Mentoring: Processes and Perceptions of Sport and Exercise Psychology Graduate Students

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Although it has been suggested that the process of mentoring provides a number of benefits to graduate students (Kelly & Schweitzer, 1999), documentation of these benefits is limited within sport and exercise psychology (SEP). Therefore, the present study surveyed SEP graduate students ($N = 104$) in an attempt to understand their mentoring experiences. Results revealed the presence of both formal and informal professional and peer mentoring. Overall, mentors were perceived positively, but multiple regression analysis showed that mentoring towards professional development was most predictive of positive mentoring evaluations. Peer mentoring was found to exist at a much higher rate than has been found in other disciplines. Participants preferred professional mentoring for areas of research and writing productivity, while peer mentoring contributed to their experience as a graduate student. These results preliminarily support the inclusion of mentoring into SEP graduate school programs.

Enrollment in graduate school can represent a “turning point in a career” (Luna & Cullen, 1998, p. 327). However, enrollment alone does not translate into a successful graduate school experience. According to Hall and Allen (1982), many students who embark upon graduate education encounter difficulties related to financial and emotional concerns and gaining professional experiences, that often result in them leaving their program early. Mentoring has been suggested as a possible solution to combat the aforementioned problems (Hall & Allen; Kelly & Schweitzer, 1999; Luna & Cullen), and has also been shown to increase the likelihood that students will complete their degree requirements and achieve future success (Brown, Davis, & McClendon, 1999).

Supervision, an important component in the development of sport and exercise psychology professionals, should not be confused with the mentoring process. Supervision, according to Andersen, Van Raalte, and Brewer (1994), is a process that allows trainees to improve the quality of services they provide to athletes through practice and feedback with a trained...
professional in the field. Supervision has been recognized by both the Association for Applied Sport Psychology (AASP) and the British Association of Sport and Exercise Sciences (BASES) as an important component in the training of future and current applied sport psychology practitioners (AAASP, 1991; Biddle, Bull, & Seheult, 1992). Mentoring, on the other hand, is academically oriented and focuses on such issues as student productivity (Cronan-Hillix, Gensheimer, Cronan-Hillix, & Davidson, 1986), classroom insights, degree completion, and career establishment (Brown et al., 1999).

Mentoring relationships can be established either formally or informally. Formal mentoring relationships are usually initiated by a department, a faculty member, or an advanced student with new graduate students on the basis of applications submitted by both parties (Douglas, 1997; Gaskill, 1993; Murray, 1991). Conversely, informal mentoring relationships develop naturally, based on mutual identification with people whom the students believe can help fulfill their career needs (Ragins & Cotton, 1999).

Kram (1985) stated that effective mentoring, formal or informal, should provide both professional and psychosocial development opportunities. Professional development is believed to enhance graduate students' abilities to function in professional environments in addition to preparing them for advancement (Johnson, 2002). This type of development is thought to include behaviors such as (a) sponsorship, (b) exposure and visibility, (c) coaching, (d) protection, and (e) challenging assignments (Kram, 1985). The psychosocial functions are intended to enhance students' competence, identity, and professional effectiveness through the provision of (a) role modeling, (b) acceptance and confirmation, (c) counseling, and (d) friendship.

Beyond the aforementioned, mentoring also supplements graduate students' “classroom information with pragmatic experiences that provide students with insights that would otherwise not be gained” (Brown et al., 1999, p. 108). Research has also shown that the recipients of mentoring, often referred to in the literature as “protégés”, report increased student productivity with respect to publications and presentations (Cronan-Hillix, Gensheimer, Cronan-Hillix, & Davidson, 1986). Furthermore, mentors guide protégés with advice about completing program requirements (Luna & Cullen, 1998), which increases the likelihood of these students graduating and pursuing careers in the field (Brown et al.). Ultimately, this process helps familiarize students with graduate education (Luna & Cullen), in addition to improving confidence (Brown et al.) and satisfaction with program experiences (Johnson, 2002). Overall, mentoring can provide tangible benefits to graduate students that can go a long way towards ensuring their professional development, career advancement, and career satisfaction (Fagenson-Egland, Marks, & Amendola, 1997; Kram, 1985).

Given the potential benefits of mentoring, it is surprising that there has been a paucity of research on this process within the field of sport and exercise psychology. This perspective about mentoring research was echoed by Hardy (1994) in his Presidential Address at the 8th Annual AASP Conference, when he questioned “the quality and quantity of mentoring in the field of sport psychology” (p. 197). Hardy further stated that if no advances were made with regard to the status of mentoring, the discipline’s future could be jeopardized. To date, the amount of research investigating mentoring within the field has been limited.

Butki and Andersen (1994) were among the first to address mentoring in sport and exercise psychology. They surveyed a sample of (N = 175) graduate student members of AASP, which represented a 43% return rate, about the mentoring they received with regard to publication and presentation guidelines. The results not only revealed students’ willingness to have more training in these areas, but also a need for more training in areas that are “important for career development and advancement” (p. 147). More recently, Wright and Smith (2000) documented the use of mentoring in sport psychology programs in Singapore starting at the undergraduate level and progressing to the graduate level. However, these mentoring programs
could have been referred to as supervision as they focused on the development of a season-long psychological skills training program (Wright & Smith).

