Benchmarks for Work Performance of Pediatric Psychologists

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Objective To establish benchmarks for work performance of pediatric psychologists. Methods All full members of the Society of Pediatric Psychology, Division 54 of the American Psychological Association (N = 1043), were recruited for participation in a mail survey. Four hundred and seventy surveys were returned (45%); 356 usable surveys (34%) were included in the analyses. Surveys assessed work-settings, academic appointments, salary, performance expectations and evaluations, and satisfaction. Results Most of the survey respondents, 63%, worked in a hospital setting. On average, survey respondents were directly accountable for generating half, 52%, of their salary. Salary covered by institutions was most frequently provided for nonrevenue generating activities such as administration and teaching. Most of the sample (78%) indicated clear performance expectations and criteria. Conclusions Findings update and expand previously established benchmarks for work performance and have implications for the practice of pediatric psychology in an ever-changing health care environment.

Key words benchmarks; pediatric psychology; productivity; professional activity.
Benchmarks for Work Performance

(Rae, 2004; Koocher, 2004; Bradford, 2004; Drotar, 2004; Mitchell & Roberts, 2004). In this current climate of concern about the financial viability of pediatric psychology, the utility of data that describe benchmarks for professional and fiscal accountability has become increasingly compelling. The most prevalent system for benchmarks for physicians is the relative value unit (RVU) system (which is also used for psychologists in some settings). However, this system has many flaws (Lantos, 2003) and is not applicable to psychologists because it was developed for physicians and does not accommodate to the full range of psychologists’ clinical activities (e.g., school consultation, neuropsychological testing). For this reason, benchmark data are needed for pediatric psychologists. These types of data can be essential in helping hospital administrators and department chairs, who often have limited familiarity with the practice of pediatric psychology, understand work-related expectations, and salary structures in our field. Further, benchmark data can be useful for individual pediatric psychologists when comparing their work situation with that of others, and for students and trainees to develop appropriate expectations.

The goal of this study was to update and expand information concerning benchmarks for work performance of pediatric psychologists in the following areas: work settings, academic appointments, salary and salary determinants, and job performance expectations.

**Method**

**Participants**

All full members of the Society of Pediatric Psychology, Division 54 of the American Psychological Association in 2002, were recruited for participation (N = 1043). Four hundred and seventy surveys were returned (45%). One hundred and fourteen of the returned surveys were excluded from analysis because of the respondent indicating that the survey was not applicable for reasons such as being retired or not working with pediatric populations. Three hundred and fifty-six usable surveys (34%) were included in the analyses.

**Procedures**

Potential participants were sent a letter introducing the study together with a copy of the survey instrument and a stamped return envelope. The letter included a statement of informed consent that indicated by completing and returning the survey the participant acknowledged consent. The study was approved by Institutional Review Boards at the participating institutions. The surveys were coded with subject numbers to identify subject candidates who returned the measure. Six months after the initial mailing, all participants for whom a completed survey had not been received were sent a second mailing. Survey data was collected between October 2002 and March 2003.

**Measures**

**Expectations and Benchmarks for the Work Performance of Pediatric Psychologists**

A 46-item survey (see Appendix) was designed by study authors based on clinical and administrative experiences in academic health centers. The survey was piloted with colleagues for clarity and utility before implementation. The topics covered in this survey included work-setting characteristics, academic appointment types, staffing, salary and salary determinants, performance expectations and evaluations, and satisfaction across these areas. The survey used both forced choice and open ended response formats.

**Results**

**Data Analysis**

Primary statistical analyses were descriptive statistics. Secondary analyses were used to compare differences on study variables across subgroups of our study population such as gender and work setting. Percentages do not always add up to 100% due to missing data.

**Sample Characteristics**

Table I summarizes the demographic characteristics of the sample. Mean age of the respondents was 45.3 years.

<table>
<thead>
<tr>
<th>Table I. Descriptive Characteristics of Sample</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>355</td>
<td>45.3</td>
<td>10.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>114</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>242</td>
<td>68%</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD</td>
<td>318</td>
<td>89.3%</td>
<td></td>
</tr>
<tr>
<td>PsyD</td>
<td>32</td>
<td>9.0%</td>
<td></td>
</tr>
<tr>
<td>EdD</td>
<td>6</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Years postdegree</td>
<td>355</td>
<td>13.6</td>
<td>8.8</td>
</tr>
<tr>
<td>Years in current setting</td>
<td>346</td>
<td>9.2</td>
<td>7.4</td>
</tr>
<tr>
<td>Work status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>288</td>
<td>80.9%</td>
<td></td>
</tr>
<tr>
<td>Part time</td>
<td>67</td>
<td>19.1%</td>
<td></td>
</tr>
<tr>
<td>Work hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>286</td>
<td>50.1</td>
<td>8.8</td>
</tr>
<tr>
<td>Part time</td>
<td>67</td>
<td>24.9</td>
<td>8.1</td>
</tr>
</tbody>
</table>
Gender composition of the sample was greater than two-thirds female (68.0%). The most common degree earned by respondents was a PhD (89.3%). Responses were received from respondents working in 48 different states, as well as Canada.

