaction, and .87 to .92 for the overall instrument (Weiss et al., 1967). MSQ short form has also been used under an Asian context. For example, Hsiu-Chin, Beck, and Amos (2005) examined job satisfaction of 286 full-time nursing faculty and director in Taiwan by using Chinese 20-item MSQ, and gained Cronbach’s alpha of .91 in intrinsic satisfaction, .88 in extrinsic satisfaction, and .80 in overall satisfaction. Liu (2016) investigated the mediating effect of social support on emotional intelligence and job satisfaction with a sample of 355 Chinese employees using MSQ-short form. The Cronbach’s alpha of job satisfaction was .89 and demonstrated a theory-consistent association with emotional intelligence and social support. In addition, Happ and Yoder (1991) examined job satisfaction of 325 full-time faculty at the 14 Pennsylvania two-year community colleges, and Cronbach’s alpha for MSQ scales was .87. In the current study, the reliability coefficients of intrinsic (.90) and extrinsic satisfaction (.84) were acceptable. The Cronbach’s alpha of the overall job satisfaction was .93.

Explanatory Style

Explanatory style was measured by Attributional Style Questionnaire (ASQ; Seligman, 1984), which was designed to determine the way of an individual explains the causes of life events. The ASQ asks respondents to imagine that they are experiencing 12 situations, 6 bad and 6 good, and write down an explanation for each event. One example of a situation is “You plan a professional development workshop for your colleagues and it goes badly”. Then respondents need to answer three questions on a Likert scale of 1 to 7 to indicate three dimension of explanatory styles: internality (“it’s due to me” or “it’s due to the situation”); globality (“it influences just this particular situation” or “it influences all situations in my life”); and stability (“it will never be present again” or “it will always be present”). The

composite scores of explanatory styles for positive events and negative events are the average scores of internality, globality, and stability scores in positive events and negative events, respectively. Therefore, the scores of explanatory styles for positive and negative events ranged from 1 to 7. A higher score indicates a higher level of explanatory style for the corresponding event. In order to adapt the instrument to Asian faculty in this study, the instrument was modified to reflect faculty-specific situations. Fineburg (2010) also developed an adapted instrument by modifying situation. For example, "You apply for a job that you want very badly, and you get it" in ASQ was changed to "You apply for a faculty position that you want very badly, and you get it".

The internal consistencies of ASQ items were acceptable in previous study. For example, Smith and Hall (1999) studied the impact of years of teaching on explanatory style of secondary family and consumer sciences teachers in Georgia. With 47 respondents, the research obtained acceptable reliabilities of .76 in composite explanatory styles score. Fineburg (2010) obtained a new version of ASQ to fit the background of educators by adjusting the original ASQ, and named it Educator Attributional Style Questionnaire (EDASQ). The study examined explanatory style of a group of 169 teachers from elementary, middle, and high schools by using the original ASQ as well as adapted Educator ASQ. In ASQ, the composite explanatory style in positive and negative events had alpha coefficients of .73 and .82, respectively. In EDASQ, a reliability with Cronbach's alpha of .84 for positive events and .72 for negative events were obtained. Mark and Smith (2012) used ASQ to examine effects of explanatory style for positive and negative events on job satisfaction of a sample of 307 university employees. The Cronbach's alphas of explanatory style was .78 and significant relationships between coping strategies, job satisfaction, and explanatory style for positive and negative events were found. In the current study, the alpha coefficient of explanatory styles for positive events was .69 and negative events .67.

Acculturation

Vancouver Index of Acculturation (VIA; Ryder et al., 2000), a bidimensional measure of acculturation, was used to examine the level of acculturation in the study. It was designed to measure the

heritage and mainstream dimensions of acculturation (Ryder, Alden, & Paulhus, 1999). It consists of 20 items with two subscales: 10 items for mainstream culture and 10 items for heritage culture (Ryder et al., 2000). Items in VIA assess ethnic and mainstream behaviors, participation, enjoyment, multicultural attitudes, values, and social affiliation (Hwang & Ting, 2008). Authors indicated that researchers need to change descriptors in both mainstream and heritage cultures, for instance, change "mainstream" to "American" and "heritage" to "Asian" in this study (Ryder et al., 2000). One example of heritage subscale is "I enjoy the jokes and humor of Asian culture", and one example of mainstream subscale is "I enjoy white American jokes and humor". Respondents are asked to answer on a 9-point Likert scale (1= *strongly disagree*, 9= *strongly agree*).

According to several studies, internal consistency of VIA is strong (Hwang & Ting, 2008; Ryder et al., 2000). Ryder et al. (2000) reported the heritage (.91) and mainstream (.89) dimensions were highly internally consistent among Chinese Asians and the heritage (.92) and mainstream (.85) dimensions of non-Chinese East Asian. In addition, Hwang and Ting (2008) reported both dimensions yielded high Cronbach's alpha (.89) in Asian Americans. In addition, Ryder et al. (2000) indicated VIA has strong concurrent validity by evaluating the percentage of time the person living in a Western country, percentage of time educated in a Western country, whether they plan to return to the country of origin, and English proficiency. It also has good concurrent validity with scores on the Suinn-Lew Asian Self-Identity Acculturation scale, a unidimensional measure of acculturation (Ryder et al., 2000). In the current study, the internal consistency of Asian (.82) and American (.77) cultural orientations were acceptable. Acculturation had a strong internal consistency with Cronbach's alpha of .83.

Coping Strategies

The Composite Coping Measure (CCM), which was developed by Zhang (2000), was used to measure coping strategies in this study. The CCM originally was composed of 24 items from a revised version of the Ways of Coping Scale (WOC; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986), 5 items from the Chinese Ways of Coping Scale (Chan, 1994), 3 items from Relationship-focused

Coping (O'Brien & DeLongis, 1996), and 11 collective coping items that were generated from a literature review (Zhang, 2000). Zhang (2000) tested the instrument among 228 overseas Chinese professionals who were born in the People's Republic of China, Hong Kong, Taiwan, Indonesia, and Singapore. Factor analysis with Oblimin rotation was used to examine the factor structure of coping. Results revealed that thirty-three items were retained and coping strategies were classified as engagement coping with 11 items, disengagement coping with 9 items, and collective coping with 13 items.

There are several reasons to choose the CCM. The first reason is that it was developed to assess coping strategies of overseas Chinses professionals in relation to Asian culture. Compared with coping questionnaires which were developed based on the western culture (Lazarus, 1991), the CCM would provide a specific measurement of coping strategies of Asian faculty in this study. Furthermore, the construct measured by the CCM aligns with the definition of coping strategies in the study. By contrast, WOC, developed by Folkman and Lazarus (1985), contained a total of 67 items with eight dimensions of coping strategies. COPE Inventory, developed by Carver (1997), contained 60 items with 15 dimensions of coping strategies. Both questionnaires require participants to complete with longer periods of time. Therefore, the CCM was considered as an appropriate measurement of coping in the present study.

In addition, in order to test the ability of the CCM in assessing coping strategies of Asian faculty in the U.S., the content validity of the questionnaire was validated in the pilot study. According to Zhang (2000), CCM was tested among overseas Chinese professionals. However, items were developed under a cultural context of collectivism, which is defined as a general cultural tendency of Asian countries (Hofstede, 1980). For example, "Spoke out for the benefit of my group" was developed based on Ho and Chiu's (1994) research on collectivism responsibility, that is, the group value is the priority for individuals. And "Tried to confirm that my feelings were similar to those of other people in my group" was based on the collectivism theory that individuals need to conform to group norms and keep harmony.

In the CCM, engagement coping is defined as a coping strategy used by employees who express themselves or actively solve problems. One example is "Changed or grew as a person in a good way".

Disengagement coping is a strategy when employees withdraw themselves or emotionally disconnect with the situation when they meet problems. One example is "Refused to get too serious about the situation; tried to laugh about it". Collective coping is defined as cognitive and behavioral activities that stress the importance of relationships with employees' ingroup members (Zhang, 2000). One example is "Talked to someone from my group of people about the situation".

At the beginning of the questionnaire, respondents were asked to think about the most stressful events experienced in the past week and respond on a 4-point Likert-type scale (1= *Does not apply or used*, 2= *Used somewhat*, 3= *Used quite a bit*, and 4= *Used a great deal*). The mean score of each dimension was obtained, and the possible score of each coping strategy ranged from 1.00-4.00. A higher score means a higher frequency of engagement, disengagement, and collective coping that are used by the participant, respectively. Internal consistency was acceptable for each subscale, namely, Cronbach's alphas of .90 in collective coping, .78 for engagement coping, and .70 for disengagement coping (Zhang, 2000). Significant relationship between coping strategies and self-efficacy appraisal was found in Zhang's (2000) study. The Cronbach's alpha of disengagement coping was .28 in the pilot study, suggesting that participants had variabilities in using disengagement coping. The variable was removed from the survey and model. In the end, the Cronbach's alphas of engagement and collective coping were .52, and .76, respectively.

Demographics

Demographic data was collected to implement information that has not been involved in instruments mentioned above. Personal and professional characteristics were sought including gender, country of origin, total years living in the U.S., total years working in the current institute, total working hours each week, job title, and research focus areas. Descriptive analysis was conducted to examine the distribution of the demographic variables. Demographic data was not included in structural equation modeling.

The Development of the Instrument and Pilot Study

The process to develop and validate the instrument was necessary for this study. According to Johnson and Christensen (2016), it is important to determine if the instrument operates properly before it is used in data collection. First, the think-aloud technique with a panel of content experts was adopted to test the content validity. Think-aloud technique requires participants to verbalize their thoughts and perceptions when they are browsing the instrument (Johnson & Christensen, 2016). It is used to refine item wording and delete improper items by taking account of research purpose, questions, and potential participants' backgrounds. A panel of eight content experts including one foreign-born Asian tenured and tenure-track faculty member, three foreign-born Asian doctoral candidates in the College of Education, two foreign-born Asian doctoral candidates in other social science fields, and one foreign-born Asian doctoral candidate in natural science in the University of Georgia were invited. Since they had similar backgrounds with the population in the study and strong content knowledge about survey research, they were qualified to be content experts.

Participants were asked to answer two questions after research objectives, questions, and variables in the study were introduced. The first question was that does the item clearly and precisely define the nature of the corresponding variable. If the answer to the first one was yes, the participant was asked to answer the second question, that is, how to reword the item or is it better to delete the item. In this process, every participant was asked to verbalize the answer and provide reasons for deleting or adjusting items. Based on their results, items with four or more agreements that should be deleted were removed from the instrument. After deletion and refinement of items, 68 items were included and the validity was further tested in the pilot study.

After the refinement of items, a pilot study was conducted to further establish the content validity and improve questions (Creswell, 2014). In order to validate the instrument, another panel of ten content

experts, consists of Asian doctoral students and faculty at the University of Georgia, were invited to review and evaluate the instrument. The pilot study aimed at examining whether the content of the instrument was clear to participants, whether additional information was needed, and whether the data collection method worked in this study. In addition, the pilot study was conducted the same as the main study. The internal consistency of each scale was tested (Appendix C). Since the Cronbach's alpha of disengagement coping was not acceptable, the variable was removed from the survey. Eventually, 10 items in the CCM, 30 items in ASQ, and 10 items in VIA were removed and the remaining 68 items of original 113 items were included in the formal study.

Procedure

The Institutional Review Board (IRB) approval was sought from the University of Georgia Office of the Vice President for Research (IRB, Appendix A). Once UGA IRB approval was obtained, data collection began. Letters seeking permission to use and modify each questionnaire were sent to authors (Appendix B). Since the study adopted online survey method, all the documents, letters, and instruments were sent through email. The administration of survey was conducted through the following steps. Upon receiving IRB approval, email addresses of Asian faculty in selected public research institutions in the Southeast were collected and compiled into a document. An examination of their names and facial features, if a profile picture was available, were used to distinguish as Asians. Last names also served as indicators of Asian heritage. For example, "Chen", "Guo", and "Lu" are indicators of Chinese and Taiwanese heritage. "Choi" and "Lee" are indicators of Korean heritage. Brief introductions of faculty were used to indicate their educational backgrounds and heritage. To control for misidentification, the invitation letter explicitly stated that this study sought only foreign-born Asians' participation.

The first contact email (Appendix D) with a link to the cover letter (Appendix E) and the questionnaires (Appendix F) in Qualtrics was sent to all potential participants. The aim of the first contact email was to briefly introduce the purpose of the study and request their willingness of participation. Second, a first follow-up email (Appendix G), which aimed at reminding people who did not responded,

was sent to all the members of the sample 14 days after the initial questionnaire (Creswell, 2014). Third, the second round of follow-up reminder (see Appendix H) was sent two weeks after the previous step (Creswell, 2014).

All the information regarding personal information of participants in the study and their responses, which were highly private, were held confidential. This information was not reported or shared with other people who were outside of the research team. In addition, no attribution was made to them in future publication of results. All the participants were encouraged to contact with me about questions of the research and future difficulties that would be associated with the participation in the current study. Table 3.2 is the procedure of data collection.

