Mentorship Behaviors and Mentorship Quality Associated With Formal Mentoring Programs: Closing the Gap Between Research and Practice

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Formal mentoring programs continue to gain popularity within organizations despite limited empirical research regarding how these programs should be designed to achieve maximum effectiveness. The present study examined perceived design features of formal mentoring programs and outcomes from both mentor and protégé perspectives. The outcomes examined were career and psychosocial mentoring, role modeling, and mentorship quality. In general, the results indicated that perceived input into the mentoring process and training perceived as high in quality were consistently related to the outcome variables. Implications for the design of formal mentoring programs and future theory development are discussed.

Keywords: formal mentoring, mentoring relationships, mentors, protégés

Formal mentoring programs have become an increasingly popular employee development tool (Catalyst, 1993; Douglas & McCauley, 1999; Eddy, Tannenbaum, Alliger, D'Abate, & Givens, 2003). For over a decade, recommendations concerning the design and implementation of these programs have been offered in both the popular and scholarly press (e.g., Burke & McKeen, 1989; Catalyst, 1993; Forret, Turban, & Dougherty, 1996; Murray, 1991; Phillips-Jones, 1983; Tyler, 1998). Surprisingly, these recommendations have been subjected to little empirical scrutiny.

Two recent reviews of the mentoring literature lament the dearth of research on formal mentoring (Noe, Greenberger, & Wang, 2002; Wanberg, Welsh, & Hezlett, 2003). Research that does exist primarily compares outcomes for protégés in formal mentoring relationships versus those in informal mentoring relationships or versus individuals who have not been a protégé (Chao, Walz, & Gardner, 1992; Fagenson-Eland, Marks, & Amendola, 1997; Ragins & Cotton, 1999; Scandura & Williams, 2001; Seibert, 1999; Viator, 2001). The results of these studies generally indicate that formal mentoring is better than no mentoring but not as effective as informal mentoring. Moreover, only one known study has compared the outcomes associated with formal and informal mentoring for mentors (Allen & Eby, 2003).

Although several studies have investigated the differences in benefits across formal and informal mentorships, less research has focused on formal program characteristics and mentorship outcomes. Two exceptions are Ragins, Cotton, and Miller (2000) and Viator (1999). Ragins and colleagues examined perceived formal mentoring program characteristics, perceived program effectiveness, satisfaction with the mentor, and job attitudes among 104 protégés employed in social work, engineering, and journalism. Of the program characteristics studied, meeting frequency guidelines related to perceived program effectiveness, purpose of the program related to opportunities for promotion satisfaction, and having a mentor from a different department were associated with greater organizational commitment, fewer intentions to quit, and stronger satisfaction with the mentor. Viator (1999) examined the effects of perceived input into the matching process, setting goals and objectives, and meeting guidelines on satisfaction with the mentor among certified public accountants in formal mentoring programs. Results indicated that protégés were more satisfied with their mentor when they had input into the matching process, had regular meetings, and set goals and objectives.

Despite these recent important contributions, several critical gaps in the formal mentoring literature remain. First, no known research has examined the relationship between perceived formal program characteristics and the degree of mentoring provided or relationship quality. This is important because mentoring provided is arguably the most proximal outcome associated with formal programs; programs are developed and instituted with the expectation that mentoring will occur. In addition, previous research suggests that mentoring provided is the likely driver of any change in participant job and career outcomes (e.g., Allen, Eby, Poteet, Lentz, & Lima, 2004). Likewise, the interpersonal relationships literature argues that relational quality represents an important criterion in evaluating relationship success because it relates to

both the amount of effort exerted in and the sustainability of the relationship (Huston & Burgess, 1979; Sprecher, 1992). A second gap in the literature is the omission of the mentor's perspective. Mentors are a key component to any formal mentoring effort (Ragins et al., 2000), and the failure to examine their perceptions provides an incomplete picture of formal programs. Further, by incorporating the mentor's perspective, crossover relationships between mentor and protégé can be examined. Such research is repeatedly called for but has been conducted rarely (e.g., Wanberg et al., 2003).

The present study addresses these two gaps by using reports from both mentors and protégés who have participated in a formal mentoring program to examine the relationship between a variety of perceived program characteristics[1] and both mentoring behavior (career, psychosocial, and role modeling) and mentorship quality. Similar to previous research, we relied on reports of program characteristics provided by program participants. This allowed us to examine both individual effects (e.g., how protégés' perceived formal program experiences relate to their reports of mentoring received; how mentors' perceived formal program experiences relate to their reports of mentoring provided) as well as crossover relationships (e.g., how protégés' formal program experiences relate to mentors' reports of relational quality). We also extended existing research by examining program characteristics such as training that are frequently mentioned as important to the success of formal programs but have yet to be empirically tested. Finally, we examined the role of interaction frequency as a mediator.

Theoretical Background and Hypothesis Development

Mentoring theory (Kram, 1985; Levinson, Darrow, Klein, Levinson, & McKee, 1978) and theoretical extensions of mentoring theory to formal mentoring (Ragins et al., 2000) provide a solid foundation on which to develop hypotheses about how perceived program characteristics relate to mentoring outcomes. Kram's (1985) pioneering work on mentoring relationships suggests that mutual liking, identification, and attraction are key interpersonal processes associated with the development and sustenance of mentoring relationships. Further, the extent that the relationship is able to meet both individuals' developmental needs is a hallmark of mentoring. Mentorships help protégés develop a sense of professional identity and personal competence and can provide mentors with a sense of generativity and purpose (Erickson, 1963; Kram, 1985; Levinson et al., 1978).

These characteristics of spontaneously developed (informal) mentorships create a dilemma for organizations attempting to implement formal mentoring programs. Ragins and colleagues' (Ragins & Cotton, 1999; Ragins et al., 2000) discussion of formal mentoring theory highlights these issues and offers advice to help formal mentoring programs mimic the interpersonal processes underlying informal mentorships. Specific program design features that should facilitate such processes include (a) allowing individuals to feel as if they have input into the matching process, (b) creating a sense that program participation is voluntary, (c) taking steps to increase the opportunity for frequent interaction between mentor and protégé, and (d) careful consideration of rank and departmental differences when making matches so as to increase the potential for learning, sponsorship, and the development of strong emotional ties. In addition, models of individual career management discuss how specific and individualized goals, realistic career expectations, and understanding of one's role within the larger organizational context promote individual growth and development (Greenhaus, Callanan, & Godshalk, 2000). Therefore, offering training for mentors and protégés prior to program participation may make formal mentorships more rewarding by identifying program goals, clarifying role obligations, and establishing mutually agreed-upon relationship expectations.

Consistent with the above theories, we inductively grouped specific program features into three categories. We refer to the first category as *participant-perceived input into the mentoring process*. This refers to the extent that participants believe that they have a choice and voice with regard to their involvement in the mentoring program and includes two specific factors: whether participation in the program is voluntary and the degree that the participants perceived that they had input into the matching process. The second category involves the *dyadic structure of the relationship*. Dyadic structure concerns the configuration or form of the mentor–protégé relationship, specifically the physical proximity of the mentor and protégé, whether partners were selected from the same or different departments, and differences in mentor–protégé rank. The third category involves *formal program training*. Specific variables are whether training was received prior to the onset of the mentorship, the number of hours of training taken, and the perceived quality of training.

