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Are facilitated mentoring programs beneficial? A randomized experimental field study

Toby Marshall Egan [a,*], Zhaoli Song [b]

[a] Human Resource Development Program, Texas A & M University, 511 Harrington Tower, 4226 TAMU, College Station, TX 77843-4226, USA
[b] Department of Management and Organization, National University of Singapore, 1 Business Link 1, Singapore 117592

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Abstract

Results from a pretest–posttest randomized field experiment study with a control group comparing the impact of high- and low-level-facilitated mentoring programs on new employees' performance and perceptions about their jobs and organization were reported in this paper. Results indicated increases in job satisfaction, organizational commitment, person-organization fit and performance by participants in both mentoring programs with larger gains made by the high-level-facilitated group. These results suggest that a formal mentoring program can have positive effects on employee's work-related attitudes, cognition and behavior with significantly greater gains made by formal mentoring programs with higher levels of facilitation.
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1. Introduction

An increasing amount of attention has been given to mentoring over the past decade. Findings from studies on mentoring participation indicate that up to two-thirds of employees have engaged in some type of mentoring relationship (Chao, Walz, & Gardner, 1992; Ragins & Cotton, 1991; Ragins & Scandura, 1994). Involvement in mentoring relationships has been found to have a variety of benefits for participants (Allen, Eby, Poteet, Lentz, & Lima, 2004; Noe, Greenberger, & Wang, 2002; Wanberg, Welsh, & Hezlett, 2003) and for organizations (Allen & O'Brian, 2006). Some of the most highlighted benefits have been psychosocial and career advancement (Kram, 1985). Other studies have highlighted related important benefits for employees and organizations including: career success, job satisfaction, organizational commitment, competence, affiliation, autonomy, achievement, self-esteem, retention, and diversity (Allen et al., 2004; Noe et al., 2002; Wanberg et al., 2003).

* Corresponding author. Fax: +1 9798624347.
E-mail address: egan@tamu.edu (T.M. Egan).

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A key distinction in the mentoring literature is the examination of formal versus informal mentoring relationships. Informal mentoring relationships are most frequently identified as having emerged largely through mutual initiation and ongoing connections between protégé and mentor (Ragins & Cotton, 1991). The development of informal mentoring relationships occurs over time without external intervention or planning. Conversely, formal mentoring relationships are most often instigated by organizational representatives and involve a process for assigning employees or managers to mentor–protégé pairings. While informal mentoring relationships are not guided by external expectations, formal mentoring relationships are often led by internal organizational facilitators who may set expectations for involvement such as: participation in mandatory introductory sessions or ongoing training, number of meeting times, discussion topics and goal setting.

Despite the increasing popularity of formal mentoring programs in public and private organizations, few empirical studies have been performed which examine outcomes of formal mentoring programs (Wanberg et al., 2003). Additionally, the value of formal mentoring programs overall, has been questioned for some time and seen as less valuable than informal (or naturalistically occurring) mentoring relationships (Ragins & Cotton, 1999). This gap between mentoring practice and research calls for empirical study to clarify the effectiveness of formal mentoring programs.

Furthermore, formal mentoring program facilitation may vary from a single intervention by the organization in which participants are simply provided a mentor–protégé match and asked to engage one another for a given period of time, to programs that provide additional ongoing group facilitation or training to protégés (e.g., Chao et al., 1992; Fagan & Ayers, 1985; Klauss, 1981; Noe, 1988; Phillips-Jones, 1983; Wilson & Elman, 1990). The handful of rigorously implemented and analyzed studies has largely failed to differentiate formal mentoring programs in terms of a variety of facilitation approaches, such as quality, content or high versus low program facilitation (Wanberg et al., 2003). Such studies lump all mentoring programs into one group whether the formal mentoring effort is painstakingly organized or involves a haphazard pairing of mentors with protégés without thoughtful attention to program elements that may support the development of the mentoring relationship. This lack of attention on the formal mentoring specifications represents a significant limitation in the mentoring literature (Allen, Eby, & Lentz, 2006). Because of the considerable investment of time and energy on the part of organizations and mentoring participants, a better understanding of the benefits of formal mentoring programs would be an important contribution (Ragins, Cotton, & Miller, 2000).