Table 3.2

Data Collection and Survey Administration Procedure

1. Identified constructs of interest and developed an initial pool of items
2. Invited content experts to review and delete items
3. Submitted and Received IRB approval
4. Asked permission from authors
5. Pilot study
6. Sent first contact email with survey link, including cover letter and questionnaires
7. Second round follow-up reminder
8. Closed access to electronic survey

Structural Equation Modeling

Structural equation modeling (SEM) was performed using Mplus version 7 (Muthén & Muthén, 2015) to examine the measurement model and the structural model. SEM is a statistical technique to examine, modify, and evaluate relationships among variables, hypothesized by a theoretical model (Schumacker & Lomax, 2010). Specifically, it can determine the extent to which a construct is defined by a set of variables and relationships among those constructs by using quantitative analysis (Schumacker & Lomax, 2010). Therefore, the purpose of SEM is to examine whether a hypothesized model is supported by the sample data. If the theoretical model is not supported by the data, the model can be modified and

retested by SEM, or a more accurate model can be developed. If the theoretical model is supported by the data, this model is good and more complex models can be built based on this model (Schumacker & Lomax, 2010).

Compared with other statistical techniques, such as correlation, multiple regression, and analysis of variance (ANOVA), SEM has an advantage to estimate and test the interrelationships among constructs (Byrne, 2001). More specifically, correlation, multiple regression, and ANOVA can only test constructs through one measure and cannot model measurement error, which is the difference between the outcome of a measurement from the true value. By contrast, SEM has the capacity to use multiple measures to represent constructs and reduce measurement error. It also benefits in establishing the construct validity of factors (Byrne, 2001). In addition, the significant results, calculated by SEM, involve various evaluations. In order to determine whether the model fits the data, SEM requires researchers to evaluate different test statistics and some fit indices (Byrne, 2001). Moreover, SEM provides ways for researchers to hypothesize and test direct and indirect relationships among multiple variables. In the current study, SEM was selected because (a) it meets the need to hypothesize and test measurement models and a structural equation model, (b) it makes it possible to control for the biasing effect of measurement error, (c) it can test models with multiple dependent variables, and (d) it is able to determine the best fitting model by comparing relative models (Kline, 2011). However, the main disadvantage of SEM is that it cannot give strong evidences for causal relationships (Hoyle, 2012).

Latent Variables

SEM makes it possible for researchers to assess the existence and strength of relationships between latent variables and corresponding indicators (Jöreskog, Sörbom, & Magidson, 1979). Latent variables, generally hypothetical constructs, are unobserved variables that cannot be directly measured and, instead, are represented by indicators. Indicators are observed variables that are caused by underlying factors and measurement errors and are used as indirect measures of latent variables.

SEM has an advantage in controlling the measurement error by linking latent variables to indicators through three ways: total disaggregation, partial disaggregation, and total aggregation with reliability correction (Coffman & MacCallum, 2005). Total disaggregation allows researchers to use each item for a scale as an indicator of the latent variable, partial disaggregation allows researchers to combine several items in the scale to form indicators, and total aggregation allows researchers to combine all of the items in a scale to form a single indicator and use the reliability correction method to control for random measurement error. Partial disaggregation models create parcels using the sum or average of the subsets of the items to indicate a latent variable based on the theory behind the scale (Kline, 2011). In this study, job satisfaction, a latent variable, was indicated by intrinsic and extrinsic satisfaction. Based on the theory of work adjustment (Dawis & Lofquist, 1984) and MSQ (Weiss et al., 1967), intrinsic job satisfaction was measured by items 1, 2, 4, 7, 9, 11, 13, 14, 16, 17, 18, and 20, while extrinsic job satisfaction was measured by items 3, 5, 6, 8, 10, 12, 15, and 19. Therefore, intrinsic and extrinsic job satisfaction, as two parcels of job satisfaction, were formed by averaging the corresponding items in the model. With this approach, the factor loadings between job satisfaction and intrinsic and extrinsic satisfaction, as well as unique variances of intrinsic and extrinsic satisfaction were estimated.

In addition, total aggregation with reliability correction was used for explanatory styles for positive and negative events, collective and engagement coping, and American and Asian cultural orientations by obtaining the average of their corresponding items in the scales. This approach is consistent with the current conceptualization of each variable as one construct with a composite score. It was suggested by Bollen (1989) to obtain a reliability estimate and use the estimate to calculate the value of unique variance. Specifically, the unique variance is (1−reliability estimate of the scale)×scale variance and uses the result as the fixed parameter. Therefore, the unique variance for the aggregated scale cannot be obtained, but it helps the researcher avoid assuming that no measurement error exists in the model (Williams & O'Boyle, 2008). The total aggregation model was used in the study because of its simplicity and capacity to capture and measure the essence of the underlying meaning of each concept.

Using a composite score for each variable also makes the reliability higher than single items. In addition, Coffman and MacCallum (2005) demonstrated that parameter estimates for a latent variable using parcels as indicators were similar to parameter estimates using the total aggregation with the reliability corrected approach.

Latent variables were created to represent explanatory styles for the positive and negative events, collective and engagement coping, and American and Asian cultural orientations with each latent variable being measured by its corresponding scale score and residual variance fixed to (1-scale reliability)×scale variance. The scale score for explanatory styles for positive and negative events were the average of the scores in positive events (items 1-3, 7-9, and 16-18) and negative events (items 4-6 and 10-15) in the Attributional Style Questionnaire (Peterson et al., 1982). Asian cultural orientation was the average of the scores of the corresponding five items (items 1, 3, 5, 7, 9), while American cultural orientation was the average of the scores of the other five items (items 2, 4, 6, 8 10) in the Vancouver Acculturation Index (Ryder et al., 2000). Engagement coping and collective coping were calculated by taking the mean value of items 1-5 and items 6-10 in the Composite Coping Measure (Zhang, 2000).

The measurement and structural models were two components that made up the structural equation modeling. In other words, SEM involved developing measurement models to define the relationships between the indicators and latent variables, as well as establishing the relationships among the latent variables to test the structural model (Jöreskog, 1993). The following section discusses the application of examining the measurement and structural models in the current study.

Measurement and Structural Model

Measurement model identifies the relationship between the latent variables and observed variables (Schumacker & Lomax, 2010). Confirmatory factor analysis (CFA) is commonly used in measurement model, and it is used when researchers have an a priori specified theoretical model (Hoyle, 2012). It can determine the statistical significance of the hypothesized factor model, that is, to what extent

are the observed variables measuring the hypothesized latent variable. The relationship between the observed variables and latent variables are indicated by factor loadings. The factor loadings provide the information on how good the observed variables measure the latent variable. The factor loading multiplying the observed variable score is the true score, indicating how much of the observed variable variance is valid (Schumacker & Lomax, 2010). The measurement error of the observed variable is the part of the observed variable and measures things other than the latent variable hypothesized by the model (Hoyle, 2012).

In the current study, the hypothesized measurement model based on the conceptual model was tested. CFA was used to test the accuracy of each measurement model and whether observed variables adequately measure corresponding latent variables. In the current study, job satisfaction was represented by intrinsic and extrinsic satisfaction using item parceling. Other variables were indicated by single indicator using the total aggregation model with reliability correction approach. This procedure is significant because the accuracy of measurement model influences the structural model and the final interpretation of results in the study (Jöreskog, 1993).

After determining that the measurement model is acceptable, the structural model is used to indicate relationships among latent variables (Schumacker & Lomax, 2010). Path analysis is used to test the structural model by involving one or more regression equations that theoretically establish relationships among latent variables in the structural model (Schumacker & Lomax, 2010). If the fit of the structural model is good, the hypothesized model is supported by the sample data. If the fit of the structural model is not good, the hypothesized model is not supported by the sample data and modification of the structural model is needed in the study (Schumacker & Lomax, 2010).

In the hypothesized diagram (see Figure 3.1) consisting of measurement model and structural model, the oval represented a latent variable, and the rectangle represents observed variables. A straight line from one variable, such as explanatory style for positive events, to the other variable, such as job satisfaction, represents direct effects, which means the direct influence of explanatory styles on job

satisfaction. A curved double-headed line from one variable to the other one represents covariance, which means the covariance between two variables. A small circle with a straight line to the observed variable is measurement error of the observed variable. In this study, direct effects between two dimensions of explanatory style and job satisfaction, dimensions of coping strategies and job satisfaction, as well as dimensions of acculturation and job satisfaction were tested by a structural model.

Furthermore, the indirect effect in the structural model is tested by path analysis. Mediating or indirect effect indicates an effect of one variable on the other variable, intervened by a mediator (Hoyle, 2012). If the indirect effect of an independent variable through the mediator is significant at level .05 and leads to a decline in the direct effect, the mediating effect is supported (Hoyle, 2012). In this study, acculturation and coping strategies served as mediators in paths from explanatory style to job satisfaction, respectively (Figure 1.1).

Several indices are commonly used to evaluate the model fit of the measurement and structural model (Hoyle, 2012; Schumacker & Lomax, 2010). Firstly, statistically non-significant chi-square and *p*-value indicate a well-fitting model, and vice versa. Secondly, root mean square error of approximation (RMSEA; .06 or less represents good fit; Steiger, 1990), the comparative fit index (CFI; .95 or higher indicates good fit; Bentler, 1990), and standardized root mean square residual (SRMR; .08 or less indicates good fit Hu & Bentler, 1999). The fit indices were used for the measurement model and the structural model in the study. The modification index in Mplus gives suggestions to improve the model (Muthén & Muthén, 2015). If the suggestion is consistent with the literature, it should be adopted.

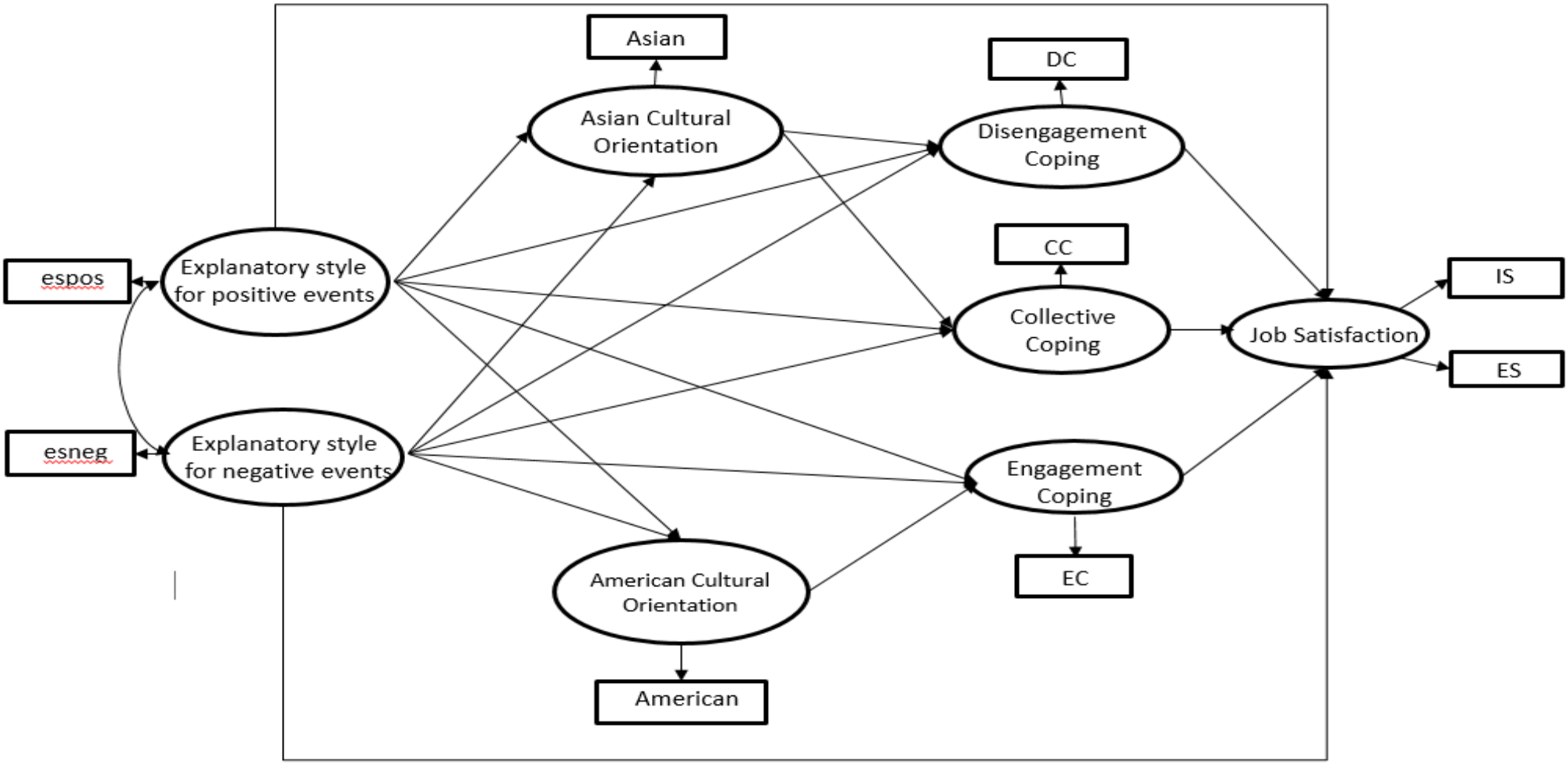

Figure 3.1. The hypothesized structural model of job satisfaction of foreign-born Asian faculty in the study. espos= explanatory style for positive events; esneg= explanatory style for negative events; Asian = Asian cultural orientation; American = American cultural orientation; DC=disengagement coping; EC = engagement coping; CC = collective coping; IS = intrinsic satisfaction; ES = extrinsic satisfaction.

