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Research in Brief

Effects of Peer Mentoring on Types of Mentor Support, Program Satisfaction and Graduate Student Stress: A Dyadic Perspective

Elisa J. Grant-Vallone Ellen A. Ensher

As students make the transition to graduate school, they are likely to experience many life changes. Some of the factors that have been found to affect their well-being include feelings of insecurity, decreased self esteem, and an increased workload (Bowman, Bowman, & Delucia, 1990). According to past research, students report high levels of stress and anxiety during this transition period (Gerdes & Malinckrodt, 1994).

One specific type of prevention strategy intended to increase social support and coping skills for graduate students is a mentoring program (Bowman, Bowman, & Delucia, 1990; Gustitus, Golden, & Hazier, 1986). In fact, mentoring has been described as an essential part of graduate education (Cusanovich & Gilliland, 1991 cited in Frierson, Hargrove, & Lewis, 1994) and would include assistance with financial aid, job placement, research projects and training, and emotional support (Frierson, et al., 1994).

The diverse types of instrumental and psychosocial support that traditional mentors offer are well-documented (Kram & Isabella, 1985; Noe, 1988). These functions have been found to play a key role in the success of individuals (e.g., Burke, McKenna & McKeen, 1991). In academic settings, mentoring is expected to be related to retention and graduation rates, cross-cultural understanding, and positive perceptions of research expectations for graduate students (Frierson, et al., 1994; Redmond, 1991).

Much research has been devoted to traditional mentoring relationships; however, less is

known about the effectiveness of other types of mentoring relationships (e.g., peer mentoring). Past research has suggested that different types of mentors, such as peers, may be beneficial for protégés in a number of ways. Peer mentors may provide some of the same functions (e.g., information sharing, job related feedback, confirmation, emotional support, personal feedback and friendship) as true mentors (Kram & Isabella, 1985). Since typically there is less difference in age and hierarchical levels, more mutuality of interaction, and relationships of a longer duration (Kram & Isabella, 1985), peer relationships may serve in a supportive capacity related to both career advancement and psychosocial functions. Few studies have examined empirically how formally assigned peer mentors provide support to protégés and their effect on important outcomes.

Furthermore, one of the limitations of much of the dyadic research, including studies on mentoring, is in its over-reliance on a single perspective, frequently the protégés. Reliance on one perspective (e.g., self-reports) can lead to problems such as socially desirable responding and common method variance. Because of this, recent mentoring authors have called for research that incorporates both mentors and protégés perspectives (Allen, Poteet, Russell, & Dobbins, 1997). Consequently, the purpose of this study was to examine the effects of a graduate student peer-mentoring program from the perspectives of both members of the mentoring dyad (e.g., mentors and protégés).

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OVERVIEW OF PROGRAM

The peer mentoring program, one that matched first year students with more advanced students, was developed by a student group to reduce the anxiety experienced by graduate students. The primary roles of the peer mentor were (a) information provider, (b) supporter of students, and (c) role model. Each peer mentoring pair was required to attend an orientation session, a group function at the start of each semester, and to meet individually at least two times during the semester.

METHOD

Sampling

Thirty-five pairs of graduate students participated in a peer-mentoring program within a psychology department at a private graduate school. All students were in the following four disciplines within psychology: Organizational, Social, Developmental and Cognitive. Surveys were distributed during both the fall and spring semester to all peer mentors and protégés. Twenty-nine peer mentors responded to either the fall or spring survey. Of those who reported gender, 21 were female and 7 were male. Twenty-nine protégés responded to either the fall or spring survey (11 were male; 15 female; 3 did not report gender). The majority of protégés and peer mentors were not married and were Caucasian (70% of peer mentors; 75% of protégés).

Data Collection

Surveys were distributed to both the peer mentors and protégés who volunteered to participate in the program. In order to match peer mentors with their protégés, a procedure was used to code surveys with a number to guarantee confidentiality. It was critical to survey both members of the pair in order to get as honest and accurate responses to the survey as possible. Matching students also enabled tests of convergence between peer mentors and protégés.

