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August, 2012

WHY AND WHEN DOES MENTORING WORK: THE MEDIATING AND  
MODERATING EFFECTS ON THE MENTORING FUNCTIONS-JOB SATISFACTION  
RELATIONSHIP

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A Thesis

Presented to

The Faculty of the Department

of Psychology

University of Houston

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In Partial Fulfillment

Of the Requirements for the Degree of

Master of Arts

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## ABSTRACT

Past studies found that mentoring significantly influences protégés' attitudinal outcomes (e.g., job satisfaction). The purpose of this study is to further understand why and when mentoring effectively impacts protégés' job satisfaction. A total of 454 mentoring dyads participated in the current study, and the results indicated that resilience is a mechanism underlying the relationship between mentoring functions (i.e., career development and psychosocial functions) and job satisfaction. Moreover, protégés in cross-gender mentoring relationships reported higher levels of role model function. This finding suggested that the relationship between role modeling function and resilience was more positive in cross-gender mentoring relationships than in same-gender mentoring relationships. Furthermore, protégés with supervisor mentoring demonstrated higher levels of reception of mentoring functions (i.e., career development, psychosocial, and role modeling function) and job satisfaction than those with non-supervisor mentoring. Finally, the present study showed that the relationship between role modeling function and job satisfaction is stronger in supervisor mentoring than in non-supervisor mentoring.

## TABLE OF CONTENTS

Introduction.....	1
Definition and Functions of Mentoring at work.....	4
Positive Outcomes Associated with Mentoring for Protégés.....	6
Conservation of Resource (COR) Theory on Mentoring.....	8
Job Satisfaction Associated with Mentoring for Protégés.....	10
Prior Research on Why and How Mentoring Affects Outcomes.....	11
The Issue of Positive Organizational Behavior: Mentoring and Resilience.....	12
Gender Composition in Mentoring Relationships.....	15
Mentors' Supervisory Status in Mentoring Relationships.....	20
Method.....	25
Participants and Procedure.....	25
Measures.....	26
Mentoring functions.....	26
Resilience.....	26
Job satisfaction.....	27
Gender composition in mentoring relationships.....	27
Supervisory status of mentor.....	28
Control Variables.....	28
Analytic Strategy.....	28
Results.....	29
The Relationship between Mentoring Functions and Job Satisfaction.....	29
The Relationship between Mentoring Functions and Resilience.....	29

The Relationship between Resilience and Job Satisfaction.....	30
Resilience Mediated the Mentoring Functions-Job Satisfaction Relationship.....	30
The Relationship between Gender Composition of Mentoring Relationships and Job Satisfaction.....	32
The Relationship between Gender Composition of Mentoring Relationships and Mentoring Functions.....	32
Gender Dyads of Mentoring Relationships Moderated the Relationship between Mentoring Functions and Job Satisfaction.....	33
Gender Dyads of Mentoring Relationships Moderated the Relationship between Mentoring Functions and Resilience.....	33
The Relationship between Supervisor Mentoring and Job Satisfaction.....	34
The Relationship between Supervisor Mentoring and Mentoring Functions.....	34
Supervisor Mentoring Moderated the Relationship between Mentoring Functions and Job Satisfaction.....	34
Supervisor Mentoring Moderated the Relationship between Mentoring Functions and Resilience.....	35
Discussion.....	35
Theoretical implications.....	37
Discussion of inconsistent results of gender dyads in mentoring relationships.....	40
Practical Implications.....	42
Limitations and Conclusion.....	42
References.....	45



## LIST OF TABLES AND FIGURES

### Tables

Table 1.....	60
Table 2.....	61
Table 3.....	62
Table 4.....	63
Table 5.....	64
Table 6.....	65
Table 7.....	66
Table 8.....	67
Table 9.....	68
Table 10.....	69
Table 11.....	70
Table 12.....	71
Table 13.....	72
Table 14.....	73
Table 15.....	74
Table 16.....	75
Table 17.....	76

### Figures

Figure 1.....	77
Figure 2.....	78
Figure 3.....	79

Figure 4..... 79

## **Why and When Does Mentoring Work: The Mediating and Moderating Effects on the Mentoring Functions-Job Satisfaction Relationship**

In the last three decades, the topic of mentoring at work has continued to be of concern to many organizational researchers (Burke, 1984). Moreover, in practice, there are increasingly more mentoring programs being conducted within organizations (Eddy, Tannenbaum, Alliger, D'Abate, & Givens, 2001). Mentoring is viewed as the dynamic processes through which mentors provide advice or support to protégés. Mentoring is defined by those aspects of a developmental relationship that enhance both protégés' growth and advancement (Kram, 1985). Furthermore, mentoring relationships can exist in individuals' different life stages and across organizations, for learning in school, or working in a company. Importantly, past studies have repeatedly indicated that mentors can positively influence the various developmental stages of individuals and promote their career success (Kram, 1985; Southwick, Morgan, Vythilingam, & Charney, 2006). Specifically, past studies outlined the important role of mentoring relationships in organizational settings (Kram, 1985).

Several empirical studies have compared the differences between mentored and non-mentored protégés within organizations (Burke, 1984; Roche, 1979; Turban & Dougherty, 1994). Their findings consistently indicate that mentoring can lead to positive work-related outcomes, such as, increased job satisfaction, commitment, engagement and decreased turnover intentions (Lankau, Carlson, & Nielson, 2006). Further, Allen, Eby, Poteet, Lentz, and Lima (2004) adopted a meta-analytic approach to summarize the existing mentoring research and indicated that, compared to non-mentored individuals, mentored individuals were: (a) more satisfied with their career (b) more likely to expect career success (c) more likely to be committed to their career and (d) more satisfied with their jobs. In a similar vein, Roche (1979) concluded that salary, bonuses and total compensation were more favorable among executives who had mentors than among executives who were not mentored. In short, mentoring is positively associated with career achievement, career success, job

satisfaction, career satisfaction, and commitment (Kammeyer-Mueller & Judge, 2008; Turban & Dougherty, 1994).

Despite the overwhelming empirical support found for mentoring effectiveness in the workplace, there are significant gaps that still remain in the current mentoring literature. First, although mentoring researchers have indicated that mentoring does indeed provide significant benefits to protégés, the mechanisms and conditions underlying the relationship between the reception of mentoring functions on the one hand, and protégés' subjective and objective work-related outcomes on the other hand, have yet to be explored (Barianik, Roling, & Eby, 2010). Second, because a mentoring relationship is a dyadic interaction, there is a need to consider how to pair a mentor and a protégé in order to attain maximal benefits for individuals and organizations (Lankau, Riordan, & Thomas, 2005). As such, the demographic composition of mentoring relationships needs to be further examined to maximize their effectiveness.

To date, relatively little is known about the exact mechanisms through which the reception of mentoring functions affects subjective career outcomes for protégés. Due to the paucity of mentoring research on mediating processes, we are still limited in our understanding of how the mentoring process influences subjective career outcomes, like job satisfaction (Wanberg, Welsh, & Hezlett, 2003; Lankau, Carlson, & Nielson, 2006). In fact, Barianik et al. (2010) recently emphasized that more mentoring research should be devoted to clarifying the mechanisms underlying the relationship between mentoring and protégé outcomes. Furthermore, Lankau et al. (2006) reviewed the literature related to mentoring studies and found that there was a scarcity of research which examined *how* and *why* the reception of mentoring functions influences protégé outcomes. Therefore, exploring the mediating mechanisms through which the reception of mentoring functions impact work-related subjective outcomes can help clarify how mentoring influences protégés and why it works.

Because a mentoring relationship is typically viewed as a dyadic interaction and a dynamic process in an organization (Kram, 1985), based on the perspective of protégés, the relationship between a mentor and a protégé influences the reception of mentoring functions (Kram, 1985; Ragins & McFarlin, 1990). Sosik and Godshalk (2005) supported the conjecture that different types of mentoring pairs impact the protégés' reception of mentoring functions and outcome. Gender composition serves as a salient demographic dyad on mentoring relationships (O'Brien, Biga, Kessler, & Allen, 2010). In fact, several studies indicated that the gender composition in mentoring influences not only the reception of mentoring functions (Ragin, 2007; Scandura, 1993), but also protégés' career development and career success (O'Brien et al., 2008; Sosik & Godshalk, 2005). Furthermore, since mentoring relationships tend to occur across hierarchical relationships in an organization (Burke, 1984; Burke, McKeen & McKenna, 1993), the supervisor-subordinate pair is another dominant type of mentoring relationships in an organization (Burke et al., 1993; Scandura & Williams, 2004). Sosik and Godshalk (2005) found that protégés whose mentors are their supervisors report different levels of outcomes compared to those whose mentors are not their supervisors.

The purpose of the present study is to address the gaps in the mentoring literature as well as theoretically and empirically advance our knowledge of mentoring. Accordingly, the objective of the present study is to examine the potential mechanisms that can explain why the reception of certain mentoring functions relates to more favorable subjective career outcomes. Specifically, I examine the concept of resilience, "the capability of individuals to cope successfully in the face of significant change, adversity, or risk" (Stewart, Reid, & Mangham, 1997, p. 22), as a potential mediating mechanism for understanding the relationship between the reception of mentoring functions, on the one hand, and employees' job satisfaction on the other. The second objective of the present study is to examine the influence of mentoring functions received by protégés on different types of mentoring pairs.

In the present study, specifically, the aim is to examine the influence of mentoring functions received by protégés given gender composition (i.e., the same-gender relationship and the cross-gender relationship). Moreover, the present study will also examine whether being mentored by one's supervisor or by an employee who is not in a supervisory role affects mentoring outcomes (i.e., mentors are protégés' supervisors and mentors are not protégés' supervisors). Lastly, this study is interested in examining whether the relationship between the reception of mentoring functions and resilience varies by the gender composition and the mentors' supervisory status of mentoring relationships.

In developing a theoretical framework for the present study, there is first a review of the relevant literature with regard to the definition of mentoring, the different types of mentoring functions, and mentoring benefits for protégés which focus on their career success. Second, the study employs the conservation of resources theory (COR; Hobfoll, 1989) to explain the relationship between the reception of mentoring functions and job satisfaction. Third, the investigation discusses research on the factors that function as mediators between the reception of mentor functions and protégés outcomes, and explore how protégés' resilience may act as a potential mediator. Lastly, this paper reviews prior empirical work regarding the composition of mentoring relationships in order to develop theoretically guided hypotheses pertaining to the effects of gender composition and mentors' supervisory status on mentoring outcomes.

### **Definition and Functions of Mentoring at work**

The term *mentor* is derived from Greek mythology and implies a relationship between a young adult and an older or more experienced adult who assists a younger individual in learning to navigate within the adult world and world of work (Kram, 1985). In the workplace, particularly, a mentor can provide support, guidance, and counseling to protégés in order to help them accomplish job tasks or achieve career success (Allen et al., 2004; Kammeyer-Mueller & Judge, 2008).

Kram (1985) conducted a content analysis of in-depth interviews to categorize core mentoring behaviors in the workplace. Several empirical studies have supported Kram's (1985) different types of mentoring functions (Ensher & Murphy, 1997; Ragins & McFarlin, 1990; Noe, 1988; Scandura, 1992; Tepper, Shaffer, & Tepper, 1996). Based on Kram's findings, Scandura (1992) identified that career development, psychosocial, and role modeling are key mentoring functions. The career development function involves the mentors' providing career-related sponsorship, exposure, visibility, coaching, protection, and challenging assignments in order to enhance their protégés' advancement in organizations (Kram, 1985). Moreover, mentors provide protégés with opportunities of human capital enhancement and links to influential people in the workplace (Kammeyer-Mueller & Judge, 2008). Second, the psychosocial function refers to those aspects of an interpersonal relationship that enhance an individual's sense of competence, identity, and effectiveness in a professional role (Kram, 1985). Additionally, it includes counseling the protégé about job anxieties and uncertainty, providing social support, and career development (Kammeyer-Mueller & Judge, 2008). The psychosocial function specifically includes role modeling, acceptance and confirmation, counseling, and friendship (Kram, 1985). Last, the role modeling function involves the mentors' attitudes, values, and behaviors providing a model for protégés to emulate (Kram, 1985). Specifically, when protégés identify with their mentors and perceive their mentors to be a desirable example to follow, they are more likely to observe, learn, and practice the behaviors displayed by their mentors (Kram, 1985; Scandura, 1992). For example, a young manager can learn the tasks involved in managing a work group by observing how a senior manager approaches these tasks. In general, mentoring provides an inexperienced individual an opportunity to learn through observation.