However, the suggestion should not be considered if it is not consistent with the literature. In addition, when the model fit is good and the total indirect effect is significant, but specific indirect effects are not significant, researchers should focus more on the direct and specific indirect effects, instead of the total indirect effect (Hayes, 2013). The characters of variables and statistical procedure for each research question was identified in Table 3.3.

Table 3.3

Data Analysis Chart for Research Analysis

Research Questions	Variables		Statistical Procedure
	Independent Variables	Dependent Variables	
1. What are job satisfaction, explanatory styles, acculturation, and coping strategies of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?	Explanatory style for positive events, explanatory style for negative events	American and Asian cultural orientation, engagement and collective coping, job satisfaction	Descriptive statistics (mean, standard deviation, sample distribution)
2. Does the measurement model in the study well-represent the latent constructs?			CFA (chi-square, p-value, CFI, RMSEA, SRMR)

3. What is the plausible pattern of relationships among explanatory styles (i.e., for positive and negative events), acculturation (i.e., American and Asian cultural orientation), coping strategies (i.e., engagement, disengagement, and collective coping), and job satisfaction (i.e., intrinsic and extrinsic satisfaction) of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?			Path analysis (chi-square, p-value, CFI, RMSEA, SRMR factor loadings), model modification
a. Are explanatory styles for positive and negative events associated with job satisfaction?	Explanatory style for positive events, explanatory style for negative events	Job satisfaction	
b. Are explanatory styles for positive and negative events associated with American and Asian cultural orientation?	Explanatory style for positive events, explanatory style for negative events	American and Asian cultural orientation	
c. Are explanatory styles for positive and negative events associated with engagement, disengagement, and collective coping?	Explanatory style for positive events, explanatory style for negative events	Engagement and collective coping	
d. Are American and Asian cultural orientations associated with job satisfaction?	American and Asian cultural orientation	Job satisfaction	
e. Are American and Asian cultural orientations associated with engagement, disengagement, and collective coping?	American and Asian cultural orientation	Engagement and collective coping	

f. Are engagement, disengagement, and collective coping associated with job satisfaction?	Engagement and collective coping	Job satisfaction
g. If explanatory styles for positive and negative events are associated with job satisfaction, do American and Asian cultural orientations as well as engagement, disengagement, and collective coping serve as mediators to the relationship?	Explanatory style for positive events, explanatory style for negative events	American and Asian cultural orientation, engagement and collective coping, job satisfaction

SEM requires a large sample size to maintain the statistical power necessary to obtain significant parameter estimates and standard errors (Schumacker & Lomax, 2010). A large sample size allows researchers to obtain a chi-square value to reject the null hypothesis, so that they can give a reasonable conclusion as to whether the model fits the data. Different ways exist by which to decide the required sample size for SEM. For example, Anderson and Gerbing (1988) suggested that a sample size of 100 to 150 is the minimum number to conduct the data analysis. Bentler and Chou (1987) demonstrated that a ratio as low as five participants per observed variable would be sufficient to test the model when the data is normally distributed. Kline (2011) also introduced a ratio of at least 20 participants per parameter. According to these suggestions, it was reasonable for the current study to generate statistical inferences based on a sample of 194.

Additionally, the bootstrapping method was used to better estimate indirect effects. The method generates the sampling distribution by repeatedly sampling the original sample data, estimates the coefficients for each sample, averages the coefficients across all of the samples, and computes the 95% confidence intervals for the coefficients across all of the samples (Bollen & Stine, 1993). The effect whose 95% confidence interval does not include 0 is statistically significant, indicating a reliable relationship. An advantage of the bootstrap is that it estimates the standard errors via a nonparametric

approach, that is, it does not need to operate under the assumption of multivariate nonnormality (Nevitt & Hancock, 2001). Nevitt and Hancock (2001) also found that bootstrapped estimates were more stable and less inflated than maximum likelihood estimates when the sample size was 200 with nonnormal distribution. Therefore, the bootstrapping method with 10,000 samples was adopted by this study.

CHAPTER IV

RESULTS

The purpose of this study was to examine the job satisfaction of tenured and tenure-track Asian faculty in the U.S. as well as the effects of explanatory styles of positive and negative events on job satisfaction as mediated by American and Asian cultural orientations and engagement and collective coping. This chapter provides an analysis of the data obtained for the research objective and each research question. The data analysis techniques included descriptive statistics, a bivariate correlation, confirmatory factor analysis, and path analysis.

Demographics of the Participants

Descriptive statistics were calculated for the participant demographics (Table 4.1) by using SPSS (22.0). First, in order to demonstrate the homogeneity of the variance in the data, a one-way ANOVA was used to test whether significant differences existed among the participants according to different countries of origin, gender, job titles, years living in the U.S., academic areas, and hours worked each week. The results indicated that no significant differences existed in extrinsic ($F(5, 168) = .70$, $p = .63$) and intrinsic satisfaction ($F(5, 167) = 1.03$, $p = .40$) among participants from different countries. The levels of extrinsic satisfaction ($F(1, 186) = .35$, $p = .56$) and intrinsic satisfaction ($F(1, 186) = .41$, $p = .53$) did not have significant differences between male and female respondents. No significant differences existed in extrinsic ($F(3, 189) = .24$, $p = .87$) and intrinsic satisfaction ($F(3, 188) = .92$, $p = .43$) among participants who were assistant professors, associate professors, and professors. In addition, the differences in extrinsic and intrinsic satisfaction among the participants who lived in the U.S. for less than five years, five to 10 years, 11 to 20 years, 21 to 30 years, and more than 31 years were not statistically significant, $F(5, 186) = 1.62, p = .16$ for intrinsic satisfaction and $F(5, 187) = .88, p = .49$ for

extrinsic satisfaction. No significant differences were found among participants working in Science, Technology, Engineering, and Math (STEM), non-STEM, and both fields: $F(3, 189) = .76, p = .52$ in intrinsic satisfaction, $F(3, 188) = .91, p = .44$ in extrinsic satisfaction. Additionally, no significant differences existed in extrinsic satisfaction ($F(4, 188) = .64$, $p = .64$) and intrinsic satisfaction ($F(4, 187) = .36$, $p = .84$) among the participants who worked less than 40 hours, 41 to 50 hours, 51 to 60 hours, and more than 61 hours a week. Since no significant differences existed in the responses of the participants in terms of countries of origin, job titles, years living in the U.S., academic areas, and hours worked each week, the homogeneity of the variance in the extrinsic and intrinsic job satisfaction was met. The data set including responses of participants with different demographics were combined and the following data analysis was undertaken.

Second, the removal of cases did not affect the final result. Paired t-test was performed comparing mean scores of intrinsic, extrinsic, and overall job satisfactions using through SPSS 22.0. As predicted, intrinsic satisfaction in original dataset with a sample of 251 responses ($M = 3.83, SD = .61, N = 188$) was not significantly different from that in the final sample of 194 responses ($M = 3.80, SD = .63, N = 188$), $t(187) = .41$, $p > .05$. Extrinsic satisfaction in original dataset with a sample of 251 responses ($M = 3.66, SD = .64, N = 193$) was not significantly different from that in the final sample of 194 responses ($M = 3.63, SD = .65, N = 193$), $t(192) = .52$, $p > .05$. Overall job satisfaction in original dataset with a sample of 251 responses ($M = 3.76, SD = .60, N = 187$) was not significantly different from that in the final sample of 194 responses ($M = 3.73, SD = .62, N = 187$), $t(186) = .70$, $p > .05$. Therefore, cases with more than 75% missing values were eliminated from the dataset and it did not create biases in following data analysis.

The demographic information indicated that about 51.3% of the respondents were born in the People's Republic of China, 13.2% in India, 9.1% in South Korea, 8.6% in Taiwan, 3.0% in Japan, 3.6% in other Asian countries, and 11.2% not identified. About 80 (41.7%) assistant professors, 66 (34.4%) associate professors, and 46 (23.9%) professors participated in this study. More than half (77.1%) of the

respondents had lived in the U.S. for more than 11 years and about 39.6% of the respondents had worked at U.S. institutions for more than 11 years. Their average working hours per week ranged between 41 to 50 hours. In addition, among the respondents, 62.0% of faculty were working in areas of STEM 31.3% were focused on non-STEM areas, and 6.8% focused on both.

Table 4.1

Personal Characteristics of Participants and Mean of Overall Job Satisfaction

Variable	n	%	Mean (*SD*)
Countries of Origin			
People's Republic of China	101	51.3	3.75 (.56)
India	26	13.2	3.65 (.72)
South Korea	18	9.1	3.81 (.52)
Taiwan	17	8.6	3.40 (.84)
Japan	6	3.0	3.66 (.49)
Philippines, Vietnam, Singapore, Malaysia, Iran	7	3.6	4.07 (.47)
Not Identified	19	11.2	3.85 (.72)
Gender			
Male	125	64.4	3.71(.65)
Female	63	32.5	3.78(.60)
Job Title			
Assistant Professor	80	41.7	3.78 (.52)
Associate Professor	66	34.4	3.66 (.68)
Professor	46	23.9	3.72 (.74)
Years Lived in the U.S.			
0-5 years	7	3.6	3.78 (.68)
6-10 years	33	17.2	3.92 (.44)
11-20 years	82	42.7	3.70 (.57)
21-30 years	50	26.0	3.59 (.75)
31 years or more	20	10.4	3.83 (.74)
Academic Area			
Science, Technology, Engineering, and Math (STEM) focused	119	62.0	3.68 (.61)
Non-STEM focused	60	31.3	3.80 (.62)
Both	13	6.8	3.87 (.80)
Hours Worked Each Week			

Less than 40 hours	26	13.5	3.73 (.75)
41-50 hours	81	42.2	3.74 (.58)
51-60 hours	46	24.0	3.77 (.51)
61 hours or more	39	20.3	3.64 (.77)
Total	194	100	3.73 (.62)

Research Question Findings

Research Question 1: What are job satisfaction, explanatory styles, acculturation, and coping strategies of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?

In order to answer this question, two steps were completed. The first step was to introduce how each observed variable was obtained based on the literature and instrument. In this study, each observed variable was calculated by taking the mean value of the corresponding items in the scale. The second step was to describe the characteristics of the observed variables, including the ranges, means, variances, and standard deviations (Table 4.2).

In the current study, the participants had a mean score for the explanatory style for positive events of 5.22 ($SD = .69$) with a range from 3.00 to 6.89. The mean score for the explanatory style for negative events was 3.75 ($SD = .79$) with a range of 1.44 to 6.00. The possible ranges for explanatory styles for positive and negative events were 1.00 to 7.00. Therefore, the results indicated that the participants tended to have positive explanatory styles when they encountered good events. When bad events happened, the participants were not likely to explain the causes in negative ways.

As shown in Table 4.2, the average rating for Asian cultural orientation was 5.74 ($SD = .79$), which ranged from 1.80 to 7.00 on a scale of 1.00 to 7.00. In addition, the average rating for American cultural orientation was 5.34 ($SD = .80$), which ranged from 2.60 to 7.00 on a scale of 1.00 to 7.00. The results indicated that the participants retained their Asian cultures while assimilating with the American culture simultaneously at high levels.

The mean score for engagement coping was 3.06 ($SD = .48$) with a range from 2.00 to 4.00. The average score for collective coping was 2.54 ($SD = .68$) with a range from 1.00 to 4.00. Therefore, the participants in this study had stronger tendencies to use engagement coping than collective coping.

The possible score for intrinsic and extrinsic satisfaction ranged from 1.00 to 5.00. In the study, intrinsic job satisfaction had a higher mean value ($M = 3.79$, $SD = .65$) than extrinsic job satisfaction ($M = 3.63$, $SD = .65$). The total mean score for job satisfaction was 3.73 with a standard deviation of .62. Based on previous literature, a mean value of 2.00 or lower represented a low level of satisfaction, a mean value between 2.01and 3.99 represented a medium level of satisfaction, and a mean value of 4.00 and above represented a high level of satisfaction. Therefore, 2.6% of the participants had a low level of extrinsic satisfaction, 73.9% of the participants had a medium level of extrinsic satisfaction, and 23.5% of the participants had a high level of extrinsic satisfaction. Meanwhile, 5.6% of the participants had a low level of intrinsic satisfaction, 12.8% of the participants had a high level of intrinsic satisfaction, and 81.6% of the participants had a medium level of intrinsic satisfaction.

Correlation among the Variables

The correlation among the variables was generated for the observed composite variables included in the SEM model (Table 4.2). First, multicollinearity was examined. In the current study, the correlations of the independent variables and mediators were tested. No correlation existed between the two variables above .85 or .90, indicating that the independent variables were not strongly correlated. In addition, the variation inflation factor (VIF) of each independent variable was examined. Based on Table 4.2, the VIF of each independent variable was below 4.00. Therefore, multicollinearity did not exist.

