



The role of personality in relationship closeness, developer assistance, and career success

Pei-Chuan Wu^{a,*}, Maw-Der Foo^b, Daniel B. Turban^c

^a National University of Singapore, 1 Business Link, Singapore 117592, Singapore

^b University of Colorado at Boulder, 419 UCB, Boulder, CO 80309, USA

^c University of Missouri, 403D Cornell Hall, Columbia, MO 65211, USA

ARTICLE INFO

Article history:

Received 9 April 2008

Available online 13 August 2008

Keywords:

Personality

Career success

Relationship closeness

Developer assistance

ABSTRACT

We investigate the role of relationship closeness, which is adapted from social network theory, in developmental relationships using a sample of 278 full-time working individuals. We theorize that personality, operationalized with the Five Factor Model, is associated with relationship closeness which is positively related to developer assistance received, which in turn is linked to objective and subjective measures of career success. In general, results supported our hypothesized model, although personality had direct effects on career success beyond the indirect effects through relationship closeness and developer assistance. The theoretical and practical implications are discussed.

© 2008 Elsevier Inc. All rights reserved.

Since Kram's (1985) seminal work on developmental relationships, defined as a relationship in which a more experienced individual (mentor) assists in the development of a younger organization member (protégé), numerous studies have investigated whether developmental relationships influence career success. A recent meta-analysis found developmental assistance to associate positively with both objective and subjective measures of career success (Allen, Eby, Poteet, Lentz, & Lima, 2004). Little is known, however, about what motivates developers, such as mentors and direct supervisors, to assist their protégés. Nonetheless, scholars have speculated that relationship closeness, defined as the level of intimacy and communication frequency in the relationship influences developmental assistance provided to protégés (Allen, Eby, & Lentz, 2006; Allen et al., 2004; Granovetter, 1973; Higgins & Kram, 2001).

In the field of mentoring, Higgins and Kram (2001) used concepts from tie strength (Granovetter, 1973) to argue that stronger developmental relationship ties enhance the value of the developmental relationship for the protégés. Tie strength, or relationship closeness, consists of how often individuals communicate with one another and their level of emotional closeness. As relationship closeness is related to career success, scholars have called for research to understand sources and consequences of relationship closeness in developmental relationships (Siebert, Kraimer, & Liden, 2001).

In this study, we theorized that relationship strength influences the amount of psychosocial and career assistance provided to the protégé and thus the extent to which the developmental relationship enhances the protégé's career. We drew upon Higgins and Kram's (2001) framework and proposed that personality is an antecedent of the closeness of the developmental relationship. Personality, defined as behavioral tendencies, is conceptualized as the Five-Factor Model (FFM), which represents a broad description of the human characteristics of extraversion, agreeableness, neuroticism, openness to experience, and conscientiousness (Costa & McCrae, 1992). Although not extensive, some research indicates that personality influences developmental relationships (Turban & Lee, 2007), social network characteristics (Bozionelos, 2003)

* Corresponding author. Fax: +65 67755571.

E-mail addresses: bizwupc@nus.edu.sg (P.-C. Wu), foom@colorado.edu (M.-D. Foo), turban@missouri.edu (D.B. Turban).

as well as career success (Judge, Higgins, Thoresen, & Barrick, 1999; Ng, Eby, Sorensen, & Feldman, 2005). We have, however, little insight into how personality impacts career success. We extend such research and investigate whether a mechanism through which personality influences career success is its influence on the quality of development relationships formed.

This study was conducted in Singapore where relationships might be particularly crucial in career outcomes. Scholars have noted the importance that individuals in some cultural groups, such as Asian communities, place on the opinions of others when making career choices (Schultheiss, 2003). Singapore is a collectivistic society where people stress relatedness within groups (Hofstede, 1980; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Because the self is considered as part of a larger 'we' and interdependent with others, personal preferences may be sacrificed to fulfill group's goals, duties and obligations. Furthermore, cultures define counseling psychology (e.g., Savickas, 2007) or career (e.g., Savickas, 2001) in different ways, leading to calls for a culturally embedded understanding of careers (Blustein, Schultheiss, & Flum, 2004). By exploring the relational perspective in careers in a country outside of the US, we also seek to contribute to a wider understanding of contextual and cultural influences on work and career.

1. Conceptual development and hypotheses

Although mentoring scholars have theorized about the importance of interpersonal comfort, few empirical studies have examined such variables (Allen, Day, & Lentz, 2005). Nonetheless, some recent evidence suggests that relationship closeness influences relationship development (Allen et al., 2006; Flum, 2001). We adapt concepts from career theory and social network theory to examine the role of relationship closeness in dyadic developmental relationships and subsequent career success (Flum, 2001; Higgins & Kram, 2001).