The purposes of the current study are twofold. First, the question of whether participation in formal mentoring programs will make a difference in protégés' work-related outcomes was explored. Besides protégés' self report of attitudinal outcomes, such as job satisfaction and organizational commitment, we included supervisor performance rating as an effectiveness index. Second, the issue regarding whether the change of one key formal mentoring specification, the level of third party facilitation during the mentoring process, will lead to different mentoring outcomes was examined. A randomized pretest and posttest experimental design with three levels of intervention (high-level-facilitated mentoring, low-level-facilitated mentoring and no formal mentoring) was adopted for this study. This study is the first known randomized experimental examination of formal mentoring and the only identified using managerial performance ratings as outcome measures for protégés.

1.1. Features of formal mentoring programs

Most often in formal mentoring, organizations deliberately pair employees or managers with moderate to high levels of experience (mentors) with employees who have less experience (protégés or mentees). Typical formal mentoring program duration is 6–12 months (Single & Muller, 2001). Common goals for mentoring programs include socialization of employees into the organizational culture, provision of support for career development, or as part of a protégé promotion or succession planning effort by the organization. As is the case with the organizational practices explored in this study, organizations may use mentoring programs in an effort to support new hires in the development of task and relationship effectiveness as well as in efforts aimed toward the retention and promotion of women and minorities (Douglas & McCauley, 1999).

According to Single and Muller (2001), protocols used in the implementation of formal mentoring programs may vary widely from single meetings for mentor–protégé pairs in hopes that a relationship emerges,

to well planned programs engaging in careful pairing efforts and training sessions aimed at supporting the development of the dyads. Low-level-facilitated mentoring programs typically do not provide support for the mentor–protégé pair beyond matching them and providing introductory information about mentoring or mentoring relationships. The success of the mentor–protégé relationship is dependent on early interpersonal connections (perhaps influenced by perceived similarity; Allen et al., 2004; Turban, Dougherty, & Lee, 2002). Conversely, high-level-facilitated mentoring programs involve greater levels of facilitation by the program to strengthen the mentoring relationship between mentor and protégé and to accomplish the specific goals identified by formal mentoring program administrators. High-level-facilitated programs are more likely to involve ongoing check-in and support throughout the established timeframe for the program (Gaskill, 1993; Zey, 1985).

In their comprehensive review of mentoring literature, Wanberg et al. (2003) indicated that "there is a striking dearth of research on formal mentoring" (p. 85). Of the fewer than 25 studies identified, only 13 were evaluated to be well-conducted empirical studies focused on the outcomes associated with formal mentoring programs in organizations. These included only four studies comparing individuals with formal mentors versus no mentors. These studies explored differences for those participating in formal mentoring programs including increased organizational socialization, job satisfaction, compensation, promotion and organizational commitment (Chao et al., 1992; Ragins & Cotton, 1991; Ragins et al., 2000; Seibert, 1999). Among previously published empirical studies, only Seibert (1999) adopted a longitudinal experimental design and provided a comparison between groups of participants in formal mentoring programs with those not enrolled. However, the small sample size and the non-random assignment of participants into intervention or control groups limit the power of the study to detect intervention effects. Following recommendation of Wanberg et al. (2003), a randomized experimental design was used in the current study to compare the effectiveness of mentoring programs in comparison to a control group with no formal mentoring treatment. We also attempted to examine whether the level of facilitation impacted mentoring outcomes.

1.2. Outcomes of formal mentoring

The goal of the formal mentoring program we examined in the current study was to promote adaptation of protégés to their new jobs. Complimentary to this goal, we included work-related affective and cognitive indices of adaptation (job satisfaction, organizational commitment and perceived person-organization fit) of protégés as mentoring outcomes. Furthermore, since an employee contributes to their organization mainly through their work behavior and performance, we also examined the relationship between mentoring participation and performance of protégé.