Explanatory style for positive events, Asian cultural orientation, American cultural orientation, and collective coping were significantly related to intrinsic and extrinsic satisfaction at the $p < .01$ level. Additionally, engagement coping was positively related to extrinsic job satisfaction and American and Asian cultural orientation at the $p < .05$ or $p < .01$ level. Explanatory style for positive events was

positively related to Asian cultural orientation at the $p < .05$ level. In addition, explanatory style for negative events was not significantly related to the other variables.

Table 4.2

Ranges, Means, Standard Deviation, Variance, and Bivariate Correlations among Observed Variables in the SEM Model ($n = 194$)

Variables	1	2	3	4	5	6	7	8
Single Indicator								
1. ESPOS	-							
2. ESNEG	.24*	-						
3. Asian	.26*	-.02	-					
4. American	.13	-.10	.42**	-				
5. EC	.10	-.09	.20**	.26**	-			
6. CC	.12	-.07	.10	.22**	.42**	-		
Job satisfaction								
7. IS	.21**	-.13	.43**	.43**	.13	.27**	-	
8. ES	.24**	-.09	.42**	.44**	.17*	.28**	.86**	-
Mean	5.22	3.75	5.74	5.34	3.06	2.54	3.79	3.63
SD	.69	.79	.74	.8	.48	.68	.64	.65
Minimum	3.00	1.44	1.80	2.60	2.00	1.00	1.80	1.63
Maximum	6.89	6.00	7.00	7.00	4.00	4.00	5.00	5.00
VIF	1.28	1.23	1.20	1.11	1.23	1.18	-	-

Note. $*p < .05$ $**p < .01$; ESPOS= explanatory style for positive events; ESNEG= explanatory style for negative events; Asian = Asian cultural orientation; American = American cultural orientation; EC = engagement coping; CC = collective coping; IS = intrinsic satisfaction; ES = extrinsic satisfaction.

Research Question 2: Does the measurement model in the study well-represent the latent constructs?

In the next step in examining the measurement model, items on each scale were evaluated in order to verify whether they accurately represented the latent constructs being measured. Before testing the measurement model, the normality of each variable was examined. Univariate normality was examined using skewness (Joanes & Gill, 1988), kurtosis (Balanda & MacGillivray, 1988), and Shapiro-Wilk's (Shapiro & Wilk, 1965) test. Multivariate normality was examined using Henze-Zirkler's (Henze

& Zirkler, 1990) test in the R version of the MVN package (Korkmaz, Goksuluk, & Zararsiz, 2014). The test statistics and *p*-value of each test are presented in Table 4.3. Skewness, which measures symmetrical distribution, indicates a normal distribution with a range between -1.00 and 1.00. Kurtosis, which measures the shape of the distribution, indicates normality within the range of -3.00 to 3.00. Therefore, skewness and kurtosis signaled a normal distribution in the current study. However, based on Shapiro-Wilk's test, explanatory styles for positive and negative events were univariate normal ($p > .05$), while the other variables were not univariate normal ($p < .05$). Further, in Henze-Zirkler's test, the multivariate hypothesis tests of all of the observed variables were significant, indicating that the data were not multivariate normal. After evaluating all of the test statistics, it was determined that the data in the current study were not multivariately normally distributed. Since the bootstrapping method can operate under the nonnormal condition, it would support the subsequent confirmatory factor analysis and path analysis to approximate the parameter estimates and better estimate the indirect effects.

Table 4.3

Univariate and Multivariate Normality Tests for Variables in the SEM Model

Variables	Skewness	Kurtosis	Shapiro-Wilk's test		Henze-Zirkler's test	
			Test Statistics	*p*	Test Statistics	*p*
EC	-.31	.06	.09	<.001	1.55	<.001
CC	-.06	-.59	.98	.022	1.65	<.001
Asian	-.47	.24	.94	<.001	6.38	<.001
American	-.52	.25	.97	<.001	3.13	<.001
ESPOS	-.07	-.04	.99	.39	1.12	<.001
ESNEG	-.05	.39	.99	.30	1.24	<.001
IS	-.02	-.22	.96	<.001	1.69	<.001
ES	-.16	-.07	.96	<.001	1.84	<.001

Note. ESPOS= explanatory style for positive events; ESNEG= explanatory style for negative events; Asian = Asian cultural orientation; American = American cultural orientation; EC = engagement coping; CC = collective coping; IS = intrinsic satisfaction; ES = extrinsic satisfaction.

The measurement model in the study was examined using a confirmatory factor analysis (CFA) with 10,000 bootstrap samples in Mplus 7.11 (Muthen & Muthen, 2013). In the current study, job

satisfaction was indicated by intrinsic and extrinsic satisfaction. One factor loading for the construct was fixed to 1 by the default of Mplus and the other loading was freely estimated. Explanatory styles for the positive and negative events, collective and engagement coping, and American and Asian cultural orientations were latent variables being measured by its corresponding scale score and residual variance fixed to (1-scale reliability)×scale variance. In addition, the parameter estimates of the explanatory style for positive and negative events, engagement and collective coping, and American and Asian cultural orientations were fixed to 1.

Several fit indices were used to evaluate the model fit: root mean square error of approximation (RMSEA) (Steiger, 1990), the comparative fit index (CFI) (Bentler, 1990), and standardized root mean square residual (SRMR) (Hu & Bentler, 1999). If the RMSEA is less than .05, CFI is larger than .95, and SRMR is less than .08, then the model is typically considered a good fit. The measurement model had a good fit to the data: RMSEA=.00, 90% confidence interval [CI] = .00 to .06, CFI=1.00, and SRMR=.01. The unstandardized and standardized parameter estimates, variances, and residuals variances in the measurement model are presented in Table 4.4. With a good fit of measurement model to the data, the following analysis in regard to the structural model was conducted.

Table 4.4

Unstandardized Estimates and 95% Confidence Interval of Confirmatory Factor Analysis for the Measurement Model in the Study

Parameter	Unstandardized Estimate	*SE*	Standardized Estimate
Factor loadings			
JS→ ES	1.00***	.00	.95
JS→ IS	.92***	.02	.90
Variances			
Var_{Asian}	.44	.06	1.00
$Var_{American}$	.48	.07	1.00
Var_{EC}	.12	.02	1.00
Var_{CC}	.35	.04	1.00
Var_{ESPOS}	.33	.05	1.00

Var_{ESNEG}	.41	.07	1.00
Var_{JS}	.38	.06	1.00
Residual variances			
E_{Asian}	.10	.00	.18
$E_{American}$	.15	.00	.23
E_{EC}	.11	.00	.48
E_{CC}	.11	.00	.24
E_{ESPOS}	.15	.00	.31
E_{ESNEG}	.20	.00	.33
E_{IS}	.08	.08	.20
E_{ES}	.04	.04	.10

Note. $*p < .05$ $**p < .01$; ESPOS= explanatory style for positive events; ESNEG= explanatory style for negative events; Asian = Asian cultural orientation; American = American cultural orientation; EC = engagement coping; CC = collective coping; IS = intrinsic satisfaction; ES = extrinsic satisfaction.

Research Question 3: What is the plausible pattern of relationships among explanatory styles (i.e., for positive and negative events), acculturation (i.e., American and Asian cultural orientation), coping strategies (i.e., engagement, disengagement, and collective coping), and job satisfaction (i.e., intrinsic and extrinsic satisfaction) of foreign-born, tenured and tenure-track, Asian faculty at Research 1: Doctoral Universities in the U.S.?

A path analysis with 10,000 bootstrap samples was used to examine the direct and indirect effects in the hypothesized structural model. First, in order to examine whether indirect effects exist, tests of direct effects of predictors on the criteria variables were required (Frazier, Tix, & Barron, 2004). The fit indices indicated an adequate model for the data:$\chi^2(7) = 9.89$, $p = .19$, RMSEA= .04, 90% confidence interval [CI] = .00 - .11, CFI= .99, and SRMR= .02. Figure 4.1 shows the structural coefficients of the model. The model explained an adequate amount of the sample variation for job satisfaction ($R^2 = .38$). In addition, 19% of the sample variation in engagement coping, 6% of the sample variation in collective coping, 14% of the sample variation in Asian cultural orientation, and 9% of the sample variation in American cultural orientation were explained by the model. There was no modification in the full structural model since the modification index did not give any suggestions. Table 4.5 shows the

unstandardized and standardized indirect effects of each variable, the corresponding standard errors, and 95% confidence interval based on the bootstrapping method.

Table 4.5

Unstandardized Estimates and 95% Confidence Interval of Indirect Effects in the Complete Hypothesized Structural Model

Indirect Effects	Unstandardized Estimate	*SE*	95% CI
ESPOS → Asian → JS	.05	.13	[-.10, .15]
ESPOS → American → JS	.07*	.08	[.01, .24]
ESPOS → EC → JS	-.03	.12	[-.30, .06]
ESPOS → CC → JS	.02	.10	[-.06, .16]
ESPOS → Asian → CC → JS	.01	.05	[-.03, .06]
ESPOS → American → EC → JS	-.01	.04	[-.10, .02]
ESNEG → Asian → JS	-.02	.11	[-.08, .05]
ESNEG → American → JS	-.07*	.06	[-.20, -.01]
ESNEG → EC → JS	.03	.11	[-.05, .04]
ESNEG → CC → JS	-.02	.11	[-.13, .04]
ESNEG → Asian → CC → JS	-.02	.04	[-.03, .01]
ESNEG → American → EC → JS	.01	.03	[-.03, .08]

Note. $*p < .05$ $**p < .01$; ESPOS= explanatory style for positive events; ESNEG= explanatory style for negative events; Asian = Asian cultural orientation; American = American cultural orientation; EC = engagement coping; CC = collective coping; JS = job satisfaction; IS = intrinsic satisfaction; ES = extrinsic satisfaction.

The explanatory style for the positive events directly influenced Asian cultural orientation ($r = .47$, 95% CI $= [.20, .86]$), American cultural orientation ($r = .31$, 95% CI $= [.02, .69]$), and job satisfaction ($r = .29$, 95% CI $= [.06, .75]$). The explanatory style for negative events had a significant direct effect on American cultural orientation ($r = -.30$, 95% CI $= [-.66, -.08]$). Job satisfaction was directly influenced by American cultural orientation ($r = .23$, 95% CI $= [.06, .52]$). In addition, American cultural orientation had a positive mediating effect on the relationship between the explanatory style for positive events and job satisfaction ($r = .07$, 95% CI $= [.01, .24]$). American cultural orientation also had a negative mediating effect on the explanatory style for negative events and job

satisfaction ($r = -.07$, 95% CI $= [-.20, -.004]$). However, other indirect effects were not statistically significant.