Although mentoring has been relatively unexplored within the field of sport and exercise psychology, this process is well-documented within its parent discipline, psychology. A survey by Clark, Harden, and Johnson (2000) of clinical psychology graduates indicated that 66% of the respondents reported having a faculty mentor during graduate school. Furthermore, 91% positively evaluated their mentor and reported that mentoring significantly improved their satisfaction for doctoral training. In a survey of (N = 800) members of the American Psychological Association, Johnson, Koch, Fallow, and Huwe (2000) found that 60% reported having a faculty mentor while in graduate school. Results also revealed that mentoring helped promote career success and satisfaction. In a survey of graduate psychology students (N = 90), Cronan-Hillix et al. (1986) found that over 50% reported having mentors. Respondents indicated that mentors provided support in addition to promoting increased research productivity. Thus, it appears that graduate students in psychology are being exposed to mentoring and seem to be benefiting from the process.

Although the majority of mentoring in graduate school is assumed to come from faculty members, mentoring can also be provided by other more advanced graduate students. Luna and Cullen (1998) were among the earliest to identify the presence of peer mentoring when they found that 2% of the graduate students indicated they received peer mentoring. Although this figure was small, 80% of the sample indicated they would be willing to mentor other graduate students. This finding provided evidence suggesting that the majority of students supported the concept of peer mentoring. Further references to peer mentoring appear to be limited to programs designed specifically for minorities (Kelly & Schweitzer, 1999; Patton & Harper, 2003).

Kelly and Schweitzer (1999) found that African American graduate students, in comparison to other ethnic groups, were more likely to participate in peer mentoring. The authors suggested that these individuals participated in such programs because they wanted to use their experiences to facilitate a smooth transition for new students. Patton and Harper (2003) also indicated a tendency for female African American students to participate in peer mentoring. This mentoring helps others deal with stress associated with higher education and is also important because female African American faculty are underrepresented (Patton & Harper, 2003).

Based upon this review, it seems that minimal progress has been made with regard to determining “the quality and quantity of mentoring in the field of sport psychology” (Hardy, 1994, p. 197). There appears to be a continued need to inform students and faculty about the nature and importance of mentoring, and to provide a better understanding of current mentoring practices and student perceptions of these practices within sport and exercise psychology. Therefore, the purposes of this project were to better understand the mentoring experiences of graduate students in the field of sport and exercise psychology regarding: (a) the provision of professional and peer mentoring, (b) the type of mentoring they are receiving, (c) opinions about the benefits of mentoring, (d) perceptions of what makes mentoring successful, (e) the current status of mentoring experiences, and (f) comparisons of professional and peer mentoring.

**METHOD**

**Participants**

The sample consisted of 104 participants, 55 males (52.9%) and 49 females (47.1%), who were all graduate students in 21 of the 52 sport and exercise psychology (SEP) programs within the USA. Age ranges varied from less than 22 years to 39 years and above, with the majority of participants reporting their age range as 23–26 years (51.9%). Ethnicity was reported as
Caucasian \((n = 84)\), Asian/Asian American \((n = 8)\), Hispanic/Hispanic American \((n = 4)\), African American \((n = 3)\), and Other \((n = 4)\).

Even though no research was found comparing the mentoring perceptions of individuals from different ethnic backgrounds, ethnicity was reduced to two categories for analyses: Caucasian \((n = 84, 81.6\%)\) and Other \((n = 19, 18.4\%)\). This reduction was done because the limited number of minorities in the sample made it difficult to assess each minority group individually. Furthermore, previous indications suggested that minorities may be more likely to take part in some forms of mentoring (Kelly & Schweitzer, 1999). There is also a belief that ethnicity may have an effect upon how students transition into graduate school and the difficulties that they may face in pursuing academic and professional goals (Patton & Harper, 2003).

Participants were predominantly master’s students \((n = 74, 71.2\%)\) with the remainder being doctoral students \((n = 29, 27.9\%)\), with years in graduate school ranging from less than one to five years \((M = 1.92, SD = 1.47)\). Respondents reported their primary areas of specialization to be Psychology/Counseling \((n = 39, 37.5\%)\), Exercise Science \((n = 28, 26.9\%)\), Physical Education/Kinesiology \((n = 14, 13.5\%)\), Education \((n = 5, 4.8\%)\), and Other \((n = 16, 15.4\%)\) with specialization identified by participant. Of the students who identified their specialization as “Other”, 14 identified this specialization at either sport or exercise psychology, with the remaining two identifying dual degree programs. Areas of specializations were grouped into thematic clusters by the researchers to reflect a general area of study in further analyses. Agreement was observed between all four researchers with regard to the two specializations that emerged: 1) Exercise Science/Physical Education (ES/PE) \((n = 65, 62.5\%)\) and 2) Psychology/Counseling (Psy/Coun) \((n = 39, 37.5\%)\).

A brief evaluation of the demographic characteristics of the respondents indicated that at the time of data collection, this sample was representative of the student membership of AASP. Respondents were 47.1% female and 52.9% male, compared to the AASP student membership, which was 47% female and 53% male (A. Bayer, personal communication, July 11, 2006). Furthermore, 28.8% of the respondents were doctoral students while 71.2% were Masters level students, whereas AASP student members were comprised of 22% doctoral students and 78% Masters students (A. Bayer, personal communication, July 11, 2006). Comparison with regard to ethnicity was not possible, as AASP does not collect this information.

Due to Human Subjects confidentiality constraints, the researchers were not permitted to ask questions about the specific universities the respondents were attending. However, based upon a review of program postings in the Directory of Graduate Programs in Applied Sport Psychology (Sachs, Burke & Smisson, 2004), of the 21 faculty members who agreed to distribute the survey, six taught in programs with an applied focus, ten in programs with a research focus, and five in programs that were listed as having an equal applied and research focus.