Instrumentation

Support Functions. Based on the peer mentoring literature (Kram & Isabella, 1985) and social support literature (Wills, 1985), two scales were

developed to measure psychosocial and instrumental support offered by a peer mentor. Psychosocial support included 11 items such as "My peer mentor provides emotional support," and "My peer mentor is someone with whom I like to socialize." Instrumental support included 9 items such as "My peer mentor gives me advice about working with faculty," and "My peer mentor gives me information about facilities on campus." All response categories were on a 5-point scale from 1 (*strongly agree*) to 5 (*strongly disagree*). All questions were re-worded so that each member of the mentoring pair could answer all questions. For example, "My peer mentor provides emotional support" became "I provide emotional support to my peer protégé". Both peer mentor and protégé scales had high internal consistency with alpha levels ranging from .78 to .91.

Perceived Stress. Cohen and Williamson's Perceived Stress Scale (1988) was used to measure perceived stress levels of the first year students during both the fall and spring semesters (14 items, e.g. How often have you been able to control irritations in your life? and How often have you felt you were on top of things?). In a probability sample of the United States this scale was shown to have good psychometric properties (Cohen & Williamson, 1988). To check for corroboration between peer mentors and protégés, mentors were asked the same questions about their peer protégés (e.g., How often has your peer protégé felt he or she was on top of things?). The response categories were on a 5-point scale ranging from *very often* to *never*. The scale of 14 items had high levels of internal consistency and an alpha coefficient of .90 and .89 for the fall and spring for first year students and .92 (for both fall and spring) for peer mentors.

Satisfaction. Similar to past research that has examined mentoring relationships (e.g., Allen & Russell, 1997), satisfaction with the peer mentoring program was measured with an item that was asked to both peer mentors and protégés (e.g., How satisfied are you with peer mentor program in general?). The item was on a 4-point scale ranging from *extremely satisfied* to *extremely dissatisfied*.

DATA ANALYSIS

First, descriptive statistics were examined to better understand contact between mentors and protégés. Second, in order to examine the effects of increased contact on mentoring relationships, a median split was used to divide contact into two groups (high contact vs. low contact). *T* tests were computed to make comparisons between high and low contact groups on types of support offered. Finally, correlation coefficients were computed to examine the relationship between peer mentor support and satisfaction and stress levels. An alpha level of .05 was used for all statistical tests.

RESULTS

Based on descriptive analyses, both mentors and protégés suggested that contact levels were higher during the fall semester than the spring semester. During the fall semester, the majority (75%) of peer mentors and protégés reported meeting, as required, about once a month for about an hour. However, for the spring semester, fewer students reported formal meetings. Approximately 40% of peer mentors reported a formal meeting, while 60% of peer mentors reported meeting.

It was predicted that peer-mentoring pairs in high contact relationships would report higher levels of both instrumental and psychosocial support than pairs in low contact relationships. During the fall semester, peer protégés who reported more contact with their peer guides, reported significantly more psychosocial support ($M = 3.65, t = 5.38, p < .01$) and instrumental support ($M = 3.14, t = 4.37, p < .05$) than peer protégés in low contact relationships (psychosocial support, $M = 2.22$; instrumental support, $M = 2.07$). Peer mentors reported a consistent pattern of results. Peer mentors in high contact relationships reported significantly more psychosocial support ($M = 3.42, t = 3.90, p < .05$) than those in low contact relationships ($M = 2.62$). However, peer mentors did not report higher levels of instrumental support in the high contact group ($M = 2.85, t = 1.93, ns$) than the low contact group ($M = 2.47$).