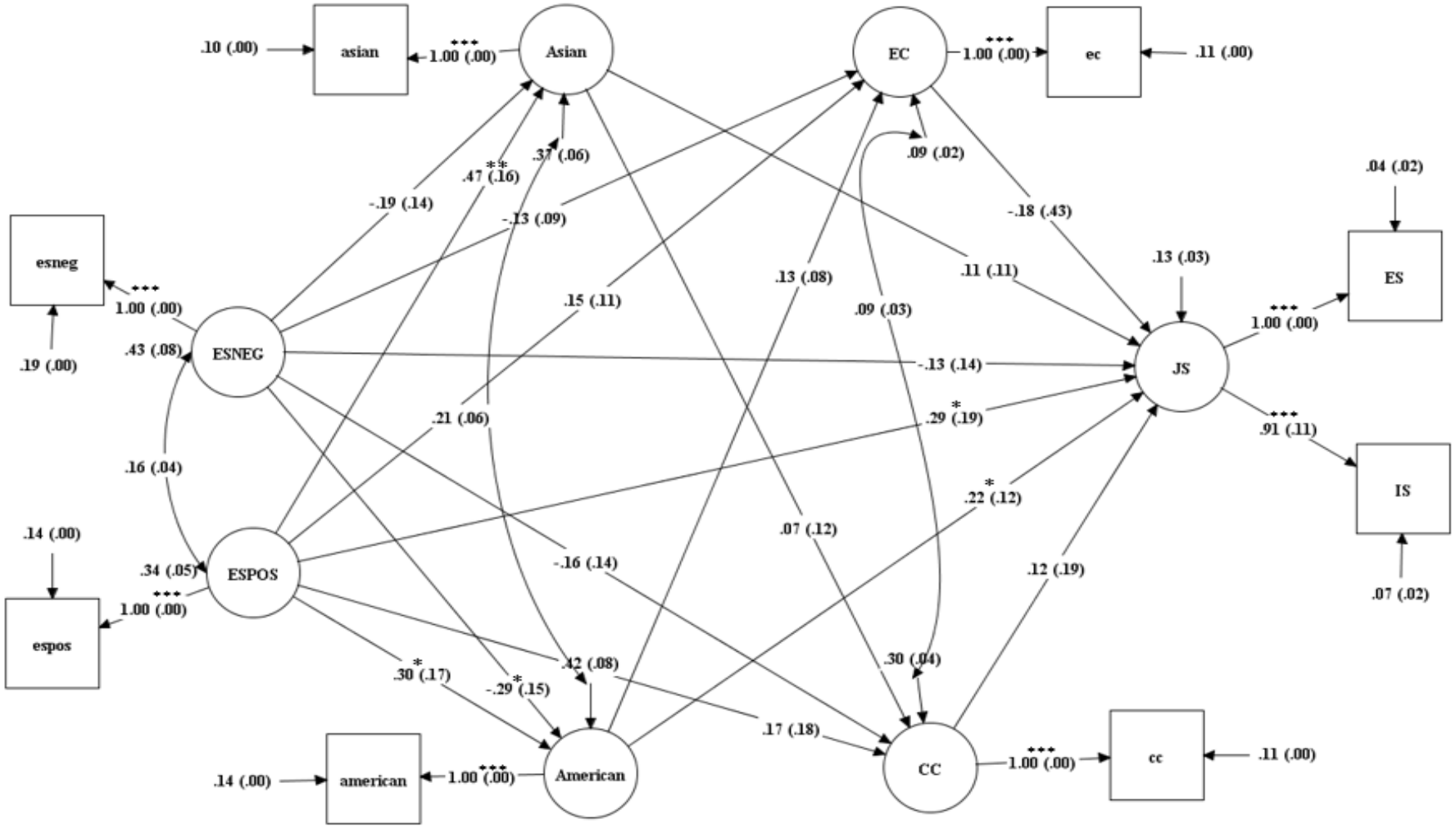

Figure 4.1. Unstandardized parameter values for the complete hypothesized structural model of job satisfaction of foreign-born tenure track Asian faculty. Standardized estimates are in parentheses. ESPOS= explanatory style for positive events; ESNEG= explanatory style for negative events; Asian = Asian cultural orientation; American = American cultural orientation; EC = engagement coping; CC = collective coping; JS = job satisfaction; IS = intrinsic satisfaction; ES = extrinsic satisfaction. espos= indicator of explanatory style for positive events; esneg= indicator of explanatory style for negative events; asian = indicator of Asian cultural orientation; american = indicator of American cultural orientation; ec = indicator of engagement coping; cc = indicator of collective coping.

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

CHAPTER V

SUMMARY AND DISCUSSION

This chapter starts with a summary of the study, including a brief introduction, the purpose statement, and methodology. The chapter also provides a review and discussion of the study findings, implications for future research, limitations, and recommendations for practice.

Summary of the Study

Introduction

In the era of globalization, an increasing number of Asians migrate to the U.S. to pursue advanced academic degrees and some stay in the country working as faculty in higher education institutions after graduation (Institute of International Education, 2015). Asian faculty members stimulate the improvement of social and natural science research by bringing global insights and innovative ideas to their fields. They also help build academic and industrial networks between the U.S. and Asian countries, leading to more frequent intellectual property exchanges and regional economic growth. Due to their heritage cultures and immigrant experiences, Asians emphasize the importance of hard work, endurance, and career success (Pew Research Center, 2012). They are one of the racial group that adds phenomenal values to the development of research and higher education institutions (Pew Research Center, 2012).

Since the trend to recruit Asians in universities is still growing due to the potential contributions that they may make as well as the diversity requirement of the National Council for Accreditation of Teacher Education standards, a need exists to study job satisfaction of Asian faculty, especially those individuals who were not born in the U.S. Foreign-born Asians are not only assigned the same responsibilities of teaching, research, and services as other colleagues, but also need to deal with issues

related to adapting to the culture, improving their language, building interpersonal relationships, and balancing work and family. It has been further indicated that Asian faculty members are not satisfied with their jobs (Eskay et al, 2012). Therefore, this study aimed to examine the job satisfaction of foreign-born Asian faculty in the U.S. and determine its associations with explanatory style, acculturation, and coping strategies.

One of the important predictors of job satisfaction is explanatory styles (Smith & Hall, 1999), which represent the way an individual interprets good and bad events. An individual who tends to have internal, stable, and global explanatory styles is more likely to be positive and satisfied with his or her job (Fineburg, 2010; Smith & Hall, 1999). Another important predictor of job satisfaction is coping strategies. Active coping strategies, such as problem-solving and social support, help employees effectively overcome obstacles and achieve higher levels of job satisfaction (Lazarus & Folkman, 1984; Mark & Smith, 2012). Since Asian faculty members experience cultural differences in the workplace, the third important predictor is acculturation. If they highly adapt to American culture, then they are assumed to meet fewer cultural challenges and tend to handle issues in a culturally appropriate manner (Liu, 2001). Liu (2001) also indicated that an employee acculturating to the U.S. culture tends to be satisfied with his or her colleagues and working environment.

However, few studies exist that focus on foreign-born Asian faculty and examine the effects of explanatory styles, coping strategies, and acculturation on job satisfaction for this racial group. Therefore, the current study aimed to fill this gap in the existing research. It also aimed to provide implications for Asians working in higher education institutions in regard to improving their job satisfaction.

Purpose Statement

The purpose of this study was to examine the job satisfaction and determine its relationship with explanatory styles, coping strategies, and acculturation of tenured and tenure-track foreign-born Asian faculty in the U.S. The population for this study consisted of Asian faculty members who were born in

Asia and employed as tenured and tenure-track college or university professors at public Research 1: Doctoral Universities in the U.S. The study was based on the theory of work adjustment. Direct and indirect effects in a structural model of job satisfaction were proposed in the study. The model contained a dependent variable, which was job satisfaction; two independent variables, which were explanatory styles for positive and negative events; and mediators, which were American and Asian cultural orientations, as well as engagement and collective coping.

Methodology

The study used a purposive sampling method. A group of 2,542 foreign-born, tenured and tenure-track, Asian faculty at southeastern Research 1: Doctoral Universities received online invitations to join the study survey. Of those invited, 251 participants replied the survey. Through the data screening and deleting of responses with more than 75% missing values, a total of 194 responses were included in the data analysis.

Four questionnaires were used in the study. Job satisfaction was assessed using the MSQ short form. Explanatory styles were measured using the ASQ. Coping strategies were measured using the CCM. Acculturation was assessed using the VIA. In addition, information including country of origin, job title, years living in the U.S., academic areas, and working hours per week was asked in the demographic section.

In order to keep the instrument an appropriate length and examine whether the items clearly explained the variables, eight content experts, including seven doctoral candidates and one associate professor, who were foreign-born Asians in the College of Education at the University of Georgia were invited to shorten the instrument and verbalize their reasons to keep and drop items before the pilot study. As a result, 20 items on the MSQ short form, 18 items on the ASQ, 10 items on the CCM, 10 items on the VIA, and six items in the demographic section remained in the following pilot study. Ten foreign-born, tenured and tenure-track, Asian faculty were then asked to participate in the pilot study. The internal

consistency of the instruments revealed that the total number of 64 items had a reasonable content validity to examine the variables in the study.

Results

In order to describe the variables included in the structural model, descriptive and correlational analyses were conducted. Each variable mean of the sample ranged from 2.54 to 5.74 with a range of standard deviation from .44 to .80. Correlations among the observed variables ranged from -.09 to .86. These results were aligned with those results of previous studies (Fineburg, 2010; Smith & Hall, 1999; Zhang, 2000). Intrinsic satisfaction was significantly related to the other variables, except explanatory style for negative events and engagement coping. Extrinsic satisfaction was significantly related to the other variables, except for engagement coping.

In order to answer the second research question, a confirmatory factor analysis with the bootstrapping approach was conducted to examine the measurement model. The modified measurement model had a good fit: RMSEA=.00, 90% confidence interval [CI] = .00 to .06, CFI=1.00, and SRMR=.01. The parameter estimates of intrinsic satisfaction to job satisfaction was .92 with the factor loading of extrinsic satisfaction fixed to 1. As latent variables with single indicators, the parameter estimates of the explanatory style for positive and negative events, engagement and collective coping, and American and Asian cultural orientations were fixed to 1.

The hypothesized complete structural model was examined using a path analysis with the bootstrapping approach. The model fit was good: $\chi^2(7) = 9.89$, $p = .19$, RMSEA= .04, 90% confidence interval [CI] = .00 - .11, CFI= .99, and SRMR= .02. The model explained 38% of the sample variation in job satisfaction, 19% of the sample variation in engagement coping, 6% of the sample variation in collective coping, 14% of the sample variation in Asian cultural orientation, and 9% of the sample variation in American cultural orientation. The indirect effects of American cultural acculturation on the explanatory style for positive and negative events were found significant in the model.

Discussion

The purpose of the study was to examine the job satisfaction and test the hypothesized structural model of job satisfaction. In this section, descriptions of each variable, relationships among variables, and the structural model are discussed.

First, most of the Asian faculty members had medium levels of extrinsic and intrinsic job satisfaction (73.9% and 81.6%, respectively). Previous studies have revealed that international faculty were significantly less satisfied with their jobs than U.S. faculty members (e.g., Corley & Sabharwal, 2007; Kim, Twombly, & Wolf-Wendel, 2012). Specifically, the current study revealed that participants had the lowest satisfaction with salary and advancement among the intrinsic factors. This result aligns with the past literature (Corley & Sabharwal, 2007; Rosser, 2004), which indicated that international faculty had negative attitudes toward their salaries because they earned significantly less than their U.S.-born colleagues even when they had higher publication productivity. Salary was also found to be one of the most important predictors of the intent to leave an organization (Kim et al., 2012). In addition, another intrinsic factor that participants had lowest satisfaction level was advancement. Varma (2004) explained that one of the obstacles for Asian faculty members to climb to managerial positions in academia is a lack of linguistic abilities and communication styles. The study also indicated an existence of stereotypes against Asian faculty toward technical and quantitative, as opposed to management, positions. As such, Asian employees are not optimistic about getting promoted to managerial positions (Tang, 2000).

University policy was one of the extrinsic factors that Asian faculty members were the least satisfied with in this study. A plausible explanation is that the policy of higher education institutions may lack international awareness. For example, Dewey and Duff (2009) pointed out that foreign-born faculty experience barriers in applying for funding for international projects. They are also lack of the information and supportive administrative policies necessary to facilitate international collaborations.

In contrast, Asian faculty members had the highest satisfaction with independence as an intrinsic factors and job variety as an extrinsic factor. A faculty position in a higher education system requires less pressure to build social networks and communicative work styles than positions in industries. Considering the language skills of Asian faculty members, accomplishing work independently may help them increase their productivity, including publishing papers, doing science experiments, and applying for grants. The possibility to concentrate on research may be one of reasons that Asian faculty members are known for their high productivity and exceptional contributions to research, especially STEM areas (Mamiseishvili & Rosser, 2010). Moreover, a tenured or tenure-track faculty position in a public Research 1: Doctoral Universities allows an individual to switch working roles from researcher, teacher, or staff in university services. They often have flexible research and advising schedules. Therefore, it is reasonable to state that participants were very satisfied with the independence and variety of their jobs.

It was additionally found that tenured and tenure-track Asian faculty had a high level of explanatory style for positive events and a relatively low level of explanatory style for negative events. In other words, the participants tended to attribute the causes of good events to internal, stable, and global factors and attribute the causes of bad events to external, unstable, and specific factors. Even though few studies exist that have focused on explanatory styles of Asian faculty members, Hau and Salili (1991) had similar findings that Asians perceived internal, stable, and global causes, such as efforts, personal interests, skills, and abilities, as the most important predictors for achievement. In contrast, the external, unstable, and specific explanatory styles, such as luck, were perceived as the least important factors for achievement (Hau & Salili, 1991). Hau and Salili (1990) also underscored that Asians were taught under the family or social environment with perceptions that career success was due to one's hard work and the failure was due to one's laziness.

This study also demonstrated that adjusting to the American culture and maintaining Asian cultural tendencies may happen simultaneously in the acculturation process. Participants in the study maintained a high level of Asian cultural values and in-group connections, while engaged in American

cultural activities. In addition, the findings related to coping strategies also aligned with other studies that have shown that overseas Asians have strong tendencies to use engagement and collective coping (Chang, Tugade, & Asakawa, 2006; Kuo, 2011; Zhang, 2000).

The explanatory style for good events positively influenced American and Asian cultural orientations. As expected, people who explained the causes of good events in internal, stable, and global ways were more likely to overcome the differences between American and Asian cultures and take the initiative to have more engagement in activities with the mainstream group, resulting in their increase in American cultural orientation (Berry, 2005; Peterson, 1991). In addition, an individual with a positive explanatory style tended to maintain his or her relationship with in-group members as well as his or her heritage cultural identity.

The explanatory style for bad events negatively influenced the American cultural orientation. This result is consistent with Peterson (1991) who stated that people who attribute bad events to external, unstable, and specific reasons tend to blame the environment and are not willing to adjust themselves to new cultural practices, leading to lower levels of American cultural orientation. However, the study did not find a significant relationship between the explanatory style for negative events and Asian cultural orientation. This is possibly due to the fact that one's tendency to explain bad events may have little impact on how factors in Asian cultural orientation are perceived. Thus, further research is needed to explore other dimensions in the explanatory style for negative events, which affect acculturative outcomes.