1.2.1. Job satisfaction and organizational commitment

It is posited that facilitated mentoring relationships will have a positive effect on job attitude, to which the two most widely used indicators are job satisfaction and organizational commitment (Maier & Brunstein, 2001). Job satisfaction is typically defined as an employee's affective reactions to a job based on comparing desired outcomes with actual outcomes (Cranny, Smith, & Stone, 1992). On the other hand, organizational commitment has often been framed as the psychological bond that ties the employee to his/her organization. Organizational commitment represents a positive feeling of congruent identity with one's organization that may include a sense of attachment or affiliation (Meyer & Allen, 1997). Harrison, Newman, and Roth (2006) conceptualized organizational commitment and job satisfaction to be specific reflections of an overall job attitude.

There appear to be relatively few studies of job satisfaction associated with mentoring. In their meta-analysis focusing on protégé outcomes, Allen et al. (2004) identified 10 mentoring studies that included job satisfaction as a dependent variable. The studies identified a positive relationship between mentoring relationships and job satisfaction. One study found protégé learning to be a mediator for the interaction between mentoring functions, role ambiguity and job satisfaction (Lankau & Scandura, 2002). In another study, Seibert, Kraimer, and Liden (2001) found that level of career sponsorship provided to the protégé to be positively related to protégé work-related satisfaction. In one of studies to compare protégés in formal mentoring programs with

those in the same organization without a mentor, increases in job satisfaction were identified in a group participating in formal mentoring relationships (Seibert, 1999).

In designing the current study we posited that a randomized experimental study would likely reveal a significant difference between formal mentoring participants and non-participants in terms of their average job satisfaction levels, following mentoring program participation. Thus, we proposed:

Hypothesis 1a. Individuals receiving high- or low-level-facilitated mentoring will have higher level of job satisfaction at the end of the mentoring programs than those receiving no formal mentoring.

Since the formal mentoring program with more facilitation is intended to provide a stronger and more positive impact on protégé adjustment to their organization than the mentoring program with less facilitation, we proposed that:

Hypothesis 1b. Individuals receiving high-level-facilitated mentoring will have higher level of job satisfaction at the end of the program than those receiving low-level-facilitated mentoring.

The few studies that explored the relationship between mentoring and organizational commitment generated mixed findings. While some studies found mentoring was associated with higher levels of organizational commitment (Donaldson, Ensher, & Grant-Vallone, 2000; Ragins & Cotton, 1999; Ragins et al., 2000), there were others found the relationship not significant (e.g., Seibert, 1999). The inconsistent findings from the aforementioned studies may also be due to the observational nature of these studies or inconsistent quality of mentoring programs examined. Two hypotheses associated with organizational commitment were developed for this randomized experimental study:

Hypothesis 2a. Individuals receiving high- or low-level-facilitated mentoring will have higher organizational commitment at the end of the mentoring programs than those receiving no formal mentoring.

Hypothesis 2b. Individuals receiving high-level-facilitated mentoring will have a higher level of organizational commitment at the end of the program than those receiving low-level-facilitated mentoring.

1.2.2. Person-organization fit

The concept of person-organization fit is focused on the combination of an individual employee and a job situation in association with the individual's response to work (O'Reilly, Chatman, & Caldwell, 1991). Employees have a stronger perception of person-organization fit when they feel their personal values match the values of their organizations and those of their co-workers. According to Vancouver and Schmitt (1991), person-organization fit can also be operationalized as goal congruence between and individual and organizational leaders and peers. In a previous study, Cable and Judge (1996) found person-organization fit to positively correlate with employee perceptions of their person-job fit, job satisfaction, organizational commitment, willingness to recommend the organization to others and employee ratings of the importance of person-job fit.

Several processes of mentoring can support a positive relationship between participation of mentoring programs and the perception of person-organization fit of protégés. First, mentorship can help protégés access important social networks that contain useful knowledge and opportunity to display their competencies (Allen et al., 2004). The improved socialization of protégés can increase their perceived fit with their organization. Second, mentorship can improve protégés' personal learning through role modeling by mentors. Through personal learning, protégés can develop a clearer awareness and sense of congruence of values of both themselves and their organization. For the current study, two hypotheses associated with person-organization fit were proposed:

Hypothesis 3a. Individuals receiving high- or low-level-facilitated mentoring will report more closely aligned person-organization fit at the end of the mentoring programs than those receiving no formal mentoring.