Participant-Perceived Input into the Mentoring Process

In informal mentorships, both individuals are voluntary participants who select each other for a relationship. This is often discussed as contributing to the success of these relationships because in such situations mutual liking, identification, and attraction are the catalysts for relationship initiation (Kram, 1985; Ragins & Cotton, 1999). In contrast, in formal programs, mentors and protégés are matched by a third party, often on the basis of job function or some other job-related characteristic. This does little to help ensure interpersonal compatibility or liking between mentoring partners (Ragins & Cotton, 1999). Thus, mentoring theorists advocate that formal programs be designed in a way that best simulates an informal mentoring process (Burke & McKeen, 1989; Ragins et al., 2000). One way that this is accomplished is by giving both mentors and protégés a voice in the mentoring process through voluntary participation and input into the matching process.

The rationale for this is that individuals who believe that their participation was forced may be less motivated and/or may resent their involvement in the program. This may contribute to counterproductive behavior such as neglect of the protégé or protégé resistance to learning from the mentor (Eby & McManus, 2004; Eby, McManus, Simon, & Russell, 2000; Kram & Hall, 1996). Likewise, perceived input into the matching process may lead to a better fit between mentor and protégé because it mimics some of the psychological processes (e.g., liking, identification) discussed as responsible for successful mentorships (Wanberg et al., 2003).

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[1] We use the term *perceived program characteristics* because our data are based on participant self-reports of program characteristics rather than objective data provided by the participating companies.

Empirical support of this idea is reported in Viator (1999), who found that protégé-perceived input into the matching process related to satisfaction with one's mentor.

Hypothesis 1: Protégés in formal programs who indicate their participation was voluntary (1a) and who perceive having more input into the matching process (1b) will report receiving greater career mentoring, psychosocial mentoring, role modeling, and mentorship quality.

Hypothesis 2: Mentors in formal programs who indicate their participation was voluntary (2a) and who perceive having more input into the matching process (2b) will report providing greater career mentoring, psychosocial mentoring, role modeling, and mentorship quality.

Dyadic Structure of the Relationship

Dyadic structure refers to aspects of the relationship that increase the likelihood of meaningful and frequent interactions, a recognized feature of high-quality informal relationships (Kram, 1985). One aspect of dyadic structure is the physical proximity of the mentor and protégé. Proximity facilitates interaction between individuals and is associated with the development of stronger psychological ties (Festinger, Schachter, & Back, 1950). The physical distance between mentors and protégés can be a challenge in formal relationships if the matching process does not take into account the geographic location of potential mentors and protégés. For example, it is not unusual for matched mentors and protégés to be located in different cities (Ensher, Heun, & Blanchard, 2003). In fact, Eby and Lockwood (2005) found that one of the suggestions for program improvements offered by both mentors and protégés in formal programs was careful consideration of geographic proximity when matching mentoring pairs. The difficulty associated with long-distance relationships is also underscored by research on commuter marriages. Specifically, single-residence, dual-career couples are more satisfied with their partner relationships than are commuter, dual-career couples (Bunker, Zubeck, Vanderslice, & Rice, 1992).

Hypothesis 3: Protégés in formal programs who report closer geographic proximity will report receiving greater career mentoring, psychosocial mentoring, role modeling, and mentorship quality.

Hypothesis 4: Mentors in formal programs who report closer geographic proximity will report providing greater career mentoring, psychosocial mentoring, role modeling, and mentorship quality.

Another aspect of dyadic structure is the mentor's organizational position relative to the protégé. This may influence the type and extent of support offered by the mentor as well as the level of emotional closeness that develops. For example, being from different areas in the organization may allow the mentor to provide greater career-related mentoring such as exposure–visibility and sponsorship. It can also bring fresh insights and perspectives to the relationship that may lead to additional coaching and more challenging assignments. Further, it may reduce the likelihood of in-group tension and perceptions of favoritism (Ragins & Scan-

dura, 1999) that can happen when mentors and protégés are from the same department. In the absence of such concerns, it may be easier for mentors and protégés to develop a psychosocial mentoring relationship marked by acceptance and confirmation, counseling, and friendship. It follows that if greater opportunity exists for career and psychosocial mentoring, there should also be the potential for a high-quality relationship. Some indirect support exists for this prediction; Ragins et al. (2000) found that having a mentor from a different department was associated with stronger satisfaction with the mentor.

On the other hand, there are factors that favor mentorships between individuals within the same department. The mentor's knowledge of the department may make it easier for him or her to provide career advice and counseling. Moreover, it may be easier for mentors to build a friendship with a protégé who shares the commonalities that come from being within the same department. Protégés may feel more comfortable with mentors who share the same department background. Finally, matching mentors and protégés from the same department may enhance the opportunities for daily interaction, which can be important for building high-quality mentorships. Given the lack of empirical research on this issue and conflicting plausible rationale, we posed the following research questions:

Research Question 1: Will protégés in formal programs from different departments than their mentoring partner report receiving greater career mentoring, psychosocial mentoring, and mentorship quality?

Research Question 2: Will mentors in formal programs from different departments than their mentoring partner report providing greater career mentoring, psychosocial mentoring, and mentorship quality?

A final dyadic structural feature is the difference in rank. Although Ragins et al. (2000) did not find differences in protégé work and career attitudes, program effectiveness, or satisfaction with the mentor as a function of rank differences, mentoring theory suggests that rank differences may be important in facilitating career mentoring and role modeling. Specifically, more career mentoring such as exposure and visibility, sponsorship, and protection may occur if the mentor has greater status relative to the protégé because the mentor is in a better position to leverage his or her organizational power to benefit the protégé. In addition, higher ranking mentors are likely in a better position to serve as role models for protégés to emulate. Mentors of a higher rank are likely to enjoy greater respect and admiration for their knowledge by virtue of their position within the organization. Kram (1985) discussed the importance of rank differences by noting that "the latter [junior colleague] finds in the senior a particular image of who he can become" (p. 33). Because there is no theoretical reason to expect that differences in rank will relate to the affective outcomes examined in the present study, no effects are proposed for psychosocial mentoring or for mentorship quality.

Hypothesis 5: Protégés in formal programs reporting greater differences in rank will report receiving greater career mentoring and role modeling.

Hypothesis 6: Mentors in formal programs reporting greater differences in rank will report providing greater career mentoring and role modeling.

Formal Program Training

Although training is one of the most common recommendations for formal mentoring programs (e.g., Burke & McKeen, 1989; Catalyst, 1993; Cunningham, 1993; Forret et al., 1996; Gray, 1988; Kram, 1985), research has yet to examine the impact of training on formal mentorships. By helping protégés develop appropriate expectations for the relationship, clarifying the objectives of the program as well as parameters of the relationship (e.g., relationship timeline), and conveying the purpose of the mentoring program (Eby & Lockwood, 2005; Forret et al., 1996), training should enhance the amount of mentoring provided and may improve the quality of the mentorship.

Training has been effectively used in other settings to help in the development of interpersonal relationships. For example, research indicates couples who complete premarital counseling report greater marital satisfaction than couples who do not (Giblin, Sprenkle, & Sheehan, 1985; Markman, Floyd, Stanley, & Storaasli, 1988; Markman, Renick, Floyd, Stanley, & Clements, 1993). These findings are attributed to increased communication and partner self-disclosure. Training is also critical in mentoring programs that match adults and youth (Sipe, 2002), such as Big Brothers and Big Sisters of America (Tierney, Grossman, & Resch, 1995).

Beyond the basic receipt of training, the quantity and perceived quality of the training may be important factors. For example, in a study of premarital counseling, couples who attended two or more sessions viewed the counseling as more valuable than did couples who attended only one session (Williams, Riley, Risch, & Van Dyke, 1999). Training of longer duration should provide the opportunity to cover a greater number of important topics.