Work Settings and Appointments

Work Setting
Most of the survey respondents, 63% (n = 225), indicated their primary work setting was in a hospital. Forty-nine percent of the sample reported working in an academic medical center, and 14% of the sample worked in a hospital not affiliated with a medical school. After hospital, private practice was the next most frequently reported setting (22%), followed by academic department of psychology (5%), mental health service agency (3%), outpatient clinic (3%), school system (2%), academic department other than psychology (1%), and other (1%). The hospital-based psychologists indicated working in many different types of hospitals including, not for profit children’s hospital (45%), children’s hospital within a general hospital (20%), general hospital (11%), children’s specialty hospital (4%), children’s rehabilitation hospital (2%), rehabilitation hospital (1%), and other (9%).

Tenure and Academic Appointment Type
As hospitals were the most typical work setting for pediatric psychologists, and academic appointment types can vary greatly between settings, analyses of appointment type and structure focused solely on respondents who indicated that they primarily worked in a hospital setting (n = 225). Sixty-nine percent (n = 156) of this group reported being on an academic track. Of those respondents, one-third (n = 52) reported holding a tenure track appointment. Individuals with a tenure track appointment reported the following ranks: instructor (4%), assistant professor (29%), associate professor (29%), and professor (38%). For individuals with a nontenured academic appointment, the breakdown of ranks was instructor (15%), assistant professor (48%), associate professor (26%), and professor (11%). The type of academic appointment held was most frequently clinical (35%), with an equal number of respondents indicating they held research (24%) and clinician-educator (24%) appointments.

Academic Departments and Divisions
Various academic departments administered the academic appointments, with pediatrics accounting for nearly half (49%) of the sample, and psychiatry (26%) and psychology (14%) also frequent responses. Less commonly reported departments included developmental and behavioral pediatrics (2%), neurology (1%), oncology (1%), behavioral medicine (1%), and physical medicine and rehabilitation (1%). At the divisional level, psychology (48%) was the most frequently reported division. Other frequently reported divisions included: developmental and behavioral pediatrics (13%), psychiatry (6%), oncology (5%), behavioral medicine (4%), and neurology (2%).

Department Size
Department size with regard to number of psychology faculty, psychology staff, and trainees varied widely across the sample. On average respondents reported 7.88 psychology faculty members (SD = 7.56, median = 6) in their departments and 4.40 staff psychologists (SD = 8.36, median = 1). However, number of faculty differed by department of appointment. Specifically, a univariate ANOVA with follow-up t-tests indicated departments of psychiatry (M = 11.29, SD = 9.26) and psychology (M = 11.09, SD = 10.39) each employed significantly more pediatric psychology faculty than departments of pediatrics (M = 6.22, SD = 4.65), F(2, 171) = 10.53, p < .001. No significant differences were found between departments in number of non-faculty, staff psychologists employed.

With regard to psychology trainees, departments averaged 3.60 graduate students (SD = 6.69, median = 2), 2.49 predoctoral interns (SD = 2.55, median = 2) and 3.22 postdoctoral fellows (SD = 5.33, median = 2). Univariate ANOVAs revealed group differences in the number of predoctoral interns and postdoctoral fellows by department type. Departments of psychiatry (M = 3.51, SD = 3.01) and psychology (M = 3.11, SD = 2.97) employed more predoctoral interns than departments of pediatrics (M = 2.11, SD = 2.13), F(2, 157) = 5.27, p < .01. Departments of psychiatry (M = 5.26, SD = 8.84) employed more fellows than either departments of pediatrics (M = 2.82, SD = 3.54) or psychology (M = 2.76, SD = 3.28), F(2, 165) = 3.57, p < .01.

Salary and Satisfaction with Salary
Salary data are described in the context of several different groupings. Most broadly we describe mean and quartile data for full- versus part-time employment. We also report salary data based on region of the country, gender, years of experience, academic appointment and work setting. We excluded Canadian respondents (n = 3) from the salary analyses due to differences in monetary values and uncertainty whether respondent’s answers represented U.S. or Canadian dollars. The salary amounts reported are based on responses to a question that queried the total salary the individual receives from their primary work setting. This amount did not include total yearly income that may be generated from additional sources.
Full-time respondents (N = 277) reported an average annual salary of $78,984 (SD = 33,873) (25th% = $59,500; 50th% = $70,000; 75th% = $93,800) with an average raise of 4.6% (SD = 5.7) over the past 5 years. Part-time respondents (N = 58) reported an average annual salary of $46,227 (SD = 27,015) (25th% = $29,750; 50th% = $41,500; 75th% = $60,000) with an average raise of 3.2% (SD = 3.5). Table II summarizes mean and quartile salary figures by region of the country for full-time respondents. No difference in salary by region was found, F(3, 272) = 0.52.