Flum (2001) established the links between relational dimensions, defined as modes of human connection, and career development. Among the eight relational dimensions Flum (2001) identified attachment, defined as the process of keeping closeness to another person, to be the most important in developing close and secure relationships and leading to less loneliness and anxiety. According to Flum (2001, p. 3), "when people know that someone is there for them, the relationship becomes a resource from which they draw strength and enjoyment." Thus attachment, which is conceptually similar to relationship closeness, is an important aspect of developmental relationships at work.

In a similar vein, Granovetter (1973, p. 1361), who distinguished strong ties from weak ties, defined tie strength as: "The strength of [an interpersonal] tie combines the amount of time, emotional intensity, intimacy, and reciprocal services which characterize the tie." Strong ties aid in the transfer of tacit and complex knowledge and promote knowledge transfer and sharing (Uzzi, 1997). Siebert et al. (2001) found that individuals who had more strong ties also received more career assistance and access to information. We theorize that in developmental relationships, individuals will obtain more developmental assistance and support from close relationships, conceptualized as relationships with more intimacy and communication frequency.

In their model examining antecedents of developmental networks, Higgins and Kram (2001) theorized that individual differences, such as personality, influence the establishment of developmental relationships. There is considerable evidence that personality influences organization relevant outcomes such as job performance, leadership, motivation, teamwork, and career success (Ng et al., 2005). The Big Five traits shape an individual's ability to adapt to society, family life, working relationships, interpersonal relationships, and other life domains (Caligiuri, 2000). Below, we provide reasons why the Big Five personality traits influence relationship closeness.

1.1. Personality and relationship closeness

Conscientious individuals tend to strive for achievement and are dutiful, self-disciplined, hard working, and reliable (Costa & McCrae, 1992) and this trait is linked with high job performance (Judge et al., 1999). High conscientious individuals are motivated to get along with others, which contribute to better interpersonal relationships and performance outputs (Hough, 1992). Conscientious individuals also tend to be cautious about taking actions that will damage their reputations (Caligiuri, 2000). Because conscientious individuals are more responsible and hardworking, we theorize that they will be more highly liked and respected by their developers. In addition, conscientious individuals should be likely to initiate and keep in close contact with their career developers to obtain work-related assistance. Thus, we hypothesize that conscientiousness will be related positively to relationship closeness.

Hypothesis 1. Conscientiousness relates positively to (a) intimacy and (b) communication frequency.

Highly extraverted individuals tend to be warm, outgoing, positive, sociable, and with a high energy level; thus they tend to be comfortable interacting with others (Costa & McCrae, 1992). For example, Asendorpf and Wilpers (1998) found extraversion to be positively associated with the number of friends made and the time spent interacting with them. Extraverted individuals, however, can be outspoken and domineering (John, 1989), characteristics that can hurt social relationships. But we theorize that extraverted individuals may curtail these domineering tendencies with developers who are usually of higher status. Thus, on balance because highly extraverted individuals handle social situations well (Goldberg, 1999), we expect extraversion to foster close relationships with developers.

Hypothesis 2. Extraversion relates positively to (a) intimacy and (b) communication frequency.

Individuals who are more neurotic tend to have large mood swings, poor emotional control, and experience negative affect, stress, and anxiety (Costa & McCrae, 1992). These individuals often have less intimate and satisfying relationships (White, Hendrick, & Hendrick, 2004). High neuroticism individuals are usually poor at handling interpersonal differences, and adopt an avoidance conflict management strategy (Antonioni, 1998) characterized by a reluctance to communicate their needs to others. More broadly, neuroticism results in greater vengefulness, or attempts to redress perceived offenses (McCullough, Bellah, Kilpatrick, & Johnson, 2001). Such vengefulness might sour relationships with others, especially when misunderstandings or tensions arise in developmental relationships. Individuals with low emotional stability (i.e., high neuroticism) are also less likely to initiate developmental relationships with others (Turban & Dougherty, 1994). Therefore, we hypothesize that neurotic individuals will have less close relationships with developers.

Hypothesis 3. Neuroticism relates negatively to (a) intimacy and (b) communication frequency.

High openness to experience individuals tend to be curious, to be flexible, to be receptive to ideas, to seek novelty and to explore the environment (Costa & McCrae, 1992). Because these individuals are drawn to novelty (Goldberg, 1999), they might solicit advice from several developers rather than to build a relationship based on intensive interactions with one individual. Thus, high openness individuals could communicate less frequently with a specific developer and instead communicate with a wider range of people. The effects of openness to experience on intimacy are mixed; high openness individuals get pleasure from connecting with others, but may not spend enough time with each individual to build intimate bonds. Thus, we expect that openness to experience will be negatively related to communication frequency, but we do not predict a relationship of openness to experience to intimacy.

Hypothesis 4. Openness to experience relates negatively to communication frequency.