Hypothesis 7: Protégés in formal programs who receive training (7a), who report training of greater duration (7b), and who report better training quality (7c) will report receiving greater career mentoring, psychosocial mentoring, role modeling, and greater mentorship quality.

Hypothesis 8: Mentors in formal programs who receive training (8a), who report training of greater duration (8b), and who report better training quality (8c) will report providing greater career mentoring, psychosocial mentoring, role modeling, and greater mentorship quality.

Interaction Frequency as a Mediator

One reason why the program design features we have discussed help facilitate mentoring provided and mentorship quality may be because they relate to the frequency that mentors and protégés interact. In order for mentoring behaviors to occur, interactions between mentors and protégés are necessary. For example, Noe (1988) found that protégés participating in a formal mentoring program who reported more frequent interaction also reported greater relationship quality and psychosocial mentoring. The frequency, diversity, and pattern of interactions are also key components of several theories of close relationships because this creates interdependencies among relational partners (Hinde, 1981; Huston & Burgess, 1979). Although this seems intuitively obvious, both mentors and protégés participating in formal programs report finding enough time to meet is a challenge (Eby & Lockwood, 2005). Developing formal mentoring programs in a way that mentors and protégés are more motivated and can more easily interact with each other may help overcome this problem and subsequently result in greater mentoring and mentorship quality.

Hypothesis 9: Protégé reports of interaction frequency will mediate the relationship between program characteristics experienced by protégés and protégé-reported career mentoring, psychosocial mentoring, role modeling, and mentorship quality.

Hypothesis 10: Mentor reports of interaction frequency will mediate the relationship between program characteristics experienced by mentors and mentor-reported career mentoring, psychosocial mentoring, role modeling, and mentorship quality.

Crossover Effects

Thus far, we have considered how the formal program as experienced by the protégé relates to protégé reports of mentoring and mentorship quality and how the formal program as experienced by the mentor relates to mentor reports of mentoring and mentorship quality. However, on the basis of systems theory (Hanson, 1995), it is also seems important to consider how program characteristics as experienced by the protégé relate to mentor reports of mentoring and mentorship quality and vice versa. Hanson (1995) defined a system as "any two or more parts that are related, such that change in any one part changes all parts" (p. 27). A systems view of mentorships recognizes that mentors and protégés are influenced by each other and suggests that behavior can be best understood within the context it occurred. For example, earlier we proposed that protégé-perceived input into the mentoring process would relate to his or her mentorship outcomes, but it also seems likely that protégé-perceived input into the mentoring process will relate to mentor outcomes. Understanding the protégé's experience in a mentoring relationship can be enhanced by also considering that of the mentor. Such crossover effects are most relevant to two of the three categories of formal program characteristics studied, perceived input into the mentoring process and training, as these two characteristics can differ within mentor–protégé dyads. For example, a protégé could receive training, but his or her mentor may not.

Crossover effects are also relevant in terms of mentoring behavior and mentorship quality. For example, high-quality relationships are marked by relatedness, reciprocity, interdependency, and mutuality (Huston & Burgess, 1979). This suggests that as mentors report a higher quality relationship with protégés, protégés should report a higher quality relationship with mentors. A similar argument can be made for mentoring behavior.

Hypothesis 11: Mentor-perceived input into the mentoring process and training will relate to protégé reports of mentoring and mentorship quality beyond protégé-perceived input into the mentoring process and receipt of training.

Hypothesis 12: Protégé-perceived input into the mentoring process and training will relate to mentor reports of mentoring and mentorship quality beyond mentor-perceived input into the mentoring process and receipt of training.

Hypothesis 13: Mentor and protégé reports of psychosocial mentoring, career mentoring, role modeling, and mentorship quality will be related after controlling for program characteristics.

Method

Participants

Participants came from four different organizations with formal mentoring programs. One of the four companies was very large and housed nine individual programs; hence, there were a total of four organizations, but 12 different formal mentoring programs included. Industries represented were health care, manufacturing, oil, and technology. The overall sample suited the purpose of the study in that there was variation of program characteristics. Altogether there were 175 protégés. Of those responding to the demographic questions, 68 were male and 102 were female. Average age was 34.50 years ($SD = 8.99$). The majority of protégés were Caucasian–White (66.7%), 14.9% were African American–Black, 6.0% were Hispanic, 8.9% were Asian, and 3.6% were of other racial–ethnic backgrounds. Median education level was a 4-year college degree. There were a total of 110 mentors. Of those responding to the demographic data, 70 were male and 37 were female. Average age was 43.42 years ($SD = 7.78$). Most mentors were Caucasian–White (85.2%), 5.6% were African American–Black, 5.6% were Hispanic, 1.9% were Asian, and 1.8% were of other racial–ethnic backgrounds. Median education level was some graduate work.[2] Sample sizes and demographic information on each company is available upon request.

Procedures

Survey questions were generated on the basis of a review of the mentoring literature concerning formal mentoring programs in organizations. The mentor and protégé surveys contained identical questions but worded from the perspective of each. Participants were told that the study was designed to better understand formal mentoring relationships. Both a paper-and-pencil survey and a Web-based version were used. Three of the participating companies chose the paper-and-pencil version. With regard to the Web-based survey, protégés were initially contacted via e-mail by a representative of the organization and provided a URL address that housed the protégé survey. At the end of the survey, protégés inputted the e-mail address of their mentors. An automated e-mail was then delivered to mentors containing their unique survey URL. This process allowed for protégé and mentor responses to be matched. The paper-and-pencil surveys contained unique numerical codes that allowed for survey matching.

On the basis of reports provided by the organizations, we estimated that a total of 681 invitations were sent to protégés. This results in a lower bound response rate estimate of 25.70%. This is a lower bound estimate because company representatives reported that some e-mails were returned and some individuals may not have received surveys because they moved to a new mail location.

Measures

Mentoring behavior. Scandura's 15-item measure of mentoring functions was used to indicate the extent mentoring was provided (Scandura, 1992). Previous research has established psychometric support for the three-factor structure of this measure (Scandura & Ragins, 1993; Scandura & Schriesheim, 1991). Six items measure career mentoring (e.g., "My

mentor placed me in important assignments"; α: protégés = .86, mentors = .71). Five items assess psychosocial mentoring (e.g., "I have socialized with my protégé after work"; α: protégés = .77, mentors = .68), and four items reflect role modeling (e.g., "I try to model my behavior after my mentor"; α: protégés = .84, mentors = .81). Responses were made on a 5-point scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicated more mentoring.

Mentorship quality. The five-item measure developed by Allen and Eby (2003) was used to assess mentorship quality (e.g., "My protégé and I enjoyed a high quality relationship"; α: protégés = .92, mentors = .91). Responses were made on a 5-point scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicated greater quality.

Program characteristics. Participants were asked whether their participation in the program was voluntary (1 = *no*, 2 = *yes*) and how much input they had as to who would be their mentoring partner (or protégé; 1 = *none*, 2 = *very little*, 3 = *moderate amount*, 4 = *a great deal*). Participants indicated whether their mentoring partner was from the same department (1 = *no*, 2 = *yes*). Rank difference between mentor and protégé was measured on a 4-point scale, with lower scores indicating a greater difference in rank. Participants indicated whether their mentoring partner was located in the same office or location (1 = *no*, 2 = *yes*) and whether their mentoring partner was located in the same city (1 = *no*, 2 = *yes*). These two responses were combined to form a proximity variable, with higher scores indicating closer proximity. Three questions were asked concerning training. Specifically, participants reported whether they received training prior to the mentoring relationship (1 = *no*, 2 = *yes*), the number of hours of training received, and a subjective assessment of training quality (1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *very good*, 5 = *excellent*).