Although mentoring researchers have already classified the different types of mentoring functions that protégés receive from mentors, it is still necessary to clarify what protégé outcomes would be influenced by each mentoring function. Therefore, mentoring experts

have been devoted, not only to answering what benefits or career outcomes mentors provide to protégés, but also to understanding the relationship between different mentoring functions and career outcomes (Allen et al., 2004; Levinson, Darrow, Klein, Levinson, & McKee, 1978; Roche, 1979).

### **Positive Outcomes Associated with Mentoring for Protégés**

Career-related success is generally used to evaluate the effectiveness of mentoring (Chao, 1997; Dreher & Ash, 1990; Fagenson, 1989; Kirchmeyer, 1998; Koberg, Boss, Chappell & Ringer, 1994). In fact, career-related success refers to the positive work or psychological outcomes which individuals experience from their job (Seibert, Kraimer, & Liden, 2001), and it is subdivided into objective career and subjective career outcomes (Gutteridge, 1973; Judge, Cable, Boudreau & Bretz, 1995; Judge, Thoresen, Pucik, Welbourne, 1999; Ng, Eby, Sorensen & Feldman, 2005). Objective career outcomes include promotions, income and compensation. Subjective career outcomes include job satisfaction, commitment, and turnover intention (Allen, et al., 2004; Seibert et al., 2001). In other words, subjective career outcomes are more affective and intangible aspects of protégés' success than objective career outcomes. Taken together, both objective and subjective career outcomes can function as indicators of career success (Ng et al., 2005).

Eby, Allen, Evans, Ng, and DuBois (2008) supported the claim that mentoring is related to favorable behavioral (e.g., job performance), attitudinal (e.g., career attitudes), health-related (e.g., psychological stress and strain), relational (e.g., interpersonal relations), and career outcomes (e.g., skill development). In other words, protégés who receive mentoring achieve significantly more career success than those who do not receive mentoring (Allen et al., 2004; Allen, Lentz & Day, 2006). Specifically, mentored employees report more job satisfaction, career satisfaction, commitment, promotions, compensation, and salary than non-mentored employees (Allen et al., 2004; Gutteridge, 1973; Roche, 1979; Judge et al., 1995; Judge, et al., 1999; Ng et al., 2005).



Mentoring could be viewed as the provision of multiple resources for protégés to achieve their career success. Career development mentoring can provide job-related information or assignments to enhance protégés' knowledge and understanding of how to complete work tasks effectively. Especially, a mentor tries to protect a protégé from tough situations until the mentor believes the protégé is ready to complete the task (Kram, 1985). Moreover, a mentor may provide a protégé with challenging assignments to develop specific competencies and to experience a sense of accomplishment in a professional role (Kram, 1985). Through those challenging assignments a protégé develops essential job-related skills through work that encourages learning with the mentor needing to provide ongoing support and feedback.

Furthermore, a mentor may provide personal concerns, trust, and encouragement to a protégé in the workplace (i.e., psychosocial function). In other words, mentoring provides the protégé with psychological resources to maintain their inner psychological states. Kram (1985) indicated that the psychosocial function provides support and trust that encourages protégés to take risks and to overcome unfamiliar tasks.

Further, mentoring provides the opportunity to emulate or learn from senior individuals through interaction between the mentor and the protégé (i.e., role modeling function). Through the mentoring interaction, protégés can understand and learn their mentors' behaviors, attitudes, decision making, and strategies (Kram, 1985). In other words, because the mentor has more job-related experience than protégés, protégés may display admiration and respect, facilitating learning through observation. Taken together, mentoring could be viewed as a resource reservoir to provide different types of resources to protégés.

In fact, subjective attitudinal outcomes, such as job satisfaction, have been found to influence organizational behaviors, including performance, turnover, and counterproductive work behaviors (Judge, Higgins, Thoresen & Barrick, 1999). As such, it is important to further consider and examine subjective attitudinal outcomes in mentoring research.

Therefore, the present study explores the relationship between different mentoring functions and job satisfaction.

### **Conservation of Resource (COR) Theory on Mentoring**

Conservation of Resource (COR) theory proposes that people tend to acquire, retain, and protect resources in order to maintain their well-being (Hobfoll, 1989). Individuals tend to avoid the situations in which resources are threatened. However, when individuals lose resources, expect not to gain resources, or experience threats to existing resources, their inner state is in disequilibrium, which causes individuals to experience strain (Hobfoll, 1989; Hobfoll, Johnson, Ennis, & Jackson, 2003). In general, individuals have an inherent tendency to retain their resources and leave strain-inducing environments (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

Most existing studies on work stress have extended the COR theory to explain the relationship between stressors and strain because stressors are viewed as decreasing individuals' resources (Brotheridge & Lee, 2002; Grandey & Cropanzano, 1999). The stressors may destroy the balance of individuals' inner state and cause individual physical and psychological harm (strains), such as coronary heart disease and anxiety (Taris, Schreurs, & Van Iersel-Van Silfhout, 2001). The majority of the studies, however, focus on a lack of resources to explain why stressors would lead to strains. In fact, COR theory also emphasizes the importance of resource gains, but limited attention has been given to this issue (Weigl et al., 2010). Weigl et al. (2010) indicated that advancing the resource-gain perspective of COR theory can address this gap in the literature and further our understanding of what mechanisms can replenish individuals' resources to prevent future frustrations in their jobs. COR theory may explain why the well-being of employees can be increased even when resources are replenished (Hobfoll et al., 2003; Weigl et al., 2010).

Because job stressors often cannot be eliminated, increasing job resources and identifying other sources becomes an important goal for individuals. However, there has been

a lack of empirical research testing this proposition (de Jonge & Dormann; 2006). Two principal types of resources that have been identified are personal and social resources (Hobfoll, 2002; Hobfoll et al., 2003). Personal resources are aspects of the self (e.g., individuals' sense of their ability to successfully control and impact the challenging circumstances), whereas social resources mean that individuals acquire support from colleagues, family, and peer groups. For example, social support has been identified as an important resource based on the COR theory that can buffer employees' burnout and anxiety on stressors (Grandey, 2000; de Jonge & Dormann, 2006).

Both gain of personal and social resources are related to psychological well-being. Specifically, it has been found that the reception of resources is negatively related to depressive moods and anger (Hobfoll et al., 2003; Holahan, Moos, Holahan, & Cronkite, 1999). Furthermore, social resources gains reflect positive interaction between the working person and the social environment (Weigl et al., 2010). Mentoring can provide protégés with resources to help them achieve career success and assist them in the attainment of job-related knowledge and information, and social support (Kram, 1985; Mullen, 1994). Mentoring provides individuals with career-related and psychosocial benefits in terms of enhancements in their career and job satisfaction (Allen et al., 2004).

By obtaining these social resources from mentoring, protégés can also escape the threat of losing resources in the workplace (i.e., mentors provide coaching or job-related training to protégés). For instance, mentors can provide psychosocial functions for protégés and build an emotional connection through counseling, friendship, and acceptance (Kram, 1985). Moreover, mentoring could provide informational and instrumental career-related support to help the protégé feel more confident in their job and enhance their career and job satisfaction (Allen et al., 2004). Hence, the protégé could experience replenishment of resources from mentors, balancing their inner state, and further helping them to cope with their career-related tasks or stressors.

The reception of role-model function from mentors may also increase protégés' resources to enhance their state of well-being. Protégés can also emulate or learn their mentors' behaviors to increase the likelihood of mastering their tasks and abilities based on role modeling functions. For instance, a protégé views a mentor as a role model for successful leadership and learns leadership behaviors that ensure job effectiveness and self-confidence. Taken together, mentoring can be seen as a resource reservoir that provides individuals with valued and stable social and personal resources, which in turn enhances their well-being.

### **Job Satisfaction Associated with Mentoring for Protégés**

Job satisfaction is defined as a pleasurable or positive emotional state resulting from individuals' appraisals of their job experience (Locke, 1968). Simply, job satisfaction is the extent to which individuals like (satisfaction) or dislike (dissatisfaction) their jobs (Spector, 1997). COR theory provides a logical explanation for why job satisfaction, as a subjective career outcome, would be affected by enhanced resources. Specifically, it suggests that individuals tend to conserve their valued resources, so as to achieve their desired goals (Grandey & Cropanzano, 1999). Therefore, when individuals experience actual resource loss or perceive the threats of resource loss, they may evaluate their environments or jobs negatively. On the other hand, when individuals conserve or replenish resources, they may appraise their environments or jobs more positively.

In summary, COR theory provides a theoretical guide for explaining why mentoring is related to subjective career success (i.e., job satisfaction). The COR theory is based on the premise that individuals seek to protect, retain, and accumulate valued resources to maintain their well-being. Mentoring could be viewed as an important resource reservoir to gain resources which individuals deplete at work. Moreover, individuals could acquire personal and social resources through different types of mentoring functions.

Through the mentoring process, protégés gain a greater amount of resources, and as

such are less negatively impacted by stressful circumstances and have greater well-being. Therefore, in the spirit of constructive replication of prior research, this study hypothesizes that there is a positive relationship between the mentoring functions that the protégés receive from their mentors and job satisfaction.

*Hypothesis 1:* The reception of mentoring functions (career development, psychosocial, and role modeling function) is positively related to job satisfaction.

### **Prior Research on Why and How Mentoring Affects Outcomes**

Comprehensive mentoring frameworks have already been developed based on prior empirical work. However, there are few mentoring studies which examine related mediators (Kammeyer-Mueller & Judge, 2008) to clarify the mechanisms underlying the relationship between mentoring and protégé outcomes. The possible reason for this is that most mentoring studies use social exchange theory or social learning theory to explain the benefits of mentoring (Allen et al., 2004). Yet, they still cannot adequately explain the relationship between mentoring and the well-being of employees, specifically the mechanism through which the provision of mentoring functions affects subjective career outcomes for protégés.

A recent study suggests that it is still necessary to conduct more research on mediators in the mentoring process in order to clarify why and how mentoring influences protégés' outcomes (Barianik et al., 2010). Prior research has only provided some preliminary directions on what mediates the relationships between mentoring functions and outcomes. Barianik et al. (2010) found that organizational support mediated the relationship between mentoring functions received and work attitudes (job satisfaction and affective organizational commitment). Lankau et al. (2006) found that both role conflict and role ambiguity fully mediated the relationship between psychosocial support and role modeling with job attitudes. Payne and Huffman (2005) concluded that affective commitment partially mediated the negative relationship between mentoring and actual turnover behavior after ten years. Lankau and Scandura (2002) found that support for personal learning acted as a mediator between

mentoring functions and attitudinal outcomes. However, we still do not exactly know what potential mechanisms can explain why mentoring is related to job satisfaction. Particularly, research has yet to explore how mentoring changes protégés' inner states and influences subjective outcomes at the within-individual level of analysis.

### **The Issue of Positive Organizational Behavior: Mentoring and Resilience**

In the 90s, psychological science started focusing on positive psychological variables. At that point, psychologists noticed that much psychological research focused on negative individual attributes while somewhat neglecting positive individual attributes (Seligman, 2000). Since then, positive psychology has influenced organizational behavior research (Luthans, 2002; Seligman, 2011), and has contributed a better overall understanding of employees' positive attributes and positive psychological states (Youssef & Luthans, 2007).

Youssef and Luthans (2007) denoted that positive psychological capacities such as hope, optimism, and, especially, resilience will influence individuals' behaviors in organizations (i.e., job satisfaction, job performance, and organizational commitment). In fact, resilience has been viewed as a core concept in positive organizational behavior in the workplace (Luthans, 2002; Luthans & Youssef, 2007; Youssef & Luthans, 2007). However, while there are a variety of scientific fields that utilize the resilience construct, such as education and nursing care, there is a scarcity of relevant research which focuses on resilience of employees (Luthans, 2002; Youssef & Luthans, 2007).

The concept of resilience involves a psychological competency within individuals to "spring back" in the face of adversity (Jacelon, 1997). Further, it indicates a combination between competency and characteristics that interact to allow an individual to bounce back, cope successfully, and function above the norm in spite of stress or adversity (Tusaie & Dyer, 2004).

Several studies indicated that resilience could be developed and changed with different life stages (Egeland, Carlson, & Sroufe, 1993; Rutter, 1987). Thus, Werner and Johnson

(2002) suggested that using a specific resilience at the particular stage will be more rational than using a global concept of resilience. Moreover, the current evidence indicates that it is questionable if researchers use the overall construct of resilience to explain individuals' behavior (Tusaie & Dyer, 2004). Therefore, in the present study, the specific concept of resilience in the workplace will be used.