Finally, high agreeableness individuals are warm, trusting, cooperative, helpful and show empathy. Agreeableness is a prosocial trait that describes how people conduct interpersonal relationships, such that high agreeableness individuals tend to have more intimate, satisfying, and secure relationships (Ansell & Pincus, 2004; White et al., 2004). Agreeable individuals communicate more effectively and tend to contact informants more frequently to obtain job search information (Wanberg, Kanfer, & Banas, 2000). Perhaps not surprisingly a recent study found agreeableness led to better interactions and adjustment for expatriate managers (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006). Thus, we hypothesize that:

Hypothesis 5. Agreeableness relates positively to (a) intimacy and (b) communication frequency.

1.2. Relationship closeness and developer assistance

Considerable evidence indicates that individuals with more (versus fewer) close relationships obtain more social resources (Granovetter, 1973; Seibert et al., 2001). Similarly, social support and relational connections enhance career progress (Phillips, Christopher-Sisk, & Gravion, 2001). For example, individuals may turn to their siblings (Schultheiss, Palma, Predragovich, & Glasscock, 2002) for emotional support when making career decisions. Beyond the family circle, individuals can benefit from others that they are close to (Bozionelos, 2003; Higgins & Kram, 2001; Seibert et al., 2001) by getting career developmental assistance. Recent evidence demonstrates that “interpersonal comfort”, which is conceptually similar to relationship closeness, is related to mentoring assistance received by protégés (Allen, et al., 2005). Studies on supervisor-subordinate relationships also find interpersonal comfort (Fairhurst, 1993) and liking (Liden, Wayne, & Stillwell, 1993) to increase assistance provided and quality of relationships, respectively. Thus, we theorize that intimacy will be related to more developmental assistance.

Hypothesis 6. Intimacy relates positively to (a) psychosocial and (b) career assistance.

More frequent communication should increase the level of developmental assistance provided to individuals. Frequent communication results in more sharing of information and knowledge, and greater assistance (Reagans & McEvily, 2003). Furthermore, frequent contact and communication makes individuals more noticeable, which may influence the attitudes others develop toward them, as well the assistance provided to them (Becerra & Gupta, 2003). Focusing on mentoring relationships, time spent with mentors is related to the amount of mentoring assistance received (Noe, 1988). Similarly, studies on formal mentoring relationships suggest that interaction frequency increases developmental assistance received (Allen et al., 2006). To summarize, individuals who communicate more frequently with their career developers should get more assistance from their developers (Kram, 1985; Noe, 1988).

Hypothesis 7. Communication frequency relates positively to (a) psychosocial and (b) career assistance.

1.3. Career developer assistance and career success

We replicate prior research and examine the relationships between career and psychosocial assistance with objective and subjective measures of career success. In her seminal work, Kram (1985) discussed two major mentoring functions—career and psychosocial mentoring—and most research has examined these functions. Career mentoring should enhance task-related capabilities, whereas psychosocial mentoring enhances the junior colleague’s sense of competence and identity in the professional role (Kram, 1985). Career assistance provided should enhance objective and subjective measures of career success in terms of promotions, and career satisfaction. Psychosocial mentoring should be related only to subjective career success and such expectations are consistent with recent meta-analytic results (Allen et al., 2004).

H8a. Psychosocial assistance relates positively to career satisfaction.

H8b. Career assistance relates positively to career satisfaction and promotions.

The hypothesized relationships are shown in Fig. 1. Although we hypothesize a fully mediated model, we also test alternative models in which personality and relationship closeness have direct effects on the “downstream” variables.

2. Method

2.1. Sample and procedure

Participants were full-time working professionals enrolled in part-time master’s degree programs in four tertiary institutions (covering different graduate schools, including social sciences, business, engineering, science, and real estate) in Singapore. We approached the lecturers to get their consent to collect data from their students. We distributed 547 questionnaires during class time, but due to time constraints in some classes, some respondents were given self-addressed envelopes in which to return the completed questionnaires to us. The surveys were conducted in English, which is the official language in Singapore.

The definition of mentor (Ragins & Cotton, 1999), which was provided to ensure a common understanding, stated that “Mentors can be formal or informal. A mentor is generally defined as a higher-ranking individual in your work environment who has advanced experience and knowledge and provides upward mobility and support to your career. Your mentor may or may not be in your organization, and he/she may or may not be your immediate supervisor.” Respondents with mentors were asked to indicate the most influential or important mentor they had over the previous six years and to indicate the relationship closeness to (intimacy, communication frequency) and developer assistance received (career and psychosocial) from this mentor. Respondents who did not have a mentor were asked to describe relationship closeness and developer assistance received from their direct supervisor. The questions were identical in all key respects, except that one group used the word “mentor” and the other the word “supervisor.”