**Instrument**

The Graduate Student Mentoring Survey (GSMS) is a 60-item survey that was developed by the authors to assess student mentoring in SEP programs. Major issues assessed via the GSMS were identified from an extensive literature review related to student mentoring in education, psychology, and sociology (Daloz, 1986; Johnson, Koch, Fallow, & Huwe 2000; Willis & Diebold, 1997). These major issues included: (a) the presence of formal and informal mentoring programs, (b) the effect of professional and peer mentoring on professional development, (c) the use of specific mentoring skills, and (d) mentor-mentee match characteristics. Thirty-five items (58%) were modified from existing student mentoring surveys (e.g., Cawyer & Friedrich, 1998; Fox, Waldron, Bohnert, Hishinuma, & Nordquist, 1998; Ragins & Scandura, 1994) to help create the current survey. The GSMS went through seven modifications during
Mentoring was defined in the GSMS as “a relationship between two individuals through which an experienced individual provides guidance and support, and assists a less experienced individual within a specific field.” This definition was further clarified through the first two questions, which identified the qualities found in professional mentoring and clarified the differences between formal and informal mentoring. Based upon this definition of mentoring, the GSMS was divided into five separate sections to facilitate completion. The first section, Professional Mentoring, contained five items that assessed the presence and effectiveness of formal and informal professional mentoring available in the students’ graduate program, as well as a 10-point overall rating of mentors. This section was designed to assess the extent to which students received professional mentoring. In it, formal mentoring was defined as “a relationship initiated by a department advisor, a faculty member, or advanced student. This relationship may be based upon similarities and goals and may include mandatory or set meeting times and hours of contact. This relationship is formalized by both the mentor and mentee.” Informal mentoring was defined as “a relationship initiated by either or both the mentor and protégé based upon an informal identification of similarities. No formal relationship exists between mentor and mentee.”

The second section, Benefits of Mentoring, contained three subsections: (a) professional and peer mentoring benefits, (b) mentoring opinions, and (c) perceived vs. preferred interactions. In the professional and peer mentoring benefits subsection, 12 items assessed participants’ opinions on the level of effect from 1 (small effect) to 4 (large effect) that both professional and peer mentoring had upon different areas of professional development (see Table 1 for list

### Table 1

**Means and Standard Deviations of the Effects of Professional and Peer Mentoring**

<table>
<thead>
<tr>
<th>GSMS Item</th>
<th>Professional</th>
<th></th>
<th>Peer</th>
<th></th>
<th>Paired Sample T-Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>M</strong> † <em>SD</em></td>
<td></td>
<td><strong>M</strong> † <em>SD</em></td>
<td></td>
<td><strong>t</strong> † <em>d</em></td>
<td></td>
</tr>
<tr>
<td>Course Selection</td>
<td>3.20 † .88</td>
<td></td>
<td>2.79 † 1.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Planning</td>
<td>2.89 † .97</td>
<td></td>
<td>2.42 † .93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>3.22 v .98</td>
<td></td>
<td>2.05 v .84</td>
<td></td>
<td>8.48 v 1.05 v</td>
<td>.36 v</td>
</tr>
<tr>
<td>Teaching</td>
<td>2.72 v 1.02</td>
<td></td>
<td>2.20 v 1.03</td>
<td></td>
<td>2.84 v .36 v</td>
<td></td>
</tr>
<tr>
<td>Applied Skills</td>
<td>3.22 † .97</td>
<td></td>
<td>2.78 † .96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>2.41 † .97</td>
<td></td>
<td>1.93 † .95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistantships</td>
<td>2.86 † 1.12</td>
<td></td>
<td>2.19 † .99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Activities</td>
<td>1.87 † 1.04</td>
<td></td>
<td>2.08 † 1.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Involvement</td>
<td>2.36 † 1.10</td>
<td></td>
<td>2.07 † 1.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student/Faculty Interactions</td>
<td>3.02 † .99</td>
<td></td>
<td>3.12 † .92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dealing w/Professional Diff.</td>
<td>2.70 † 1.01</td>
<td></td>
<td>2.57 † 1.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>2.98 v .97</td>
<td></td>
<td>1.83 v .83</td>
<td></td>
<td>7.64 v .95 v</td>
<td></td>
</tr>
</tbody>
</table>

*Scale, 1 (small effect) to 4 (large effect).  
* † p < .001.  
v *based on the paired t-test.  
# Large Effect Size.  
GSMS = Graduate Student Mentoring Survey.
# Table 2

## Adjusted Means, Standard Deviations, and Paired Sample T-Test Results for Current and Preferred Behaviors of Professional Mentors