In fact, resilience is an integral concept in which the interactions of intrapersonal and environmental factors exist (Tusaie & Dyer, 2004). Intrapersonal factors include cognitive factors (e.g., intelligence, creativity, and humor) and competencies (e.g., coping strategies, social skills, and educational ability etc.). Environmental factors that would influence individuals' resilience include perceived resources or other life events. In other words, the state of resilience would be influenced by environmental and intrapersonal factors (Richardson, Neiger, Jensen, & Keumpfer, 1990).

Several studies found support for a relationship between resilience and mentoring (Brown, 2004; Day, 2006; Southwick et al., 2006). Ragins (2007) noted that mentoring can be viewed as a high-quality connection that produces positive states of psychological capital for protégés, such as resilience (Luthans & Youssef, 2004). Career mentoring can provide protégés useful job-related information or training to enhance their competencies. Then psychosocial mentoring can provide protégés social support and reduce job anxieties and uncertainty. Also, role modeling mentoring can provide protégés resources to emulate mentors' behaviors. Taken together, mentoring that is viewed as a resource reservoir involves facilitating intrapersonal and environmental factors to influence the protégé's state of resilience in the workplace.

In general, mentors play an important role in promoting and developing resilience among individuals (Ragins, 2007; Southwick et al., 2006). Masten (2001) also maintained that individuals can develop resilience through mentoring or training, which may assist in overcoming adversity in their career development. Accordingly, this research proposes that

each mentoring function is positively associated with resilience.

In the apparent absence of research exploring the effects of resilience on job satisfaction, COR theory may provide a potential support that resilience is positively related to job satisfaction. COR theory posits that individuals tend to retain and acquire resources, and that individuals who own greater resources are less negatively impacted by stressors or challenges (Hobfoll, 1988, 1998). In other words, when individuals obtain resources to replenish their inner states, they will display positive emotion state (e.g., job satisfaction).

Moreover, several studies have indicated that there is a positive relationship between individuals' resources and their resilience (Hobfoll, 2002; Hobfoll et al., 2003; Weigl et al., 2010). Resilience signifies that individuals can actively face challenges and complete tasks in stressful circumstances. Individuals who have high resilience could recover quickly from adversity and develop courage when facing difficult situations (Bonanno, 2004; Luthans, 2002; Youssef & Luthans, 2007). Moreover, Richardson et al. (1990) indicated that individuals who have higher resilience tend to exert fewer resources compared to those who have lower resilience. Taken together, individuals who have higher resilience can not only effectively cope with difficult tasks, but also maintain more resources compared to those who have less resilience. Therefore, I propose that resilience is positively associated with job satisfaction.

*Hypothesis 2:* The reception of mentoring functions (career development, psychosocial, and role modeling function) is positively related to resilience.

*Hypothesis 3:* Resilience is positively related to job satisfaction.

Past meta-analytic research has already supported the idea that mentoring is positively related to protégés' job satisfaction (Allen et al., 2004). Protégés may acquire different types of mentoring functions from mentors. These protégés in mentoring relationships would avoid depleting their resources and retain or promote their state of inner well-being. However, we



still only partially understand what the exact mechanisms are within this relationship. In fact, resilient individuals could retain resources and bounce back from adversity more easily than individuals who lack resilience (Luthans, 2002; Youssef & Luthans, 2007). Several studies support the relationship between resilience and employees' well-being (Hobfoll et al., 2003; Luthans, 2002; Youssef & Luthans, 2007; Weigl et al., 2010). Hence, resilience is thought of as a vital competency for protégés to overcome adversity and experience positive subjective attitudinal outcomes (Ferris, Sinclair, & Kline, 2005; Tusaie & Dyer, 2004). Therefore, it could be a potential mechanism between mentoring and protégés' job satisfaction explaining why mentoring could impact their well-being. Based on the argument above, this study offers the hypothesis that resilience mediates the relationship between each mentoring function and job satisfaction.

*Hypothesis 4:* Resilience will mediate the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling function) and job satisfaction.

### **Gender Composition in Mentoring Relationships**

Mentoring researchers have found much support for the notion that mentoring can truly enhance protégés' performance, opportunities for promotion, career success, commitment, career and job satisfaction, etc. and decrease turnover intention (Allen et al., 2004). Hence, more organizations have taken concrete steps to design and implement mentoring programs (Allen, et al., 2006). For example, the Bank of America, Marriott International, and Charles Schwab in the U.S have all instituted formal mentoring programs to help their employees achieve higher performance levels (Eddy et al., 2001). However, there still remain several issues which need to be addressed. According to the definition of mentoring, a mentoring relationship is a dynamic matching process whereby mentors provide advice or support to their protégés (Kram, 1985). Within the context of mentoring relationships, individuals must

necessarily work together and communicate with one another (Young, Cady, & Foxon, 2006). Hence, the pairing of mentoring relationships directly influences how protégés receive support from their mentors and indirectly impacts their subsequent career outcomes. Allen et al. (2006) emphasized the need to identify how one can optimally pair mentors and protégés so that both attain maximum benefits and effectiveness from the mentoring relationship.

In line with the social identity theory, individuals tend to evaluate the characteristics and distinctiveness of people or groups, and individuals inevitably prefer to interact with people who are similar rather than different from themselves (Byrne, 1971; Tajfel & Turner, 1985). Specifically, research has shown that protégés are acutely concerned about the similarities between themselves and their mentors (i.e., demographic similarities), and that demographic similarities, especially gender similarity, impact the degree to which protégés readily accept advice from mentors (Olian, Carroll, Giannantonio, & Feren, 1988). In general, research suggests that demographic similarity between mentor and protégés enhance the quality of social interactions.

The current body of evidence evinces that demographic similarities are important for the quality of mentoring relationships (Young et al., 2006). Therefore, it is expected that, compared to cross-gender relationships, same-gender relationships would foster greater interpersonal comfort among mentors and protégés due to congruence in social identity between them (Ragin, 1997). In general, a higher level of interpersonal comforts would result in greater social interactions (Sosik & Godshalk, 2005), and a high quality of social interactions in turn would be associated with commitment, job satisfaction and decreased turnover intention (Ragin & McFarlin, 1990; Tajfel & Turner, 1985). Accordingly, this study hypothesizes the following:

*Hypothesis 5:* Protégés in a same-gender mentoring relationship report greater job satisfaction than those in a cross-gender mentoring relationship.

The composition of mentoring relationships, e.g., same-gender pairing, may potentially

influence the effectiveness of mentoring relationships (Turban, Dougherty, & Lee, 2002). Lincoln and Miller (1979) found that similarities between individuals may lead to more frequent communications, higher social integration, and a greater intent to maintain relationships. Wharton and Baron (1987) further suggested that demographic similarities of individuals could lead to more cohesive work relations. Prior studies supported the conjecture that the gender composition in mentoring relationships influences the mentoring functions received by the protégés (Sosik & Godshalk, 2005; Turban, 2002). Moreover, Ragin and McFarlin (1990) found that female protégés with female mentors reported that their mentors provided more role modeling mentoring, in comparison with protégés with cross-gender mentors. Accordingly, this study hypothesizes the following:

*Hypothesis 6:* Protégés in a same-gender mentoring relationship report more mentoring functions (career development, psychosocial, and role modeling function) than those in a cross-gender mentoring relationship.

Although past research has already provided ample support for the hypothesis that the perceived provision of mentoring functions is related to job satisfaction (Allen et al., 2004), gender composition in the mentoring relationship may yet play a key role in this relationship. In same gender mentoring relationships, protégés may receive more mentoring functions, and subsequently demonstrate greater job satisfaction than their counterparts in cross-gender mentoring relationships. The social capital theory may provide a possible explanation of why gender composition would influence the mentoring functions-job satisfaction relationship. Social capital is defined as the resources or assets which are produced within and flow through relationships (Burt, 1997; Coleman, 1988). Individuals could acquire resources such as information, knowledge, support, and advice through their relationships or social networks (Burt, 1997). Moreover, mentoring could also be involved within a broader framework of social networks (Higgins, 2007). Therefore, the quality of mentoring relationships would naturally influence the reception of different levels of resources.

Based on the social identity theory (Tajfel & Turner, 1985), mentoring relationships with same-gender composition may lead to an increase in interpersonal comforts and social interactions, as compared to those with cross-gender composition, thereby ensuring that a same-gender relationship would likely result in reception of more resources. In particular, same-gender relationships can increase interpersonal comforts and social interactions, such as verbal communications and behavioral interactions, to enhance the quality of relationships (Ragin & McFarlin, 1990; Ragin, 1997; Tajfel & Turner, 1985), and may influence the reception of mentoring functions (Allen, Day, & Lentz, 2005).

Integrating perspectives from both social capital theory and social identity theory, one can conclude that infrequent contact and a lack of social identification with one's mentor would also likely discourage the seeking of emotional/psychosocial support, role-model identity and career-developmental advice from one's mentor (Olian et al., 1988). Conversely, due to the high level of personal comforts and social interactions, protégés display greater intent to interact with their same-gender mentors and thus receive more resources from the latter.

Same-gender composition in mentoring relationships may also constitute more favorable conditions for protégés to receive adequate mentoring functions, compared to a cross-gender mentoring relationship (Koberg, Boss, & Goodman, 1998; Scandura & Williams, 2001; Thomas, 1990), and would thus influence individuals' job satisfaction levels. Given that the COR theory posits that individuals tend to acquire or retain their resources, protégés receive different types of mentoring functions as resources from their mentors to aid in replenishing other depleted resources; this in turn can lead to increased job satisfaction (Ragins, 2007). Accordingly, the hypothesis may be made that the relationship between the reception of mentoring functions and job satisfaction would be influenced by gender composition in mentoring relationships. Specifically, this would expect that the higher reception of mentoring functions within same-gender relationships would lead to higher job

satisfaction, as compared with cross-gender relationships (see Figure 1). Accordingly, this study hypothesizes the following:

*Hypothesis 7:* The gender composition in mentoring relationships moderates the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling function) and job satisfaction. Specifically, the relationship between the reception of mentoring functions and job satisfaction is more positive when protégés are in same-gender mentoring relationships as opposed to cross-gender mentoring relationships.

In line with the social capital theory, mentoring could be viewed as a resource reservoir where protégés might gain different types of resources through their relationships from others, specifically their mentors. Positive psychological capital, such as resilience, may be produced by high-quality connections, such as mentoring relationships (Luthans & Youssef, 2004; Ragins, 2007). Several studies found that resilience can be produced during the mentoring process (Brown, 2004; Day, 2006; Masten, 2001; Southwick, et al., 2006; Zand et al., 2009). In fact, mentoring functions can provide job-related information, psychological support, and learning examples to increase competencies, psychological resources, and learning resources (Allen et al., 2004; Richardson et al., 1990; Tusaie & Dyer, 2004). Moreover, past studies supported the view that resilience is one of the psychological capacities that are critically related to individuals' resources (Hobfoll et al., 2003; Luthans & Youssef, 2004).

The effect of the gender composition in mentoring relationships has been examined in prior studies (Lankau et al., 2005; Young et al., 2006). However, there appears to be an absence of any study that has examined its impact on the relationship between the reception of mentoring functions and resilience. The social identity theory suggests that due to their greater social identification and resulting frequency of interactions with their mentors, such as communications and behavior interactions (Ragin & McFarlin, 1990; Ragin, 1997; Tajfel & Turner, 1985), protégés in same-gender mentoring relationships are more likely to gain the necessary mentoring functions from their mentors. Gender composition in mentoring

relationships influences the quality of relationships and might impact the reception and supply of resources (i.e., mentoring functions) (Sosik & Godshalk, 2005; Turban et al., 2002).

Integrating perspectives from the social capital theory and social identity theory, accordingly, this study hypothesizes that the relationship between the reception of mentoring functions and resilience would be influenced by gender composition in mentoring relationships. Specifically, this research expects that the higher reception of mentoring functions in same-gender relationships would result in higher resilience than in cross-gender relationships (see Figure 2). Accordingly, we hypothesize the following:

*Hypothesis 8:* The gender composition of mentoring relationships moderates the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling function) and resilience. Specifically, the relationship between the reception of mentoring functions and resilience is more positive when protégés are in same-gender relationships as opposed to cross-gender relationships.