Although 320 surveys were returned, missing data reduced the sample size to 278, a response rate of 51%. Eighty-seven (31%) of the respondents were women, 140 (50%) were single, with an average age of 30.5 years and an average 6.84 years of

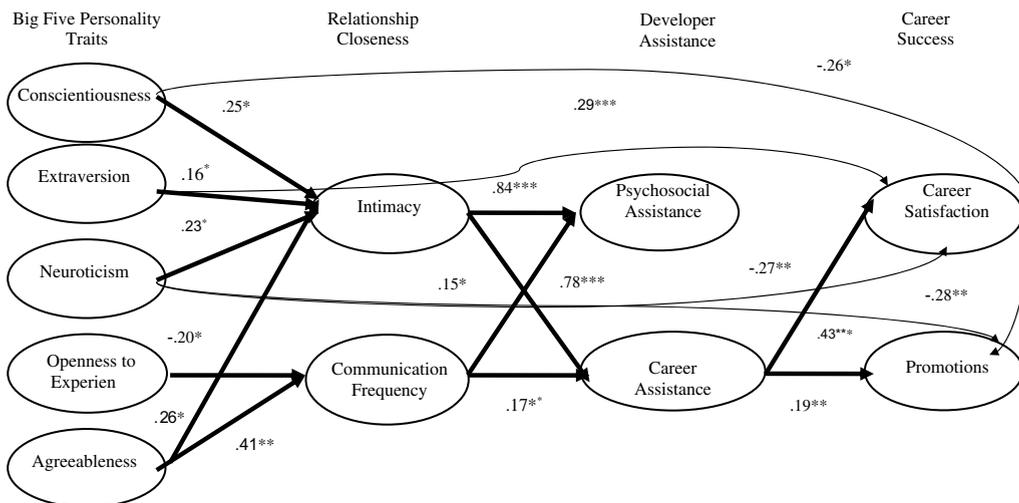


Fig. 1. Results of Structural Equation Model. Note. Fit: $\chi^2 = 443.05$, $df = 264$; IFI = .95, TLI = .94, CFI = .95, RMSEA = .05. Parameter estimates were from the completely standardized solution and were significant at * $p < .05$, ** $p < .10$, and *** $p < .001$. Hypothesized paths that were significant are represented by full bold arrows, while nonhypothesized paths that were significant are represented by light arrows.

work experience. Most respondents held professional (67.3%) or managerial (21.6%) positions. One hundred eleven respondents (40%) reported having a primary mentor, while 167 (60%) did not have a mentor.

2.2. Measures

Unless otherwise indicates items were measured on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree.

2.2.1. Big Five personality trait

The Big Five personality traits were measured using the 50 items in the International Personality Item Pool (IPIP) (Goldberg, 1999; International Personality Item Pool, 2001). This scale has convergent validities of .84 and higher with existing personality measures and the FFM (Goldberg, 1999). This measure has also been validated in East Asian countries (Lim & Ployhart, 2004). The reliability and sample items are as follows: Conscientiousness ($\alpha = .75$; "I am always prepared"); Extraversion ($\alpha = .81$; "I feel comfortable around people"); Agreeableness ($\alpha = .65$; "I make people feel at ease"); Neuroticism ($\alpha = .80$; "I often feel blue"); and Openness to Experience ($\alpha = .70$; "I enjoy hearing new ideas").

Intimacy ($\alpha = .90$) was measured with six items adapted from previous research (Ingram & Roberts, 2001; Umphress, Labianca, Brass, Kass, & Scholten, 2003). Because social network research tends to use a single item to measure closeness, we extracted items tapping interpersonal comfort and emotional closeness to measure intimacy. A sample item include "I am close to my mentor/supervisor." Factor analysis shows that all six items loaded on the same factor with loadings more than .50 and thus were combined into a composite measure.

Communication frequency ($\alpha = .87$) was measured with six items validated by Kacmar, Witt, Zivnuska, and Gully (2003). Previous research (e.g., Becerra & Gupta, 2003) has demonstrated the construct validity of using communication channels such as face-to-face communication, email, and phone to measure the frequency of interaction between two parties. Example includes "How frequently do you initiate face-to-face conversations with your mentor/supervisor?" Items were scored on a 5-point scale where 1 = Less than once a month, 2 = Once/twice a month, 3 = Once/twice a week, 4 = Once a day, and 5 = More than once a day.

2.2.2. Developer assistance

The scales developed by Noe (1988) were used to assess career and psychosocial assistance. Following Noe (1988) we used 7 items to measure career assistance ($\alpha = .91$) and 14 items to measure psychosocial assistance ($\alpha = .94$). As noted by Allen, Eby, O'Brien, and Lentz (2008) in their review of the mentoring literature, the Noe (1988) measure is the most frequently used scale for measuring both career and psychosocial mentoring.