Gender and Experience
For the remaining salary analyses, data are only reported for full-time respondents, as the sample size for part-time employment was too small to break into further meaningful categories. Males (n = 104) reported a significantly larger average annual salary of $91,548 (SD = 38,986) 25th% = $65,000; 50th% = $83,000; 75th% = $113,000, as compared with females (n = 173) $71,431 (SD = 27,896) 25th% = $55,000; 50th% = $65,000; 75th% = $79,000, t(275) = 4.99, p < .001. Table III summarizes salary broken down by gender and years of experience postdoctoral degree. As can be seen, with the exception of entry level positions, males consistently reported higher salaries than females. Due to sometimes small and uneven numbers across cells, statistical comparisons by gender and experience were not conducted.

Work Settings
Next, survey respondents' salaries were compared across type of work settings, which varied widely (Table IV). As hospitals were by far the most common work setting, salaries and raises in this setting were further categorized by experience level. Table V summarizes mean and quartile salary and raises by years of experience for pediatric psychologists who worked in a hospital setting. Average salary increased incrementally for each experience category with the exception of respondents with 20 or more years of experience. However, median salary was higher for those with 20 or more years of experience.

Academic Appointment
Finally, average salary and raises were described for pediatric psychologists reporting an academic appointment. As summarized in Table VI, salary and raises varied across type and level of academic appointments.

Salary Satisfaction
Satisfaction with salary was assessed through a 7-point Likert scale ranging from 1, very unsatisfied to 7, very satisfied. Average salary satisfaction for the study sample was 4.51 (SD = 1.58), indicating slightly greater than neutral perceptions about salary. Minimal variability in satisfaction was found across gender, work setting, or appointment type; with satisfaction ranging between a mean of 4 and 5 for each of the categories. Salary satisfaction (for full-time respondents) was correlated, r(262) = .36, p < .001, with actual salary amount.

Salary Sources and Determinants
Next we examined the types of revenue-generating activities in which pediatric psychologists participated and level of accountability for revenue generation. Again, data are presented for pediatric psychologists who reported primarily working in a hospital setting. As described above this includes those working in academic medical
centers, as well as medical centers not affiliated with a medical school. This subgroup was chosen, as work setting can clearly affect salary determinants and psychologists working in a hospital setting were by far the largest proportion of respondents ($n = 225$).

### Sources of Revenue

Respondents reported the following activities contributed to their total professional revenue generated (percentages from most to least frequently endorsed): Patient care (83%), research (55%), teaching (43%), administrative activities (42%), consultation (20%), honoraria (14%), service contracts (10%), and book and other royalties (4%).

### Salary Accountability

On average, respondents reported that they were held directly accountable by their institution for generating approximately half, 52% ($SD = 42.44$), of their salary. Outpatient care was the most frequent activity respondents engaged in to generate this portion of their salary, with 56% of the sample reporting spending an average of 52% effort in this activity. Research was next, reported by 33.8% of the sample, who spent an average of 55% effort in this activity. Inpatient care was reported by 27% of the sample with a mean effort of 22%, followed by

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**Table IV. Annual Salary in Dollars and Average Raise in Past 5 Years by Work Setting Reported in Means ($SD$) and Quartiles**