We also collected data from representatives of three of the four companies that described their mentoring programs. Space constraints preclude a complete description of the results; however, the data from company representatives regarding program characteristics were largely consistent with participant reports (e.g., participants from companies that reported participation was voluntary self-reported that their participation was voluntary; participants from companies that reported mentors and protégés must come from different departments reported being from different departments). Nevertheless, it is important to acknowledge that participant reports may not be 100% veridical with the way in which a program is actually designed. More information regarding the company data is available upon request.

Interaction frequency. Interaction frequency was operationalized as the average number of hours spent together each month in person-to-person or other forms of communication (e.g., e-mail) as reported by participants.

Potential controls. We collected data from both mentors and protégés concerning their gender, race, education, and age. None of the protégé or mentor demographic variables significantly related to the four dependent variables and thus were not included in subsequent analyses.

Results

Outliers

The Web-based surveys contained nine impossible response values (e.g., 37,623) attributed to user input error that were set to missing values prior to data analysis. The protégé survey contained one response concerning the number of hours spent together that was greater than nine standard deviations above the average. The mentor survey contained one response on the same variable that

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[2] On the basis of the suggestion of an anonymous reviewer, we conducted a *t* test to examine mean differences in mentorship quality as well as mentor behavior across protégés with responding mentors and those without. The *t* tests yielded no significant differences.

was greater than six standard deviations above the average. These two responses were also set to missing prior to data analysis.

Hypothesis Testing

Means, standard deviations, and correlations are presented in Table 1 for protégés and in Table 2 for mentors. To test Hypotheses 1–8 and the two research questions, we conducted multiple regression analyses with mean substitution. Mean substitution was necessary because the training hours and training quality variables were not applicable to those who did not receive training (Cohen & Cohen, 1983). The results concerning protégé reports of program characteristics predicting protégé outcomes are reported in Table 3. Results for mentors are in Table 4. Although we did not hypothesize that every independent variable investigated would relate to every outcome, we included all of the independent variables in the regression analyses to facilitate comparisons across outcomes. Regression analyses conducted by deleting nonhypothesized independent variables produced the same results (available upon request).

Participant input into mentoring process. Hypothesis 1 stated protégés in formal programs who indicated their participation was voluntary (1a) and who perceived having more input into the matching process (1b) would report greater mentoring (career, psychosocial, role modeling) and greater mentorship quality. Hypothesis 1a was not supported, as voluntary participation was not related to any of the dependent variables. Hypothesis 1b was supported in that perceived input into the match was associated with greater mentorship quality ($\beta = .27$, $p < .01$), greater career mentoring ($\beta = .18$, $p < .05$), and greater role modeling ($\beta = .23$, $p < .01$). However, because the zero-order correlation between perceived input into the match and career mentoring ($r = .11$) was not significant, this result should be viewed cautiously, as it is indicative of a suppressor effect (Cohen & Cohen, 1983).

Hypothesis 2 stated mentors in formal programs who indicated that their participation was voluntary (2a) and who perceived having more input into the matching process (2b) would report providing greater mentoring and greater mentorship quality. Only

2 mentors reported that their participation in the program was not voluntary; therefore, that variable could not be considered in any of the analyses involving mentors. Greater perceived input into the match was associated with greater mentorship quality ($\beta = .37$, $p < .001$) and greater career mentoring ($\beta = .24$, $p < .05$).

Dyadic structure. Hypothesis 3 stated that protégés in formal programs who reported closer geographic proximity would report greater career mentoring, psychosocial mentoring, role modeling, and mentorship quality. Hypothesis 3 was not supported, as proximity was not related to any of the protégé dependent variables.

Hypothesis 4 suggested that mentors in formal programs who reported closer geographic proximity would report providing greater career mentoring, psychosocial mentoring, role modeling, and mentorship quality. Hypothesis 4 was not supported, as proximity was not related to any of the mentor dependent variables.

Research Question 1 asked whether protégés in formal programs from different departments than their mentor would report greater career and psychosocial mentoring and greater mentorship quality. We did not expect role modeling to relate to department status. Results indicated that being from the same department was associated with greater mentorship quality ($\beta = .20$, $p < .05$) and greater career mentoring ($\beta = .18$, $p < .05$). However, because the zero-order correlation between department and mentorship quality ($r = .12$) was not significant, this result should be viewed cautiously, as it is indicative of a suppressor effect (Cohen & Cohen, 1983).

Research Question 2 asked whether mentors in formal programs from different departments than their protégé would report greater career and psychosocial mentoring and greater mentorship quality. Results indicated that being in the same department was associated with greater psychosocial mentoring ($\beta = .29$, $p < .01$).

Hypothesis 5 stated that protégés in formal programs reporting greater differences in rank would report greater career mentoring and role modeling. We did not expect psychosocial mentoring or mentorship quality to relate to rank. Counter to prediction, less of a difference in rank for protégés was associated with greater role modeling ($\beta = -.17$, $p < .05$).

Table 1
Means, Standard Deviations, and Intercorrelations for Protégés

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Mentorship quality	—												
2. Career mentoring	.72*	—											
3. Psychosocial	.55*	.53*	—										
4. Role modeling	.72*	.66*	.42*	—									
5. Voluntary participation	.06	−.06	.00	.17*	—								
6. Match input	.24*	.11	.09	.22*	.35*	—							
7. Interaction frequency	.11	.25*	.14	.00	−.35*	−.14	—						
8. Proximity	.04	.17*	.15	−.01	−.33*	−.18*	.30*	—					
9. Same department	.12	.19*	.06	.02	−.42*	−.19*	.37*	.49*	—				
10. Difference in rank	−.03	.03	.07	−.17*	−.14	.12	.10	.17*	.12	—			
11. Receive training	−.02	.04	.10	.00	.12	−.11	−.17*	.01	−.06	−.01	—		
12. Hours of training	.04	.01	.24*	.10	−.05	.07	.07	.15	−.07	−.17		—	
13. Training quality	.27*	.23*	.11	.32*	.38*	.13	−.17	.01	−.18	−.17		.20*	—
M	3.76	3.48	3.12	4.05	1.82	2.30	5.14	2.20	1.36	2.04	1.65	6.36	3.49
SD	0.73	0.81	0.86	0.65	0.39	1.18	8.25	0.82	0.48	0.86	0.48	2.87	0.87

Note. Ns = 97–173. Voluntary participation, same department, and receive training were coded as 1 = *no,* 2 = *yes.*
* $p \leq .05$.