2.2.3. Career success

Subjective career success ($\alpha = .87$) was measured by a 4-item scale used by previous research (Turban & Dougherty, 1994). A sample item include "Your career has been successful so far." Objective career success was measured as the number of promotions received. A promotion was defined as involving two or more of the following: a change of office or of the type of office furniture; a significant increase in annual salary; a significant increase in the scope of responsibility of the job; a change in the job level or rank; or greater eligibility for bonuses, incentives, or stock plans (Turban & Dougherty, 1994; Whitely, Dougherty, & Dreher, 1991).

2.2.4. Control variables

Following previous studies (Noe, 1988), we controlled for gender (0 = female, 1 = male); professional tenure (in years); and type of developer (0 = supervisor, 1 = mentor). We controlled for these variables by calculating and using the partial correlation matrix for the subsequent structural equation modeling analyses (Major, Klein, & Ehrhart, 2002).

3. Results

Table 1 presents the means, standard deviations, and correlations between the study variables. The pattern of correlations is consistent with our hypothesized model. We used Structural Equation Modeling (SEM) to test the fit of the data to the model and to test each hypothesis. We first used confirmatory factor analyses to verify the distinctiveness of the four core variables in this study (intimacy, communication frequency, psychosocial and career assistance). Next we used a model comparison procedure to assess our hypothesized models. To test the measurement model, we created indicators for each latent construct based on its dimensions. For the constructs without dimensions, we created two parcels for each variable (e.g., the Big Five personality traits and career satisfaction) by randomly assigning items to parcels and calculating the mean for each parcel.

3.1. Confirmatory factor analyses

We conducted a four-factor CFA to test construct distinctiveness among the four core variables. The results indicated the four-factor model fit the data well ($\chi^2 = 149.65$, $df = 59$; Incremental Fit Index (IFI) = .96; Tucker-Lewis Index (TLI) = .95;

Table 1
Means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	0.69	0.46	(-)												
2. Professional tenure	6.84	4.82	.08	(-)											
3. Type of developer	0.40	0.49	-.10	-.05	(-)										
4. Conscientiousness	3.63	0.42	-.02	.13*	.19**	(.75)									
5. Extraversion	3.26	0.51	.04	-.01	.01	.32**	(.81)								
6. Neuroticism	2.52	0.52	-.10	-.11	.00	-.45**	-.41**	(.80)							
7. Openness to experience	3.43	0.44	.05	.13*	.10	.23**	.34**	-.19**	(.70)						
8. Agreeableness	3.66	0.39	.06	.14*	.07	.41**	.15*	-.45**	.14*	(.65)					
9. Intimacy	3.32	0.78	.07	-.00	.33**	.29**	.20**	-.14**	.12	.20**	(.90)				
10. Communication frequency	3.14	1.04	.09	-.01	-.16**	.10	.01	-.11	-.10	.20**	.13*	(.87)			
11. Psychosocial assistance	3.40	0.73	.00	-.08	.46**	.28**	.13*	-.16**	.09	.26**	.72**	.12*	(.94)		
12. Career assistance	3.40	0.74	.05	-.06	.35**	.29**	.18**	-.17**	.11	.29**	.66**	.18**	.77**	(.91)	
13. Career satisfaction	3.36	0.71	.13*	.05	.19**	.39**	.42**	-.40**	.16**	.22**	.31**	.10	.31**	.42**	(.87)
14. Promotions	2.62	2.50	.09	.48**	.05	.07	.08	-.24**	.12	.18**	.14*	.08	.12*	.13*	.22**

Note. N = 278. Gender coded 0 = female, 1 = male. Professional tenure is in years. Type of developer coded 0 = supervisor, 1 = mentor.

* p < .05.

** p < .01. Where appropriate, coefficient alpha is on the diagonal.

Comparative Fit Index (CFI) = .96; Root Mean Square Error of Approximation (RMSEA) = .07 as compared to the other six alternative models with different combinations of the four factors. We further tested the fit of the overall measurement model, which indicated an excellent fit to the data ($\chi^2 = 403.52$, $df = 245$; IFI = .96; TLI = .94; CFI = .96; RMSEA = .05). All of the estimated parameters were statistically significant ($p < .001$), and the factor loadings were all greater than .50.

3.2. Hypothesized model

SEM results indicated that the hypothesized model provided a good fit to the data ($\chi^2 = 546.70$, $df = 275$; IFI = .93, TLI = .91, CFI = .92; RMSEA = .06). Nonetheless, we compared our proposed fully mediated model (Fig. 1) with three theoretically appropriate alternative models. As Table 2 shows, only alternative model 3 fit the data significantly better than the fully mediated model ($\Delta\chi^2 = 82.89$, $\Delta df = 10$, IFI = .95, TLI = .94, CFI = .95; RMSEA = .05). The results indicate that the personality traits had direct as well as indirect effects on career success.