Hypothesis 3b. Individuals receiving high-level-facilitated mentoring will report more closely aligned person-organization fit at the end of the mentoring programs than those receiving low-level-facilitated mentoring.

1.2.3. Job performance

Although most mentoring programs are not targeted specifically at improving productivity, it is possible to improve protégé performance by influencing proximal outcomes, such as learning, socialization and career commitment (Wanberg et al., 2003). The positive relationship between mentorship and objective career outcomes, such as compensation and promotions (Allen et al., 2004; Underhill, 2006), also implies that job performance may be improved through mentoring. Unfortunately, few studies have focused on direct measures of job performance in relation to mentoring participation and no studies have been identified which use managerial or organizational reported measures of protégé performance. Green and Bauer (1995) identified a significant correlation between production of published work and participation in informal mentoring for graduate students, but these results were not significant in a multivariate context in which protégé ability (i.e., verbal and quantitative GRE scores) and commitment (i.e., to a research career or graduate program) were controlled. Job performance was used as a control by Day and Allen (2002) who explored mediating effects of career motivation and self-efficacy between mentoring provided and protégé outcomes. Career motivation was found to mediate fully the relationship between self-reported performance effectiveness and involvement in mentoring. Because of the absence of studies exploring the impact of mentoring on job performance, this study has the potential to make an initial contribution in the exploration of job performance and mentoring interactions. Job performance can be measured and interpreted in numerous ways (Youngcourt, Leiva, & Jones, 2007). In the current study, job performance was indicated by performance ratings of participants evaluated by their supervisors. We proposed two hypotheses associated with job performance ratings in this study:

Hypothesis 4a. Individuals receiving high- or low-level-facilitated mentoring will have job performance ratings from their managers at the end of the mentoring programs greater than those receiving no formal mentoring.

Hypothesis 4b. Individuals receiving high-level-facilitated mentoring will have job performance ratings from their managers at the end of the mentoring program greater than those receiving the low-level-facilitated mentoring.

2. Methods

2.1. Research setting and participants

This study was conducted in a large US-based *Fortune 500* health care organization that provides healthcare services, insurance and health maintenance. The organization under study viewed mentoring as an element of a series of orientation and socialization programs, also including orientations at the organization, division and department levels, new employee social groups and events and training sessions (e.g., database management, internal and external customer service). Those qualified to be included in the mentoring program were 174 employees who worked with the organization for at least 6 months, but no more than 18 months. Study participants had an array of organizational occupations and assignments including roles in business services, health care services, knowledge and information services, specialized care services and clinical services divisions. All worked in moderate to high skilled jobs such as business accounts manager, member services specialist, nursing and ward services specialist, member records specialist and IT specialist positions. The issue regarding the start of the mentoring program was carefully considered in context with the intensive early career orientation and on-the-job training activities demanded by many healthcare organizations, including the organization under study.

Among these 174 individuals, 158 filled out both pretest and posttest surveys (a 90.80% completion rate). Respondents and non-respondents were not significantly different from each other on demographic variables, including age, years of previous work experience, education level, race and gender. Due to restrictions on researchers regarding access non-respondent information, comparison of these two groups on other studied variables was not possible. The further analyses were based on 158 respondents. The average age of the sample was 30.02 years old ($SD = 3.26$) and average previous work experience was 7.23 years ($SD = 3.22$). Most participants (83.54%) had Bachelor's degrees. Thirty-seven percent of the sample was male.

2.2. Mentoring programs and research design

The facilitated formal mentoring program was part of a larger effort to increase employee satisfaction and organizational commitment. Mentors internal to the organization were recruited to participate in the program. The mentors were selected based on four factors: (1) above average work performance; (2) positive employee feedback on 360 deg evaluations; (3) absence of negative reputation; and (4) positive feedback from formal mentoring protégés in earlier program participation. One hundred and twelve mentors had at least one previous formal mentoring program experience over the past 5 years. Because of a limited number of mentors, not all employees eligible and interested in participation were provided an opportunity to be paired with a mentor during the 6-month period identified for the implementation of the mentoring efforts under study. It was determined that those unable to participate in the program would be offered an opportunity in the following 6 months and, in the interim, would be the control group for the study. Post hoc evaluations of mentoring program participants suggested that neither mentoring program participants, nor their managers had knowledge that there were group assignments involving different levels of facilitation. Furthermore, post hoc evaluations also revealed that control group participants viewed the mentoring program as part of several new employee development activities and did not view negatively their delayed participation in the formal mentoring program during the controlled research process reported herein.