<table>
<thead>
<tr>
<th>GSMS Item</th>
<th>Current</th>
<th>Preferred</th>
<th>Paired Sample T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M^a$</td>
<td>$SD$</td>
<td>$M^a$</td>
</tr>
<tr>
<td>Prepared for career advancement</td>
<td>3.07</td>
<td>.82</td>
<td>3.65</td>
</tr>
<tr>
<td>Discussed competence concerns</td>
<td>2.89</td>
<td>.90</td>
<td>3.47</td>
</tr>
<tr>
<td>Discussed concerns about peers, supervision, conflicts</td>
<td>2.53</td>
<td>1.04</td>
<td>3.03</td>
</tr>
<tr>
<td>Shared personal experiences</td>
<td>2.80</td>
<td>1.03</td>
<td>3.24</td>
</tr>
<tr>
<td>Discussed competence concerns</td>
<td>2.68</td>
<td>1.13</td>
<td>3.12</td>
</tr>
<tr>
<td>Encouraged me to discuss fears</td>
<td>2.74</td>
<td>.88</td>
<td>3.60</td>
</tr>
<tr>
<td>Helped meet new colleagues</td>
<td>3.20</td>
<td>.92</td>
<td>3.72</td>
</tr>
<tr>
<td>Provided support/feedback regarding performance</td>
<td>3.18</td>
<td>.90</td>
<td>3.66</td>
</tr>
<tr>
<td>Shared ideas with me</td>
<td>3.12</td>
<td>.89</td>
<td>3.68</td>
</tr>
<tr>
<td>Gave performance feedback</td>
<td>3.58</td>
<td>.60</td>
<td>3.79</td>
</tr>
<tr>
<td>Listened well</td>
<td>3.55</td>
<td>.71</td>
<td>3.85</td>
</tr>
<tr>
<td>Conveyed empathy</td>
<td>3.64</td>
<td>.67</td>
<td>3.88</td>
</tr>
<tr>
<td>Conveyed feelings of respect</td>
<td>2.76</td>
<td>1.03</td>
<td>3.74</td>
</tr>
<tr>
<td>Helped to increase contact with others who may judge advancement</td>
<td>3.24</td>
<td>.90</td>
<td>3.73</td>
</tr>
<tr>
<td>Helped develop new skills</td>
<td>2.86</td>
<td>.91</td>
<td>3.51</td>
</tr>
<tr>
<td>Suggested goal strategies</td>
<td>2.93</td>
<td>.91</td>
<td>3.35</td>
</tr>
<tr>
<td>Developed a friendship</td>
<td>3.22</td>
<td>.99</td>
<td>3.58</td>
</tr>
<tr>
<td>Invited to conferences</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a-scale, 1 (not at all) to 4 (often).  
*p < .001.  
*Moderate effect size; # Large Effect Size.  
GSMS = Graduate Student Mentoring Survey.

The subsection related to mentoring opinions, allowed respondents to rate their beliefs about the benefits of mentoring at different levels (i.e., masters vs. doctoral) of student training from 1 (strongly disagree) to 4 (strongly agree) on three items. In the perceived vs. preferred interaction subsection, respondents rated on a four-point scale ranging from 1 (not at all) to 4 (often) the extent to which their advisors used 17 different mentoring skills and the extent to which they would have preferred their advisors to use these skills (see Table 2 for a list of topic areas). This overall section was developed to help the authors better understand student opinions about mentoring and the benefits that they have received from mentoring.

The third section of the survey, *Perceptions of Mentoring*, contained eight items. Six of these items asked respondents for their opinions about mentor-mentee match characteristics (e.g., ethnicity, culture) that may affect the likelihood of mentoring success on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Of the final two questions in this section, one involved open-ended suggestions for students who may try to establish mentoring relationships, and for the other item, respondents were asked to rate the importance of professional mentoring on professional development from 1 (not at all important) to 10 (very important). This section was developed to help provide insight into the status of mentoring experiences and an evaluation of what is successful.

The fourth section, *Student/Peer Mentoring*, contained six closed-ended and two open-ended items related to the peer mentoring and peer mentoring programs in place at their institutions. Three of these six items asked respondents to compare peer mentoring to
professional mentoring, and were designed to provide information about the type of mentoring received. The fifth and final section of this survey contained nine demographic items designed to help the researchers better understand the backgrounds of the respondents.

### Pilot Testing

Initial pilot testing of the instrument involved the use of 20 SEP undergraduate students and 22 students enrolled in a community counseling master’s degree program. The undergraduate students completed an electronic version of the survey, while the master’s students completed a paper and pencil version. The undergraduate SEP students were sampled because of their familiarity with the field and because of their knowledge and previous involvement in research, while not limiting the potential participant pool. All students were asked to complete the survey to the best of their abilities, and provide comments about wording of instructions, items, overall content, and time needed to complete the survey. The survey took approximately 10 minutes to complete. Minor changes in the wording of several questions and instructions were made as a result of testing, but no changes were made in the overall content. Participants reported that the instrument appeared to comprehensively assess mentoring. According to their comments, the instrument not only assessed all important aspects of mentoring, but was also clearly understood and easy to complete. This information along with the authors’ comprehensive evaluation of the related material provided some evidence of both face and content validity.

### Procedure

The authors applied for and received approval from the Institutional Review Board for the Protection of Human Subjects (IRB). To comply with review board policies, IRB approval was applied for and granted from two of the institutions where data were collected. Program directors (N = 52) within all U.S. programs listed within the Directory of Graduate Programs in Applied Sport Psychology (Sachs et al., 2004) were contacted twice via e-mail addresses listed in the directory. They were asked if they would be willing to distribute an e-mail or hard copy survey to students in their programs, their preference in delivery method (e-mail or hard copy), and the number of students in their programs. These two methods of survey delivery were used in an attempt to maximize return rates by making it easier for faculty members to disseminate the surveys. Further, based upon feedback from pilot testing, the two methods appeared similar in terms of time demands and ease of administration.

Those faculty who agreed to distribute e-mail surveys (n = 15) were immediately sent an e-mail with the cover letter and survey attached to distribute. Those who preferred paper surveys (n = 6) were mailed a packet of surveys with postage paid return envelopes enclosed. Students completing hard-copy surveys were asked to return their surveys using the postage paid envelopes. Students who received electronic copies of the survey were instructed to complete the survey electronically and e-mail their completed survey to the researchers. In all, 51 hard copy surveys and 53 electronic surveys were returned. Returned surveys were immediately printed, and e-mails deleted to maintain confidentiality. No e-mail or IP addresses were tracked.