For the specific relationships, the intimacy measure of relationship closeness was related to conscientiousness, extraversion, and agreeableness ($b = .25$, $.16$, and $.26$, respectively; $p < .05$), supporting Hypotheses 1a, 2a, and 5a. Surprisingly, and in contrast to our hypothesis, neuroticism was positively related to intimacy ($b = .23$, $p < .05$). Communication frequency was negatively with openness to experience ($b = -.20$, $p < .05$ and positively with agreeableness ($b = .41$, $p < .01$), providing support for Hypotheses 4 and 5b, respectively. Supporting our theoretical model, results indicated that personality did not have direct effects on developer assistance, but influenced such assistance only through relationship closeness.

The model provided strong support for the hypothesized paths between relationship closeness and developer assistance. Specifically, results indicated that intimacy ($b = .84$ and $.78$, respectively; $p < .001$) and communication frequency ($b = .15$, $p < .05$, and $b = .17$, $p < .01$, respectively), were positively related to both measures of psychosocial and career assistance, providing strong support for Hypotheses 6a and 7a and b. Furthermore, as theorized, results from the model comparison indicated that relationship closeness did not have a direct effect on career success beyond the indirect effects through assistance.

Table 2
Nested model comparisons

Model	Model description	Model comparisons	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	IFI	TLI	CFI	RMSEA
Fully mediated model	Personality → Relationship closeness → Developer assistance → Career success		525.94 (274)		.93	.91	.93	.06
Alternative model 1	Fully mediated model and Personality → Developer assistance	Compared to fully mediated model	492.55 (264)	33.39 (10)	.94	.92	.93	.06
Alternative model 2	Fully mediated model and Relationship closeness → Career success	Compared to fully mediated model	523.32 (270)	2.62 (4)	.93	.91	.93	.06
Alternative model 3	Fully mediated model and Personality → Career success	Compared to fully mediated model	443.05 (264)	82.89** (10)	.95	.94	.95	.05

Note. Personality = Conscientiousness, extraversion, agreeableness, neuroticism, and openness to experience; Relationship closeness = Intimacy and communication frequency; Career developer assistance = Psychosocial and career assistance; Career success = Career satisfaction and promotions; Control = Gender, Professional tenure, and Type of developer.

** p < .01.

We found career assistance to be positively related with both promotions and career satisfaction ($b = .19, p < .01$ and $b = .43, p < .001$, respectively), as hypothesized. However, psychosocial assistance was not correlated with our subjective measure of career success.

The model comparison indicated that personality had direct effects on career success in addition to the hypothesized indirect effects through relationship closeness and developer assistance. As *fig. 1* shows, neuroticism was negatively related to both career satisfaction and promotions, extraversion was positively related to career satisfaction, and conscientiousness was negatively related to promotions. Additional analyses showed the path between conscientiousness and promotions to be negative only when professional tenure was included as control variable.

4. Discussion

Relationships affect career outcomes (Phillips, et al., 2001; Flum, 2001; Schultheiss, 2003). Consistent with studies examining an individual's ego-centric network (Seibert et al., 2001), individuals in closer relationships received more developer assistance. Individuals who had close relationships and maintained frequent contact with their primary developer were more likely to benefit from such relationships, as indicated by development assistance received. Such results emphasize the importance of examining relationship characteristics, such as but not limited to interpersonal comfort (Allen et al., 2005), to better understand what leads to higher quality developmental relationships. The results support the relational perspective that individuals at work seek connection, affirmation, support, and attachment with others and these relationships have important career outcomes.

We showed personality to influence careers through mechanisms such as relationship closeness and developer assistance and we also found personality to directly influence career success. Conscientiousness, extraversion, neuroticism, and agreeableness were associated positively with intimacy with developers, while agreeableness and openness to experience (negatively) related to communication frequency. As Flum (2001) noted, attachment is an active process of keeping closeness with one another. Our results indicate that people with certain personality traits were more likely to build closer relationships with their developers. Although there is an ongoing debate about the usefulness of global versus narrow personality traits (Turban & Lee, 2007), our results indicate that global traits (such as the Big Five), are related to closeness in developmental relationships. Our findings also support the direct influences from personality on career success (Judge et al., 1999; Ng et al., 2005; White et al., 2004). Extraversion related positively to career satisfaction, while neuroticism related negatively to career satisfaction and promotions. Unexpectedly, conscientiousness related negatively to promotions, which appeared to be a suppressor effect. Future research should examine both global and narrower personality traits and continue investigating the role of personality in developmental relationships.