<table>
<thead>
<tr>
<th>Setting</th>
<th>N</th>
<th>$M$</th>
<th>$SD$</th>
<th>25th</th>
<th>50th</th>
<th>75th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private practice</td>
<td>43</td>
<td>84,675</td>
<td>61,340</td>
<td>45,000</td>
<td>70,000</td>
<td>140,000</td>
</tr>
<tr>
<td>Salary</td>
<td>30</td>
<td>3.5</td>
<td>6.0</td>
<td>0</td>
<td>2.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Academic Psychology Department</td>
<td>18</td>
<td>71,037</td>
<td>24,164</td>
<td>52,250</td>
<td>68,840</td>
<td>81,750</td>
</tr>
<tr>
<td>Salary</td>
<td>18</td>
<td>3.2</td>
<td>1.9</td>
<td>2.0</td>
<td>3.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Academic Health Center</td>
<td>152</td>
<td>79,638</td>
<td>28,237</td>
<td>60,000</td>
<td>70,817</td>
<td>94,750</td>
</tr>
<tr>
<td>Salary</td>
<td>132</td>
<td>4.6</td>
<td>4.4</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Hospital (not with medical school)</td>
<td>39</td>
<td>74,184</td>
<td>20,266</td>
<td>61,700</td>
<td>70,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Salary</td>
<td>36</td>
<td>6.1</td>
<td>8.8</td>
<td>2.4</td>
<td>3.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Mental Health Service</td>
<td>7</td>
<td>77,768</td>
<td>22,393</td>
<td>65,000</td>
<td>72,000</td>
<td>94,000</td>
</tr>
<tr>
<td>Salary</td>
<td>7</td>
<td>1.8</td>
<td>1.5</td>
<td>0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>University (other)</td>
<td>4</td>
<td>87,975</td>
<td>14,147</td>
<td>73,575</td>
<td>93,450</td>
<td>96,000</td>
</tr>
<tr>
<td>Salary</td>
<td>4</td>
<td>4.3</td>
<td>1.0</td>
<td>3.3</td>
<td>4.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Outpatient Medical Clinic</td>
<td>7</td>
<td>80,428</td>
<td>21,854</td>
<td>64,000</td>
<td>75,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Salary</td>
<td>7</td>
<td>5.9</td>
<td>8.6</td>
<td>1.0</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>School system</td>
<td>3</td>
<td>68,833</td>
<td>21,179</td>
<td>53,500</td>
<td>60,000</td>
<td>93,000</td>
</tr>
<tr>
<td>Salary</td>
<td>3</td>
<td>1.5</td>
<td>2.1</td>
<td>0</td>
<td>1.5</td>
<td>3.0</td>
</tr>
</tbody>
</table>

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**Table V. Annual Salary in Dollars and Average Raise in Past 5 Years for Pediatric Psychologists Based in a Hospital Setting by Years of Experience Reported in Means ($SD$) and Quartiles**

<table>
<thead>
<tr>
<th>Years of experience</th>
<th>N</th>
<th>$M$</th>
<th>$SD$</th>
<th>25th</th>
<th>50th</th>
<th>75th</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–3</td>
<td>24</td>
<td>58,803</td>
<td>10,026</td>
<td>50,000</td>
<td>59,500</td>
<td>64,500</td>
</tr>
<tr>
<td>Salary</td>
<td>17</td>
<td>4.9</td>
<td>5.9</td>
<td>2.0</td>
<td>3.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Percent raise</td>
<td>46</td>
<td>63,778</td>
<td>14,874</td>
<td>55,000</td>
<td>61,900</td>
<td>66,800</td>
</tr>
<tr>
<td>4–7</td>
<td>43</td>
<td>6.3</td>
<td>7.7</td>
<td>3.0</td>
<td>4.0</td>
<td>7.0</td>
</tr>
<tr>
<td>8–11</td>
<td>26</td>
<td>72,401</td>
<td>20,063</td>
<td>58,500</td>
<td>65,500</td>
<td>75,750</td>
</tr>
<tr>
<td>Salary</td>
<td>22</td>
<td>5.0</td>
<td>3.7</td>
<td>3.0</td>
<td>4.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Percent raise</td>
<td>20</td>
<td>74,853</td>
<td>18,614</td>
<td>61,457</td>
<td>75,843</td>
<td>87,250</td>
</tr>
<tr>
<td>12–15</td>
<td>18</td>
<td>3.9</td>
<td>3.1</td>
<td>2.0</td>
<td>3.0</td>
<td>5.0</td>
</tr>
<tr>
<td>16–19</td>
<td>19</td>
<td>98,783</td>
<td>30,124</td>
<td>75,000</td>
<td>87,000</td>
<td>121,000</td>
</tr>
<tr>
<td>Salary</td>
<td>19</td>
<td>5.7</td>
<td>6.1</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>20+</td>
<td>54</td>
<td>96,281</td>
<td>28,503</td>
<td>73,000</td>
<td>99,261</td>
<td>115,000</td>
</tr>
<tr>
<td>Salary</td>
<td>51</td>
<td>3.8</td>
<td>4.8</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

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16% of the sample engaging in teaching with an average effort of 19% and 15% of the sample performing administrative duties with a mean effort of 23%.

The portion of salary that respondents were not held directly accountable for was covered by the following sources: Hospital (27%), Department of Pediatrics (16%), Medical School (10%), Department of Psychiatry (7%), University (4%), other/unsure (22%). Salary covered by institutions was most frequently committed for administrative activities reported by 35% of respondents, who spent an average of 29% effort. Teaching was reported by 34% of sample, with a mean effort of 18%. Outpatient care was endorsed by 31%, with an average effort of 41%, followed by research, 27% of the sample with 36% effort, and inpatient care, 24% of sample with a mean effort of 26%.

