Training Experiences and Theoretical Orientations of Pediatric Psychologists

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Objective To reexamine members of the Society of Pediatric Psychology (SPP) to document trends in training experiences of individuals who identify themselves as pediatric psychologists.  

Methods Using the 1999 SPP membership list, we asked respondents to complete a survey describing their degree status, theoretical orientation of graduate program, type of internship/fellowship, current employment setting, and orientation to assessment and treatment of pediatric problems. 

Results The majority of the respondents matriculated from doctoral programs in the last two decades. Compared to a previous survey (Mullins, Harbeck-Weber, Olson, & Hartman, 1996), this survey had a higher percentage of respondents who completed accredited predoctoral or postdoctoral training in pediatric psychology. Over half of the respondents were primarily employed in medical centers or academic institutions; fewer respondents reported working in private practice settings than in the previous survey 10 years ago. Respondents' current orientation was most often described as cognitive-behavioral. In this survey, the percentage of respondents endorsing an eclectic orientation was lower; the percentage endorsing cognitive-behavioral, behavioral, and systems orientations increased. 

Conclusions We discuss implications of these findings as they relate to training and practice in pediatric psychology. 

Key words training; theoretical orientation.
cation (APA)-accredited internship; however, less than a fourth completed an internship with a specific focus on pediatric psychology. Further, only a third of the respondents completed a postdoctoral fellowship, and only half of those receiving postdoctoral training did so specifically in pediatric psychology. These findings suggest that the majority of the members of SPP at that time had not necessarily received specialized, formal training in pediatric psychology at either the pre- or postdoctoral level. The results also indicated that the majority of respondents received graduate training in either cognitive, behavioral, or eclectic theoretical models; assessment of their subsequent orientation in clinical practice similarly reflected use of these models.

Since the time of the original survey, significant changes have occurred in the context of professional psychology. Clearly, managed care has altered the nature and manner of mental health service delivery, with mandates for short-term treatment models, accountability for outcomes, and restricted access to patient populations (e.g., Reed, Levant, Stout, Murphy, & Phelps, 2001). Most psychologists believe that such changes associated with managed care have negatively affected their practice (Phelps, Eisman, & Kohout, 1998). At the same time, psychologists have increasingly focused on the development of empirically supported, time-limited treatment models for specific clinical problems, in part to meet the demands of the evolving managed care system (e.g., Chambless & Hollon, 1998).

Concomitantly, the role of prescriptive authority for psychologists has been debated extensively (e.g., Sammons, Gorny, Zinner, & Allen, 2000). Within the organizational framework of the APA, the move has begun to develop specific guidelines for competencies and proficiencies in subspecialization. Demographic trends are also apparent. Increasingly, women are entering doctoral graduate training programs and becoming a part of the workforce (Kohout, Wickersham, & Woerheide, 1999). The impetus to recruit and retain psychologists of various ethnic and racial backgrounds has intensified through formal mechanisms (APA, 1996), with the number of new graduates of ethnic minority status slowly increasing (Kohout et al., 1999).

The extent to which these and other developments have influenced the actual training of graduate students in pediatric psychology is unclear. However, the number and magnitude of such changes argue for the continued assessment of current training practices. Such assessment would serve multiple purposes. First, it would document the nature of existing training models. Second, assessment of individuals who identify themselves as pediatric psychologists would permit a broad comparison of historical as well as recent training approaches. Finally, assessment of training practices would aid future planning and curriculum design for doctoral programs, internships, and fellowships that seek to train students in pediatric psychology.

Thus, we elected to reexamine SPP members approximately one decade later, seeking to document training experiences of individuals who currently identify themselves as pediatric psychologists. Using the 1999 membership list, we asked respondents to indicate their degree status, orientation of graduate training program, type of internship/fellowship training, employment setting, current theoretical approach to assessment and treatment, and involvement in empirical endeavors. We expected the findings of this study, although speculative, to reflect a number of trends, including continued endorsement of training in and subsequent adherence to cognitive and behavioral models, increasing numbers of pediatric psychologists completing postdoctoral fellowships to obtain specialized training, and a proportionally high percentage of pediatric psychologists seeking employment in medical school and university settings rather than private practice settings. Also, we expected to find an increase in the number of women entering pediatric psychology. Finally, we expected that the majority of pediatric psychologists would be actively involved in empirical endeavors. Such trends would be consistent with both our previous data as well as those documented by the APA for applied psychologists as a group (Kohout et al., 1999).