### RESULTS

#### Provision of Professional Mentoring

**Current Mentoring Relationships**

The majority of participants reported having a professional mentor (n = 84, 80.8%) with 70.4% of the mentoring relationships identified as formal. The professional mentoring relationships were predominantly sought out and established by the students (n = 34, 40.5%)
or formally assigned by the department or school \((n = 25, 29.8\%)\). Other mentoring relationships were established because of others’ recommendations \((n = 12, 14.3\%)\), initiated by the mentor \((n = 9, 10.7\%)\), or through other means \((n = 4, 4.8\%)\). The establishment of these relationships was most frequently reported to take either more than 1 month \((47.6\%)\) or only days \((41.7\%)\). Not surprisingly, students who were formally assigned a mentor most often reported the process of finding a mentor taking days \((68\%)\), and those seeking their own mentor often noted it taking more than 1 month \((64.7\%)\).

**Mentoring Evaluations**

Respondents’ ratings of overall perceptions of their current mentors using a 10-point scale were very favorable \((M = 8.21, SD = 1.72)\). Further, using a 4-point scale, respondents reported a general belief that mentoring results in more academic satisfaction \((M = 3.67, SD = .57)\), and is important at both the master’s \((M = 3.77, SD = .45)\) and doctoral \((M = 3.82, SD = .45)\) levels of education. No significant differences in overall mentor ratings were found for informal versus formal mentoring relationships \((t (79) = -1.66, p = .10)\). However, students perceived formal mentoring \((M = 3.18, SD = 1.05)\) to have a significantly larger effect upon helping students to develop overall research skills \((t (79) = -2.41, p < .01, d = .54)\) than informal mentoring \((M = 2.54, SD = 1.14)\). No differences were found between formal and informal mentoring with respect to the degree of effect that they are perceived to have upon helping students to develop overall skills in the areas of teaching \((t (76) = -1.86, p = .39)\), service \((t (72) = 1.00, p = .32)\), or writing \((t (77) = -1.29, p = .20)\).

The researchers explored 17 issues related to students’ professional mentoring experiences that could help predict overall mentor evaluations. These items, scored on a four-point scale from 1 (not at all) to 4 (often), asked the respondents to rate their current mentoring experiences with respect to issues commonly discussed in mentoring relationships (see Table 2 for topic areas). Pearson correlations were run between items that asked about students’ current interactions with their professional mentors and the overall mentor evaluation scores. Four items had correlations above .6 suggesting a strong relationship and were selected for further examination: (a) “my mentor has encouraged me to prepare for career advancement” \((r (84) = .62, p < .001)\), (b) “my mentor has discussed my questions about competence, commitment, and advancement” \((r (84) = .67, p < .001)\), (c) “my mentor has provided me with support and feedback regarding my performance as a student and future professional” \((r (84) = .61, p < .001)\), and (d) “my mentor has assigned responsibilities to me that have increased my contact with people who may judge my potential for future development” \((r (84) = .65, p < .001)\).

A multiple regression analysis was performed between the dependent variable (i.e., overall professional mentor evaluation) and the four independent variables discussed previously. Bivariate correlations were run between each of these items; all were less than 0.7. Using the enter method, the regression analysis revealed that the model significantly predicted the overall professional mentor evaluation, \(F (4, 79) = 32.06, R = .79, p < .001\), with an \(R^2 = .62\), and adjusted \(R^2 = .60\). The significant predictors were “my mentor has . . .” a) “encouraged me to prepare for career advancement” \((t = 2.28, \beta = .21, p = .025)\), b) “discussed my questions or concerns about competence, commitment, and advancement” \((t = 3.15, \beta = .30, p = .002)\), and c) “assigned responsibilities to me that have increased my contact with people who may judge my potential for future development” \((t = 2.94, \beta = .28, p = .004)\). Together, these three items accounted for 58.7% of the variance in the mentor evaluations scores and appeared to reflect issues addressing career advancement.
Benefits of Mentoring

To explore the specific benefits of professional and peer mentoring, students were asked to explain the degree of effect that these two types of mentors have had on twelve identified areas of graduate education (see Table 1 for means and standard deviations). Based upon past research and common professional responsibilities, researching, teaching, and writing, were identified by the researchers as areas of greatest interest with regard to student development. Paired sample t-tests were used to determine if mean differences existed in students’ perceptions of these competency areas based on their experiences with professional or peer mentoring. Professional mentoring was found to have a significantly larger effect than peer mentoring for research \((t(65) = 8.48, p < .001, d = 1.05)\) and writing \((t(64) = 7.64, p < .001, d = .95)\), but not teaching \((t(60) = 2.83, p = .006, d = .73)\).

Perceived vs. Preferred Interaction

To explore students’ experiences with professional mentors, the researchers examined students’ interactions (i.e., perceptions) with their mentors as well as their preferences for their interactions across 17 possible behaviors (see Table 2 for means and standard deviations). These 17 behaviors were rated on a 4-point ordinal scale ranging from 1 (not at all) to 4 (often). All items about preference had higher means than the corresponding responses for perceived interaction.