Clarity of Salary Determinants
Over two-thirds of the sample reported that the factors that influenced their salary (72%), and the relative importance of each factor (66.7%), was clear. Respondents indicated that several factors directly affected the amount of salary they received including: federal grants (39%), academic productivity (25%), foundation grants (24%), hours of clinical contact (22%), patient billings (22%), patient accounts receivable (15%), teaching productivity (14%), donor grants (9%), and service contracts (6%). Thirty four percent of the sample indicated that salary from their institution was not affected by the above factors.

Setting Salaries
Finally, we examined position and training of individuals responsible for setting salaries for pediatric psychologists in hospital settings. Almost one-half of the sample, 46%, reported their salary was set by a department chair. For 37% of respondents, this was a physician and for 9% of the respondents this was a psychologist. Fifteen percent of the sample reported their salary was set by a division director (10% physician, 5% psychologist). Six percent

| Appointment | Research |  |  |  |  |  |  |  |
|-------------|---------|  |  |  |  |  |  |  |
| Instructor  | 2       | 1  | 9  | 3  | 3  | 12  | 2  |
| M           | 62,500  | 3.0| 72,288 | 6.1 | 46,333 | 3.3 |
| SD          | 3,535   | 1.0| 31,150 | 7.8 | 21,548 | 0.6 |
| 25%         | 60,000  | 3.0| 53,500 | 2.3 | 22,000 | 3.0 |
| 50%         | 62,500  | 3.0| 60,000 | 4.0 | 54,000 | 3.0 |
| 75%         | 65,000  | 3.0| 78,000 | 5.8 | 63,000 | 4.0 |
| Assistant professor | 12 | 9  | 31 | 27 | 16 | 12 |
| M           | 65,333  | 6.6| 71,518 | 3.7 | 67,893 | 4.7 |
| SD          | 10,575  | 5.1| 24,849 | 2.7 | 26,407 | 4.1 |
| 25%         | 54,625  | 2.0| 57,000 | 2.0 | 53,000 | 2.0 |
| 50%         | 64,250  | 5.0| 65,000 | 3.0 | 61,900 | 3.5 |
| 75%         | 76,500  | 10.5| 80,000 | 5.0 | 86,000 | 6.3 |
| Associate professor | 13 | 13 | 10 | 10 | 14 | 13 |
| M           | 84,167  | 3.7| 81,900 | 3.8 | 67,381 | 3.9 |
| SD          | 21,297  | 0.9| 27,432 | 3.2 | 14,685 | 3.3 |
| 25%         | 63,500  | 3.0| 57,500 | 1.8 | 60,750 | 2.5 |
| 50%         | 88,000  | 4.0| 78,000 | 3.0 | 68,731 | 3.0 |
| 75%         | 103,250 | 4.5| 104,750 | 5.0 | 74,458 | 4.5 |
| Full professor | 14 | 14 | 3  | 3  | 9  | 5  |
| M           | 121,857 | 6.4| 82,000 | 3.7 | 109,811 | 3.3 |
| SD          | 26,405  | 5.9| 10,583 | 1.5 | 22,027 | 1.5 |
| 25%         | 98,875  | 4.0| 70,000 | 2.0 | 93,150 | 1.8 |
| 50%         | 127,500 | 5.0| 86,000 | 4.0 | 102,000 | 4.0 |
| 75%         | 140,500 | 7.3| 90,000 | 5.0 | 130,000 | 4.5 |
of the sample indicated a chair and division director collaborated in determining salary, (1%, two physicians; 5%, physician and psychologist). Twenty seven percent of respondents reported salary was set by some other source (e.g., dean, hospital administration), and 7% were not aware of who determined their salary.

**Performance Expectations and Evaluation**

Performance Expectations in Hospital Settings

Respondents were queried about whether or not they had performance expectations. Again the subgroup of pediatric psychologists who worked in a hospital setting \((n = 225)\) was selected. The majority (72%) of this subset indicated having specific criteria. Clinical contact was paramount for hospital-based pediatric psychologists, with 32% reporting specific performance criteria. Frequency of respondents indicating performance criteria across other activities included, number of publications (22%), hours teaching (20%), patient billings (19%), administrative activity (18%), patient accounts receivable (9%), number of grants (8%), RVUs (4%), and income from service contracts (3%). Average satisfaction with performance criteria was slightly favorable \((n = 185, M = 4.56, SD = 1.59)\) based on the 7-point scale (1, very unsatisfied; 4, neutral, and 7, very satisfied).

Performance Evaluation in Hospital Settings

Eighty-one percent of the hospital-based pediatric psychologists reported receiving an annual performance evaluation. This evaluation was most frequently conducted by a department chair, physician (29%), followed by division director, psychologists (20%), department chair, psychologist (15%) and division director, physician (15%). Patient hours were ranked as the most important activity in determining a performance evaluation \((\text{average rank} = 2.17)\), followed by grants (2.27), patient billings (2.52), publications (2.98), administrative activities (3.39), patient accounts receivable (3.40), and teaching (3.57). Satisfaction ratings, based on a 7-point scale, indicated a slightly positive view regarding the quality and relevance of performance evaluations \((n = 177, M = 4.77, SD = 1.71)\).