For the spring semester, peer protégés again

reported that there were significant differences between the high and low contact pairs as those with high contact received greater instrumental support ($M = 2.72, t = 3.77, p < .05$) and psychosocial support ($M = 3.57, t = 3.62, p < .05$) than those in low contact relationships (instrumental $M = 1.78$; psychosocial $M = 2.29$). Peer mentors reported a similar pattern of findings. Those in high contact peer mentoring relationships reported higher levels of instrumental support ($M = 2.65, t = 2.22, p < .05$), and psychosocial support ($M = 3.26, t = 2.22, p < .05$) than peer mentors in low contact relationships (instrumental $M = 2.06$; psychosocial $M = 2.43$).

In addition, it was expected that peer mentors would provide higher levels of psychosocial support than instrumental support. In both the fall and spring semesters, peer protégés reported higher levels of psychosocial than instrumental support ($t = -3.28, p < .01$; $t = -2.67, p < .05$). These findings were replicated with reports from peer mentors. Peer mentors reported that they offered higher levels of psychosocial than instrumental support ($t = -3.22, p < .01$; $t = -3.66, p < .01$).

The effects of mentoring support on satisfaction and stress levels were examined with Pearson correlation coefficients. As predicted, peer protégés and mentors in high contact relationships reported high levels of satisfaction with the program. For peer protégés, there was a significant relationship between psychosocial support and satisfaction with the mentoring program (fall: $r = .84, p < .01$; spring: $r = .73, p < .01$) and instrumental support and satisfaction (fall: $r = .72, p < .01$; spring: $r = .66, p < .01$). Peer mentors who provided higher levels of support were also more satisfied with the program. Reports of psychosocial support were correlated with satisfaction with the mentoring program (fall: $r = .56, p < .01$; spring: $r = .78, p < .01$) as were reports of instrumental support and satisfaction (fall: $r = .38, p < .01$; spring: $r = .60, p < .01$). However, contrary to expectations, higher levels of support were not related to lower levels of stress for protégés. In fact, during the fall semester, increased support was related to higher levels of stress. See Tables 1 and 2 for descriptive statistics and inter-

TABLE 1.
Descriptive Statistics and Intercorrelation Matrix for Peer Mentor Contact, Support,
and Stress During Fall Semester

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
<i>Peer protégés</i>											
1. Contact	2.96	1.17	—								
2. Psychosocial Supp.	3.03	0.97	.83**	—							
3. Instrumental Supp.	2.71	0.85	.74**	.86**	—						
4. Stress	2.79	0.56	.31	.45*	.49**	—					
5. Satisfaction	3.23	0.82	.69**	.84**	.72**	.36	—				
<i>Peer Mentors</i>											
6. Contact	3.13	0.88	.68**	.57**	.43	.05	.35	—			
7. Psychosocial Supp.	3.00	0.66	.56*	.52*	.29	-.01	.33	.75**	—		
8. Instrumental Supp.	2.65	0.53	.33	.31	.23	-.09	.10	.45*	.56**	—	
9. Stress	2.32	0.48	-.15	-.03	.14	.30	.09	-.19	-.35	.16	—
10. Satisfaction	3.29	0.54	.70**	.46*	.42	-.04	.37	.82**	.56**	.38*	-.21

* $p < .05$. ** $p < .01$.

correlation matrix.

DISCUSSION

This study examined the psychosocial and instrumental support that peer mentors provide, the relationships between support and satisfaction with the peer mentoring program, and graduate student stress levels. Strong support was found that peer mentoring provides students with both increased levels of psychosocial and instrumental support, and that those with high levels of support are more satisfied with their peer mentoring relationships. In addition, there was strong evidence that peer mentors provide higher levels of psychosocial than instrumental support. However, the predicted relationships between peer mentoring support and students stress levels

were not supported. Thus, while peer mentoring increases support, that type of support did not seem to reduce stress levels.