The researchers also explored the reported differences between students’ preferred and perceived interactions with their mentors by calculating discrepancy scores. Because of the risk of Type 1 error associated with running multiple analyses, only eight items were chosen for further analyses. These eight items were chosen because they had discrepancy scores above .5 (4-point scale) and were deemed by the researchers to cover issues important for professional development. These eight items were examined for statistical significance using paired sample t-tests, and the alpha level was adjusted to \(p < .01\). For all eight items, significant differences were found at the \(p = .001\) level, with moderate to very large effect sizes ranging from .49 to 1.06 (see Table 2). For each of these eight items, 4 one-way analyses of variance (ANOVAs) were run using age, ethnicity, specialization, and gender as the independent variables. To reduce the chance of a type 1 error, alpha was set at 0.001. The only significant difference from these analyses was found between specialization groups on the item “... assigned responsibilities to me that have increased my contact with people who may judge my potential for future advancement,” \((F(1, 69) = 13.55, p < .001)\). Individuals in the Psy/Coun specialization had a smaller discrepancy \((M = .54, SD = .58)\) in their current and preferred interactions for this item than individuals in the ES/PE specializations \((M = 1.31, SD = .97)\).

Perceptions of Successful Professional Mentoring

Students were asked for their perceptions about mentoring relationships throughout the survey. Their responses revealed a strong agreement that being mentored by a professional for professional development was very important \((M = 9.1, SD = 1.23)\), on a 10-point scale. In addition, it was indicated that mentoring relationships, when rated on a 4-point scale, were perceived to be most successful when both parties had similar approaches to work \((M = 3.18, SD = .77)\) and when the mentor was chosen by the protégé \((M = 2.53, SD = .84)\). One-way ANOVAs were conducted to determine if perceptions of mentoring varied based upon the demographic characteristics of the respondents. Females’ beliefs that the mentoring relationship would be most successful when both parties have similar work approaches \((M = 3.34, SD = .60)\) were significantly higher than the perceptions of males \((M = 3.02, SD = .88)\), \(F(1, 101) = 4.82, p = .03\). Differences between participants of different ethnicities were also found.
Non-Caucasians more strongly believed that mentoring relationships would be most successful when both parties were of the same gender $F(1, 101) = 7.43, p = .008$, of the same culture $F(1, 101) = 8.9, p = .04$, and when the mentor was chosen by the protégé $F(1, 101) = 6.24, p = .01$.

**Suggestions for Professional Mentoring**

Open-ended responses to the question “What suggestions would you have for others who are trying to establish a mentoring relationship?” were evaluated by four separate researchers. Two researchers independently examined the responses to the question and developed thematic clusters to represent the responses. The researchers then coded each of the responses into the thematic clusters. When differences of opinion existed, all four researchers worked together to find consensus.

In all, 62 responses were submitted. Within six of these responses, multiple themes were identified. Therefore, these responses were coded into each of the themes, thereby increasing the total number of coded responses to 68. These responses were coded into a total of six thematic clusters. Twenty-seven responses were coded within the first theme “Personal- ity/Connection.” These responses primarily dealt with the belief that students should try to find a mentor who has a similar personality and approach to work, such as “Get to know potential mentors—see if their personality fits yours.” The second theme of “Research and Questions” included 13 responses. These responses mentioned the need to research potential mentors before establishing a relationship, but did not mention the fit that needed to occur to make the final decision. Within this theme, one respondent suggested that students should “Do your homework, know what they have done and where they have been.” The third theme of “Being Proactive” contained 11 responses. These responses were specific about students needing to take the steps necessary to find a mentor and initiate the contact. Such steps included “Don’t wait until someone comes to you. It is your responsibility, take control.” The fourth thematic cluster involved eight responses and was titled “Finding a Person who you Respect.” Responses within this theme all mentioned issues such as “Find a mentor who you respect and who will challenge you to do better always.” The fifth thematic cluster, entitled “Mutual Expectations,” also had eight responses. These responses all surrounded a theme exemplified by the quote “make sure that the mentor you work with has similar work expectations as you. This will help to clear up each person’s role in the relationship.” The sixth and final thematic cluster had four responses coded within it, and was titled “Being Open Minded.” This theme included responses that suggested a need to be open minded about mentoring relationships such as “Have an open mind. Be willing to try new things or methods.”

**Provision of Peer Mentoring**

The researchers explored the frequency and type of peer mentoring among graduate students. Out of the 104 students, 26 (25%) reported that either an informal ($n = 21$) or formal ($n = 5$) peer mentoring program was in place at their school. Of those students who reported their programs having a peer mentoring program in place, 17 (65%) were master’s level students while 9 (34.6%) were doctoral level students. Of those students receiving peer mentoring, 14 (53.8%) indicated that peer mentoring was less effective than professional mentoring, 10 (38.5%) evaluated them as equally effective, and 2 (7.7%) believed that peer mentoring was more effective than faculty mentoring. Students also indicated the importance of peer mentoring to their professional development, with a mean score of 7.10 ($SD = 2.16$), on a 10-point scale.
Comparison of Professional and Peer Mentoring

The open-ended responses to two questions about the advantages and disadvantages of peer mentoring when compared to professional mentoring were analyzed using the same qualitative methods previously described. In all, 21 responses were provided for the question about the advantages of peer mentoring over professional mentoring. These responses were placed into four broad thematic groupings: (a) Informal, (b) Relate on a Similar Level, (c) Student Perspective, and (d) Social Connections. The eight responses that were classified into the “Informal” thematic cluster primarily dealt with the relationship being more open, candid, trustworthy, and comfortable than meetings with faculty. Within this theme, it was commented that “it is much easier and more comfortable to talk with students than professionals.” Five responses were classified within the “Relate on a Similar Level” theme. These items dealt with the advantage of talking with people who can empathize with a student’s situation, and often included items that dealt with relating to others on an emotional level. A sample comment from this theme is “They can relate better to you as a student.” The theme of “Student Perspective” had six responses, all of which dealt with gaining practical/hands-on advice on how to navigate current challenges and were often based upon previous student experiences. One respondent mentioned that “Students can provide a more realistic view of some classes/expectations and extracurricular activities.” The two responses classified within the final theme of “Social Connections” discussed the benefits of having veteran students help make social connections on campus. For example, it was stated that “The peer mentor student has been through the process and gives you a social connection.”