**Method**

**Participants**

Participants were recruited from a 1999 listing of the full members of the SPP. In total, 680 questionnaires were mailed, and 377 questionnaires were returned by full members. Eleven questionnaires were excluded due to incomplete or missing data, resulting in a return rate of 53.8% (N = 366). This rate is somewhat lower than that in the previous survey, possibly as a function of different types of incentives offered to participants. Of the completed surveys, approximately 35% (n = 129) were completed by men, and 65% (n = 237) were completed by women. Respondents were between 30 and 76 years of age, averaging 44 years (SD = 8.9). Ethnic characteristics were as follows (N = 366): 93.7% (n = 343) Caucasian; 2.2% (n = 8) Asian; 1.9% (n = 7) Hispanic; 1.1% (n = 4) African American; 0.5% (n = 2) Native American; 0.3% (n = 1) Pacific Islander; and 0.3% (n = 1) biracial. Although direct statistical comparisons were not possible, the age and ethnic break-
down of this sample appear largely representative of the 1999 Division membership obtained through the APA research office (APA research office, personal communication, May 3, 2001). However, the female to male ratio (65:35) obtained in this survey suggests that a higher percentage of female members of the SPP responded to the survey compared to the ratio in the database compiled by the APA (i.e., 55% female, 45% male). A potential gender response bias may therefore exist for this sample.

**Measure**

The original 1990 questionnaire was modified to include 25 questions assessing the following areas: select demographics, degree status, orientation of graduate training program, areas of specialization during graduate training, level and type of postgraduate training, current work setting, involvement in empirical endeavors, and current theoretical orientation. Type of orientation was broken down into nine discrete categories, including behavioral, cognitive, cognitive-behavioral, analytic, interpersonal, dynamic, systems, integrationism, and eclectic. Such descriptive labels reflect the predominant models most commonly utilized in contemporary applied psychology (Prochaska & Norcross, 1999). No operational definitions were provided for these models so as not to introduce any subtle bias. In this manner, participants could self-identify with a particular model.

**Procedure**

The survey and a self-addressed stamped envelope were mailed to each full member of the SPP. Participants were informed in the cover letter that $50 would be donated to the Rebecca Routh Coon Injury Research Fund for every 100 returned surveys. All procedures were approved by the institutional review board and were in keeping with the ethical standards of the APA.

**Results**

**Overview of Analyses**

Most of the analyses were descriptive. Chi-square analyses were conducted to examine trends in training and adherence to theoretical models by decade of graduation, as well as between male and female respondents.

**Training and Employment Characteristics**

Table I describes graduate training characteristics by gender, including decade of graduation, type of degree obtained, and area of specialization. The majority (78%) of respondents graduated during the 1990s and 1980s; only 21.9% graduated during the 1960s and 1970s combined.

By far, the majority of the sample received the PhD degree (n = 351, 95.9%). Over 75% of all male and female respondents matriculated from doctoral programs in clinical psychology (n = 287, 78.6%). There were no significant gender trends for type of degree earned, χ²(2, N = 365) = 3.77, p > .05, or area of specialization in graduate school, χ²(7, N = 366) = 5.95, p > .05. Chi-square analysis, χ²(3, N = 365) = 21.70, p < .05, revealed that a higher percentage of male respondents graduated during the 1980s, whereas a higher percentage of female respondents graduated during the 1990s.

Table II describes predoctoral internship and postdoctoral training data. The majority of the respondents completed an APA-accredited predoctoral internship (n = 308, 84.2%); only 15.8% completed a nonaccredited internship. Examination by decade of graduation revealed that 90.3% (n = 139) of the respondents who graduated during the 1990s and 89.5% (n = 17) of the respondents who graduated in the 1960s completed an APA-accredited internship, whereas only 83.1% (n = 108) and 70.5% (n = 43) of those graduating during the 1980s and 1970s, respectively, completed an APA-accredited internship, χ² (3, N = 364) = 13.48, p < .01. There was no significant relationship, χ² (1, N = 365) = 3.12, p > .05, between gender of the respondent and completion of an APA-accredited internship.