Employees were randomly assigned to one of three groups—high-level-facilitated, low-level-facilitated, or control. Those assigned to participate in a mentoring program were randomly assigned to a mentor. The final numbers of participants in the high-level-facilitated mentoring group, low-level-facilitated mentoring group and the control group were 57, 54 and 47, respectively.

Before the program began, all mentors and protégés were informed regarding the expectation that mentors and protégés meet regularly over a 6-month period (no specific number of expected meetings was identified). The program appeared to be well supported, designed and implemented including: upper level managerial support for the program, clearly defined and communicated objectives, experienced mentors with solid performance records and clear expectations communicated to mentors and protégés (Kram & Bragar, 1992). Subsequent program evaluations were positive and several measures supported the overall effectiveness of the program, including attendance rate and satisfaction with the mentor–protégé relationships.

Both groups participated in a program kickoff meeting where the mentor–protégé pairs were introduced and were given time to get to know one another. Expectations and guidelines to engage in effective mentoring relationship were also introduced to mentors and protégés by the organization's human resource development leaders. Although both groups were provided written information regarding mentoring and goal setting, the high-level-facilitated group of protégés was asked to meet once a month during the program to have "brown bag lunch." Facilitated by a HRD practitioner, this meeting included approximately 15 min of structured discussion about the printed information on mentoring and goal setting as well as an unstructured discussion focused on how the protégé relationship was going with the mentor. The meetings were scheduled for one hour per month and were well attended. The same printed materials were provided to participants in both programs. A post study e-mail survey indicated that few participants knew or suspected that some protégés were involved in different or additional programs associated with the organization's formal mentoring efforts.

Questionnaires were administered to program participants as well as those in the control group prior to program participation and immediately following the official termination of the formal mentoring programs 6 months later. Data on the demographic and outcome variables, with the exception of manage performance ratings, were collected from all study participants on the pretest questionnaire. Posttest data on the outcome variables was collected again from all study participants. Manager performance ratings were collected from managers to whom protégés and employees in the control group (at both time points) reported directly.

2.3. Measures

Job satisfaction was measured using the three item overall job satisfaction measure developed by Cammann, Fichman, Jenkins, and Klesh (1983). Responses were obtained on a 7-point Likert-type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). The sum of responses to these three items was used to represent a participant's job satisfaction level. A sample item is "In general, I like working here." In the cur-

rent study, the Cronbach alpha coefficient values for the measure were .85 and .90 at the pretest and posttest, respectively.

Organizational commitment was measured using three affiliation commitment items from organizational commitment scale (OCS) developed by Balfour and Wechsler (1996). Affiliation oriented organizational commitment is generated from beliefs that organizational colleagues care about the individual and his/her well-being, and from a sense of association and belonging with a group or number of individuals in the organization (Balfour & Wechsler, 1996). Responses were obtained on a 7-point Likert-type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). An example item is "I feel a strong sense of belonging to this organization." The coefficient alpha values were .81 and .88 at the pretest and posttest.

Person-organization fit was measured by a three-item instrument developed by Cable and Judge (1996) to directly assess employees' individual perceptions of fit with the organization. Responses were obtained on a 5-point Likert-type scale (1 = not at all to 5 = completely). An example item is "My values match those of the current employees in this organization." The Cronbach alpha reliability coefficients for person-organization fit were .87 and .93 at the pretest and posttest, respectively.