**Discussion**

The results of this study update and expand previously established benchmarks for work performance of pediatric psychologists. This study presents current information on salary ranges for pediatric psychologists across region, settings, experience, and gender. There were marked salary disparities present for women in our sample at the junior, mid, and senior levels. These findings are consistent with previous reports that looked more broadly at medical school psychologists (Black & Holden, 1998; Williams & Wedding, 1999) and found salary inequities as a function of gender across years of experience and ranks, and despite similar levels of academic productivity. These data are particularly concerning for the field given the rapid growth of female psychologists working in medical school settings, including pediatric psychologists (American Psychological Association, 1995). The marked gender-based salary disparity has implications both at the individual level with regard to job satisfaction, as well as for the field of pediatric psychology and its perceived importance within medical school settings. While these results regarding salary and gender are concerning and disappointing, it must be noted that this study was not constructed to fully investigate factors responsible for the discrepancy (e.g., time off for childbearing and rearing, previous history of part-time status) in power, sampling, or item content. Thus, the results should be interpreted with caution and investigated more thoroughly in future studies.

The hospital-based psychologists in our sample were held accountable for generating over half (52%) of their salary. They achieved this in a variety of ways, with the majority generating this salary through clinical work; while only one-third of the sample reported utilizing research funding to cover some portion of their salary. Our data suggests that the clinical demands in hospital settings continue to remain high with over 80% of our sample involved in clinical work. This is significantly higher than was reported previously by Drotar et al. (1993). These data raise the question of whether the need to raise money is pushing pediatric psychologists to engage in increasing levels of clinical activity. Alternatively, increased clinical activity may be related to a growing recognition of what pediatric psychologists do, the cost-offset benefits of our work, and the importance of our work in overall patient care. However, regardless of its origins, increased clinical time demands have the potential to negatively impact the course and pace of research funding for pediatric psychologists in academic medical centers.

There was also wide variability in who covered the portion of salary for which individual psychologists were not accountable. This highlights the heterogeneity of administrative models under which pediatric psychology exists. Over half of the survey respondents reported that they were based in a department of pediatrics, with a quarter indicating they were in psychiatry. How departmental home affects salary, work expectations, and satisfaction would be very helpful in defining “best”
models of success for pediatric psychologists in hospital settings.

Over two-thirds of survey respondents reported that they had clear productivity expectations set for them, which highlights the increasing demands for financial accountability and viability within hospital settings. For more than half of the respondents it was nonpsychologist, physician colleagues who were setting both expectations and salary compensation. Unfortunately data from the current survey does not allow for detailed analysis of group productivity expectations across settings. For example questions of typical number of patients seen, charges billed or RVUs earned per day for pediatric psychologists in a hospital setting are not possible to answer. However, obtaining this level of information for benchmarks in clinical care, teaching, and research is clearly a critical next step as it would facilitate setting salaries and work expectations for pediatric psychologists.

Although this is the only recent employment and salary survey specific to pediatric psychologists that we are aware, over the past decade there have been broader surveys of medical school psychologists (Black & Holden, 1998; Williams & Kohout, 1999; Williams & Wedding, 1999). Considering current findings in light of previous broader survey results provide an important context for interpreting these data. This study had a significantly higher percentage of female (68%) as compared to male respondents; this has not been found in past surveys. It is unclear whether this reflects a gender composition that is unique to pediatric psychology, continued growth of females in psychology as a whole, or response bias. Our survey respondents were very similar to those in previous surveys of age, time since doctoral degree, years in current position, and need to generate a portion of their salary. Although medical school psychologists are most typically based in departments of psychiatry (Williams & Wedding, 1999), most of the respondents in our survey reported appointments in pediatrics; likely a reflection of their area of specialization. Further investigation in future studies of the impact of departmental home on productivity and salary expectations would be useful. Despite differences in academic home, findings were consistent with past results regarding academic rank and tenure status, with most of the respondents at the assistant professor level with a non-tenure track appointment (Williams & Kohout, 1999). Interestingly, in 1996 Williams & Wedding (1999) reported a median base salary for full-time medical school psychologists of $66,100; our sample of pediatric psychologists based in academic health centers surveyed 7 years later reported only slightly higher median salary of $70,817. Although it is not possible to make direct comparisons between these two numbers, analysis of salary and productivity expectations for medical school psychologists by area of specialization (i.e., pediatric psychology, neuropsychology, adult behavioral medicine) would be helpful in further advancing benchmarks in our field.