Table 2
Means, Standard Deviations, and Intercorrelations for Mentors

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Mentorship quality	—											
2. Career mentoring	.57*	—										
3. Psychosocial	.33*	.40*	—									
4. Role modeling	.58*	.48*	.24*	—								
5. Match input	.33*	.21*	.19*	.13	—							
6. Interaction frequency	.14	.19*	.36*	.02	.00	—						
7. Proximity	.06	.02	.14	.05	.03	.31*	—					
8. Same department	.13	.06	.28*	.06	.11	.33*	.54*	—				
9. Difference in rank	.14	.02	.01	.24*	.03	.09	.03	.15	—			
10. Receive training	.04	.08	.10	.09	−.08	−.05	−.15	−.02	−.13	—		
11. Hours of training	−.29*	−.24*	.07	−.30*	.21	.15	.30*	.21	−.13		—	
12. Training quality	.06	.09	.29*	.04	.12	−.17	−.13	−.12	.08		.26*	—
M	3.67	3.54	2.96	3.82	1.97	5.15	2.11	1.44	1.96	1.65	5.86	3.35
SD	0.68	0.62	0.74	0.47	1.05	6.67	0.88	0.50	0.90	0.48	2.72	0.83

Note. Ns = 59–109. Same department and receive training were coded as 1 = *no,* 2 = *yes.*
* $p \le .05.$

Hypothesis 6 stated that mentors in formal programs reporting greater differences in rank would report greater career mentoring and role modeling. Consistent with our hypothesis, greater differences in rank related positively to mentors' reports of role modeling provided ($\beta = .20, p < .05$).[3]

Formal program training. Hypothesis 7 stated that protégés in formal programs who received training (7a), who reported training of greater duration (7b), and who reported better training quality (7c) would report receiving greater career mentoring, psychosocial mentoring, role modeling, and greater mentorship quality. The results indicated that the receipt of training was not related to any of the dependent variables. The number of training hours related to psychosocial mentoring ($\beta = .17, p < .05$). Training quality positively related to mentorship quality ($\beta = .20, p < .05$), career mentoring ($\beta = .20, p < .05$), and role modeling ($\beta = .18, p < .05$).

Hypothesis 8 stated that mentors in formal programs who received training (8a), who reported training of greater duration (8b),

and who reported better training quality (8c) would report greater career mentoring, psychosocial mentoring, role modeling, and greater mentorship quality. The receipt of training was not related to any of the dependent variables. On the other hand, number of hours of training related to mentorship quality ($\beta = −.36, p < .001$), career mentoring ($\beta = −.30, p < .01$), and role modeling ($\beta = −.32, p < .01$). However, these relationships were in the direction opposite to that expected. That is, fewer training hours were associated with greater mentorship quality, greater career mentoring, and greater role modeling. Finally, greater training quality was associated with greater psychosocial mentoring ($\beta = .30, p < .01$).

Mediation effects. Hypothesis 9 stated that protégé reports of interaction frequency would mediate the relationship between program characteristics experienced by protégés and protégé-reported career mentoring, psychosocial mentoring, role modeling, and mentorship quality. We followed the procedures described by Baron and Kenny (1986) for establishing mediation. The only relationship that met all conditions was the relationship between department and career mentoring. The results indicated support for mediation. Specifically, the beta weight associated with department ($\beta = .09, p = .28$) was no longer significant in the regression equation after interaction frequency ($\beta = .22, p < .01$) was entered into the equation, thus satisfying the criteria for mediation.

Hypothesis 10 stated that mentor reports of interaction frequency would mediate the relationship between program characteristics experienced by mentors and mentor-reported career mentoring, psychosocial mentoring, role modeling, and mentorship quality. We followed the same procedures described for testing Hypothesis 9. Only the relationship between department and psychosocial mentoring met all of the necessary criteria to test for mediation. Supporting a mediation effect, the regression analysis

Table 3
Regression Results for Formal Mentoring Program Characteristics Predicting Mentoring Received and Mentorship Quality for Protégés

Predictor variable	Quality	Career	Psychosocial	Role modeling
Voluntary participation	−.02	−.08	.01	.08
Match input	.27**	.18*	.12	.23**
Proximity	.00	.09	.11	.02
Same department	.20*	.18*	.05	.14
Difference in rank	−.06	−.02	.06	−.17*
Receive training	.02	.08	.12	.02
Hours of training	.01	.02	.17*	.04
Training quality	.20*	.20*	.05	.18*
$F(8, 166)$	3.01**	2.48*	1.77	3.34**
R^2 total	.13	.11	.08	.14
Adjusted R^2	.09	.06	.03	.10

Note. $N = 174.$
* $p \le .05.$ ** $p < .01.$

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[3] On the basis of the suggestion of an anonymous reviewer, we examined whether rank difference had a curvilinear effect on the dependent variables. No curvilinear effects were detected for protégés or for mentors. The data were also examined for interactions between rank and department and yielded little support for interactive effects.

Table 4

Regression Results for Formal Mentoring Program Characteristics Predicting Mentoring Provided and Mentorship Quality for Mentors

Predictor variable	Quality	Career	Psychosocial	Role modeling
Match input	.37***	.24*	.16	.17
Proximity	.11	.09	.06	.14
Same department	.09	.05	.29**	.01
Difference in rank	.08	−.02	−.06	.20*
Receive training	.10	.10	.12	.15
Hours of training	−.36***	−.30**	−.11	−.32**
Training quality	.13	.14	.30**	.11
$F(7, 102)$	4.75***	2.16*	3.54**	3.07**
R^2 total	.25	.13	.20	.17
Adjusted R^2	.19	.07	.14	.12

Note. $N = 109$.
* $p \le .05$. ** $p < .01$. *** $p < .001$.

indicated that the beta weight associated with department ($\beta = .19$, $p = .05$) was no longer significant in the regression equation after interaction frequency ($\beta = .30$, $p < .001$) was entered.

Crossover effects. Hierarchical multiple regression was used to test the crossover effects predicted by Hypotheses 11–13. These analyses were conducted with our matched set of mentors and protégés ($n = 91$). We first examined relationships between mentor and protégé responses regarding variables for which we would expect consistent reports. The results were as follows. The results indicated that mentorship quality ($r = .29$, $p < .05$), career mentoring ($r = .24$, $p < .05$), psychosocial mentoring ($r = .39$, $p < .05$), role modeling ($r = .28$, $p < .05$), and proximity ($r = .95$, $p < .05$) were all significantly related. Paired t tests indicated no significant difference between protégé ($M = 6.09$, $SD = 10.05$) and mentor ($M = 6.23$, $SD = 9.37$) reports of interaction frequency, $t(84) = −0.13$, $p = .896$, or between protégé ($M = 1.98$, $SD = 0.85$) and mentor ($M = 1.98$, $SD = 0.93$) reports of differences in the rank level between mentor and protégé, $t(85) = 0.00$, $p = 1.00$. Kappa was used to assess agreement regarding reports of being from the same department. Level of agreement was .67, which is generally considered good agreement (Altman, 1991).

Hypothesis 11 stated mentor-perceived input into the mentoring process and mentor reports of training would relate to protégé reports of mentoring and mentorship quality beyond protégé-perceived input into the mentoring process and receipt of training. Protégé variables were entered in Step 1 of the equation. Mentor variables were entered at Step 2. Note that the variable labeled *mentor matching variable* refers to the mentor counterpart to the protégé dependent variable. For instance, in the regression equation predicting protégé quality, the mentor matching variable is the mentor's report of mentorship quality. Results are shown in Table 5.

The mentor variables added a significant increment in variance toward the prediction of protégé-reported mentorship quality above and beyond the protégé-reported program characteristics ($\Delta R^2 = .08$, $p < .05$). Additionally, the beta weight associated with mentor-perceived input into the match was significant ($\beta = .25$, $p < .05$), indicating that protégés with mentors who perceived

they had greater input into the match reported greater mentorship quality than did protégés with mentors who perceived less input into the match. Although the mentor variables added 6% additional variance toward the prediction of protégé-reported career mentoring, this increment was not significant. The mentor variables added a significant amount of variance toward the prediction of protégé reports of psychosocial mentoring provided beyond the protégé-reported variables ($\Delta R^2 = .14$, $p < .01$). The mentor variables also contributed a unique amount of variance associated with protégé-reported role modeling above and beyond the protégé-reported program characteristics ($\Delta R^2 = .10$, $p < .05$). Additionally, the beta weight associated with mentor-perceived input into the match was significant ($\beta = .25$, $p < .05$), indicating that protégés with mentors who believed they had greater input into the match reported greater role modeling than did protégés with mentors who perceived less input into the match.