As shown in Table II, approximately 40% of the total respondents completing an APA-accredited internship indicated their training had a primary focus in pediatric psychology. Examination of training trends by decade of graduation revealed that a higher percentage of respon-

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<th>Table I. Training Characteristics (n and %)</th>
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<td><strong>Decade of graduation</strong></td>
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<td>Other</td>
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Data for decade of graduation and specialization in graduate program include 236 women due to missing data for one respondent.
Table II. Internship and Postdoctoral Training Characteristics (n and %)

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<tr>
<th>Training Focus</th>
<th>APA Predoctoral Internship</th>
<th>Postdoctoral Fellowship</th>
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<tr>
<td></td>
<td>Women</td>
<td>Men</td>
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<tr>
<td>Yes</td>
<td>205 (86.5)</td>
<td>103 (79.8)</td>
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<tr>
<td>No</td>
<td>32 (13.5)</td>
<td>26 (20.2)</td>
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*Other internship foci include administration, adult, behavioral medicine-adult, community clinical, and neuropsychology; other postdoctoral fellowship foci include behavioral medicine-adult, community clinical, developmental psychology, family therapy/family systems, neurodevelopmental disabilities, neuropsychology, pain management/rehabilitation, psychopharmacology; and research.

Approximately half of the total respondents completed a postdoctoral fellowship. Chi-square analysis yielded no significant relationship between gender of the respondent and completion of a postdoctoral fellowship, $\chi^2 (1, N = 366) = .04, p > .05$. According to trends by decade of graduation, 64.3% (n = 99) of the respondents graduating in the 1990s completed a postdoctoral fellowship, whereas only 44.3% (n = 58), 37.7% (n = 23), and 21.1% (n = 4) of the respondents who graduated in the 1980s, 1970s, and 1960s, respectively, completed a fellowship with a focus in pediatric psychology or behavioral medicine with children.

Table III provides a listing of employment setting by gender. Over a third of the total respondents were currently employed in medical school settings, followed by university academic settings, and outpatient private practice settings. Employment settings less frequently endorsed included private pediatric hospitals, private general hospitals, and community mental health centers. Chi-square analysis revealed a significant relationship between decade of graduation and current employment setting, $\chi^2 (21, N = 365) = 34.16, p < .05$. Approximately a third of the respondents graduating in the 1990s (33.8%, n = 52), 1980s (37.4%, n = 49), and 1970s (36.1%, n = 22) were employed in medical school settings, whereas the highest percentage of graduates from the 1960s were employed in academic university settings (36.8%, n = 7). There was a significant relationship between gender of respondent and current employment setting, $\chi^2 (7, N = 366) = 21.54, p < .01$. A higher percentage of male respondents were employed in university academic settings and medical school settings, whereas a higher percentage of female respondents were employed in private pediatric hospitals and private practice. Examination of trends related to postgraduate training and the respondents' current employment setting revealed that 61.9% (n = 78) of the respondents employed in medical school settings completed postdoctoral fellowships. Approximately 60% (n = 30) of the respondents employed in private pediatric hospitals completed postdoctoral fellowships, whereas only 36% (n = 27) of those employed in academic university settings completed postdoctoral fellowships.
Approximately two thirds \((n = 247, 67.5\%)\) of the total respondents indicated that they were involved in research endeavors. Most of those conducting research were employed in medical school or university settings \((n = 165, 66.8\%)\). Analyses within employment settings indicated that 83.8% \((n = 62)\) of those employed in academic university settings and 81.7% \((n = 103)\) of those employed in medical school settings were involved in empirical endeavors. Approximately 50% \((n = 66)\) of the respondents employed in nonacademic settings (i.e., private practice, private hospitals, community mental health centers) were also involved in empirical endeavors. There was no significant relationship between decade of graduation and involvement in research endeavors,

\[
\chi^2 (3, N = 365) = .58, p > .05
\]

with greater than 65% of the respondents graduating in each of the last four decades involved in research endeavors. Chi-square analysis revealed a significant relationship between gender of the respondent and research endeavors,

\[
\chi^2 (1, N = 366) = 4.36, p < .05
\]

with a higher percentage of male respondents involved in research activities.