Foreign-born tenured and tenure-track Asian faculty tended to use engagement coping more often than collective coping. In addition, engagement coping and collective coping were not directly affected by American and Asian cultural orientations. However, engagement coping was positively correlated with American and Asian cultural orientations, while collective coping was related to American cultural orientation. In other words, instead of causal relationships, engagement coping fluctuated together with American and Asian cultural orientations and collective coping varied with American cultural orientation.

Therefore, the results shed light on the interpretation of the relationship between the dimensions of acculturation and coping strategies of Asian faculty. Based on Roesch et al. (2006), when Asian faculty were highly acculturated into American culture and had more chances to be part of mainstream activities, they adopted culturally appropriate coping behaviors and developed action-based strategies to solve conflicts, and vice versa.

Asian cultural orientation was not correlated with collective coping, but was positively correlated with engagement coping. The result is not surprising when the participants are faculty members working in academia and focusing on research and teaching, which requires less cooperation. Foreign-born faculty perceived a lack of support in the workplace and faced obstacles in interacting with colleagues and students, leading to independent working styles (Collins, 2008; Kim et al., 2012). In addition, Asian cultural orientation emphasizes hard working and being skillful in the workplace. Therefore, individuals with higher Asian cultural orientation tend to use engagement coping, including actively overcoming challenges, working hard to apply for grants, and gaining more skills in the workplace (Zhang, 2000).

Engagement coping was positively correlated with extrinsic satisfaction, while collective coping was positively associated with intrinsic and extrinsic satisfaction. According to Dawis and Lofquist (1984), intrinsic satisfaction measures the factors of the job that are experienced internally, whereas extrinsic satisfaction measures the factors of the job that are experienced externally, such as responsibility, security, and interpersonal relationships. A persistent effort to take initiative, be productive, and solve conflicts in the workplace does not necessary bring perceived success at work, but could increase the exhaustion of the individual (Long et al., 1992). Moreover, seeking support from in-group members was associated with an increase in intrinsic and extrinsic satisfaction. It is consistent with Berry's (2005) assumption that an individual who relates to the heritage culture achieves psychological and emotional well-being. More support and advices from in-group members are associated with the satisfaction with the job internally and an increase in strategies to manage the environmental factors in the workplace. Based on the associations among coping strategies and job satisfaction, it has been suggested

that possible interventions, such as building social support systems, providing training in problem-focused coping methods, providing skills training for the enhancement of decision authority, and discouraging self-blame, can be provided to create a supportive environment in academia (Mark & Smith, 2012).

It is interesting to note that engagement coping and collective coping did not significantly affect job satisfaction. The lack of a directional relationship between coping strategies and job satisfaction is possibly because one's satisfaction is directly related to the job's characteristics in general (Zhang, 2000). For example, an individual's job satisfaction can be directly influenced by salary without using coping strategies, especially in academia. Explanatory styles for good and bad events did not directly affect engagement and collective coping in this study probably because Asian faculty members adopt other coping strategies that were not included in this study, leading to the missing of significant relationships.

With a lack of relationships among explanatory styles for good and bad events and job satisfaction, engagement coping and collective coping did not play roles as mediators in the model. While it is possible that the weak relationship is due to limitations in the coping measure, an alternative explanation for the insignificant mediating effect may be that there is no impact of coping strategies on the explanatory style and job satisfaction of tenured and tenure-track Asian faculty in the U.S. Some aspects of the job situation remain passive and the application of engagement and collective coping does not lead to any improvement in the workplace. For instance, neither coping strategies can mediate the relationship between explanatory style and job satisfaction to help Asian faculty improve university policies regarding promotion and salary, which were aspects of the job that the participants felt the least satisfied with. Surprisingly, this study is consistent with other literature where a mediating effect of the coping strategies on personal traits and job satisfaction was not observed among the Asian faculty members (Zhang, 2000). In addition, the tendency for Asian faculty members to adopt a broad range of coping strategies may reduce the influence of those strategies on well-being in academia. Carver et al. (1989) mentioned that problem- and emotion-focused strategies were too simple to measure coping,

which requires closer examinations under different situations. Given the lack of studies that have included the coping strategies of tenured and tenure-track Asian faculty when examining their ways of explaining life events and job satisfaction, further research would help us to better understand the types of coping strategies used in academia in relation to job satisfaction.

American cultural orientation was shown to influence the job satisfaction of Asian faculty members. This result is consistent with other literature that has shown that a person who has an enhanced attachment to American cultural activities, norms, and social networks is more likely to adapt to the mainstream culture and achieve pleasurable states in the workplace (Berry, 2005; Kuo, 2011; Lazarus & Folkman, 1984). Unexpectedly, Asian cultural orientation failed to significantly affect job satisfaction, but was positively associated with intrinsic and extrinsic satisfaction. The lack of the Asian cultural orientation leads to no mediating effect on the relationship between explanatory style and job satisfaction. Both non-significant relationships possibly exist because the job satisfaction of Asian faculty members in the U.S. may not be affected by Asian cultural orientation when the American culture is the dominant culture in the workplace. Therefore, an increase in Asian cultural orientation is correlated with an increase in intrinsic and extrinsic satisfaction, but does not predict the level of job satisfaction.

The relationship between the explanatory style for positive events and job satisfaction was supported by previous findings (Berry, 2005; Dawis & Lofquist, 1984; Lazarus & Folkman, 1984). A higher level of explanatory style for positive events means that an individual explains good events in an optimistic way and are more likely to change negative situations, leading to greater job satisfaction. The optimistic explanatory style influences an individual's outlook toward the adjustment to a new culture. Foreign-born Asian faculty with higher level of an explanatory style for positive events are more likely to be persistent in changing personal factors, increase chances to succeed, and accepting cultural differences to fit in the American culture and maintain good connections with colleagues. In addition, the lack of a significant relationship between an explanatory style for negative events was supported by Peterson (1991). He indicated that an explanatory style for bad events had a direct impact on people's responses to

bad events, while indirectly affecting people's responses to good events. Therefore, it has been suggested that the relationship between the explanatory style for bad events and job satisfaction is affected by additional variables that have a suppressor effect (Shrout & Bolger, 2002).

As predicted, American cultural orientation significantly mediated the relationship between explanatory styles for good and bad events and job satisfaction. An Asian faculty with higher levels of internal, global, and stable explanatory styles is more likely to acculturate to the mainstream culture in the U.S. and, in turn, improve their positive attitudes toward the job (Berry, 2005). Dawis and Lofquist (1984) asserted that the fit between personal factors and work environments leads to pleasurable outcomes. American cultural orientation serves as a facilitator to increase the job satisfaction of employees who hold positive attitudes toward absorbing new cultural values, and mainstream activities.

American cultural orientation had a negative mediating impact on the explanatory style for negative events and job satisfaction. It demonstrated that a mediator is needed in the relationship between the explanatory style for negative events and positive outcomes (Peterson, 1991). Therefore, for Asian faculty members who had internal, global, and stable explanations for failures, American cultural orientation can ameliorate the negative effect of a pessimistic explanatory style on job satisfaction. For example, even though a person is not confident in his or her ability to accomplish an administrative or research role, with an understanding of American cultural values and interpersonal network with the mainstream group, that person could still succeed with support and obtain the positive attitude toward the job.

Limitations

Several limitations exist to this study and findings. First, disengagement coping was not included in the study because of the low internal consistency. Engagement coping and collective coping did not mediate the relationship between explanatory styles for positive and negative events and job satisfaction. The unsatisfying result of coping strategies may be due to the lack of sensitivity of the instrument as its

content focused on the individual's ways of coping in daily life rather than under the context of academia. Other variables have been linking coping strategies with explanatory style and job satisfaction, which are not included in the study. Therefore, it is recommended that a scale, which measures the coping strategies of foreign-born Asian faculty in the U.S. with a consideration of their cultural, academic, and intellectual backgrounds, should be developed and validated for future research. In addition, future research needs to investigate the variations of coping strategies in different situations since situations affect people's responses. Therefore, specific good and bad events should be considered in future research to explore coping strategies in relation to explanatory style and job satisfaction.

The second limitation focuses on purposive sampling. The purposive sampling method was considered as the most effective way to collect data for the study because the study required a large sample size to analyze the data and the previous literature indicated that the response rate was low among Asian faculty. Even though most findings of the study were consistent with previous studies, it still makes the generalization of the findings compromised. Future study should use random sampling method to include Asian faculty in the U.S.

In addition, half of the participants in the study were from China, and the rest were from India, South Korea, Taiwan, Japan, the Philippines, Vietnam, Singapore, Malaysia, and Iran limiting the generalization to participants from other Asian countries. Future research about the diversity of higher education is recommended to cooperate with professional associations or institutional research offices at universities so that a large sample size of foreign-born faculty can be achieved. In addition, the extension of research to other Asian groups is also suggested.

The third limitation is that the hypothesized model explained about 38% of the sample variance for job satisfaction, which suggests that there must be other important predictors. Thus, qualitative research is also recommended to explore the perspectives of faculty with different cultural backgrounds in order to determine ways by which to improve job satisfaction in the U.S. Moreover, more in-depth research, including an extended selection of variables, is needed to shed light on this issue.

Finally, due to the correlation research method on which the study was based, no causal interpretations can be concluded from the current data. The applications of other statistical analysis or longitudinal studies are recommended for future research to test the causal factors of the job satisfaction of Asian faculty.

Conclusions and Implications

The results of the study have implications for job satisfaction research in several ways. First, the study fills the gap in the existing literature to examine the job satisfaction of foreign-born, tenured and tenure-track, Asian faculty in the U.S. It assessed predictors of job satisfaction by looking into specific variables, explanatory style for positive and negative events, acculturation, and coping strategies. Second, the findings indicate the importance of explanatory styles and acculturation in predicting job satisfaction. In order to achieve greater job satisfaction, foreign-born Asian faculty members are encouraged to have internal, global, and stable explanatory styles for good events and adjust to the mainstream cultural environment. Third, it has been revealed that the significant role of acculturation in mediating the relationship between explanatory styles and job satisfaction. Adapting to a new culture can help foreign-born faculty fit their personal factors with institutional characteristics of public Research 1: Doctoral Universities, which, in turn, increases their positive attitudes toward the job.

To achieve job satisfaction in the workplace, foreign-born Asian faculty should positively interpret life events. Since Asian cultures are different from the American culture, foreign-born Asian faculty ought to understand American cultural values and build connections with community in the U.S. They should engage in community service and mainstream activities, which help them adapt to the institutional culture in the U.S. Enlarging their social network with American colleagues can help them understand the culture in academia. Since respondents were the least satisfied with salary, university policies, and advancement, it is also important for them to actively engage in understanding the policy, joining the policy making procedure, and understanding promotion criteria.

Universities should commit to improving the acculturation level of foreign-born Asian faculty and help them adapt to the mainstream society. It is important to provide professional development programs to address foreign-born faculty's acculturative problems and improve their job satisfaction. The professional development programs should include trainings regarding American cultural values, university policies, managerial skills, advancement criteria, and acculturative strategies. Even though we do not know why participants were the least satisfied with advancement, it is important to give more opportunities or encouragements to Asian faculty members to participate in administrative and managerial roles (Tang, 2000).

In conclusion, as an increasing number of foreign-born Asians are studying and working in the U.S., it is important for higher education institutions to attract and retain outstanding scholars to improve their academic competitiveness and maximize their contributions. Asian faculty are known for their strong work ethic and high productivity. They directly influence American students through their teaching and services on campus. However, they, as a group, are often overlooked and underestimated. This study stresses the importance of the job satisfaction of foreign-born Asian faculty in order to make their voices heard. Foreign-born Asian faculty should be optimistic toward their professional development and increase engagement in mainstream activities. Higher education institutions need to understand the characteristics of foreign-born Asian faculty members, develop strategies to improve faculty members' job satisfaction, and help them achieve acculturation.

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APPENDIX A

IRB APPROVAL

Phone 706-542-3199

The University of Georgia

Office of the Vice President for Research
Institutional Review Board

APPROVAL OF PROTOCOL

April 4, 2016

Dear Bettye Smith:

On 4/4/2016, the IRB reviewed the following submission:

Type of Review:	Modification
Title of Study:	A Structural Model of Job Satisfaction of Tenure-track Asian Academicians in the United States
Investigator:	Bettye Smith
IRB ID:	MOD00002721
Funding:	None
Grant ID:	None

The IRB approved the protocol from 4/4/2016.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Dr. Gerald E. Crites, MD, MEd
University of Georgia
Institutional Review Board Chairperson

APPENDIX B

LETTERS OF REQUEST TO USE QUESTIONNAIRES AND PERMISSION LETTERS

(MINNESOTA SATISFACTION QUESTIONNAIRE SHORT FORM,

THE COMPOSITE COPING MEASURE,

ATTRIBUTIONAL STYLE QUESTIONNAIRE,

VANCOUVER INDEX OF ACCULTURATION)

Letter of Request to Use Minnesota Satisfaction Questionnaire Short form

Dr. D. J. Weiss
Vocational Psychology Research
N620 Elliott Hall
75 East River Rd.
University of Minnesota
Minneapolis, MN 55455

Dear Dr. Weiss:

Please accept this letter as a request for permission to use the Minnesota Satisfaction Questionnaire-short form in my doctoral dissertation. My dissertation tile is "The Structural Model of Job Satisfaction among tenured and tenure-track Asian Faculty". The purpose of the study will be to test the structural model of job satisfaction, and determine relationships among explanatory style, coping strategies, acculturation, and job satisfaction of foreign-born, tenured and tenure-track, Asian faculty in U.S.