Hypothesis 12 stated protégé-perceived input into the mentoring process and receipt of training would relate to mentor reports of mentoring and mentorship quality beyond mentor-perceived input into the mentoring process and receipt of training. Mentor variables were entered in Step 1 and protégé variables were entered at Step 2 (see Table 6).

The protégé variables added a significant amount of variance toward the explanation of the mentor reports of mentorship quality beyond the mentor-reported variables ($\Delta R^2 = .13$, $p < .05$). Additionally, the beta weight associated with protégé-perceived input into the match was significant ($\beta = .31$, $p < .01$), indicating that mentors with protégés who perceived that they had greater input into the match reported greater mentorship quality than did mentors with protégés who perceived that they had less input into the match. Although the protégé variables added 5% additional variance toward the prediction of mentor-reported career mentoring, this increment was not statistically significant. The protégé variables added a significant increment in variance toward the prediction of mentor-reported psychosocial mentoring above and beyond the mentor-reported program characteristics ($\Delta R^2 = .16$, $p < .01$). The protégé variables added a significant increment in variance toward the prediction of mentor-reported role modeling above and beyond the mentor-reported program characteristics

Table 5

Matched Data Regression for Protégé Outcomes

Predictor variable	Quality	Career	Psychosocial	Role modeling
Step 1: Protégé				
Voluntary participation	−.14	−.26*	−.13	.09
Match input	.14	.13	.14	.02
Receive training	−.07	−.05	.03	−.15
ΔR^2	.07*	.08	.04	.07
Step 2: Mentor				
Match input	.25*	.06	.02	.25*
Receive training	.05	.09	.01	.09
Mentor matching variable	.15	.21	.38***	.21
ΔR^2	.08*	.06	.14**	.10*
$F(6, 83)$	3.16**	2.12	3.07**	2.89*
R^2 total	.19	.13	.18	.17
Adjusted R^2	.13	.07	.12	.11

Note. $N = 91$. All beta weights are from the final equation.
* $p \le .05$. ** $p < .01$. *** $p < .001$.

Table 6
Matched Data Regression for Mentor Outcomes

Predictor variable	Quality	Career	Psychosocial	Role modeling
Step 1: Mentor				
Match input	.14	.21	.18	−.04
Receive training	.09	−.03	.01	.00
ΔR^2	.10*	.06	.04	.02
Step 2: Protégé				
Voluntary participation	−.04	.05	.04	.07
Match input	.31**	−.02	−.07	.31**
Receive training	−.12	−.05	.13	.02
Protégé matching variable	.14	.22	.37***	.21
ΔR^2	.13*	.05	.16**	.15**
$F(6, 83)$	4.04**	1.56	3.47**	2.97*
R^2 total	.23	.10	.20	.18
Adjusted R^2	.17	.04	.14	.12

Note. $N = 91$. All beta weights are from the final equation.
* $p \leq .05$. ** $p < .01$. *** $p < .001$.

($\Delta R^2 = .15$, $p < .01$). Additionally, the beta weight associated with protégé-perceived input into the match was significant ($\beta = .31$, $p < .01$), indicating that mentors with protégés who perceived that they had greater input into the match reported greater role modeling than did mentors with protégés who perceived that they had less input into the match.

Hypothesis 13 suggested that mentor and protégé reports of psychosocial mentoring, career mentoring, role modeling, and mentorship quality would be related after controlling for program characteristics. In support of Hypothesis 13, mentor reports of psychosocial mentoring related to protégé reports of psychosocial mentoring provided ($\beta = .38$, $p < .001$; see Table 5).

Discussion

The present study examined the relationship between participant-reported formal mentoring program characteristics and mentoring relationship outcomes from the perspective of both the mentor and the protégé. The results reveal several specific program characteristics that are important correlates of mentoring behavior and mentorship quality.

In terms of participant input into the mentoring process, our results indicate that whether the protégé reports he or she is a voluntary participant makes little difference in the mentoring outcomes studied (recall that we were unable to test this variable for mentors). In contrast, perceived input into the matching process appears to be critical for both mentors and protégés. These findings are consistent with those of Viator (1999), who found that protégés who reported more input into the match were more satisfied with their mentors than were protégés who reported less input into the match. Moreover, consistent with systems theory, our findings reveal crossover effects for perceived input into the match, such that protégés with mentors who reported greater input also reported greater mentorship quality and role modeling than did protégés with mentors who perceived less input. Likewise, mentors with protégés who perceived greater input into the match also reported greater mentorship quality and role modeling than did mentors with protégés who perceived less input. By perceiving that they have a voice in the matching process, mentors and protégés

may start to invest in the relationship prior to its official beginning. Accordingly, both parties are likely to feel greater motivation to maximize the relationship. This greater investment may explain why perceived input into the matching process appears to be a key component of effective formal mentoring practice.

With respect to the dyadic structure of the mentorship, there is little consistent evidence supporting the importance of these variables. After controlling for all program characteristics, proximity does not relate to any of the protégé or mentor dependent variables. This tentatively suggests that organizations should not be overly concerned with matching mentors and protégés from different geographic locales. However, as would be expected, proximity and interaction frequency are moderately correlated (protégés: $r = .30$; mentors: $r = .31$), indicating that mentor–protégé pairs closer to each other do interact more frequently. Perhaps mentors and protégés who are not geographically close recognize the potential difficulty of such a relationship and work hard to make their time together more meaningful. Qualitative research focusing on long-distance mentoring dyads may be useful for understanding the factors that contribute to the effectiveness of these relationships.

Contrary to Ragins et al. (2000), we found little evidence supporting the efficacy of pairing mentors and protégés from different departments. In fact, protégés reported receiving greater career mentoring from mentors within the same department, and mentors reported providing more psychosocial mentoring to protégés from the same department. It is important to note that these relationships were mediated by interaction frequency. Thus, matching mentors and protégés from the same department appears to have the benefit of enhanced opportunity for interaction, which in turn relates to greater mentoring provided. This was found despite the fact that our measure of interaction frequency included both face-to-face communication as well as other forms of communication such as e-mail. In future research, it may be helpful to examine climate within the department to determine whether it plays a role in the extent that same versus different department mentorships are most beneficial. For example, in departments with a supportive climate for mentoring (e.g., strong encouragement of mentoring, mentoring role models), mentors might be more comfortable providing psychosocial mentoring to protégés than in climates that are less supportive.[4]

We did not find a relationship between differences in rank and career mentoring. This is surprising, as we thought that mentors at a higher rank relative to their protégés would be in a better position to provide career mentoring. Differences in rank do relate to role modeling; however, the nature of the relationship varies depending on whether reports are from the protégé or from the mentor. Protégés are more likely to role model individuals closer to their own rank, whereas mentors reported more role modeling occurs when they are at a rank higher than their protégés. Closer examination of the role modeling function helps explain this contradiction. For protégés, the process of role modeling requires identification with the mentor (Kram, 1985). Such identification is facilitated when two individuals share things in common (Ragins, 1997), which is more likely with fewer differences in rank. Additionally, protégés may be more likely to role model mentors who are in the next position to which they most immediately aspire. The

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[4] We thank an anonymous reviewer for this suggestion.

role modeling process is different for mentors because, as the object of emulation, identification is not necessary for mentors to be an effective role model. In fact, mentors may believe that they can provide greater role modeling if they have more expertise, organizational experience, and authority than the protégé (Kram, 1985).