Finally, contrary to our prediction, psychosocial assistance did not explain variance in career outcomes beyond the effects of career assistance. This result, however, coincides with the recent meta-analytic results that career assistance has stronger relationships with most outcomes other than psychosocial assistance (Allen et al., 2004). Nonetheless, we believe researchers should continue to investigate psychosocial assistance as it may be important for outcomes such as mentoring satisfaction (Allen et al., 2004).

An important practical implication of our study is that individuals can enhance the quality of their developmental relationships by building closer interpersonal relations with their developers and consequently receive more career benefits (Allen et al., 2006; Noe, 1988). As Singapore is a collectivistic society where relationships are important and individuals are more sensitive to in-group and out-group differentiation, individuals may need to keep in close contact with their developers to become in-group members (House et al., 2004). We believe that mentoring research can benefit from more studies conducted in cultures outside the US to build our understanding of work and career in a broader context.

In addition, organizations with formal mentoring programs should insure that the participants are encouraged to spend enough time with their mentors to foster successful relationships and find ways to increase employees' exposure to networking opportunities. Informal networking sessions can be organized to introduce employees to people from other departments. These informal sessions can also help individuals mingle with potential career developers in a "relaxed" setting which helps build closer bonds.

4.1. Limitations and conclusions

First, we focused on psychosocial and career assistance received. Future studies might investigate outcomes developers receive from the relationships. Second, we used a self-report questionnaire and collected information from a single source. Given the data collection methods, we could not compare the respondents and nonrespondents and could not determine the extent of nonresponse bias. Finally, as SEM does not provide evidence of causality it is possible that recursive relationships exist among the study variables.

In conclusion, we reveal how relationship closeness, a construct adapted from social network theory, leads to developmental relationships. Our theoretical model integrated variables previously studied independently as influences on career success such as personality (Judge et al., 1999), time spent with mentors (Noe, 1988), relationships with alters (Seibert et al., 2001), and mentor functions (Allen et al., 2004; Kram, 1985; Noe, 1988). As such our results offer a framework by which individuals can recognize that their individual characteristics can influence developmental relationship formation

and thus career success. Moving beyond the individual, the results remind organizations to create networking opportunities for individuals to seek and develop beneficial relationships with developers.