My doctoral work is directed by Dr. Bettye P. Smith, Workforce Education, at the University of Georgia, as well as a committee comprised of three other faculty members in the university. I am also requesting permission to have minor changes in the MSQ-short form:

5. Question 4: Change from "The chance to be 'somebody' in the community" to "The chance to be "somebody" in the university".
6. Question 5: Change from "The way my boss handles his/her workers" to "The way my dean handles his/her colleagues".
7. Question 6: Change from "The competence of my supervisor in making decisions" to "The competence of my dean in making decisions".
8. Questions 12: Change from "The way company policies are put into practice" to "The way university policies are put into practice".

Your response to this request may be emailed to be at wyang@uga.edu. I plan to begin data collection in September 2015. Thank you for your assistance and I look forward to hearing from you.

Sincerely,
Wenting Yang
Doctoral Student
Workforce Education
University of Georgia
850 College Station Rd.
Athens, GA 30605

Letter of Permission to Use the Minnesota Satisfaction Questionnaire Short form

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Department of Psychology
College of Liberal Arts

N218 Elliott Hall
75 East River Road
Minneapolis, MN 55455
Office: 612-625-2818
Fax: 612-626-2079
www.psych.umn.edu

April 19, 2016

Dear Wenting Yang,

We are pleased to grant you permission to use the **Minnesota Satisfaction 1977 short form** on a secure web site.. We acknowledge receipt of your **$60.00** payment for Royalty fees for **300 MSQ Short Form Surveys.**

Please note that each copy that you make must include the following copyright statement:

Copyright 1977, Vocational Psychology Research , University of Minnesota. Reproduced by permission.

We would appreciate receiving a copy of any publications that result from your use of the **MSQ short form surveys**. We attempt to maintain an archive and bibliography of research related to Vocational Psychology Research instruments, and we would value your contribution to our collection.

If you have any questions, or if we can be of any additional assistance, please do not hesitate to contact us.

Sincerely,

Vocational Psychology Research

Letter of Request to Use the Composite Coping Measure

Dr. D. Zhang

Mind Garden, Inc.
855 Oak Grove Ave., Suite 215
Menlo Park, CA 94025 USA

Dear Dr. Zhang:

Please accept this letter as a request for permission to use the Composite Coping Measure, which was developed in your doctoral dissertation to measure engagement, disengagement, and collective coping. The Composite Coping Measure fits my dissertation's purpose. My dissertation tile is "The Structural Model of Job Satisfaction among Tenured and tenure-track Asian Faculty". The purpose of the study will be to test the structural model of job satisfaction, and determine relationships among explanatory style, coping strategies, acculturation, and job satisfaction of foreign-born, tenured and tenure-track, Asian faculty in U.S.

My doctoral work is directed by Dr. Bettye P. Smith, Workforce Education, at the University of Georgia, as well as a committee comprised of three other faculty members in the university.

Your response to this request may be emailed to be at wyang@uga.edu. I plan to begin data collection in October 2015. Thank you for your assistance and I look forward to hearing from you.

Sincerely,

Wenting Yang

Doctoral Student

Workforce Education

University of Georgia

850 College Station Rd.

Athens, GA 30605

Permission to Use the Composite Coping Measure

Dan Zhang <dzhang@vcc.ca>

Tue 9/22/2015 17:32

Inbox

To:Wenting Yang <wyang@uga.edu>;

Cc:dzhang1000@gmail.com <dzhang1000@gmail.com>;

Hello Wenting Yang,

Thank you for the letter Wenting!

Yes, please go ahead to use the Composite Coping Measure that I used in my dissertation. As you may already noticed I developed the Collective Coping (copy righted) measurement and used in my dissertation research back in 1998-1999, and it will be very interesting to see how this measurement works in your research.

Thank you again and looking forward to read your dissertation!

All the best wishes and please contact me if you needed!

Dan

Letter of Request to Use Attributional Style Questionnaire

Dr. Martin E.P. Seligman
University of Pennsylvania
Philadelphia, PA 19104

Dear Dr. Seligman,

Please accept this letter as a request for permission to use the Attributional Style Questionnaire in my doctoral dissertation. My dissertation tile is "The Structural Model of Job Satisfaction of Tenured and tenure-track Asian Faculty". The purpose of the study will be to test the structural model of job satisfaction, and determine relationships among explanatory style, coping strategies, acculturation, and job satisfaction of Asian faculty in the U.S. The population will be Asian faculty who are foreign-born and employed as a tenured and tenure-track college or university professors in public Research Universities-Extensive in the U.S.

My doctoral work is directed by Dr. Bettye P. Smith, Workforce Education, at the University of Georgia, as well as a committee comprised of three other faculty members in the university. In order to set situations in the ASQ into ones that tap directly into faculty's lives, I am also requesting permission to have the following changes in the situations:

1. Situation 1: change "You meet a friend who compliments you on your appearance" to "A student compliments you on the lesson you taught him/her".
2. Situation 2: change "You have been looking for a job unsuccessfully for some time" to "You have been looking for a faculty job unsuccessfully for some time".
3. Situation 3: change "You become very rich" to "You win faculty of the year".
4. Situation 4: change "A friend comes to you with a problem and you don't try to help him or her" to "A colleague comes to you with a work related problem and you don't try to help him or her".
5. Situation 5: change "You give an important talk in front of a group and the audience reacts negatively" to "You teach an important lesson and the students reacts negatively".
6. Situation 6: change "You complete a project that is highly praised" to "You do a project for your university which is highly praised".
7. Situation 7: change "You meet a friend who acts hostilely towards you" to "You meet a colleague who acts hostilely towards you".
8. Situation 9: change "Your spouse or significant others has been treating you more lovingly" to "Your dean (principal) has given you several positive evaluations".
9. Situation 10: change "You apply for a position that you want very badly and you get it" to "You apply for a faculty position that you want very badly, and you get it".
10. Situation 11: change "You go out on a date and it goes badly" to "You plan a professional development workshop for your colleagues, and it goes badly".
11. Situation 12: change "You get a raise" to "You get a letter from a former student that thanks you for your positive influence in his/her life".
12. Four questions for each situation will be modified according to the situation statement.

Your response to this request and all materials may be emailed to be at wyang@uga.edu. I plan to begin data collection in April 2016. Thank you for your assistance and I look forward to hearing from you.

Sincerely,

Wenting Yang
Doctoral Student
Workforce Education
University of Georgia
Athens, GA 30605

Letter of Permission to Use Attributional Style Questionnaire

Penn
Arts & Sciences

Positive Psychology Center
3701 Market Street, Suite 200
Philadelphia, PA 19104
Phone: 215.898.7173
http://ppc.sas.upenn.edu/

Permission to Use the Attributional Style Questionnaire

The Attributional Style Questionnaire (ASQ) is copyrighted material and may only be used with the written permission of the author, Dr. Martin E.P. Seligman. This letter grants you permission to use the ASQ solely for non-commercial academic research purposes or by a licensed clinical psychologist for the diagnosis of patients. The ASQ may not be used for any commercial or for-profit purposes under any circumstances. You are not authorized to revise, adapt, or create any derivative materials from the ASQ.

You may only administer the ASQ in a paper format. Though we may send you the ASQ in an electronic format, we do this solely as a convenience to expedite your receipt of this material. You are not authorized to administer or distribute the ASQ electronically, nor to post the ASQ in any online environment (e.g., website).

Sincerely,

Martin E.P. Seligman, Ph.D.
Zellerbach Family Professor of Psychology
Director, Positive Psychology Center
University of Pennsylvania

Letter of Request to Use Vancouver Index of Acculturation

Dr. D. L. Paulhus

University of British Columbia
Vancouver, Canada V6T 1Z4
dpaulhus@psych.ubc.ca

Dear Dr. Paulhus:

Please accept this letter as a request for permission to use the Vancouver Index of Acculturation in my doctoral dissertation. My dissertation tile is "The Structural Model of Job Satisfaction among tenured and tenure-track Asian Faculty". The purpose of the study will be to test the structural model of job satisfaction, and determine relationships among explanatory style, coping strategies, acculturation, and job satisfaction of foreign-born, tenured and tenure-track, Asian faculty in U.S.

My doctoral work is directed by Dr. Bettye P. Smith, Workforce Education, at the University of Georgia, as well as a committee comprised of three other faculty members in the university. I am also requesting permission to change "mainstream" to "American".

Your response to this request may be emailed to be at wyang@uga.edu. I plan to begin data collection in October 2015. Thank you for your assistance and I look forward to hearing from you.

Sincerely,

Wenting Yang

Doctoral Student

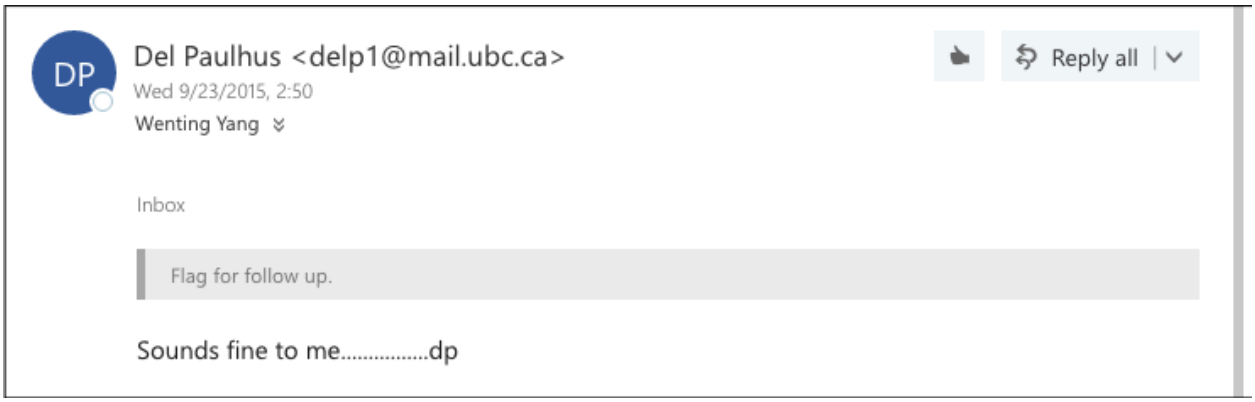
Workforce Education

University of Georgia

850 College Station Rd.

Athens, GA 30605

Letter of Permission to Use Vancouver Index of Acculturation



APPENDIX C

PILOT STUDY RESULTS

Table 1

Cronbach's Alpha of Latent and Observed Variables and Number of Items in Each Scale in Pilot Study

Latent Variable	Observed Variables	Cronbach's Alpha	Number of Items
Job Satisfaction		.93	20
	Intrinsic Satisfaction	.90	12
	Extrinsic Satisfaction	.77	8
Explanatory Style		.75	18
	for positive events	.68	9
	for negative events	.57	9
Coping Strategies			
	Disengagement Coping	.28	4
	Engagement Coping	.62	5
	Collective Coping	.76	5
Acculturation		.92	10
	Asian Cultural Orientation	.79	5
	American Cultural Orientation	.88	5

Table 2

Descriptive Analysis of Questions in Pilot Study

Questions	Minimum	Maximum	Mean	*SD*
1. Cover letter was clear regarding the purpose of the instrument	3	4	3.20	.45
2. Directions of four parts of instruments were clear regarding how to respond	1	3	2.40	.89
3. The format of instrument in Qualtrics was logical	3	3	3.00	.00
4. The appearance of the instrument in Qualtrics was satisfactory	3	3	3.00	.00

APPENDIX D

FIRST CONTACT EMAIL

First Contact Email

To: Asian Tenure-Track or Tenured Faculty Members

From: Wenting Yang, Ph.D. Candidate
Program of Workforce Education
College of Education
The University of Georgia

Bettye P. Smith, Ph.D.
Professor in the Program of Workforce Education
College of Education
The University of Georgia

Dear Faculty Member,

Your help and expertise are needed for participation in a research entitled "*Examining Job Satisfaction among Asian Faculty in the United States"*.

Wenting Yang, a Ph.D. candidate, is conducting a research study for her dissertation on determining relationships among explanatory style, coping strategies, acculturation, and job satisfaction of Asian faculty in the U.S. The focus on job satisfaction of Asian faculty is needed for implications of their career development.

The questionnaire for this study was adapted from four different scales: Minnesota Job Satisfaction, Vancouver Index of Acculturation, Attributional Style Questionnaire, and the Composite Coping Measure. This survey may take you 15 minutes.

The link to the questionnaire
is https://ugeorgia.qualtrics.com/SE/?SID=SV_5bWWkZCe7LZGMCh.