The *job performance* measures were evaluated by the managers of each protégé and were part of the numerical performance rating utilized by internal human resources. The six items used in this study focused on employee productivity and performance and were rated by each protégé's manager on a 5-point Likert-type scale ranging from 1 ("unacceptable") to 5 ("exceptional"). An example item: "The employee's actions to consistently coordinate job expectations for the designated time period as detailed in her/his job expectation description are:" The reliability coefficients were .95 and .95 at the pretest and posttest.

Six *demographic variables* were included to assess equivalence between groups. Respondents were asked to report their *age in years, years of previous work experience, number of months with the company*, on the blanks provided. They were asked to mark the appropriate category to indicate their *level of educational attainment* (high school through doctoral degree), *race* and *gender*.

3. Results

The group differences of demographics and measures at pretest were assessed by multivariate analysis of variance (MANOVA). No significant multivariate effect was detected (the Wilks' multivariate $F(8, 304) = .29$, $p = .97$). Univariate analysis of variance tests for each variable also showed that pretest values were not significantly different across three groups. These tests provide evidence to support that three groups were equivalent at the pretest. Thus, the randomization was successful.

To assess the effects of mentoring, multivariate analysis of covariance (MANCOVA) was first used, with the posttest measures as the dependent variables, mentoring group status as independent variable and pretest measures as covariates. A significant group effect was obtained (Wilks' multivariate $F(8, 296) = 8.82$, $p < .01$).

To evaluate the effect of mentoring on individual outcome variables, we conducted a series of univariate analysis of covariance (ANCOVA) controlling the pretest measure. Significant effects were emerged for all four dependent measures ($F(2, 154) = 25.23$, 27.82, 18.00 and 16.07 for job satisfaction, organizational commitment, person-organization fit and manager's performance rating, respectively. All above statistics were significant at .01 level).

Based on above ANCOVA models, Bonferroni tests with adjusted marginal means were conducted to simultaneously compare outcome measures for three groups, controlling for pretest measures. Employees in high-level-facilitated group demonstrated higher values for job satisfaction than the low-level-facilitated group, and both groups had higher values than the control group (adjusted mean = 17.88, 16.52 and 15.19, respectively). Employees who received high-level-facilitation mentoring demonstrated higher organizational commitment than the low-level-facilitation mentoring, and both mentoring groups had higher values than the control group (adjusted mean = 15.50, 13.76 and 12.23, respectively). Thus, Hypotheses 1a, 1b, 2a and 2b were fully supported. For person-organization fit, both the high and low-level-facilitation groups had significant higher mean values than the control group (adjusted mean = 11.71, 11.45 and10.51, respectively). However, the difference between high and low mentoring groups was not significant. Hypothesis 3a was supported, but Hypothesis 3b was not supported. For the manager's performance rating, employees who received high-level-facilitated mentoring demonstrated higher ratings than the low-level-facilitated mentoring, and

Table 1
Effects of facilitation on mentoring outcomes

Variable	High-level-facilitated mentoring group ($n = 57$)	Low-level-facilitated mentoring group ($n = 54$)	Control group ($n = 47$)	F	df
Pretest measures					
Job satisfaction	14.84	14.85	15.34	.42	2, 155
Organizational commitment	12.14	12.06	12.55	.40	2, 155
Person-organization fit	10.46	10.48	10.40	.01	2, 155
Manager performance rating	22.03	22.06	21.66	.13	2, 155
Posttest measures					
Job satisfaction	17.88_a	16.52_b	15.19_c	25.23^{**}	2, 154
Organizational commitment	15.50_a	13.76_b	12.23_c	27.82^{**}	2, 154
Person-organization fit	11.71_a	11.45_a	10.51_b	18.00^{**}	2, 154
Manager performance rating	24.12_a	23.22_b	22.18_c	16.07^{**}	2, 154

Note: Within the same raw, means with different subscripts differ at $p < .05$ based on the Bonferroni tests; all posttest variable means are cell means adjusted for their corresponding pretest scores. $^{**}p < .01$.

both mentoring groups had higher average performance ratings than those of the control group (adjusted mean = 24.12, 23.22 and 22.18, respectively), which provide support for the Hypothesis 4a and 4b. Above tests were summarized in Table 1.