Our final category of program characteristics involves training. The results regarding training are mixed. The receipt of training was not associated with protégé or with mentor reports of mentorship quality or mentoring behavior. On the other hand, training quality is associated with protégé reports of mentorship quality, career mentoring, and role modeling. In addition, hours spent in training positively relates to psychosocial mentoring. Thus, the mere receipt of training may not be enough to have a positive impact on mentoring behavior and mentorship quality; the training also needs to be perceived as high quality.

What is most surprising is that mentor receipt of training is not related to mentor reports of mentoring behavior or mentorship quality. This is in contrast to the suggestion of mentoring experts such as Gray (1988), who contended that although training for both parties should be important, lack of mentor training is a primary reason that formal mentoring programs fail. Moreover, more hours of mentor training is negatively associated with mentor-reported relationship quality, career mentoring, and role modeling. Individuals in the position to assume the role of the mentor are often pressed for time. Perhaps greater investment in the mentoring process through more training hours left mentors resentful regarding the intrusion into their time. However, it should be noted that the average number of hours spent in training by mentors was relatively small ($M = 5.86$). Another potential explanation is that a greater time investment unduly raised mentor expectations regarding the program.

One final finding regarding training is that mentors who reported the training was of high quality were also more likely to report providing psychosocial mentoring. Although it is speculative, perhaps higher quality training includes more breadth of topics and focuses on not just the career-related roles that mentors might fulfill for protégés but also provides guidance on how to develop a close interpersonal relationship with protégés. Clearly, a more in-depth examination of what constitutes high-quality training and what it is that both mentors and protégés learn during the training process represents an important next step for research.

Another interesting finding is that psychosocial mentoring as reported by 1 mentoring partner related to psychosocial mentoring reported by the other mentoring partner. The social psychology literature on close relationships sheds some light on this finding. As relational partners grow closer, they tend to relate to one another as a couple and develop a sense of mutual interdependency (Huston & Burgess, 1979). As such, one would expect that reports of psychosocial mentoring from each mentoring partner would be consistent. On the other hand, career mentoring, role modeling, and mentorship quality reported by 1 partner did not relate to the reports provided by the other partner after controlling for perceived input into the mentoring process and receipt of training. This may be because career mentoring and role modeling are not marked by emotional closeness. As such, there may be more room for individual interpretation of relational events. Additionally, mentors and protégés may use different criteria in assessing mentorship quality. As recipients of support, protégés may gauge

quality in terms of the ability of the relationship to enhance their own sense of personal and professional competence (Kram, 1985). In contrast, formal mentors might be more likely to reflect on the extent that they learned from the relationship and enjoyed interacting with the protégé (Eby & Lockwood, 2005).

Implications for Research, Theory, and Practice

Our findings provide an important point of departure for future research and theory building on formal and informal mentoring relationships. Of particular relevance for theory building is the finding that not all perceived program characteristics relate to the mentoring outcomes studied. Some characteristics (i.e., voluntary participation, proximity, receipt of training) were not related to any of the outcomes, whereas other features related to some but not all (e.g., protégé input into the match, mentor input into the match, protégé reports of training quality). This provides a first step in refining formal mentoring theory. Given our pattern of findings, we tentatively suggest that formal mentoring theory focus more on the role of creating voice and high-quality role preparatory activities and de-emphasize perceived choice and geographic proximity factors. These findings also help scholars identify psychological and cognitive processes linking specific perceived design features to outcomes. For example, input into the match may foster a sense of commitment to the mentorship or influence how attractive mentors find protégés and vice versa. Recent research has identified interpersonal comfort as playing a mediating role in the mentorship process (Allen, Day, & Lentz, 2005). It may be that input into the match sets the stage for the mutual identification, interpersonal comfort, and liking between mentoring partners that is critical to the development of mentorships (Kram, 1985). Other processes, such as met expectations or role clarity, may help explain the obtained training effects. The importance of further examining the processes that link perceived design features with mentoring outcomes is underscored by our weak findings for interaction frequency as a mediator variable.

Formal mentoring theory is also informed by our pattern of effects across different outcomes and across mentor and protégé perspectives. This suggests that additional conceptual and theoretical work is needed that takes a more fine-grained perspective on how and why certain perceived program features are likely to influence proximal mentoring outcomes. It also suggests that careful examination is needed of the unique roles that mentors and protégés play in a mentoring relationship in order to understand the different pattern of effects across mentors and protégés. Now that the relationship between various program features and mentoring outcomes has been initially identified, researchers are in a better position to examine additional crossover effects and relationship dynamics between mentors and protégés. Given the dearth of literature examining formal mentor–protégé pairs, this represents a high-priority area for future research.

Although our results require replication prior to providing firm recommendations for formal mentoring programs, the results have potential practical implications. For example, it appears that one of the most important considerations for organizations developing formal mentoring programs is to ensure that mentors and protégés perceive that they have input into the matching process. We emphasize that our results primarily speak to participant beliefs that they had input into the matching process. It is conceivable that

a program provides opportunities for participant input without the participants perceiving that they had input. Additional research using quasi-experimental designs in which participants can be assigned into different groups (input vs. no input into the match; training vs. no training) is needed to further extend and support the findings from the present study.

Study Limitations

We acknowledge several important limitations to the present study. First, because our data are cross-sectional, we cannot state with certainty that the program characteristics examined are predictors of mentoring behavior or mentorship quality. Although it is not conceivable that mentoring behavior predicts receipt of training prior to the mentorship or that mentorship quality predicts voluntary participation in the mentoring program, reverse causality cannot be ruled out for all relationships. Another limitation is that all but 2 of our mentors reported that they were voluntary program participants; hence, we could not test the impact of this variable. Although we purposely collected data from multiple organizations with multiple programs in place so that we would have variation in program characteristics, our sample cannot be considered representative of all formal mentoring programs or even of the programs studied given the low response rate. The generalizability of our results remains to be tested. We emphasize again that our study is based on participant reports of program characteristics, rather than on actual program characteristics as reported by an administrative member of the organization. For example, our data cannot tell us for certain whether the participants were actually from the same or different departments. Further, the terminology of *department* or *level* might have been interpreted differently across research participants. The small sample of matched mentors and protégés also limited statistical power.

In conclusion, organizations often do not anticipate or understand the challenges associated with formal mentoring programs (Kram, 1985; Murray, 1991; Phillips-Jones, 1983). We hope the results of the present study can be used as a starting point for enabling those involved with formal mentoring practices to better navigate these challenges. Moreover, the results should be useful toward the development of future mentoring research and theory regarding the effectiveness of formal mentoring.

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. T. (2003). Relationship effectiveness for mentors: Factors associated with learning and quality. *Journal of Management, 29,* 469–486.

Allen, T. D., Eby, L. T., Poteet, M. L., Lentz, E., & Lima, L. (2004). Career benefits associated with mentoring for protégés: A meta-analytic review. *Journal of Applied Psychology, 89,* 127–136.

Altman, D. G. (1991). *Practical statistics for medial research.* London: Chapman & Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182.

Bunker, B. B., Zubeck, J. M., Vanderslice, V. J., & Rice, R. W. (1992). Quality of live in dual-career families: Commuting versus single-residence couples. *Journal of Marriage and the Family, 54,* 399–407.

Burke, R. J., & McKeen, C. A. (1989). Developing formal mentoring programs in organizations. *Business Quarterly, 53,* 76–80.

Catalyst. (1993). *Mentoring: A guide to corporate programs and practices.* New York: Author.

Chao, G. T., Walz, P. M., & Gardner, P. D. (1992). Formal and informal mentorships: A comparison on mentoring functions and contrast with nonmentored counterparts. *Personnel Psychology, 45,* 619–636.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences.* Hillsdale, NJ: Erlbaum.