### Analyses of Orientation Trends

Orientation data for this sample is provided in Table IV. Overall, the primary orientation of the respondents' graduate program was most often described as cognitive-behavioral \((n = 131, 35.8\%)\). Chi-square analyses yielded a significant relationship between program orientation and decade of graduation,

\[
\chi^2 (27, N = 364) = 57.53, p < .01
\]

with greater than a third of the respondents graduating during the 1990s and 1980s matriculated from programs with a cognitive-behavioral orientation, whereas an eclectic program orientation was most common among respondents who graduated during the 1970s and 1960s. There was no significant relationship between gender and personal orientation in graduate school,

\[
\chi^2 (9, N = 365) = 7.64, p > .05
\]

The majority of respondents described their personal orientation during graduate training as cognitive-behavioral (43.8% women, 41.9% men), followed by eclectic (18.3% women, 14.0% men), behavioral (8.9% women, 15.5% men), and systems (9.8% women, 10.9% men).

With regard to current orientation, chi-square analysis yielded no significant relationship between gender of respondent and current orientation to assessment and treatment,

\[
\chi^2 (8, N = 366) = 7.69, p > .05
\]

or decade of graduation and current orientation to assessment and treatment,

\[
\chi^2 (24, N = 361) = 24.96, p > .05
\]

The majority of the total respondents (65.8% women, 96.1% men) endorsed a single orientation. Respondents who endorsed a single orientation to assessment and treatment most often adhered to a cognitive-behavioral approach \((n = 121, 33.1\%)\). Approximately a fourth of the total respondents indicated that they currently adhere to two or more primary orientations in assessment and treatment. The majority of the respondents adhering to two or more approaches most often identified themselves as adhering to systems orientation in combination with cognitive-behavioral approaches to assessment and treatment.

### Discussion

The findings of this survey of SPP members reveal interesting trends in the training of pediatric psychologists. First, the field of pediatric psychology is a relatively young
and growing specialty; over 75% of the respondents matriculated in the last two decades. Second, more women are entering graduate training with a focus on pediatric psychology, a trend consistent with that of psychology in general (Kohout et al., 1999). At the same time, ethnic minority psychologists remain underrepresented in pediatric psychology. Third, the majority of members have completed an accredited internship, with approximately 45% of the internship sites having pediatric psychology as a primary focus of training. It is encouraging to note that the percentage of individuals receiving training in pediatric psychology during internship increased since the previous survey (cf. Mullins et al., 1996), suggesting that more individuals are able to obtain such training experiences during their predoctoral internship, rather than having to wait until the postgraduate training period of their career.

A higher percentage of SPP members, particularly those subsequently employed in medical school settings, are completing postdoctoral fellowships with a training emphasis in pediatric psychology. This trend mirrors the general trend for applied psychologists to complete a postdoctoral fellowship before entering the workforce (Kohout et al., 1999). Such an increase may reflect the career-enhancing aspect of postdoctoral experience, that is, research, publication, grant-writing opportunities, and refinement of clinical skills within specific areas of practice. The need to acquire additional clinical hours for licensure before entering the workforce may also have resulted in an increase in the number of pediatric psychologists securing postdoctoral training. However, an unfortunate potential byproduct of postdoctoral training is increased debt load, an issue for both graduate students and APA members (Chamberlin, 2000).

Over half of the current respondents report primary employment in medical school settings or university settings. Although the number of pediatric psychologists employed in medical school settings appears relatively stable over the last 10 years, the percentage of SPP members employed in academic settings appears higher (cf. Mullins et al., 1996). In contrast, our data indicate that a lower percentage of pediatric psychologists are now working primarily in private practice settings. This trend may indicate the desire among contemporarily trained pediatric psychologists to work in settings that allow for interdisciplinary work in health care settings or to engage in academic pursuits (e.g., teaching and research). At the same time, these numbers may reflect the demands of the managed care marketplace. The current SPP member employment data stand in contrast to recent APA Division 12 (Clinical Psychology) survey data, which indicate a lower percentage of psychologists employed in medical settings and a higher percentage in private practice (Norcross, Karg, & Prochaska, 1997b). It is noteworthy that approximately two thirds of the respondents indicated that they were currently involved in research endeavors. Given the history of pediatric psychology and its empirical underpinnings, not to mention the number of pediatric psychologists employed in academic settings, such figures are not surprising. Future research would do well to compare these findings to other subspecialties in applied psychology.