4. Discussion

This study was the first known randomized experimental comparison of the effectiveness of facilitated mentoring programs in a field setting. The data indicated significant differences among mentoring and control groups with regard to four key work-related variables at the end of the experiment. Employees who participated in the high-level-facilitated mentoring program reported greater levels of job satisfaction, organizational commitment and manager performance ratings than the low-level-facilitation group, and both mentoring groups were higher than their non-mentored counterparts on the measures of job satisfaction, organizational commitment, person-organization fit and manager performance ratings.

These findings are consistent with previous correlational research demonstrating positive outcomes of mentoring on satisfaction and organizational commitment (Chao et al., 1992; Dreher & Ash, 1990; Fagenson, 1989) and for the first time demonstrated the significant difference in performance ratings for formal mentoring participants and those without formal mentoring. Our results advance the study of formal mentoring programs because it does not share threats to internal validity suffered by the majority of the mentoring studies, which used non-experimental and non-randomized designs. Results from the current study support the conclusion that the positive effects of mentoring on protégés' job satisfaction, organizational commitment, person-organization fit and performance, is likely a characteristic outcome of formal mentoring, and not the result of an implicit selection process on the part of the mentors or protégés.

Additionally, support was provided for the notion that formal mentoring designs that engage mentoring program participants beyond the initial pairing and mentor–protégé introductions enhance desired program outcomes. Few empirical studies examining the effectiveness of different formal mentoring designs have been reported in the mentoring literature. One exception is a recent survey study conducted by Allen et al. (2006), which documented that the input in the mentor–protégé pairing process and receiving training prior to the mentoring relationship had significant relationships with the perceived mentoring effectiveness. The current study, with the adoption of a randomized experimental research design, provides strong evidence to support the casual relationship between one key mentoring design feature, the levels of facilitation and mentoring outcomes.

4.1. Practical implications

Results of the study indicate that formal mentoring may bring significant benefits to participants: protégés of the mentoring program cannot only benefit psychologically, including increased job satisfaction, higher

commitment to their organization and perceived better fit with their organization, but also demonstrate higher job performance immediately after the program. A more satisfied, committed and higher performing employee on the job is highly likely to impact organizational level performance. Thus, organizations may benefit from formal mentoring programs.

Study findings support greater use of ongoing facilitation during the mentoring process. The formal mentoring relationship is not developed naturally; instead it is a facilitated process. The relationship is initiated through certain matching procedures with the involvement of organizational representatives. The structure of the relationship is also defined and developed by facilitators. Since the relationship is not initiated naturalistically, some participates may be less motivated to engage. Furthermore, some participants may lack appropriate communication skills to engaging in effective mentoring process (Wanberg et al., 2003). These potential limitations of formal mentoring relationships require organizations to provide measures beyond the initial matching to keep the motivation of participation high and nurture a productive mentor–protégé relationship. Results of the current study suggest that these additional facilitation efforts really pay off. Besides the orientation that both groups attended at the beginning of the mentoring program, the high-level-facilitated group went through additional monthly semi-structured facilitation session and achieved significantly better outcomes than the low-level-facilitated group. The results support the importance of several key features of planned mentoring programs (Kram & Bragar, 1992), including ongoing monitoring, evaluation and support from program coordinator. During the one-hour facilitated session, coordinators can communicate and reinforce program expectations, goals and guidelines to participants. As a result, participants may be more committed to and align better with formal mentoring program goals. During facilitated sessions, program facilitators can observe interactions of mentor–protégé pairs and give specific feedback and consultation to enhance protégé developmental relationships. The facilitator thus becomes a supportive ally for mentor–protégé pairs. In a cost-cutting business environment, HRD staff is under the pressure to launch mentoring programs quickly and minimize investment and time in activities (Kram & Bragar, 1992). Results of the current study suggest that a fast-paced minimalist approach to formal mentoring may not be most effective. Programs with ongoing facilitation can be significantly more effective while requiring a relatively small additional investment of time and effort. Additional research is encouraged that examines the roles of ongoing facilitation by coordinators in improving mentoring effectiveness.