There are limitations of this study that need to be considered and that offer direction for future research. First, while we had a 45% response rate to our survey, only one-third (34%) of the surveys were complete and usable for analysis. Thus, our study sample may not be representative of the population of pediatric psychologists. Our study was conducted anonymously as sensitive and private information (e.g., salary, satisfaction) was collected. However, by doing so we did not have the opportunity to compare responders to nonresponders on any variables. Sampling bias may have influenced our results, although the exact nature of the bias is difficult to ascertain. Second, these data are based on self-report and therefore may have been affected by self-report biases (e.g., estimates of hours worked). Given the nature of the questions and sample, these biases were likely small; however, some results may differ if departmental administrators were surveyed regarding information for the pediatric psychologists in their group. Third, although information on specific categories and subsamples (e.g., gender) was instructive, small numbers precluded some statistical comparisons and the data should be interpreted cautiously. Fourth, it is possible that data presented at the division/department level is skewed by the fact that the unit of sampling for study data was individual psychologists. Larger departments may have had more psychologists responding to the survey, thus skewing results with regard to number of faculty, trainees, and so on. As survey data was collected anonymously it is not possible to evaluate whether this occurred. This limitation highlights the importance of future studies examining similar variables at the level of program administrators or directors.

Our survey did not include information about either individual or program level productivity. These data are crucial for program administrators and directors. A greater focus on defining and describing successful clinical and academic pediatric psychology programs at the program level would be extremely valuable for the field. While there is a great degree of heterogeneity across pediatric psychology programs in hospital settings, learning how successful programs make themselves financially viable is of paramount importance to continued positive growth (Bradford, 2004; Drotar, 2004; Koocher, 2004; Mitchell & Roberts, 2004; Rae, 2004).
Although we have much to learn about individual and program level benchmarks and models, our data underscores the emerging success of pediatric psychology in academic hospital settings. One such indicator is that twenty of the respondents have achieved full professor status on tenure tracks in medical school settings. For a young field establishing itself outside the traditional academic home of a psychology department, this is a clear indicator of success and relevance.

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References
Appendix

Survey: Expectations and Benchmarks for the Work Performance of Pediatric Psychologists

Demographic characteristics
1. What is your age?
2. What is your gender?
   ○ Male
   ○ Female
3. What is the highest degree you have completed?
   ○ MA
   ○ PhD
   ○ PsyD
   ○ Other (specify) ________________________
4. What is your current work status?
   ○ Full time
   ○ Part time
5. On average, how many hours do you work per week? ________________________ hours
6. How many years of clinical experience do you have after PhD (or highest degree)? ________________________ years
7. In what state do you work? ________________________

Setting characteristics
8. Are you currently engaged in work with a pediatric population?
   ○ Yes
   ○ No
9. In what type of work setting do you work?
   ○ Private practice
   ○ Academic Department of Psychology
   ○ School of Medicine/Academic Health Center
   ○ Hospital (not affiliated with a medical school)
   ○ Mental Health Service Agency
   ○ Other (specify) ________________________
10. Do you work in a hospital setting?
    ○ Yes
    ○ No–go to Q. 12
11. If yes, in what type of hospital do you work?
    ○ Children's Hospital (not for profit)
    ○ Children's Specialty Hospital (e.g., Shriners)
    ○ Children's Rehabilitation Hospital
    ○ Children's Hospital within a General Hospital
    ○ General Hospital
    ○ Other Hospital (specify) ________________________
12. How many years have you been in your current setting? ________________________ years

Academic appointment
13. Are you currently on an academic track?
    ○ Yes
    ○ No–go to Q. 17
14. If yes, what is the academic track of your appointment?
    ○ Tenure
    ○ Nontenure
15. What type of academic appointment do you have?
    ○ Research
    ○ Clinical
    ○ Clinician-Educator
    ○ Other (specify) ________________________
16. What is your current academic rank?
    ○ Instructor
    ○ Assistant professor
17. What is the department of your primary appointment?
  - Pediatrics
  - Psychiatry
  - Neurology
  - Psychology
  - Behavioral Pediatrics
  - Developmental Pediatrics
  - Other (specify) ______________________

18. Within your primary department, what is your division?
  - Psychiatry
  - Neurology
  - Oncology
  - Psychology
  - Behavioral Pediatrics
  - Developmental Pediatrics
  - Other (specify) ______________________

19. How many of the following are in your department?
   - Psychology faculty? ______
   - Licensed staff psychologists—non faculty? ______
   - Predoctoral graduate students in psychology? ______
   - Predoctoral interns in psychology? ______
   - Postdoctoral fellows in psychology? ______

20. What is your annual professional revenue generated from all sources? $_ _ _, _ _ _, _ _ _

21. What is your annual salary from your institution? $_ _ _, _ _ _, _ _ _

22. What was your average percentage raise over the past 5 years? _______________%

23. Please indicate which activities contribute to the total professional revenue you generate and specify percent of your total professional revenue (if known)
   - Patient care/practice _______________%
   - Research _______________%
   - Teaching _______________%
   - Administrative activities _______________%
   - Service contracts with schools or agencies _______________%
   - Consultation (outside) _______________%
   - Book and other royalties _______________%
   - Honoraria _______________%
   - Other (specify) _______________%

24. What percentage of your salary from your institution are you expected to generate? _______________% (If 100%—go to Q. 27)
   (By expected we mean any portion that you are held directly accountable for generating.)