### **Mentors' Supervisory Status in Mentoring Relationships**

Due to a variety of organizational characteristics, there exist different types of mentoring relationships within organizations. Among those identified by mentoring researchers and practitioners are peer mentoring, supervisor mentoring, team mentoring, and external sponsor mentoring, all of which serve to satisfy different organizational goals (Allen & Eby, 2007; Eby, Rhodes, & Allen, 2007; Scandura & Pellegrini, 2007). Particularly, most mentoring relationships tend to occur in hierarchical relationships within organizations, and mentoring is established between supervisors and subordinates (i.e., supervisor mentoring) (Burke, 1984; Burke et al., 1993; Ragins, 2007; Sosik & Godshalk, 2005).

Several studies support the notion that employees are more likely to obtain mentoring from their direct supervisors, and the notion that supervisors therefore assume the responsibilities of providing greater support and spending more time with their subordinates (Eby, 1997; Ragins & McFarlin, 1990; Tepper & Taylor, 2003). Employees tend to interact

more frequently with their supervisors than with other managers in the workplace (Richard, Ismail, Bhuian, & Taylor, 2009). In general, protégés whose mentors are their supervisors report greater interpersonal comforts with the latter (Mullen, 1994), and higher levels of relationship quality and interaction frequency, compared to protégés whose mentors are not their supervisors (Lincoln & Miller, 1979). Furthermore, mentors who are also the direct supervisors of their protégés are also more likely to have a vested interest in their protégés' success compared to mentors who are not their protégés' direct supervisor (Fletcher & Perry, 2002). Hence, it is reasonable to expect that protégés would be more likely to benefit from mentors who are their supervisors than from mentors who are not their supervisors. As such, this hypothesis follows:

*Hypothesis 9: Protégés whose mentors are their supervisors demonstrate greater job satisfaction than those whose mentors are not their supervisors.*

As stated previously, the social capital theory contends that individuals tend to create or acquire assets and resources through relationships (Burt, 1997; Coleman, 1988); hence, relationships will necessarily influence the resources that individuals acquire. When mentors, who are also protégés' supervisors, recognize that providing support or resources to their protégés is part of their core responsibilities, they are more likely to invest more resources (i.e., time or energy) in their mentoring relationships (Burke & McKeen, 1997; Fagenson-Eland, Marks, & Amendola, 1997). Moreover, if mentors view their protégés as members of their work groups, they are more likely to provide the latter with higher levels of support compared to protégés who are not their subordinates (and therefore not part of their "in-group") (Richard et al., 2009). Supervisor-subordinate mentoring has been shown to promote higher levels of interpersonal comforts and interactions, and subsequently greater levels of mentoring effectiveness (Lincoln & Miller, 1979; Mullen, 1994). Therefore, protégés may acquire greater resources and/or support through supervisor mentoring than non-supervisor mentoring (Sosik & Godshalk, 2005).

In short, in line with the social capital theory, there are two reasons which could explain why supervisor mentoring is favorable for protégés (Burke, & McKeen, 1997; Sosik & Godshalk, 2005). First, when the subordinates' mentors are also their supervisors, the interactions between mentors and protégés would increase, particularly through higher frequency of contacts and communications. Through the increased interactions, protégés can receive more resources or support from their supervisory mentors. Second, supervisors are regarded as representatives of the organizations, and their levels of position are higher than their subordinates. In particular, a supervisory mentor may be familiar with the pertinent job-related knowledge, skills and abilities. Moreover, they could also provide psychological support to reduce anxiety or depression. Therefore, protégés are more likely to acquire the job-related and psychological resources requisite for completing their tasks. Accordingly, the following is expected:

*Hypothesis 10:* Protégés whose mentors are their supervisors receive more mentoring functions (career development, psychosocial, and role modeling function) than those whose mentors are not their supervisors.

Although past research has already offered support that mentoring functions are related to job satisfaction (Allen et al., 2004), a mentor's supervisory status (i.e., supervisor vs. non-supervisor) in the mentoring relationship may play a key role in this relationship. Supervisory mentors are likely to provide more career-related and role modeling functions and psychosocial support (i.e., coaching, sponsorship, and skill developing) to protégés subordinates than to non-protégé subordinates (Burke, McKenna, & McKeen, 1991; Sosik & Godshalk, 2005; Tepper, 1995), thereby leading to different levels of job satisfaction among the subordinates. The social capital theory may provide a possible explanation of why the mentor's supervisory status would impact the mentoring functions-job satisfaction relationship. It notes that individuals' resources or assets are produced within and flow through relationships (Burt, 1997; Coleman, 1988). Particularly, mentoring relationships have



been involved within a resource reservoir (Higgins, 2007). Therefore, the quality of mentoring relationships would influence the reception of resources.

The COR theory also points out that employees strive to maintain or acquire resources in order to escape the states of strain (Hobfoll, 1989). Weigl et al. (2010) offered support that there exists a relationship between resources and individuals' well-being. Hence, it is reasonable to believe that protégés would report different levels of job satisfaction based on different reception of mentoring functions. Thus, the supervisor mentoring will likely make it more favorable for protégés to receive adequate mentoring functions compared to the non-supervisor mentoring (Burke & McKeen, 1997; Burke, et al., 1991; Sosik & Godshalk, 2005), thereby impacting individuals' job satisfaction. Accordingly, this study hypothesizes that the relationship between the reception of mentoring functions and job satisfaction would be influenced by the different supervisory statuses of mentors. Specifically, it expects that the high reception of mentoring functions under supervisor mentoring would lead to higher job satisfaction, compared to the case of non-supervisory mentoring (see Figure 3). As such, we hypothesize the following:

*Hypothesis 11:* The supervisory status of mentors moderates the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling function) and job satisfaction. Specifically, the relationship between the reception of mentoring functions and job satisfaction is more positive when protégés are mentored by their supervisors as opposed to non-supervisors.

Mentoring could be viewed as a resource reservoir where protégés might gain different types of resources through relationships. Moreover, positive psychological capital, such as resilience, may be produced by high-quality mentoring relationships (Luthans & Youssef, 2004; Ragins, 2007). Several studies suggested that resilience is associated with mentoring (Brown, 2004; Day, 2006; Masten, 2001, Southwick et al., 2006; Zand et al., 2009). In fact, mentoring functions can provide job-related information, psychological support, and learning

examples to increase job-related and psychological resources that are related to resilience (Allen et al., 2004; Richardson et al., 1990; Tusaie & Dyer, 2004).

The social capital theory argues that maintaining or building quality relationships influences the reception of resources (Burt, 1997; Coleman, 1988). Supervisor mentoring can lead to greater interactions and personal comforts between mentors and protégés (Richard et al., 2009; Lincoln & Miller, 1979; Mullen, 1994). Additionally, supervisory mentors are familiar with the job tasks, skills, and abilities necessary for high performance, and capable of protecting their protégés from tough situations (Sosik & Godshalk, 2005). Although the effect of the mentor's supervisory status has been examined in prior studies (McKenna & McKeen, 1991; Tepper, 1995; Sosik & Godshalk, 2005), we are unaware of any study that has examined its impact on the relationship between the reception of mentoring functions and resilience.

Sosik and Godshalk (2005) argued that supervisor mentors generally provide more mentoring functions than non-supervisory mentors. Hence, protégés with supervisors as mentors are more likely to gain the necessary mentoring functions. The mentor's supervisory status may influence the quality of relationships and might impact the reception and supply of mentoring functions (Sosik & Godshalk, 2005; Turban, 2002; Turban et al., 2002). Further, individuals' resources are generally linked to individuals' resilience (Hobfoll et al., 2003; Luthans & Youssef, 2004).

Supervisor mentoring may be more conducive for protégés to receive adequate mentoring functions, compared to non-supervisory mentoring (Sosik & Godshalk, 2005), and would influence individuals' resilience. Accordingly, it is hypothesized that the relationship between the reception of mentoring functions and resilience would be influenced by the mentor's supervisory status. Specifically, it is expected that the high reception of mentoring functions with the supervisor mentoring would lead to higher resilience, compared to non-supervisor mentoring (see Figure 4). Accordingly, we hypothesize the following:

*Hypothesis 12:* Mentors' supervisory status moderates the relationship between the reception of mentoring functions (career development, psychosocial, role modeling function) and resilience. Specifically, the relationship between the reception of mentoring functions and resilience is more positive when protégés are mentored by their supervisors as opposed to non-supervisors.

## **Method**

### **Participants and Procedure**

Employees working for an insurance company in Taiwan were recruited for the current study. Data were collected from employees when they attended corporate training courses. The instructor described the purpose of this study and distributed questionnaires to employees in the training courses. Participants were each given one paper survey. Prior to completing the survey, all participants were asked to indicate whether they had a mentor in the workplace. If the participants indicated that they had a mentor, then they were asked to complete the rest of the survey. Hence, employees were first screened based on whether or not they had a mentor. Specifically, employees who did not report whether they had a mentor or explicitly indicated that they did not have a mentor in the current workplace were not included in the current study's analysis.

A total of 454 sales people (response rate= 90.2%) participated in the study by completing a survey that included questions about their mentors, demographic information, and other measurements. The majority of the participants were female (64.2%). Furthermore, 64.6% of the participants indicated that their mentors were female too. Most of the participants were not married (54.6%) and did not have any children (58.6%). Approximately half (50.7%) of participants had graduated from universities or colleges. Their tenure was distributed as follows: 47.4% having been at the current job for less than 1 year; 20% from 1 year to less than 3 years; 12.3% from 3 years to less than 8 years; 8.4% from 8 years to less than 12 years; 1.9% for 12 years and more. Also, age was distributed, with 46.7% between 20 and 30 years old; 25.8%

between 30 and 40 years old; 19.8% between 40 and 50 years old; and 7.7 % 50 years of age and older.

## Measures

All surveys were translated from English to Chinese, following Brislin's (1980) recommended translation-back translation procedure.

**Mentoring functions.** Mentoring functions were measured using 15 items from Scandura's studies (1992, 1993). Career development function was measured by 6 items. Sample items included: "Mentor has placed me in important assignments" and "Mentor advised me about promotional opportunities." Psychosocial functions were measured with five items. Sample items included "I share personal problems with mentor" and "I socialize with mentor after work." Role modeling functions were measured by four items. For example, items of role modeling function included "I try to model my behavior after mentor" and "I respect mentor's ability to teach others." Participants rated each statement on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) according to their work experience in the workplace. The reliability of these sub-scales were .89, .84, and .85, respectively. The overall 15 item scale had a coefficient alpha of .93. A confirmatory factor analysis (CFA) was conducted on mentoring functions items comparing the fit of a one-factor model to that of the hypothesized three-factor model (i.e., career development, psychosocial, and role modeling mentoring functions) in order to determine whether the factor should be kept separate (Spitzmüller et al., 2008). Results indicated that the three-factor model had significantly better fit than did the one-factor model,  $\chi^2(3) = 18.42, p < .001$  (See Table 1). Therefore, the three-factor model structure was used.

**Resilience.** Resilience was measured by 15 items adapted from Conner and Davidson (2003). Specifically, most items were modified to match the "workplace" context. Two dimensions were assessed in the study: tenacity (which essentially refers to whether individuals can still achieve a goal even in difficult situations) was assessed by 11 items and

positive thinking (which essentially refers to whether individuals believe the difficult situation can be changed) was assessed by 4 items. Sample items of tenacity included: “When I am in a difficult situation, I can still complete the task,” “I will overcome any challenge in the workplace,” “When faced with a difficult situation, I continue working hard,” and “I can tolerate frustrations in the workplace.” Sample items of positive thinking included: “When I am in a difficult situation, I know that better times will come” and “I optimistically accept challenges on the job.” In order to avoid central tendency, participants rated each statement on a six-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) according to their feelings and work experience instead of original five-point scale. The reliability of these sub-scales were .86 and .72, respectively. Because of the high correlation between two dimensions ( $r = .72, p < .00$ ), tenacity and positive thinking were collapsed into one-factor scale representing resilience. This result is consistent with past resilience studies: resilience scale has often combined these dimensions into a single scale or factor (Luthans, Norman, Avolio, & Avey, 2008; Youssef & Luthans, 2007). Exploratory factor analysis (EFA) also supports one-factor loading. The overall 15 item scale had a coefficient alpha of .89.

**Job satisfaction.** Job satisfaction was measured by 4 items developed for the current study. Exploratory factor analysis (EFA) indicated one-factor loading. Sample items included: “Overall, I am satisfied with my present job” and “I can find real enjoyment in my work.” Participants rated on a six-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) according to their feelings and work experience. The reliability of this scale is .74.