Nineteen responses were provided for the question about the disadvantages of peer mentoring when compared to professional mentoring. Ten of these responses were classified within the thematic cluster “Lacking Experience.” Responses within this theme primarily dealt with the issue that students do not have the experience or global knowledge necessary to effectively mentor in some areas. In general, respondents suggested that peers “lack the historical overview of the university and the field of sport psych.” The second thematic cluster “Professionalism” contained nine responses. Items within this theme discussed the lack of professionalism and professional development of students, as well as students being more likely to “sabotage another student’s work” and “gossip with friends” about issues discussed.

DISCUSSION

Mentoring Effectiveness

The above results have provided basic support for previous findings that have suggested that mentoring has been viewed as an effective way to help with academic satisfaction at all levels of graduate education (Brown et al., 1999; Patton & Harper, 2003). The SEP graduate students from this survey overwhelmingly identified mentoring as an important aspect of graduate education at all levels (i.e., masters and doctoral) that can lead to improved student satisfaction. The respondents also identified several specific areas of professional development (e.g., research, writing, exposure to important people and tasks) that they perceived to be positively affected by mentoring. Furthermore, respondents viewed their mentors very positively overall. Although the current study was not able to determine the effect of mentoring on retention rates and future success (Brown et al., 1999; Patton & Harper, 2003), it certainly appears to have identified benefits such as satisfaction and the development of professional development skills that would seem likely to improve the opportunities for future success.
The current results indicated that overall mentoring evaluations could be significantly predicted by three factors. These factors included having a mentor who: (a) encouraged students to prepare for career advancement, (b) discussed student questions or concerns about competence, commitment, and advancement, and (c) assigned responsibilities to increase student contact with people who may judge their potential for future development. These factors all seem to address issues of student career advancement, and to indicate that graduate students may be looking for and judging their mentors based upon the mentor’s ability to help them advance their careers. With this in mind, it may be beneficial for mentors in SEP to focus a majority of mentoring interactions on career advancement issues. Such career advancement issues may vary from helping students prepare a vita, to teaching them about the application and interview process. Other important topics include providing guidance in the areas of writing and publishing, development as a teacher and practitioner, as well as learning how to be an effective presenter. However, it is important to note that each student is different, and using a one-size fits all mentoring approach for all students may not be effective. It is recommended that professionals consider formalized individual and group mentoring related to some topics such as teaching and publishing, but that they also make time for individual mentoring with each student to focus on individual needs.

**Professional vs. Peer Mentoring**

Limited research has been conducted on the effectiveness of peer mentoring. The research that has been conducted in fields other than SEP seems to indicate that peer mentoring programs can be important for personal and professional development (Luna & Cullen, 1998). However, peer mentoring programs are less prominent than professional mentoring programs (Luna & Cullen), and more common among minorities (Kelly & Schweitzer, 1999). The current study provides evidence to suggest that a higher percentage of SEP graduate students (25%) may be receiving peer mentoring than the 2% of students previously documented to be receiving peer mentoring in other disciplines (Luna & Cullen).

Respondents in the current study indicated that they believed mentoring programs to be important to the professional development of students, and 46% reported that peer mentoring was equally or more effective than professional mentoring. However, respondents also indicated that professional mentoring had more of an effect upon skill development in research and writing, and was conducted in a more professional manner with a more experienced person. Peer mentoring was also viewed positively and seen as having several benefits over professional mentoring. These benefits included its informal nature, the openness of the relationship, the ability of the mentor and protégé to relate on a similar level, gaining information about the student perspective, and helping the protégé build better social connections.

Based upon the above-mentioned benefits of both professional and peer mentoring, the authors suggest that having both peer and professional mentoring programs in place could be beneficial to graduate students, because they can receive the perceived professional development benefits that may come from a professor and the perceived personal and social benefits that may come from a peer. Based upon these perceived benefits of peer and professional mentoring, peer mentoring may be more effective early in the graduate school experience to assist with the transition to the program and institution in a manner that may help students facilitate problem solving and avoid possible pitfalls. Further, allowing peer mentoring to take place early in a program provides time for students to develop professional mentoring relationships with faculty based upon information about perceived fit and similarity of interests and personalities. If given this additional time to find a professional mentor, the probability of developing a natural and preferred match between student and professional could increase. Further, if resources are not available for a formal professional mentoring program, students
believed that peer mentoring programs would be able to provide sufficient benefits to new students. However, to be effective, formal peer mentors should be trained in mentoring, and such relationships should be monitored by professionals.

**Perceived vs. Preferred Mentoring**

When asked to report what mentoring they were currently experiencing and what mentoring they would prefer to receive, respondents indicated several discrepancies. On all items, mean ratings for preferred mentoring behaviors were higher than mean ratings for mentoring behaviors actually received, indicating that the respondents would prefer different mentoring than they were currently receiving. The largest and most significant discrepancies came in areas related to professional development such as preparing the student for career advancement, discussing competency concerns, helping meet new colleagues, suggesting goal strategies, and increasing contact with others who may judge advancement. These results suggest that SEP graduate students are looking for their professors to provide more guidance than they believe they are currently receiving in areas such as competence development, networking, and career development.