However, the study does not downplay the role of program orientation or the training prior to the mentoring programs. The low-level-facilitated group in the current study, who only attended the orientation meeting at the start of the mentoring process, still achieved significantly better outcomes on average than the control group. A well designed orientation session can help participants understand the objectives of the program and guidelines in building constructive mentoring relationship. Those who already have the necessary self-awareness and interpersonal competencies may be likely to establish beneficial relationships without further facilitation. Kram and Bragar (1992) also suggest, those who lack interpersonal skills may feel uncomfortable without further facilitation and benefit less, or even withdraw from the program. It would be informative to practice if future studies can demonstrate how different levels of facilitation can benefit different groups/types of individuals.

4.2. Limitations and future research directions

Despite the strengths of the research design and compelling findings, the current study still has its limitations. One limitation is that there were only two concurrent formal mentoring programs examined. It is possible that certain idiosyncrasies of the programs, the company, the industry, or even the specific research period might amplify the difference among experimental groups. Nevertheless, mentoring programs examined in the current study followed widely accepted guidelines and the company hosted mentoring programs was a well established large organization. It is likely the results can be generalized to most other well implemented formal mentoring programs. It is imperative for future studies to replicate these results with programs in different companies. By studying programs across companies, boundary conditions, such as the level of organizational support, can be examined (Ellinger, Elmadag, & Ellinger, 2007).

Besides the level of facilitation, other formal mentoring program features, such as methods of pairing mentors and protégés, are relevant to formal mentoring program effectiveness. In the current study, we randomly

paired mentors and protégés in both experimental groups to preserve the randomization protocol. This was different from most other formal mentoring programs, in which mentors and protégés are matched based on certain criteria, such as personality, needs or participant input. Existing studies documented that participant input into the match process was positively correlated with the perceived mentoring effectiveness (Allen et al., 2006; Klauss, 1981; Viator, 1999). Since in the current study participants in two mentoring groups did not provide any input in the matching process, the observed positive effects for mentoring groups compared with the control group likely represents a lower bound of the estimation of mentoring effects.

The focus of the current study was the use of experimental design to demonstrate evidence of formal mentoring effectiveness. Given the compelling positive outcomes revealed in the study, it is natural to ask what mechanisms account for these effects. Kram (1985) outlines two types of mentor functions that can lead to positive outcomes for protégés. The first is the career-enhancing functions including career sponsorship, coaching, exposure and visibility, protection and challenging work assignments. The second type of function is psychosocial functions including acceptance and confirmation, counseling, role modeling and friendship. Allen et al. (2004), using meta-analysis, demonstrated that both career and psychosocial mentoring functions are positively related to subjective organizational outcomes such as job satisfaction and organizational commitment, while career functions are also significantly associated with objective career outcomes of compensation levels and number of promotions. The above findings on mentoring functions suggest that career and psychosocial functions may explain mentoring intervention effectiveness.

Promising next steps toward explaining the dynamics underlying formal mentoring relationships, beyond the mentor-centered explanations associated with mentoring functions, is an examination of protégé development and related outcomes that may be induced by the mentoring program. First, motivational frameworks such as self-efficacy (Bandura, 1977) and goal setting (Locke & Latham, 1990) can be used to explain protégé outcomes. As a result of a positive mentoring experience, protégés may have an increased sense of individual competence and a more positive outlook regarding career advancement. This confidence associated with anticipated job and career success may link to more positive work-related attitudes and motivate protégés to work harder and achieve better objective outcomes such as higher performance rating and salary. It is generally supported that mentors help protégés to set more challenging and specific goals through mentor behaviors such as coaching, challenging work assignments, role modeling and feedback (Kram, 1985). Enhanced work and career goals are likely to lead protégés toward better career outcomes. Second, mentoring process factors can be used to explain mentoring effectiveness. Eby, Butts, Lockwood, and Simon (2004) also examined negative mentoring experiences through the lens of social exchange theory. They found that a scale of negative mentoring experiences, including dimensions such as mismatch within the dyad and distancing behavior of the mentor can explain mentoring outcomes over and above positive psychosocial and career functions. These positive and negative mentoring processes hold the promise to explain mentoring effectiveness. We encourage future studies to test above assumptions.

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