By far, the majority of pediatric psychologists report having matriculated from programs with a cognitive-behavioral orientation and currently espouse a cognitive-behavioral orientation to assessment and treatment. In contrast to data from a decade ago (cf. Mullins et al., 1996), the percentage of respondents personally endorsing an eclectic orientation is now lower, whereas the percentage endorsing a cognitive-behavioral orientation is higher. Such trends may well reflect the general movement in graduate training programs toward a cognitive focus (e.g., Robins, Gosling, & Craik, 1999), as well as a move toward training in empirically based treatments. Compared to survey data on clinical psychologists from APA Division 12 (Norcross, Karg, & Prochaska, 1997a), our results suggest that a higher percentage of pediatric psychologists endorse a cognitive-behavioral or behavioral perspective, and fewer endorse a psychodynamic perspective. Also noteworthy, our data indicate that approximately one fourth of SPP members in this survey adhere to two or more orientations to assessment and treatment; most often, a systems orientation appears to be utilized in combination with cognitive-behavioral approaches. Such data may well reflect a move away from eclecticism per se and a move toward assimilative integrationism (Stricker, 1994).

A number of implications are suggested by our data. First, it appears that graduate students in psychology are increasingly able to secure specialized training in pediatric psychology at the internship and postdoctoral level. The specific nature of such training (e.g., number of clinical hours, type of experiences, level of supervision) is not clear, however, and further examination of these issues is warranted. In particular, research is needed to determine if internships and postdoctoral fellowships in pediatric psychology have increased in number over the last decade, how this has been accomplished, and whether there is consistency in training opportunities across training sites. Second, it appears that a relatively high percentage of pediatric psychologists are working in medical centers and university settings, with a correspondingly
lower number in private practice. If such a trend reflects the impact of managed care on the workforce, it may not be long before the marketplace for academic pediatric psychologists tightens. Robiner and Crew (2000) have called for a workforce agenda to address these issues within the APA, and it may serve Division 54 well to evaluate the unique needs of pediatric psychologists in the workplace. Third, our data revealed a number of interesting gender trends, with more women entering the field of pediatric psychology and seeking particular types of training and work experiences. However, such gender differences may also reflect an age effect, as the women in our sample were younger than the men. Certainly, it will be important to evaluate the nature of these findings systematically in future surveys. Finally, recruitment of ethnic minority pediatric psychologists remains a significant problem for the field. Continued efforts on the part of the graduate programs to expand their recruitment efforts is essential if we are to meet the needs of an increasingly diverse population.

The findings of this study are limited by the survey format and resulting self-selection bias. Indeed, it may be that a select group of SPP members (e.g., researchers and academicians) chose to respond to the survey, making generalizability difficult. Further, we have assumed that the majority of those psychologists who identify themselves as pediatric psychologists are also SPP members, which may not be correct. Although our method of identifying potential participants (i.e., SPP membership) ensures a relatively high degree of identification with this area of specialization, it can be argued that a substantial number of psychologists who work in pediatric psychology may not have joined the SPP, or they affiliate with another APA division. Future surveys might also include other child-oriented divisions (e.g., Clinical Child; Child, Youth, and Family) to address this issue. Finally, any comparison of trends between this sample and that obtained in 1990 should be made cautiously, as no direct statistical comparisons were made between these two overlapping samples of the SPP membership.

In summary, our survey offers additional information on the training and theoretical orientations of pediatric psychologists, as well as trends in this area of specialization over the past 10 years. Additional research is needed to address the specific means by which graduate training institutions, predoctoral internships, and postdoctoral fellowships structure training opportunities in pediatric psychology. Indeed, little is known about the nature of coursework, practicum requirements, and supervisory models employed by these programs and the extent to which they conform to the guidelines being offered by the SPP Task Force on Training (Spirito et al., this issue). The new guidelines for training in pediatric psychology may alter the direction of existing training programs as they attempt to meet the demands of managed care in a changing marketplace.

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