**Gender composition in mentoring relationships.** Participants indicated their mentor’s gender by selecting either of two options - “male” or “female”. Dummy coding was used to identify the gender composition in mentoring relationships, Specifically, participants who were the same gender as their mentors were assigned the code “0”, whereas, participants who were a different gender from their mentors were assigned the code “1”(i.e., 0= the

cross-gender composition; 1= the same-gender composition). Fewer participants were in a cross-gender mentoring relationship (36.8%) than in same-gender mentoring relationship (63.2%).

**Supervisory status of mentor.** Participants were asked to answer whether their mentors were also their direct supervisors. Dummy coding was used with non-supervisor mentoring as the reference status (0= their mentors are not their supervisors; 1= their mentors are also their supervisors). Majority of participants reported their mentors were also their supervisors (61%).

### **Control Variables**

Five variables that may be related to mentoring outcomes (i.e., job satisfaction and resilience) were considered to be controlled in this study: gender, age, job tenure, marital status, and education level. Previous studies have shown that age, education, and tenure are associated with job satisfaction and resilience (Hunt & Saul, 1975; Youssef & Luthans, 2007). Women often report greater levels of well-being than men (Wood, Rhodes, & Whelan, 1989). Furthermore, past studies indicated that the married state and education were related to individuals' well-being (Glenn & Weaver, 1981; Wood et al., 1989). Hence, age, gender, job tenure, education level and marital status were controlled in the following analysis.

### **Analytic Strategy**

As mentioned in the preceding paragraphs, a confirmatory factor analysis (CFA) was first conducted to test whether a one-factor model or the proposed model with three correlated factors (i.e., career development, psychosocial, and role modeling mentoring function) fits the data. Following basic descriptive data analysis, hierarchical regression analyses was performed to determine the relationships between the predictor, criterion, mediator and moderator variables. Specifically, the hypothesized main effect of mentoring functions and the proposed mediation and two moderations were tested independently using hierarchical multiple regression. For the categorical variables (gender composition and

supervisor mentoring), the study employed dummy coding to test the main effect on the reception of mentoring functions and job satisfaction, and to examine the categorical moderators between mentoring functions and mentoring outcomes. Moreover, for the analytic process of testing the mediating hypothesis, the study used Barron and Kenny's (1986) four steps to identify whether the full mediation effect exists in the proposed model, and followed Preacher and Hayes' (2004) suggestion to test indirect effects using a normal theory approach and a bootstrap approach to obtain confidence intervals estimates.

## **Results**

The descriptive statistics, reliability estimates, and inter-correlation matrix are presented in Table 2.

### **The Relationship between Mentoring Functions and Job Satisfaction**

Hypothesis 1 proposed that there is a positive relationship between mentoring functions and job satisfaction. In order to test Hypothesis 1, one regression equation was tested with three predictors (i.e., career development, psychosocial, and role modeling function). All predictors were entered simultaneously. The results provided support for this hypothesis. Specifically, the career development function was significantly related to job satisfaction ( $\beta = .16, p < .05$ ). The psychosocial function was significantly related to job satisfaction ( $\beta = .17, p < .00$ ). However, the role of modeling function was not significantly related to job satisfaction ( $\beta = .11, p = .11$ ). Therefore, in support of hypothesis 1, when the reception of mentoring functions (i.e., career development and psychosocial function) was higher, protégés demonstrated higher job satisfaction.

### **The Relationship between Mentoring Functions and Resilience**

Hypothesis 2 proposed that there is a positive relationship between mentoring functions and resilience. In order to test Hypothesis 2, one regression equation was tested with three predictors (i.e., career development, psychosocial, and role modeling function). All predictors were entered simultaneously. The results provided support for this hypothesis. Specifically,

the career development function was significantly related to resilience ( $\beta = .16, p < .05$ ). And, the psychosocial function was significantly related to resilience ( $\beta = .16, p < .05$ ). However, the role modeling function was not significantly related to resilience ( $\beta = .10, p = .12$ ). Therefore, when the reception of mentoring functions (i.e., career development and psychosocial function) was higher, protégés demonstrated higher states of resilience. Hypothesis 2 was supported.

### **The Relationship between Resilience and Job Satisfaction**

Hypothesis 3 proposed that there is a positive relationship between resilience and job satisfaction. The results supported that resilience was significantly related to job satisfaction ( $\beta = .76, p < .00$ ). Therefore, when the states of resilience were higher, protégés displayed higher job satisfaction. Hypothesis 3 was supported.

### **Resilience Mediated the Mentoring Functions-Job Satisfaction Relationship**

Hypothesis 4 proposed that resilience mediated the relationship between the mentoring functions and job satisfaction. The research employed mediation analysis to test this hypothesis. According to Baron and Kenny (1986), first there must be a relationship between mentoring functions (i.e., IV: career development, psychosocial, and role modeling function) on job satisfaction (i.e., DV). Second, mentoring functions as predictors must have a significant relationship with resilience (i.e., a mediator). Third, resilience (i.e., a mediator) must have a significant association with job satisfaction (i.e., DV). Finally, if the relationship between mentoring functions (i.e., IVs) and job satisfaction (i.e., DV) is no longer significant in the presence of resilience as the mediator, the relationship is fully mediated. Further, the study followed Preacher and Hayes' (2004) suggestion to employ the normal theory and the bootstrapping approach testing the indirect effect of resilience.

Mediated hierarchical multiple regression was used to test this mediation hypotheses (see Table 3). First, several potential control variables were entered: gender, age, job tenure, education level, and marital status as predictors in step one of the hierarchical regression model.



Second, the study tested the direct effects by entering career development, psychosocial, and role modeling function in step two of the hierarchical regression model. Finally, resilience as proposed mediator was entered in step three of the hierarchical regression model.

Results from hierarchical multiple regression were as follows: first, the effects of job satisfaction regressed on career development and psychosocial function were significant as well ( $\beta = .16, p < .05$ ;  $\beta = .17, p < .00$ , respectively). However, the effect of job satisfaction regressed on role modeling function was not significant ( $\beta = .11, p = .11$ ). Second, the effects of resilience regressed on career development and psychosocial function were significant ( $\beta = .16, p < .05$ ;  $\beta = .16, p < .05$ , respectively). However, the effect of resilience regressed on role modeling function was not significant ( $\beta = .10, p = .12$ ). Third, the effect of job satisfaction regressed on resilience was significant ( $\beta = .76, p < .00$ ). Finally, the effect of job satisfaction regressed on role modeling function remained non-significant in this step when adding the resilience as mediator ( $\beta = .03, p = .54$ ), failing to provide evidence for the mediation effect. However, the relationships between career development function, as well as psychosocial function, and job satisfaction became non-significant ( $\beta = .05, p = .25$ ;  $\beta = .05, p = .54$ , respectively), providing evidence of a full mediation effect (Baron & Kenny, 1986). Results of this effect are presented in Table 2 and Figure 1.

Furthermore, to test the significance of the indirect relationships of career development and psychosocial functions on job satisfaction via resilience (i.e., the full mediation models), the study used both normal theory approach (i.e., Sobel test) and bootstrapping procedure to obtain confidence intervals estimates (CI) (Preachers & Hayes, 2004). This test accounts for the indirect effects of career development, and the psychosocial function predicted job satisfaction through the resilience mediator. First, the results of the Sobel test of significance of the career development function indirect effect were significant (Sobel  $Z = 1.98, p < .05$ ). Moreover, the total indirect effect, including the mediator as resilience, was significant (point estimate for indirect effect = .23; 95% CI = .15, .31). Second, the results of the Sobel test of

significance on the psychosocial function indirect effects were significant (Sobel  $Z= 2.48$ ,  $p<.05$ ). Moreover, the total indirect effect, including the mediator as resilience, was significant (point estimate for indirect effect= .23; 95% CI= .15, .30). These results from a normal theory approach and a bootstrap approach consistently indicated that resilience carries a significant portion of the effect from both career development and psychosocial function to job satisfaction. Overall, these results suggest that there is not a direct effect between career development function and job satisfaction, nor is there a mediating effect via resilience. Moreover, there is also a mediating effect via resilience between psychosocial function and job satisfaction. However, these results suggest that a direct effect between role modeling function and job satisfaction does exist. Thus, hypothesis 4 was supported.

### **The Relationship between Gender Composition of Mentoring Relationships and Job Satisfaction**

Hypothesis 5 posited that protégés in a same-gender mentoring relationship report greater job satisfaction than those in a cross-gender mentoring relationship.

The result indicated that there is no significant difference between protégés with cross-gender dyads ( $M=4.48$ ,  $SD=.68$ ) and same-gender dyads ( $M=4.40$ ,  $SD=.68$ ) in job satisfaction,  $t(452) = 1.14$ ,  $p=.257$  (See Table 4). Therefore, hypothesis 5 was not supported in the current study.

### **The Relationship between Gender Composition of Mentoring Relationships and Mentoring Functions**

Hypothesis 6 proposed that protégés in a same-gender mentoring relationship report more mentoring functions (career development, psychosocial, and role modeling function) than those in a cross-gender mentoring relationship. However, there is no significant difference between protégés with cross-gender dyads ( $M=3.83$ ,  $SD=.67$ ) and same-gender dyads ( $M=3.71$ ,  $SD=.71$ ) on career development mentoring,  $t(452) = 1.87$ ,  $p=.062$  (See Table 4). Furthermore, there is also no significant difference between protégés with cross-gender dyads ( $M=3.64$ ,  $SD=.72$ ) and same-gender dyads ( $M=3.58$ ,  $SD=.72$ ) on psychosocial

mentoring,  $t(452) = .85, p = .398$ . Unexpectedly, the result indicated that protégés with cross-gender dyads had a higher score ( $M = 4.05, SD = .61$ ) on role modeling mentoring than protégés with same-gender dyads ( $M = 3.88, SD = .68$ ),  $t(452) = 2.73, p < .01$ . Therefore, hypothesis 6 was not supported in the current study.

### **Gender Dyads of Mentoring Relationships Moderated the Relationship between Mentoring Functions and Job Satisfaction**

Hypothesis 7 posited that the gender composition in mentoring relationships would moderate the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling) and job satisfaction. However, as shown in Table 5-7, gender dyads of mentoring relationships did not significantly moderate the relationship between mentoring functions and job satisfaction, therefore, hypothesis 7 was not supported in the current study.

### **Gender Dyads of Mentoring Relationships Moderated the Relationship between Mentoring Functions and Resilience**

Hypothesis 8 proposed that the gender composition in mentoring relationships would moderate the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling) and resilience. As shown in Table 8, the interactions between career development function and gender dyads of mentoring relationships on resilience was marginally significant ( $\beta = -.49, p = .05, \Delta R^2 = .007$ ). The simple slope test revealed that for cross-gender dyads of mentoring relationships the career development function-resilience link was positive and significant ( $B = .37, SE = .13, p < .01$ ), and for same-gender dyads, it was non-significant ( $B = .23, SE = .17, p = .19$ ). These findings showed that, unexpectedly, the relationship between career development functions and resilience is more positive when protégés are in cross-gender relationships as opposed to same-gender relationships (see Figure 3). Furthermore, as shown in Table 9-10, there is no significant interaction effect. Therefore, hypothesis 8 was not supported in the current study.

### **The Relationship between Supervisor Mentoring and Job Satisfaction**

Hypothesis 9 posited that protégés whose mentors are their supervisors demonstrate greater job satisfaction than those whose mentors are not their supervisors. Results supported the hypothesis that protégés whose mentors are their supervisors report more job satisfaction ( $M=4.50$ ,  $SD=.63$ ) than those whose mentors are not their supervisors ( $M=4.32$ ,  $SD=.75$ ),  $t(450) = -2.63$ ,  $p=.009$  (See table 11). Therefore, hypothesis 9 was supported.

### **The Relationship between Supervisor Mentoring and Mentoring Functions**

Hypothesis 10 proposed that protégés whose mentors are their supervisors receive more mentoring functions (career development, psychosocial, and role modeling function) than those whose mentors are not their supervisors. Results indicated that protégés whose mentors are their supervisors reported greater reception of career development function ( $M=3.90$ ,  $SD=.61$ ) than those whose mentors are not their supervisors ( $M=3.52$ ,  $SD=.75$ ),  $t(450) = -5.89$ ,  $p<.001$  (See table 11). Results noted that protégés whose mentors are their supervisors reported greater reception of psychosocial function ( $M=3.66$ ,  $SD=.69$ ) than those whose mentors are not their supervisors ( $M=3.50$ ,  $SD=.75$ ),  $t(450) = -2.36$ ,  $p=.019$ . The finding indicated that protégés whose mentors are their supervisors reported greater reception of role modeling function ( $M=4.04$ ,  $SD=.60$ ) than those whose mentors are not their supervisors ( $M=3.80$ ,  $SD=.72$ ),  $t(450) = -3.89$ ,  $p<.001$ . Therefore, hypothesis 10 was supported.