References

- Allen, T. D., Day, R., & Lentz, E. (2005). The role of interpersonal comfort in mentoring relationships. *Journal of Career Development, 31*, 155–169.
- Allen, T. D., Eby, L., & Lentz, E. (2006). Mentoring behaviors and mentorship quality associated with formal mentoring programs: Closing the gap between research and practice. *Journal of Applied Psychology, 91*, 567–578.
- Allen, T. D., Eby, L. T., Poteet, M. L., Lentz, E., & Lima, L. (2004). Career benefits associated with mentoring for protégés: A meta-analysis. *Journal of Applied Psychology, 89*, 127–136.
- Allen, T. D., Eby, L. T., O'Brien, K. E., & Lentz, E. (2008). The state of mentoring research: A qualitative review and future research implications. *Journal of Vocational Behavior, doi:10.1016/j.jvb.2007.08.004*.
- Ansell, E. B., & Pincus, A. L. (2004). Interpersonal perceptions of the five-factor model of personality: An examination using the structural summary method for circumplex data. *Multivariate Behavioral Research, 39*, 167–201.
- Antonioni, D. (1998). Relationship between the Big Five personality factors and conflict management styles. *International Journal of Conflict Management, 9*, 336–355.
- Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology, 74*, 1531–1544.
- Becerra, M., & Gupta, A. K. (2003). Perceived trustworthiness within the organization. *Organization Science, 14*, 32–44.
- Blustein, D. L., Schultheiss, D., & Flum, H. (2004). Toward a relational perspective of the psychology of careers and working: A social constructionist analysis. *Journal of Vocational Behavior, 64*, 423–440.
- Bozionelos, N. (2003). Intra-organizational network resources: Relations to career success and personality. *International Journal of Organizational Analysis, 11*, 41–66.
- Caligiuri, P. M. (2000). The Big Five personality characteristics as predictors of expatriate's desire to terminate the assignment and supervisor-rated performance. *Personnel Psychology, 53*, 67–88.
- Costa, P. T., & McCrae, R. R. (1992). *NEO-PI/NEO-FFI professional manual*. Odessa, FL: Psychological Assessment Resources.
- Fairhurst, G. T. (1993). The leader-member exchange model of leadership: A critique and further development. *Academy of Management Review, 11*, 618–634.
- Flum, H. (2001). Relational dimensions in career development. *Journal of Vocational Behavior, 59*, 1–16.
- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.), *Personality psychology in Europe, 7*, 7–28. Tilburg, The Netherlands: Tilburg University Press.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology, 6*, 1360–1380.
- Higgins, M. C., & Kram, K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *Academy of Management Review, 26*, 264–288.
- Hofstede, G. (1980). *Culture's consequences*. Sage: Beverly Hills.
- Hough, L. M. (1992). The "Big Five" personality variables-construct confusion: Description versus prediction. *Human Performance, 5*, 139–156.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Sage.
- Ingram, P., & Roberts, P. W. (2001). Friendships among competitors in the Sydney hotel industry. *American Journal of Sociology, 106*, 387–423.
- International Personality Item Pool. (2001). A scientific collaboratory for the development of advanced measures of personality traits and other individual differences. <http://ipip.ori.org/>.
- John, O. P. (1989). Towards a taxonomy of personality descriptors. In D. M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 261–271). New York: Springer-Verlag.
- Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The Big Five personality traits, general mental ability, and career success across the life span. *Personnel Psychology, 52*, 621–652.
- Kacmar, K. M., Witt, L. A., Zivnuska, S., & Gully, S. M. (2003). The interactive effect of leader-member exchange and communication frequency on performance ratings. *Journal of Applied Psychology, 88*, 764–772.
- Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life*. Glenview, IL: Scott, Foresman.
- Liden, R. C., Wayne, S. J., & Stilwell, D. (1993). A longitudinal study on the early development of leader-member exchanges. *Journal of Applied Psychology, 78*, 662–674.
- Lim, B. C., & Ployhart, R. E. (2004). Transformational Leadership: Relations to the Five-Factor Model and Team Performance in Typical and Maximum Contexts. *Journal of Applied Psychology, 89*, 610–621.
- Major, V. S., Klein, K. J., & Ehrhart, M. G. (2002). Work time, work interference with family, and psychological distress. *Journal of Applied Psychology, 87*, 427–436.
- McCullough, M. E., Bellah, C. G., Kilpatrick, S. D., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin, 27*, 601–610.
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology, 58*, 367–408.
- Noe, R. A. (1988). An investigation of the determinants of successful assigned mentoring relationships. *Personnel Psychology, 41*, 457–479.
- Phillips, S. D., Christopher-Sisk, E. K., & Gravino, K. L. (2001). Making career decisions in a relational context. *The Counseling Psychologist, 29*, 193–213.
- Ragins, B. R., & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology, 84*, 529–550.
- Reagans, R., & McEvily, B. (2003). Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly, 48*, 240–267.
- Savickas, M. L. (2001). Toward a comprehensive theory of career development: Dispositions, concerns, and narratives. In F. T. L. Leong & A. Barak (Eds.), *Contemporary models in vocational psychology* (pp. 305–329). Mahwah, NJ: Erlbaum.
- Savickas, M. L. (2007). Internationalisation of counseling psychology: Constructing cross-national consensus and collaboration. *Applied psychology: An international review, 56*(1), 182–188.
- Schultheiss, D. (2003). A relational approach to career counseling: Theoretical integration and practical application. *Journal of Counseling and Development, 81*(3), 301–310.
- Schultheiss, D., Palma, T., Predragovich, K., & Glasscock, J. (2002). Relational influences on career paths: Siblings in context. *Journal of Counseling Psychology, 49*, 302–310.
- Seibert, S. E., Kraimer, M. L., & Liden, R. C. (2001). A social capital theory of career success. *Academy of Management Journal, 44*, 219–237.
- Shaffer, M. A., Harrison, D. A., Gregersen, H., Black, J. S., & Ferzandi, L. A. (2006). You can take it with you: Individual differences and expatriate effectiveness. *Journal of Applied Psychology, 91*, 109–125.
- Turban, D. B., & Dougherty, T. W. (1994). Role of protégé personality in receipt of mentoring and career success. *Academy of Management Journal, 37*, 688–702.
- Turban, D. B., & Lee, F. K. (2007). The role of personality in mentoring relationships: Formation, dynamics, and outcomes. In B. R. Ragins & K. E. Kram (Eds.), *The handbook of mentoring* (pp. 21–50). Thousand Oaks, CA: Sage.

- Umphress, E. E., Labianca, G., Brass, D. J., Kass, E., & Scholten, L. (2003). The role of instrumental and expressive social ties in employees' perceptions of organizational justice. *Organization Science*, *14*, 738–753.
- Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, *42*, 35–67.
- Wangberg, C. R., Kanfer, R., & Banas, J. T. (2000). Predictors and outcomes of networking intensity among unemployed job seekers. *Journal of Applied Psychology*, *85*, 491–503.
- White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big Five personality variables and relationship constructs. *Personality and Individual Differences*, *37*, 1519–1530.
- Whitely, W., Dougherty, T. W., & Dreher, G. F. (1991). Relationship of career mentoring and socioeconomic origin to managers' and professionals' early career progress. *Academy of Management Journal*, *34*, 331–351.