This study makes several important contributions to the mentoring literature. First, there is a limited amount of empirical research that examines peer-mentoring relationships. Although there is anecdotal evidence about the effectiveness of such programs, this is one of the first studies to more fully examine the supportive functions of peer mentors. Second, the use of both dyadic members' perspectives adds a dimension to the mentoring literature. The consistent pattern of responses between peer mentors and their protégés is noteworthy and suggests that findings are not due simply to self report bias (e.g., participants responding in a way to make them look more favorable) or common

method variance problems (e.g., increases in relationships due to reliance on one type of measurement tool). Finally, this study was unique in that it explored the effects of peer mentoring on both student satisfaction and stress levels.

The findings from this study are important for the development and refinement of peer mentoring programs. Specifically, it seems that peer mentors provide similar types of support, such as instrumental and psychosocial, as do traditional mentors. However, the finding that peer mentors provided higher levels of psychosocial support is important to note. Traditional mentors might offer more career functions, while peer mentors can focus on emotional and support functions. Thus, program directors can gear peer-mentoring programs to focus on key types of psychosocial support. For example, peer protégés

can be trained to help students cope with personal issues when appropriate (e.g., peer mentors being available to listen), provide social and emotional support, and encourage higher levels of social contact (e.g., inviting a protégé to go for coffee).

Although there was a high level of consistency between peer mentors and protégés regarding the types of support offered, there was less consistency between the actual levels of contact reported (e.g., how often the mentoring pairs formally and informally met). This can alert mentoring program directors about the importance of gaining the perspective of both members of the dyad, and to carefully monitor the actual contact between protégés and mentors. For example, this study suggested that contact was much higher at the start of the program, but declined over the course of the year.

TABLE 2.
Descriptive Statistics and Intercorrelation Matrix for Peer Mentor Contact, Support, and Stress During Spring Semester

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
<i>Peer protégés</i>											
1. Contact	2.17	1.10	—								
2. Psychosocial Supp.	2.70	0.94	.83**	—							
3. Instrumental Supp.	2.15	0.66	.83**	.88**	—						
4. Stress	2.85	0.55	-.13	.01	-.01	—					
5. Satisfaction	2.93	0.80	.53*	.73**	.66**	.22	—				
<i>Peer Mentors</i>											
6. Contact	3.00	1.03	.70*	.63*	.65*	-.69*	.26	—			
7. Psychosocial Supp.	2.74	0.80	.58	.81**	.81**	-.44	.34	.80**	—		
8. Instrumental Supp.	2.28	0.65	.58	.54	.54	-.63	-.04	.71**	.71**	—	
9. Stress	2.47	0.56	.22	-.01	-.01	-.33	-.13	.15	.33	.33	—
10. Satisfaction	2.95	0.50	.67	.77**	.77**	-.39	.29	.78**	.60**	.60**	.14

* $p < .05$. ** $p < .01$.

Contrary to original expectations of the program, increased social support by the peer mentor was not associated with decreased stress levels. In fact, during the fall semester, higher levels of psychosocial and instrumental support were associated with protégés self reported stress levels. Two possible explanations for this finding are as follows: (a) it is likely that students who were feeling more stress asked for more support from the peer mentor, and (b) peer mentors actually may have increased stress levels in the students by providing too much information too quickly. Because this finding is based on correlational results, more work is needed to determine which interpretation is accurate. However, it seems likely that students who were feeling more anxious were more likely to turn to their peer mentor for emotional support. Further studies with larger samples should continue to explore this topic.

In summary, there were important lessons learned for students, administrators, and faculty who are interested in peer mentoring programs. We recommend that peer mentor programs

(a) require a more extensive application procedure and training process for peer mentors to ensure dedication of peer mentors, (b) design a more extensive matching strategy or allow students to choose their own peer mentor to enhance the support provided, (c) provide a peer protégé orientation to clarify expectations, (d) reward peer mentors for their efforts, and (e) organize more formal events to ensure contact.

In conclusion, peer mentoring appears to offer a promising alternative, or perhaps supplement to traditional mentoring programs, particularly within both graduate and academic institutions. It seems likely that different types of mentors can be beneficial to their protégés in a variety of ways.

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