### **Supervisor Mentoring Moderated the Relationship between Mentoring Functions and Job Satisfaction**

Hypothesis 11 posited that the supervisory status of mentors moderates the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling function) and job satisfaction. This hypothesis was supported as supervisor mentoring significantly moderated the relationship between role modeling function and job satisfaction ( $\beta = .47$ ,  $p<.01$ ,  $\Delta R^2 = .02$ ) (see Table 14; Figure 4). The simple slope test indicated that for protégés with supervisor mentoring, the role modeling function-job

satisfaction link was significant and positive ( $B = .40$ ,  $SE = .17$ ,  $p < .05$ ); for non-supervisor mentoring, it was also positive ( $B = .26$ ,  $SE = .13$ ,  $p < .05$ ). Moreover, protégés with supervisor mentoring reported much sharper increase in job satisfaction than those with non-supervisor mentoring. However, the interaction between career development and psychosocial functions and job satisfaction were not significant ( $\beta = .07$ ,  $p = .78$ ;  $\beta = -.04$ ,  $p = .85$ , respectively) (See Table 12-13). Therefore, hypothesis 11 was partially supported in the current study.

### **Supervisor Mentoring Moderated the Relationship between Mentoring Functions and Resilience**

Hypothesis 12 proposed that the supervisory status of mentors moderates the relationship between the reception of mentoring functions (career development, psychosocial, and role modeling function) and resilience. Results indicated that supervisor mentoring was significant as a moderator of the relationship between role modeling function and resilience ( $\beta = .45$ ,  $p < .01$ ,  $\Delta R^2 = .01$ ) (see Table 17). However, given non-significance found for this slope test, there were roughly equal levels of resilience, despite whether protégés had supervisor mentoring. The interactions between career development and psychosocial functions and resilience were not significant ( $\beta = .12$ ,  $p = .62$ ;  $\beta = -.02$ ,  $p = .93$ , respectively) (See Table 15-16). Therefore, Hypothesis 12 was not supported in the current study.

## **Discussion**

The purpose of the current study is to shed light on why and when mentoring influences the protégés' well-being at the workplace (i.e., job satisfaction). This study builds on the Conservation of Resources (COR) theory (Hobfoll, 1989) to demonstrate why the reception of mentoring functions impacts distal protégés' job satisfaction through proximal resilience that had not been previously examined in the mentoring literature. In addition to investigating when mentoring achieves maximal effectiveness and affects mentoring outcomes in organizations, the current study integrates social identity theory (Tajfel & Turner, 1985), social capital theory (Coleman, 1988) and COR theory, and proposes that different types of

mentoring relationships (i.e., same-gender composition vs. cross-gender composition; supervisor mentoring vs. non-supervisor mentoring) might influence the different levels of mentoring outcomes (e.g., the reception of mentoring functions and job satisfaction) and relationships between mentoring functions, resilience, and job satisfaction.

One of the key findings in the current study was that the reception of mentoring functions (i.e., career development and psychosocial function) was associated with higher resilience, and higher levels of resilience were in turn associated with higher levels of job satisfaction. In other words, protégés who received greater mentoring functions demonstrated higher levels of job satisfaction due to increased resilience. However, further analysis revealed that the mediating influence of resilience on the mentoring function-job satisfaction relationship only held for two types of mentoring functions, career development and psychosocial functions.

Regarding the main effect of gender composition in mentoring relationships on the reception of mentoring functions and job satisfaction, there was no support for the hypothesis that gender composition in mentoring relationships influences the protégés' levels of job satisfaction. Unexpectedly, cross-gender mentoring relationships were associated with greater reception of role model mentoring function than those in a same-gender mentoring relationship.

As for the moderating role of gender composition in mentoring relationships, contrary to preliminary prediction, gender dyads did not moderate the relationship between mentoring functions and job satisfaction. Although there was a marginally significant interaction effect indicating that the gender composition of mentoring relationships moderated the relationship between the reception of career development functions and resilience, unexpectedly, the relationship between the reception of career development function and resilience was more positive for protégés in cross-gender relationships, compared to those in same-gender relationships.

Results from the study supported the notion that supervisor mentoring was positively related to job satisfaction and the reception of mentoring functions (i.e., career development, psychosocial, and role modeling function). These findings implied that the supervisory status of mentors will influence their subordinate protégés' job satisfaction levels and the mentoring functions received. Specifically, protégés whose mentors were also their supervisors reported higher levels of job satisfaction and received a broader range of mentoring functions than those whose mentors were not their supervisors. Moreover, the findings suggested that protégés with supervisor mentoring were more competent at career development function than psychosocial and role modeling function.

It was also predicted that the relationship between mentoring functions and job satisfaction would be stronger for protégés receiving supervisor mentoring. There was limited support for this notion, with supervisor mentoring moderating in the expected direction the relationship between the reception of mentoring functions (i.e., career development, psychosocial, and role modeling function) and both job satisfaction and resilience. There was no support for supervisor mentoring as a moderator of the relationship between the reception of both career development and psychosocial function and both job satisfaction and resilience. Further, supervisor mentoring had no significant effect on the relationship between role modeling function and resilience. However, the results supported the conjecture that supervisor mentoring moderates the relationship between the reception of role modeling function and job satisfaction. Specifically, the relationship between role modeling function and job satisfaction is more positive in supervisor mentoring relationships than in non-supervisor mentoring relationships.

### **Theoretical implications**

The findings from this study have several theoretical implications. First, the results indicated that the reception of mentoring functions is positively related to resilience. This finding is consistent with previous studies showing that individuals can enhance their

competence (e.g., resilience) through mentoring relationships (Zand et al., 2009). In other words, mentoring can be viewed as an intervention to foster individuals' resilience to handle threats and challenges. However, by utilizing specific job-related resilience and focusing on individuals in organizations, the current study has supported the school of thought that the reception of mentoring functions in the workplace is also positively related to job-related resilience. This finding has advanced our understanding about the relationship between mentoring and resilience in organizational contexts.

Second, the findings from the current study demonstrate the positive relationship between resilience and individuals' well-being as suggested by previous studies examining the experiences of nurses or care workers (e.g., Ablett & Jones, 2007; Matos, Neushotz, Griffin, & Fitzpatrick, 2010). Specifically, resilience is positively related to purpose in life, attitudes towards life, and job satisfaction (Ablett & Jones, 2007; Matos, Neushotz, Griffin, & Fitzpatrick, 2010; Waite & Richardson, 2004). In an extension of previous research, the current study also found a positive relationship between job-related resilience and job satisfaction as demonstrated across different occupations (i.e., employees in the business company).

Third, the findings from this study have led to the conclusion that resilience is the mechanism underlying the relationship between the reception of mentoring functions (career development and psychosocial function) and job satisfaction. Unexpectedly, although role modeling function was also significantly associated with resilience, it became non-significantly predictive of both resilience and job satisfaction when I combined the three types of mentoring functions together in the regression model. Both career development and psychosocial function were still significantly predictive of resilience and job satisfaction. One possible explanation is the classification of mentoring functions. Kram (1985) suggested that career development and psychosocial function are the main dimensions of mentoring function, and role modeling is one aspect of psychosocial function. In fact, these results support the



suggestion from previous studies that future studies need to keep clarifying why and how the mentoring process influences the protégés' outcomes (e.g., job satisfaction) (Barianik et al., 2010). A number of previous studies were conducted on mediating research on mentoring; however, the meager research to date focused on the role of resilience as the exact mechanism through which the reception of mentoring functions influences mentoring outcomes for protégés (Barianik et al., 2010; Lankau et al., 2006; Payne & Huffman, 2005). In general, this study has broadened our understanding of the mediating role of resilience between the reception of mentoring functions and job satisfaction.

Fourth, the results from the present study unexpectedly revealed that protégés in cross-gender relationships reported a broader range of role modeling function than those in same-gender relationships. In addition, this study found that for protégés in the cross-gender dyad, the positive relationship between career mentoring and resilience was stronger. These findings contradicted the proposed hypotheses; however, past relevant research suggested that protégés in the same-gender dyad were not associated with the higher levels of role modeling, psychosocial, and career development function received, especially protégés in the male mentor/ male protégé dyad (Sosik & Godshalk, 2000). For role modeling function, protégés consider mentors' trust, values, beliefs, and ethics; hence, male protégés may view female mentors as role models, especially since female mentors are more likely to establish a trusting relationship with protégés (Bass, 1998; Sosik & Godshalk, 2000). Moreover, the complementarily factors might be significant in cross-gender dyads (Sosik & Godshalk, 2005). Because both individuals can experience enjoyment, self-fulfillment and excitement from each other, a sense of competence, identity and effectiveness will be promoted. Ragin (1997) proposed that the influence of the reception of mentoring functions may depend upon whether the mentoring dyad is homogeneous (e.g., same-gender composition) or heterogeneous (e.g., cross-gender composition). Generally, this study has provided further evidence of the efficacy of cross-gender composition in the mentoring relationship.

Fifth, this study suggests that protégés with supervisor mentoring demonstrated greater job satisfaction and mentoring functions (i.e., career development, psychosocial, and role modeling mentoring). These findings provide support for the position that supervisor mentoring serves as a significant type of mentoring relationships to influence mentoring outcomes (Burke et al., 1991; Ragins & McFarlin, 1990; Sosik & Godshalk, 2005). Further, these findings are also consistent with past research indicating that protégés with supervisory mentors reported receiving higher levels of career mentoring than those with non-supervisory mentors (Scandura & Williams, 2004). Moreover, this study indicates that for protégés with supervisor mentoring, the positive relationships between role modeling mentoring, job satisfaction, and resilience are stronger than those without supervisor mentoring. These findings constitute an extension of previous mentoring research examining the moderating role of supervisor mentoring on the relationships between role modeling, job satisfaction, and resilience. Overall, synthesizing and analyzing these findings provides a more comprehensive view of the processes that emerge in hierarchical mentoring dyads.

### **Discussion of inconsistent results of gender dyads in mentoring relationships**

Prior studies proposed that the gender composition of the mentoring relationships influences the mentor functions provided (i.e., career development, psychosocial, role modeling function), which in turn influence the outcomes (i.e., career development, psychosocial, role modeling function) for the protégés concerned (Ragin, 1997). Results from the current study indicated that protégés in cross-gender dyads of mentoring relationships received greater role model mentoring. However, this finding contradicts my proposed hypothesis and a prior study which proposed that role modeling mentoring is limited in cross-gender relationships (Kram, 1985). A few studies had tested the effects of the gender composition of mentoring relationships on relevant mentoring outcomes, but the results were inconsistent. For example, Koberg et al. (1998) found that protégés in same-gender dyads reported receiving more psychosocial mentoring than protégés in cross-gender dyads. On the

other hand, Ragins and McFarlin (1990) concluded that protégés with cross-gender composition reported less reception of role modeling and social role modeling function than protégés with same-gender composition. Nevertheless, Sosik and Godshalk (2000) found that male mentors in cross-gender dyads provided more career development mentoring, and, moreover, female mentors in either cross-gender or same-gender mentoring relationships provided higher levels of role modeling mentoring and less career development functions. One possible reason is that female mentors are more willing to provide mentoring to others (Allen, Russell, & Maetzke, 1997).

These inconsistent results may be a function of methodological issues influencing either the current study or prior research (Sosik & Godshalk, 2000). First, most studies did not have equal gender dyads (e.g., Burke et al., 1990). Second, these studies employed industry-specific participants (e.g., Koberg et al., 1998). Third, many studies were plagued by the assumption of symmetrical effects (Ragin, 2007), i.e., the assumption that heterogeneity and homogeneity in relationships mean the same thing for the group. For example, female mentor/female protégé and male mentor/male protégé are considered the same type. In fact, it is possible to misrepresent the exact patterns or behaviors.