**Experiences with Professional Mentoring**

Participants of various ages, ethnicities, and genders did not differ from one another with respect to the discrepancy scores discussed above. However, students within different specializations did report significantly different discrepancy scores. Individuals in the psychology/counseling specialization had less discrepancy in the area of receiving help to “increase contact with others who may judge advancement” than individuals in ES/PE specializations. Since mean scores for receiving mentoring in this area were similar between the two specialization areas, this difference in discrepancy is due to the higher reported preferred contact among those individuals with a specialization in ES/PE.

**Ethnicity**

Non-Caucasian respondents were found to more strongly believe that mentoring relationships are most successful when both parties are of the same gender and culture, and when the mentor is chosen by the protégé. Based upon current data and the state of the profession of sport and exercise psychology, it is unable to be determined at this time if these results are due to the ethnicity of the respondents, or if all students would prefer mentors of the same gender and culture. As Patton and Harper (2003) suggested, students might feel more comfortable with mentors who may have experienced similar circumstances in their path to professional success. In line with this suggestion, Kontos and Breland-Noble (2002) recommended an increase in the number of sport psychology consultants of color and that the field adopt a multicultural sport psychology approach to address the growing diversity of athletes seeking consultation.

**Establishing Mentoring Relationships**

Results seem to imply that students may benefit most from situations where they find their own mentors. Although this approach seems to be viewed positively by the student, it would likely take longer to find a mentor after arriving on campus, and no mentoring relationships will be formed if the student does not take the initiative to find a mentor. Some students may not know what to look for in a possible mentor, or may not have the necessary skill set or courage that allows them to find a mentor. When looking for a mentor, students’ open-ended responses indicated that they believed it most important to be proactive in the search and
to look for a mentor who has similar interests, personality, work habits, and expectations. Respondents also recommended being open-minded and trying to find a person whom one respects. These suggestions are indicative of the belief that having the proper mentor-protégé match is perceived to be important to students. Such a belief is supported by previous research that has provided evidence that proper matching is important to the success of the mentoring relationship (Clark et al., 2000; Johnson & Huwe, 2002). Therefore, it may be a good suggestion for programs to provide mentoring seminars to help students meet faculty in less formal settings and to help identify matches. Such seminars may also attempt to teach students what to look for in a mentor, and provide students with the pros and cons of mentoring.

Implementing Mentoring Programs
Current and past research provides evidence that mentoring programs can be extremely beneficial to students in terms of both personal and professional development (Hall & Allen, 1982; Kelly & Schweitzer, 1999; Luna & Cullen, 1998). This information should encourage program faculty to develop mentoring programs. To enhance the benefits of such programs, mentoring training in areas such as giving performance feedback, helping to increase contact with others who may judge advancement, suggesting appropriate goal strategies, and discussing competency concerns could be provided to both peer and professional mentors, and could be used as a form of transitional training to help prepare students for their future professional careers. Departments should also take steps to make opportunities for informal mentoring more readily available to students; a strategy that has been documented in work environments to be effective (Kram, 1985). Such settings might include regularly scheduled program social gatherings such as dinner parties, luncheons, intramural sports, brown-bag lunches, colloquia, and other academic and non-academic gatherings where people can interact in an informal manner. Furthermore, mentoring evaluations should be established to help monitor the effects of mentoring programs on new students.

Limitations and Future Directions
Since a survey research design was used, and surveys were sent to program directors to hand out to current students, it was not possible to determine the exact return rate in the current study. At the time of survey collection, the return sample size was equivalent to approximately 40% of the student membership of AASP. However, sample size was still lower than expected. A second limitation to the current study was that the researchers did not differentiate between students who were in a research-focused program versus those in a more applied program. The focus of student training would likely affect students’ academic and professional goals, which could then influence their preferences for mentoring in certain areas. More importantly, the researchers’ inability to differentiate between students in masters programs requiring coursework only and those requiring coursework and research thesis represents a key limitation to the current study. Lastly, because of their status as current students rather than graduates, the respondents may have been unable to clarify the true benefit of mentoring on career advancement and professional development.

Additional research is needed within this area for faculty to better understand the effectiveness of different styles of mentoring and the true effect of mentoring on professional development. With additional knowledge about mentoring, faculty are more likely to be able to improve student satisfaction and performance in graduate school. Such additional research should address issues such as the: 1) appropriate amount of time needed to establish a mentoring relationship 2) most effective structure of mentoring, 3) most effective methods of matching mentors with protégés, 4) appropriate balance of professional and peer mentoring,
5) best means to use or encourage the development of informal mentoring, and 6) development of a valid and reliable measure to assess mentoring. Future research should also sample recent graduates from SEP programs to determine their perceived benefits from mentoring on their professional development. Such research should also use shorter and more specific surveys and possibly an experimental approach utilizing different styles of mentoring (e.g., peer vs. professional, individual vs. group) across groups to determine the effects upon overall professional development, personal growth, writing, research and/or service.

In closing, the authors recommend that faculty teaching in SEP programs that do not currently have mentoring programs consider the development of formal professional and peer mentoring programs as well as promoting informal peer and/or professional mentoring opportunities (e.g., lunches, parties, outings, regularly schedule program gatherings, the development of program leisure space). Such formal and informal programs will likely lead to improved student morale as well as personal and professional development. It is also recommended that academic units with mentoring programs in place consider evaluating their programs. It seems clear that mentoring programs can have a distinct positive effect upon student satisfaction and professional development. As such, program faculty would be well-advised to consider the positive effect that such programs could have upon student recruitment and retention.

REFERENCES