Cunningham, J. B. (1993). Facilitating a mentoring programme. *Leadership & Organizational Development Journal, 14*(4), 15–20.

Douglas, C. A., & McCauley, C. D. (1999). Formal developmental relationships: A survey of organizational practices. *Human Resource Development Quarterly, 10,* 203–224.

Eby, L. T., & Lockwood, A. (2005). Protégés and mentors' reactions to participating in formal mentoring programs: A qualitative investigation. *Journal of Vocational Behavior, 67,* 441–458.

Eby, L. T., & McManus, S. (2004). The protégé's role in negative mentoring experiences. *Journal of Vocational Behavior, 65,* 255–275.

Eby, L. T., McManus, S., Simon, S. A., & Russell, J. E. A. (2000). An examination of negative mentoring experiences from the protégé's perspective. *Journal of Vocational Behavior, 57,* 1–21.

Eddy, E., Tannenbaum, S., Alliger, G., D'Abate, C., & Givens, S. (2003, April). Mentoring in industry: The top 10 issues when building and supporting a mentoring program. In S. Tannenbaum (Chair), *Ensuring employee development on the job.* Symposium conducted at the 18th Annual Society for Industrial and Organizational Psychology Conference, Orlando, FL.

Ensher, E. A., Heun, C., & Blanchard, A. (2003). Online mentoring and computer-mediated communication: New directions in research. *Journal of Vocational Behavior, 63,* 264–288.

Erickson, E. H. (1963). *Childhood and society.* New York: Norton.

Fagenson-Eland, E. A., Marks, M. A., & Amendola, K. L. (1997). Perceptions of mentoring relationships. *Journal of Vocational Behavior, 51,* 29–42.

Festinger, L., Schachter, S., & Back, K. (1950). *Social pressures in informal groups: A study of human factors in housing.* Oxford, England: Harper.

Forret, M. L., Turban, D. B., & Dougherty, T. W. (1996). Issues facing organizations when implementing formal mentoring programmes. *Leadership & Organization Development Journal, 17,* 27–30.

Giblin, P., Sprenkle, D. H., & Sheehan, R. (1985). Enrichment outcome research: A meta-analysis of premarital, marital and family interventions. *Journal of Marital and Family Therapy, 11,* 257–271.

Gray, W. A. (1988). Developing a planned mentoring program to facilitate career development. *Career Planning and Adult Development Journal, 4*(2), 9–16.

Greenhaus, J. H., Callanan, G. A., & Godshalk, V. M. (2000). *Career management.* Fort Worth, TX: Dryden Press.

Hanson, B. G. (1995). *General systems theory beginning with wholes.* Washington, DC: Taylor & Francis.

Hinde, R. A. (1981). *Relationships: A dialectical perspective.* East Sussex, United Kingdom: Psychology Press.

Huston, T. L., & Burgess, R. L. (1979). Social exchange in developing relationships: An overview. In T. L. Huston & R. L. Burgess (Eds.), *Social exchanges in developing relationships* (pp. 3–28). New York: Academic Press.

Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life.* Glenview, IL: Scott Foresman.

Kram, K. E., & Hall, D. T. (1996). Mentoring in a context of diversity and turbulence. In E. E. Kossek & S. Lobel (Eds.), *Managing diversity:*

Human resource strategies for transforming the workplace (pp. 108–136). Cambridge, MA: Blackwell.

Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). *Seasons of a man's life.* New York: Knopf.

Markman, H. J., Floyd, F. J., Stanley, S. M., & Storaasli, R. D. (1988). Prevention of marital distress: A longitudinal investigation. *Journal of Consulting and Clinical Psychology, 56,* 210–217.

Markman, H. J., Renick, M. J., Floyd, F. J., Stanley, S. M., & Clements, M. (1993). Preventing marital distress through communication and conflict management training: A 4- and 5-year follow-up. *Journal of Consulting and Clinical Psychology, 61,* 70–77.

Murray, M. (1991). *Beyond the myths and magic of mentoring.* San Francisco: Jossey-Bass.

Noe, R. A. (1988). An investigation of the determinants of successful assigned mentoring relationships. *Personnel Psychology, 41,* 457–479.

Noe, R. A., Greenberger, D. B., & Wang, S. (2002). Mentoring: What we know and where we might go from here. In G. R. Ferris & J. J. Martocchio (Eds.), *Research in personnel and human resources management* (Vol. 21, pp. 129–173). Oxford, England: Elsevier.

Phillips-Jones, L. (1983). Establishing a formalized mentoring program. *Training and Development Journal, 37,* 38–42.

Ragins, B. R. (1997). Diversified mentoring relationships in organizations: A power perspective. *Academy of Management Review, 22,* 482–521.

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.

Ragins, B. R., Cotton, J. L., & Miller, J. S. (2000). Marginal mentoring: The effects of type of mentor, quality of relationship, and program design on work and career attitudes. *Academy of Management Journal, 43,* 1177–1194.

Ragins, B. R., & Scandura, T. A. (1999). Burden or blessing: Expected costs and benefits of being a mentor. *Journal of Organizational Behavior, 20,* 493–509.

Scandura, T. A. (1992). Mentorship and career mobility: An empirical investigation. *Journal of Organizational Behavior, 13,* 169–174.

Scandura, T. A., & Ragins, B. R. (1993). The effects of sex and gender role orientation on mentorship in male-dominated occupations. *Journal of Vocational Behavior, 43,* 251–265.

Scandura, T. A., & Schriesheim, C. A. (1991). Leader–member exchange and supervisory career mentoring as complementary constructs in leadership research. *Academy of Management Journal, 37,* 1588–1602.

Scandura, T. A., & Williams, E. A. (2001). An investigation of the moderating effects of gender on the relationships between mentorship initiation and protégé perceptions of mentoring functions. *Journal of Vocational Behavior, 59,* 342–363.

Seibert, S. (1999). The effectiveness of facilitated mentoring: A longitudinal quasi-experiment. *Journal of Vocational Behavior, 54,* 483–502.

Sipe, C. L. (2002). Mentoring programs for adolescents: A research summary. *Journal of Adolescent Health, 31,* 251–260.

Sprecher, S. (1992). Social exchange perspectives on the dissolution of close relationships. In T. L. Orbuch (Ed.), *Close relationship loss* (pp. 47–66). New York: Academic Press.

Tierney, J. P., Grossman, J. B., & Resch, N. L. (1995). *Making a difference: An impact study of Big Brothers/Big Sisters.* Philadelphia: Public/Private Ventures.

Tyler, K. (1998). Mentoring programs link employees and experienced execs. *HR Magazine, 43,* 98–103.

Viator, R. E. (1999). An analysis of formal mentoring programs and perceived barriers to obtaining a mentor at large public accounting firms. *Accounting Horizons, 13,* 37–53.

Viator, R. E. (2001). The association of formal and informal public accounting mentoring with role stress and related job outcomes. *Accounting, Organizations, and Society, 26,* 73–93.

Wanberg, C. R., Welsh, E. T., & Hezlett, S. A. (2003). Mentoring research: A review and dynamic process model. In G. R. Ferris & J. J. Martocchio (Eds.), *Research in personnel and human resources management* (Vol. 22, pp. 39–124). Oxford, England: Elsevier.

Williams, L. M., Riley, L. A., Risch, G. S., & Van Dyke, D. T. (1999). An empirical approach to designing marriage preparation programs. *The American Journal of Family Therapy, 27,* 271–283.