If you have questions or concerns, please contact Wenting Yang at wyang@uga.edu or Bettye P. Smith at smithb@uga.edu. If you have any questions about the rights of research subjects, please contact the University of Georgia's Human Subjects Office at 706-542-3199, Fax 706-542-3360, or e-mail irb@uga.edu, or regular mail at: University of Georgia, 310 E. Campus Rd., Athens, GA 30602.

Please help us with your candid responses. Thank you in advance for your help.

Respectfully,

Wenting Yang
Follow the link to opt out of future emails:
Click here to unsubscribe

APPENDIX E

COVER LETTER

Cover Letter

March 30th, 2016

Dear Faculty Members:

I am a graduate student under the direction of Dr. Bettye P. Smith in the Program of Workforce Education at the University of Georgia. I invite you to participate in a research study entitled "The Structural Model of Job Satisfaction among Tenured and tenure-track Asian Faculty in U.S."

Job satisfaction has an impact on faculty' career development and higher education institutions' efficiency. With an increasing emphasis on diversity in the modern work, greater attention to the nature and causes of job satisfaction is required. Besides, Asian faculty are gaining more recognition in the academy. However, there is a void in the literature on the job satisfaction of Asian faculty in the U.S. Therefore, the purpose of this study is to determine relationships among explanatory style, coping strategies, acculturation, and job satisfaction.

If you were born in Asia, employed as a faculty in the U.S., and 22 years of age or older, you are invited to participate in this study. We obtained your contact information from the faculty directory posted on websites of your university. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. However, I hope you will choose to participate in this research project. If you choose to participate, you will be asked to complete an online survey and should take about 20 minutes.

There is a limit to the confidentiality that can be guaranteed when using Internet communications due to the technology itself. Once the materials are received by the researcher, standard confidentiality procedures will be employed. The results of the research study may be published, but your name will not be used. In fact, the published results will be presented in summary form only. Your identity will not be associated with your responses in any published format.

The findings from this project may provide information that could assist in the career development of Asian faculty in the U.S. There are no known risks or discomforts associated with this research.

If you have any questions about this research project, please feel free to send an email to Wenting Yang, wyang@uga.edu, and/or Dr. Bettye P. Smith, smithb@uga.edu. Questions or concerns about your rights as a research participant should be directed to the University of Georgia Institutional Review Board, 310 E. Campus Rd. Athens, Georgia 30602; telephone (706) 542-3199; email irb@uga.edu.

By completing the online survey, you are agreeing to participate in the above described research project. Thank you for your consideration! Please keep this letter for your records.

Sincerely,

Wenting Yang, Ph.D. Candidate
Program of Workforce Education
College of Education
The University of Georgia

Bettye P. Smith, Ph.D.
Professor in the Program of Workforce Education
College of Education
The University of Georgia

APPENDIX F

QUESTIONNAIRES

(MINNESOTA SATISFACTION QUESTIONNAIRE SHORT FORM, THE COMPOSITE COPING MEASURE, ATTRIBUTIONAL STYLE QUESTIONNAIRE, VANCOUVER INDEX OF ACCULTURATION DEMOGRAPHICS)

Part I. Minnesota Satisfaction Questionnaire Short Form

Directions: Read each statement carefully, and decide how satisfied you feel about the aspect of your job.

If you feel that your job gives you more than you expected, check the box under very satisfied. If you feel that your job gives you what you expected, check the box under satisfied. If you cannot make up your mind whether or not the job gives you what you expected, check the box under neither satisfied nor dissatisfied. If you feel that your job gives you less than you expected, check the box under dissatisfied. If you feel that your job gives you much less than you expected, check the box under very dissatisfied.

Keep the statement in mind when deciding how satisfied you feel about the aspect of your job. Please answer all items. Be frank and honest.

Key:

1= Very Dissatisfied
2= Dissatisfied
3= Neither Satisfied nor Dissatisfied
4= Satisfied
5= Very Satisfied

Questions

1. Being able to keep busy all the time.
2. The chance to work alone on the job.
3. The chance to do different things from time to time.
4. The chance to be "somebody" in the university.
5. The way my dean handles his/her workers.
6. The competence of my dean in making decisions.
7. Being able to do things that don't go against my conscience.
8. The way my job provides for steady employment.
9. The chance to do things for other people.
10. The chance to tell people what to do.
11. The chance to do something that makes use of my abilities.
12. The way university policies are put into practice.
13. My pay and the amount of work I do.
14. The chances for advancement on this job.
15. The freedom to use my own judgment.
16. The chance to try my own methods of doing the job.
17. The working conditions.
18. The way my co-workers get along with each other.
19. The praise I get for doing a good job.
20. The feeling of accomplishment I get from the job.

Part II. Composite Coping Questionnaire

To respond to the statements on this scale, you must have a specific stressful situation in mind. Take a few moments and think about the most stressful situation that you have experienced in the past week.

By "stressful" we mean a situation that was difficult or troubling for you, either because you felt distressed about what happened, or because you had to use considerate effort to deal with the situation. The situation may have involved your family, your job, your friends, or something else important to you. Before responding to the statements, think about details of this stressful situation, such as where it happened, who was involved, how you acted, and why it was important to you. While you may still be involved in the situation, or it could have already happened, it should be the most stressful situation that you experienced during the week.

Directions: As you respond to each of the statements on the next page, keep this stressful situation in mind.

Following is the list of statements concerning coping, please rate your level of agreement on how it applies to you.

Key:

1= Does not apply or not used;

2= used somewhat;

3= Used quite a bit;

4= Used a great deal.

Questions

1. Prepared for the worst.
2. Went over in my mind what to say or do.
3. Tried to see things from another perspective.
4. Increased my efforts to make things work.
5. Made a plan of action and followed it.
6. Talked to someone from my group of people about the situation.
7. Talked to someone from my group of people about how I was feeling.
8. Tried to find out if my reactions to the problem were acceptable to others in my group.
9. Followed the ways that other people in my group dealt with similar problems.
10. Asked a respected relative/friend for advice.

Part III. Attributional Style Questionnaire

This questionnaire is asking the way you explain good events and bad events. Directions:

1. There are 6 situations on the following pages.

2. Read each situation and vividly imagine it happening to you.

3. Decide what you believe to be the one major cause of the situation if it happened to you. Keep the cause in mind when you respond each question.

4. Answer the questions about the cause by rating your level of agreement.

5. Then go on to the next situation.

Situation 1. You do a project for your university which is highly praised.

1) Is the cause of your project being praised due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

2) In the future when do a project, will this cause again be present? (circle one number)

Will never again be present 12 3 4 5 6 7 Will always be present

3) Is the cause something that just affects praise for your work, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 12 3 4 5 6 7 Influences all situations in my life

Situation 2. A colleague comes to you with a problem and you don't try to help him or her.

1) Is the cause of your not helping colleague due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

2) In the future when your colleague comes to you, will this cause again be present? (circle one number)

Will never again be present 12 3 4 5 6 7 Will always be present

3) Is the cause something that just affects what happens when a colleague comes to you, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 12 3 4 5 6 7 Influences all situations in my life

Situation 3. You apply for a faculty position that you want very badly and you get it.

1) Is the cause of your getting the faculty position due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

2) In the future when apply for a faculty position, will this cause again be present? (circle one number)

Will never again be present 12 3 4 5 6 7 Will always be present

3) Is the cause something that just affects applying for a faculty position, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 12 3 4 5 6 7 Influences all situations in my life

Situation 4. You teach an important lesson and students react negatively.

1) Is the cause of the class's negative reaction due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

2) In the future when you teach, will this cause again be present? (circle one number)

Will never again be present 12 3 4 5 6 7 Will always be present

3) Is the cause something that just affects teaching, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 12 3 4 5 6 7 Influences all situations in my life

Situation 5. You meet a colleague who acts hostilely towards you.

1) Is the cause of your colleague acting hostile towards you due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

2) In the future when interacting with colleagues, will this cause again be present? (circle one number)

Will never again be present 12 3 4 5 6 7 Will always be present

3) Is the cause something that just affects interacting with colleagues, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 12 3 4 5 6 7 Influences all situations in my life

Situation 6. You get a letter from a former student that thanks you for your positive influence in his/her life.

1) Is the cause of your getting the positive letter due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

2) In the future, will this cause again be present? (circle one number)

Will never again be present 12 3 4 5 6 7 Will always be present

3) Is the cause something that just affects influencing students, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation 12 3 4 5 6 7 Influences all situations in my life

Part IV. Vancouver Index of Acculturation (VIA)

Many of these questions will refer to your heritage culture, meaning the original culture of your family (other than American). It may be the culture of your birth, the culture in which you have been raised, or any culture in your family background. If there are several, pick the one that has influenced you most (e.g. Korean, Chinese, Thai, Philippine, or Japanese). On the next page, you will find statements about acculturation.

Directions: Following is the list of statements concerning acculturation, please rate your level of agreement on how it applies to you.

Key:

9= Extremely Agree
8= Strongly Agree
7 = Somewhat Agree
6= Slightly Agree
5= Neither Agree or Disagree
4= Slightly Disagree
3= Somewhat Disagree
2= Strongly Disagree
1= Extremely Disagree

Questions

1. I enjoy social activities with people from the same heritage culture as myself.
2. I enjoy social activities with typical American people.
3. I am comfortable interacting with people of the same heritage culture as myself.
4. I am comfortable interacting with typical American people.
5. I enjoy entertainment (e.g. movies, music) from my heritage culture.
6. I enjoy American entertainment (e.g. movies, music).
7. It is important for me to maintain or develop the practices of my heritage culture.
8. It is important for me to maintain or develop American cultural practices.
9. I am interested in having friends from my heritage culture.
10. I am interested in having white American friends.

Part IV. Demographics

Please respond to the following items by providing the answer that best represents you.

1. Gender: Female__ Male___

2. Your country of origin (the place where you were born):

3. What is your job title?

- Assistant Professor
- Associate Professor
- Professor
- Other _____

4. How long have you lived in the U.S.?

- 0 - 5 years
- 6 - 10 years
- 11 - 20 years
- 21 - 30 years
- 31 years or more

5. Approximately, how many hours do you work each week?

- Less than 40 hours
- 41 to 50 hours
- 51 to 60 hours
- 61 hours or more

6. What is your research and teaching focused area?

- STEM
- Non-STEM
- Other

APPENDIX G

FIRST FOLLOW-UP

Follow-Up Email to Participants

To: Asian Tenure-Track and Tenured Faculty Members

From: Wenting Yang, Ph.D. Candidate
Workforce Education
College of Education
The University of Georgia

Bettye P. Smith, Ph.D.
Professor in the Program of Workforce Education and Advisor
College of Education
The University of Georgia

About a week ago, an email was sent to you requesting your participation in a study entitled "*Examining Job Satisfaction among Asian Faculty in the United States*". If you have already completed the online questionnaire, thank you for your participation.

If you have not, I would appreciate your completing the survey, which should take about 15 mins to complete. We know that your time is very valuable and that you are busy with your work. However, your responses are extremely vital to this research survey regarding job satisfaction of Asian faculty.

The link to the questionnaire is https://ugeorgia.qualtrics.com/SE/?SID=SV_5bWWkZCe7LZGMCh.

If you have questions or concerns, please contact Wenting Yang at wyang@uga.edu or Bettye P. Smith at smithb@uga.edu. If you have any questions about the rights of research subjects, please contact the University of Georgia's Human Subjects Office at 706-542-3199, Fax 706-542-3360, or e-mail irb@uga.edu, or regular mail at: University of Georgia, 310 E. Campus Rd., Athens, GA 30602.

Thank you!

Respectfully,

Wenting Yang
Follow the link to opt out of future emails:
Click here to unsubscribe

APPENDIX H

SECOND FOLLOW-UP EMAIL

Second Follow-Up Email to Participants

To: Asian Tenure-Track and Tenured Faculty Members

From: Wenting Yang, Ph.D. Candidate
Workforce Education
College of Education
The University of Georgia

Bettye P. Smith, Ph.D.
Professor in the Program of Workforce Education and Advisor
College of Education
The University of Georgia

Several weeks ago, an email was sent to you requesting your participation in a study entitled "*Examining Job Satisfaction among Asian Faculty in the United States*". If you have already completed the online questionnaire, thank you for your participation.

If you have not, I would appreciate your completing the survey, which should take about 15 mins to complete. We know that your time is very valuable and that you are busy with your work. However, your responses are extremely vital to this research survey regarding job satisfaction of Asian faculty.

If you were born in Asia, you are invited to participate in this study. The link to the questionnaire is https://ugeorgia.qualtrics.com/SE/?SID=SV_5bWWkZCe7LZGMCh.

If you were not born in Asia, sorry about the interruption and you can opt out of future email Click here to unsubscribe.

If you have questions or concerns, please contact Wenting Yang at wyang@uga.edu or Bettye P. Smith at smithb@uga.edu. If you have any questions about the rights of research subjects, please contact the University of Georgia's Human Subjects Office at 706-542-3199, Fax 706-542-3360, or e-mail irb@uga.edu, or regular mail at: University of Georgia, 310 E. Campus Rd., Athens, GA 30602.

Thank you! Hope you have a great upcoming summer semester!

Respectfully,

Wenting Yang