In the current study, the majority of the participants were female (64.2%). 36.8% (N=167) of participants were in mentoring relationships with cross-gender composition, and 63.2% (N=287) were in mentoring relationships with same-gender composition. In addition, 64.8% (N=294) of the mentors were female, and 35.2% (N=160) of the mentors were male. These demographic data indicate that there are unequal dyads, and that the majority of the employees are female in specific organizations (i.e., the insurance company). Furthermore, this study does not specifically identify the four types of gender composition for the mentoring relationships: female mentor/female protégés, male mentor/male protégés, female mentor/male protégés, and male mentor/female protégés. Therefore, this study will not be able to clearly elucidate the effects of each type on the mentoring outcomes. Future studies could focus on different types of

gender composition in mentoring relationships. In this way, this study has significantly advanced our understanding about the effects of gender dyads of mentoring relationships on the relevant mentoring outcomes.

### **Practical Implications**

From a practical standpoint, the results of the current study provide useful guidance for practitioners who are interested in instituting mentoring programs. First, the reception of mentoring functions will influence the protégés' attitudinal outcomes, such as job satisfaction. The current study indicates that protégés who received higher levels of mentoring functions reported higher levels of job satisfaction. Moreover, this study's findings provide evidence that the reception of mentoring functions (i.e., career development and psychosocial function) will proximally enhance individuals' personal competency (i.e., resilience) to successfully handle challenges/ difficult tasks and tolerate changes at the workplace, and distally promote their well-being (i.e., job satisfaction). Second, because the mentoring relationship is often a dynamic one, there is the issue of how can best pair the mentor/ protégé to attain the maximal effectiveness for the protégés. The findings from this study indicate that protégés in cross-gender dyads of mentoring relationships reported higher levels of role modeling function than those in same-gender relationships. Furthermore, protégés, whose supervisors also served as their mentors, were likely to demonstrate higher levels of job satisfaction and receive greater mentoring functions (i.e., career development, psychosocial, and role modeling function) than those in non-supervisor mentoring relationships. As such, supervisor mentoring can be used as a tool to enhance the protégés' career development in their organizations. Taken together, practitioners can consider establishing mentoring programs to assign supervisors as mentors for subordinates and design a cross-gender composition of mentoring relationships in organizations.

### **Limitations and Conclusion**

This study has limitations that should be considered when interpreting the results. First, generalizing the results from our study might be limited by the sample we examined. All the participants were recruited from an insurance company in Taiwan. Therefore, future research should examine whether the theorized model will be a fit for data from different populations.

Second, same-gender and cross-gender dyads of mentoring relationships are identified in the current study. However, this classification may distort the exact patterns of heterogeneous mentoring relationships (Ragins, 2007). For example, male mentors with female protégés or female mentors with male protégés pairs are identified as cross-gender composition in mentoring relationships and male mentors with male protégés or female mentors with female protégés are recognized as same-gender dyads, but these relationships have very different processes, and can result in different outcomes (O'Neill & Blake-Beard, 2002). Future research should consider examining different types of mentoring dyads in order to clarify the effects of each type on relevant outcomes.

Third, the cross-sectional design was implemented in the current study. The results supported the conjecture that the reception of mentoring functions was positively related to resilience, and that higher levels of resilience were in turn associated with higher levels of job satisfaction. However, the reverse causation hypotheses may be plausible; for example, high job satisfaction might promote high levels of resilience. Thus, to address the concerns about the reverse causation hypotheses of this study, future research should adopt a longitudinal design.

Finally, the current study does not distinguish between formal mentoring and informal mentoring. There are significant differences between formal and informal mentoring relationships that will influence both the provision and reception of mentoring functions and career outcomes (Ragin & Cotton, 1999). Therefore, future research should incorporate formal/informal mentoring into this research model.

Overall, findings from the current study provide a significant and programmatic contribution to the existing literature on mentoring in the workplace. Particularly, the current study explored the existing lacunae on how and why mentoring impacts protégés' attitudinal outcomes, such as job satisfaction. The findings indicate that resilience serves as a vital mechanism underlying the relationship between mentoring functions and job satisfaction. Moreover, different characteristics of mentoring dyads will influence the reception of mentoring functions and the individuals' resilience. Furthermore, they significantly impact the relationship between mentoring functions and job satisfaction. In conclusion, this study provides valuable and useful information to organizations planning to implement mentoring programs in the workplace, as well as to researchers interested in clarifying why mentoring works (resilience as a mechanism) and when mentoring works (cross-gender mentoring relationship and supervisor mentoring). Such important findings can contribute to effective organizational decision making in the areas of human resources and strategic planning, as well as providing direction in mentoring outcomes, such as job satisfaction and job performance.

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Table 1.

*Fit Indices for the Two Measurement Models*

Model	$\chi^2(N=454)$	df	CFI	RMSEA	SRMR	$\Delta \chi^2$	$\Delta df$
One-factor model	718.31**	90	.85	.12	.066		
Three-factor model	699.89**	87	.86	.125	.065	18.42**	3
Null model	4343.31**	105					

*Note.* CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual. N=454. \*p< .05; \*\*p< .01

Table 2.  
*Means, Standard Deviations, and Bivariate Correlations among Studied Variables*

Measure	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	.36	.48	—												
2. Age	34.92	9.77	-.37**	—											
3. Education	3.46	.96	.38**	-.60**	—										
4. Marital status	1.58	.91	-.26**	.51**	-.38**	—									
5. Tenure	4.09	5.89	-.34**	.69**	-.58**	.33**	—								
6. Mentor's gender	.35	.48	.20**	-.05	.05	-.03	-.05	—							
7. Supervisor mentoring	.61	.49	.08	-.09*	.07	.01	-.06	.15**	—						
8. Gender composition	.63	.48	-.24**	.03	-.10*	.02	.07	-.21**	-.04	—					
9. Career development function	3.75	.70	.12*	-.21**	.10*	-.12**	-.12**	.01	.27**	-.09	(.89)				
10. Psychosocial function	3.60	.72	.09*	-.16**	.09	-.07	-.04	-.02	.12*	-.04	.74**	(.84)			
11. Role modeling function	3.95	.66	.13**	-.20**	.11*	-.11*	-.10*	.03	.18**	-.13**	.75**	.62**	(.85)		
12. Resilience	4.60	.55	-.06	.15**	-.08	.16**	.15**	.06	.11*	-.11*	.30**	.31**	.28**	(.89)	
13. Job Satisfaction	4.43	.68	-.03	.14**	-.04	.12**	.12*	.03	.12**	-.05	.32**	.33**	.29**	.80**	(.74)

*Note.* Values on the diagonal are coefficient alphas. N=454. \*p< .05; \*\*p< .01; <sup>a</sup> female=0; male=1

Table 3

*Hierarchical Mediated Regression Analyses for Mentoring Function-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.02	-.02	.01
Age	.10	.20**	.09*
Education level	.10	.10	.06
Marital status	.09	.09	-.003
Tenure	.09	.05	-.01
Step 2:			
Career development function		.16*	.05
Psychosocial function		.17**	.05
Role modeling function		.11	.03
Step 3:			
Resilience			.76**
$\Delta R^2$	.03*	.15**	.48**
Total $R^2$	.03*	.18**	.66**

*Note.* N= 454. \*  $p < .05$ , \*\*  $p < .01$



Table 4.

*Comparison of the Mean of Career Development Function, Psychosocial Function, Role Modeling Function, and Job Satisfaction among Two Groups*

Variable	Cross-gender relationships		Same-gender relationship		<i>t</i> (452)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			LL	UL	
Career development function	3.83	.67	3.71	.71	1.87	.06	-.01	.26	.25
Psychosocial function	3.64	.71	3.58	.72	.85	.40	-.08	.20	.12
Role modeling function	4.06	.61	3.88	.68	2.73	.01	.05	.30	.42
Job satisfaction	4.48	.68	4.40	.68	1.14	.26	-.06	.21	.17

*Note.* CI= confidence interval; *LL*= lower limit; *UL*= upper limit.

Table 5  
*Hierarchical Moderated Regression Analyses for Career Development Function-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.03	-.01	-.01
Age	.01	.18*	.18**
Education level	.07	.11	.12*
Marital status	.07	.09	.09
Tenure	.01	.08	.07
Step 2:			
Gender composition		-.03	.37
Career development function		.37**	.47**
Step 3:			
Gender composition $\times$ Career development function			-.40
$\Delta R^2$	.03*	.13**	.01
Total $R^2$	.03*	.16**	.17**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 6  
*Hierarchical Moderated Regression Analyses for Psychosocial Function-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.03	-.01	-.01
Age	.01	.18*	.18*
Education level	.07	.08	.08
Marital status	.07	.07	.08
Tenure	.01	.04	.03
Step 2:			
Gender composition		-.04	.27
Psychosocial function		.35**	.44**
Step 3:			
Gender composition $\times$ Psychosocial function			-.33
$\Delta R^2$	.03*	.12**	.004
Total $R^2$	.03*	.153	.156

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 7  
*Hierarchical Moderated Regression Analyses for Role Modeling Function-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.03	-.01	-.01
Age	.01	.17*	.18
Education level	.07	.10	.10
Marital status	.07	.09	.09
Tenure	.01	.06	.06
Step 2:			
Gender composition		-.02	.19
Role modeling function		.33**	.38**
Step 3:			
Gender composition $\times$ Role modeling function			-.21
$\Delta R^2$	.03*	.11**	.001
Total $R^2$	.03*	.134**	.135**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 8

*Hierarchical Moderated Regression Analyses for Career Development Function-Resilience Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.01	-.03	-.04
Age	.04	.11	.12
Education level	.05	.06	.07
Marital status	.12*	.12*	.12*
Tenure	.11	.11	.10
Step 2:			
Gender composition		-.10*	.38
Career development function		.34**	.46**
Step 3:			
Gender composition $\times$ Career development function			-.49*
$\Delta R^2$	.04**	.13**	.007
Total $R^2$	.04**	.163**	.17**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 9  
*Hierarchical Moderated Regression Analyses for Psychosocial Function-Resilience Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.01	-.04	-.04
Age	.04	.11	.11
Education level	.05	.04	.04
Marital status	.12*	.11*	.11*
Tenure	.11	.07	.06
Step 2:			
Gender composition		-.11*	.26
Psychosocial function		.33**	.43**
Step 3:			
Gender composition $\times$ Psychosocial function			-.39
$\Delta R^2$	.04**	.12**	.006
Total $R^2$	.04**	.158**	.164**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 10  
*Hierarchical Moderated Regression Analyses for Role Modeling Function-Resilience Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.01	-.04	-.04
Age	.04	.10	.11
Education level	.05	.05	.05
Marital status	.12*	.12*	.12*
Tenure	.11	.09	.09
Step 2:			
Gender composition		-.09	.22
Role modeling function		.31**	.38**
Step 3:			
Gender composition $\times$ Role modeling function			-.32
$\Delta R^2$	.04**	.103**	.002
Total $R^2$	.04**	.139**	.142**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 11

*Comparison of the Mean of Career Development Function, Psychosocial Function, Role Modeling Function, and Job Satisfaction among Two Groups*

Variable	Supervisor mentoring		Non-supervisor mentoring		<i>t</i> (450)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			LL	UL	
Career development function	3.52	.75	3.90	.61	-5.89	<.00	-.51	-.25	.86
Psychosocial function	3.50	.75	3.66	.69	-2.36	<.05	-.30	-.03	.32
Role modeling function	3.80	.72	4.04	.60	-3.89	<.00	-.36	-.12	.57
Job satisfaction	4.32	.75	4.50	.63	-2.63	<.01	-.30	-.04	.29

*Note.* CI= confidence interval; *LL*= lower limit; *UL*= upper limit.



Table 12  
*Hierarchical Moderated Regression Analyses for Career Development Functions-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.02	-.001	-.002
Age	.10	.18**	.18**
Education level	.10	.11	.11*
Marital status	.09	.09	.09
Tenure	.09	.08	.08
Step 2:			
Career development function		.36**	.35**
Supervisor mentoring		.04	-.02
Step 3:			
Supervisor mentoring $\times$ Career development function			.07
$\Delta R^2$	.03*	.13**	.00
Total $R^2$	.03*	.16**	.16**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 13  
*Hierarchical Moderated Regression Analyses for Psychosocial Function-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.02	-.002	-.002
Age	.10	.19**	.19**
Education level	.10	.08	.08
Marital status	.09	.07	.07
Tenure	.09	.03	.03
Step 2:			
Supervisor mentoring		.10*	.14
Psychosocial function		.35**	.35**
Step 3:			
Supervisor mentoring $\times$ Psychosocial function			-.04
$\Delta R^2$	.03*	.13**	.00
Total $R^2$	.03*	.16**	.16**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 14

*Hierarchical Moderated Regression Analyses for Role Modeling Function-Job Satisfaction Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.02	-.008	-.009
Age	.10	.18*	.19*
Education level	.10	.10	.11
Marital status	.09	.08	.07
Tenure	.09	.06	.05
Step 2:			
Supervisor mentoring		.08	-.36*
Role modeling function		.32**	.26**
Step 3:			
Supervisor mentoring $\times$ Role modeling function			.47**
$\Delta R^2$	.03*	.11**	.02**
Total $R^2$	.03*	.14**	.16**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 15  
*Hierarchical Moderated Regression Analyses for Career Development Function-Resilience Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.01	-.01	-.01
Age	.04	.12	.13
Education Level	.05	.07	.07
Marital Status	.12*	.12*	.12*
Tenure	.11	.10	.10
Step 2:			
Career development function		.34**	.32**
Supervisor mentoring		.03	-.08
Step 3:			
Supervisor mentoring $\times$ Career development function			.12
$\Delta R^2$	.04**	.12**	.00
Total $R^2$	.04**	.16**	.16**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 16

*Hierarchical Moderated Regression Analyses for Psychosocial Function-Resilience Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.01	-.01	-.01
Age	.04	.13	.13
Education level	.05	.04	.04
Marital status	.12*	.10	.10
Tenure	.11	.06	.06
Step 2:			
Supervisor mentoring		.09*	.11
Psychosocial function		.33**	.33**
Step 3:			
Supervisor mentoring $\times$ Psychosocial function			-.02
$\Delta R^2$	.04**	.12**	.00
Total $R^2$	.04**	.15**	.15**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Table 17  
*Hierarchical Moderated Regression Analyses for Role Modeling Function-Resilience Relationships*

Variable	Step1 $\beta$	Step2 $\beta$	Step3 $\beta$
Step 1: Control variables			
Gender	.01	-.02	-.02
Age	.04	.12	.13
Education level	.05	.05	.06
Marital status	.12*	.11*	.11*
Tenure	.11	.09	.08
Step 2:			
Supervisor mentoring		.07	-.35*
Role modeling function		.31**	.25**
Step 3:			
Supervisor mentoring $\times$ Role modeling function			.45**
$\Delta R^2$	.04**	.10**	.01
Total $R^2$	.04**	.14**	.15**

Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$

Figure 1. Research Framework

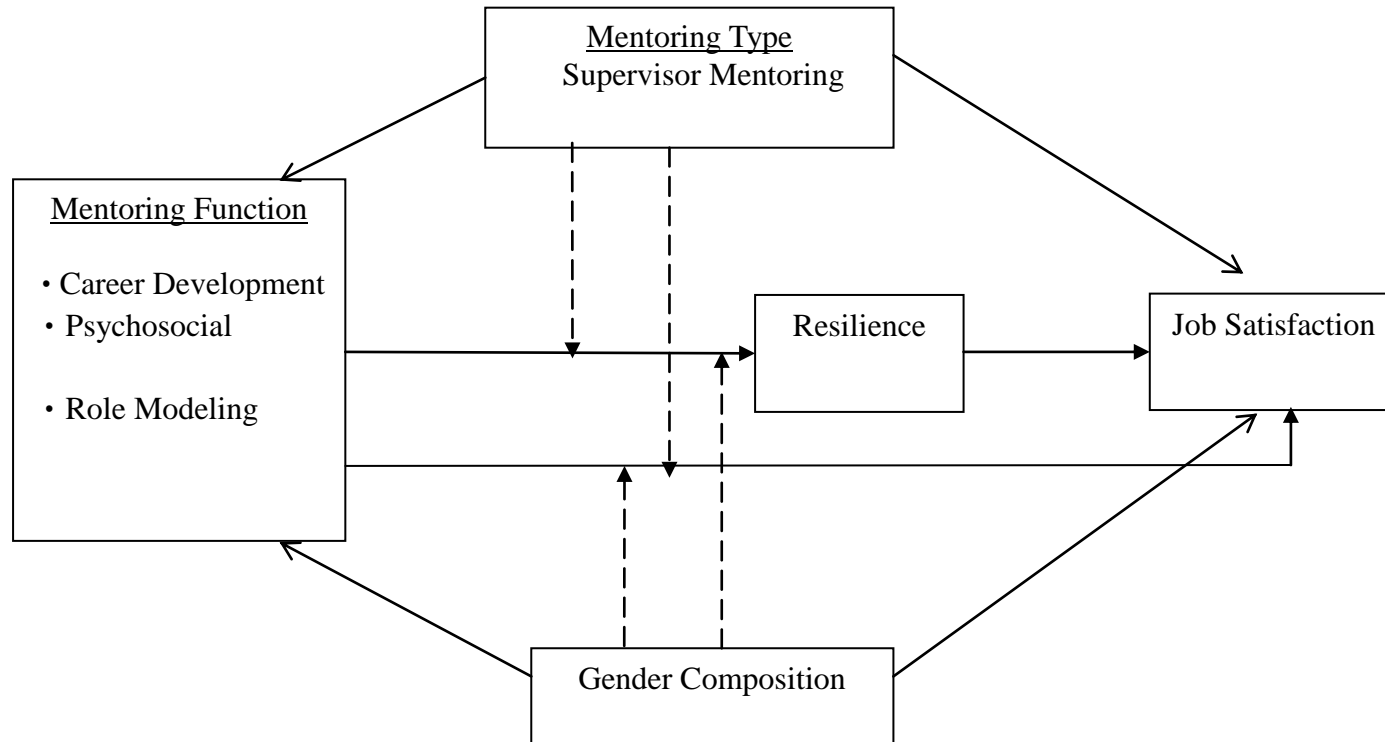
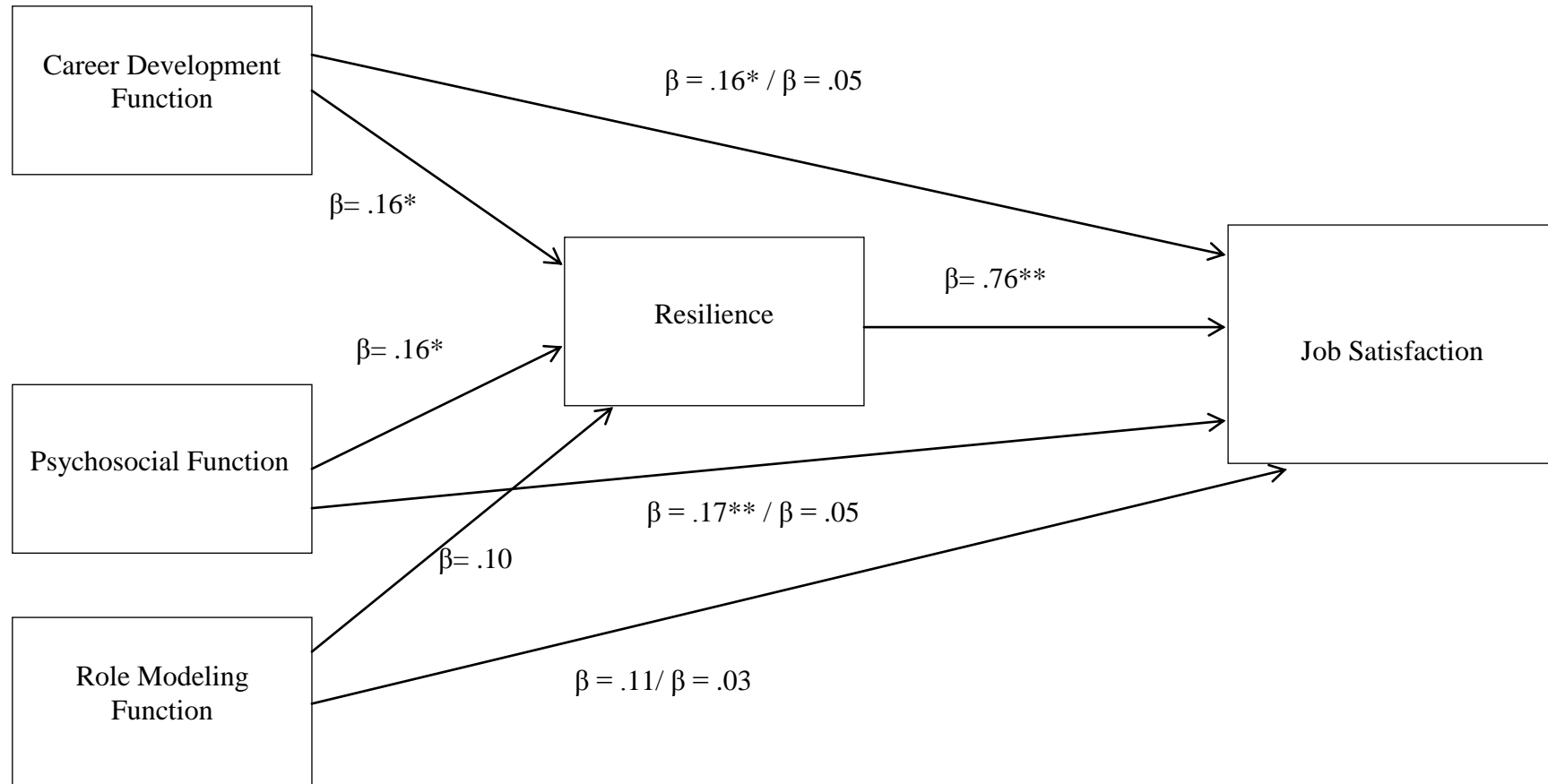


Figure 2. The Mediation Effect of Resilience on the Relationship between Mentoring Functions and Job Satisfaction.



Note. N= 454. \*  $p < .05$ , \*\*  $p < .01$



Figure 3. Graph of the Moderating Effect of Gender Composition on the Relationship between Career Development Function and Job Resilience.

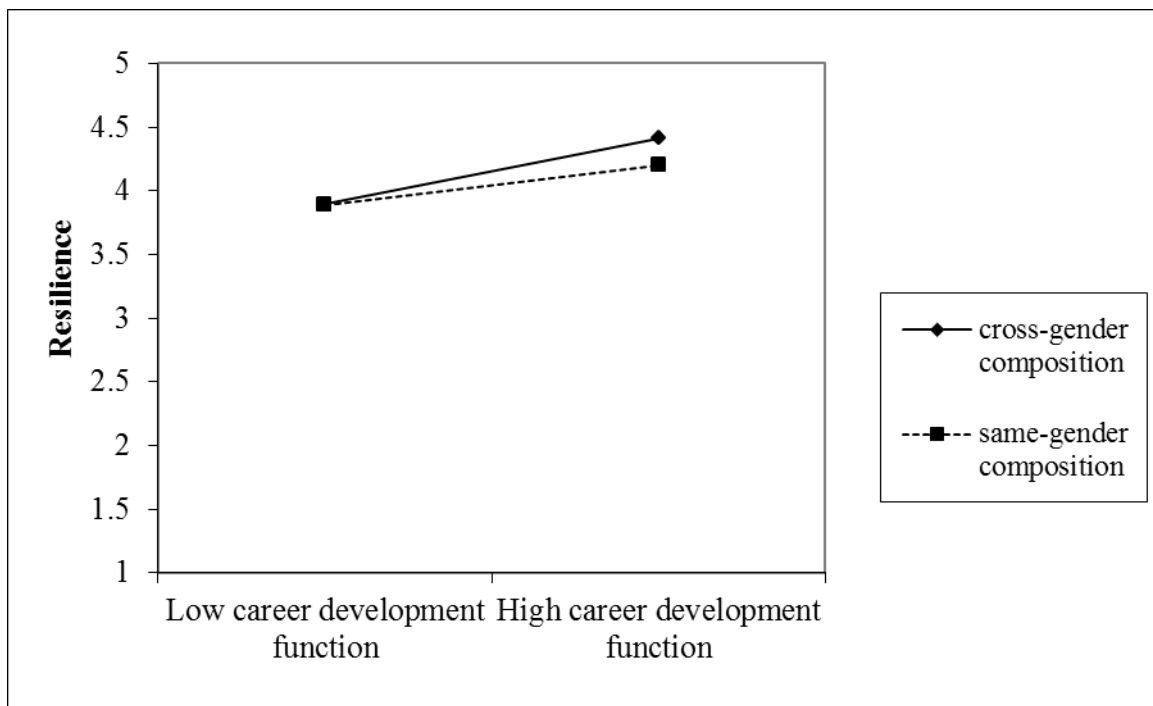


Figure 4. Graph of the Moderating Effect of Supervisor Mentoring on the Relationship between Role Modeling Function and Job Satisfaction.