25. Who covers the cost of the portion of your salary that you are NOT expected (i.e., not held directly accountable) to directly generate?
   - University
   - Medical School
   - Hospital
   - Department of Pediatrics
   - Department of Psychiatry
   - Other (specify) ______________________
   - Don't know

26. What specific activities is this portion of your salary (i.e., the part that you are NOT directly accountable for generating) committed for you to conduct? Please specify percent effort per 1 FTE (full-time equivalent) (if known).
   - Inpatient care _______________%
   - Outpatient care _______________%
Appendix continued

- Research ____________ %
- Teaching ______________ %
- Administrative activities ____________ %
- Other (specify) ____________ %
- Don't know ______________ %

27. What specific activities do you engage in to generate the portion of your institutional salary that you are directly responsible for? Please specify percent effort per 1 FTE (if known).
- Inpatient care ____________ %
- Outpatient care ____________ %
- Research ____________ %
- Teaching ____________ %
- Service contracts with schools or other agencies ____________ %
- Administrative activities ____________ %
- Consultation ____________ %
- Other (specify) ____________ %

28. Which of the following items affect the amount of salary you receive from your institution? (check all that apply)
- Hours of clinical contact
- Patient billings
- Patient accounts receivable
- Service contracts with schools or other service agencies
- Academic productivity (publications)
- Teaching productivity
- Federal grants
- Foundation grants
- Donor grants
- Other (specify) ____________
- Salary amount not affected by above

29. Factors that influence my salary are clear to me?
- Yes
- No

30. The relative importance of my salary determinants is clear to me.
- Yes
- No–go to Q. 32

31. Please rank order (1, 2, 3 …) the relative importance of the following items in determining your salary. Each number ranking should be assigned once. Rank only items that apply.

  1. Hours of clinical contact
  2. Patient billings
  3. Patient accounts receivable (money collected)
  4. Service contracts with schools or other agencies
  5. Academic productivity (publications)
  6. Academic productivity (grants)
  7. Teaching productivity
  8. Administrative activities

32. Do you have an administrative title or position?
- Yes
- No–go to Q. 35

33. If yes, what is it?

34. Does your administrative position affect your salary?
- Yes (specify how) ____________
- No

35. Who decides your salary?
- Department chair (physician)
- Department chair (psychologist)
- Division director (physician)
36. On a scale from 1 to 7, please rank the level of satisfaction with your annual salary from your institution. 

Very unsatisfied 1 2 3 4 5 6 7 very satisfied

Performance expectations and evaluation

37. Do you receive an annual performance evaluation?

○ Yes
○ No—go to Q. 42

38. If yes, who conducts it? (indicate all that apply)

○ Department chair (physician)
○ Department chair (psychologist)
○ Division director (physician)
○ Division director (psychologist)
○ Other (specify) _______________

39. The relative importance of factors that influence my performance evaluation is clear to me

○ Yes
○ No—go to Q. 41

40. Please rank order (1, 2, 3 …) the relative importance of the following items as they influence your performance evaluation. Each number ranking should be assigned once. Rank only items that apply

____ Patient hours
____ Patient billings
____ Patient accounts receivable (money collected)
____ Academic productivity (publications)
____ Academic productivity (grants)
____ Teaching productivity
____ Administrative activities

41. Please rank the level of satisfaction with the quality and relevance of your performance evaluation

Very unsatisfied 1 2 3 4 5 6 7 very satisfied

42. Of the following, indicate areas in which you must meet specific performance criteria and specify these criteria:

○ The criteria for my job performance are not clear ______________________________
○ Hours of clinical contact (per week or year) (specify) ______________
○ Patient billings (per week or year) (specify) ______________
○ Patient accounts receivable (money collected) (specify) ______________
○ Relative value units (RVU) (specify) ______________
○ Income from service contracts (specify) ______________
○ Number of publications (per year) (specify) ______________
○ Number of research grants (per year) (specify) ______________
○ Dollar amount of research grants (per year) (specify) ______________
○ Hours of teaching (per year) (specify) ______________
○ Annual percentage income from clinical sources (specify) ______________
○ Annual percentage income from research grants (specify) ______________
○ Annual percentage income from teaching activities (specify) ______________

43. Please rank the level of satisfaction with the specific performance criteria or standards that you have to meet

Very unsatisfied 1 2 3 4 5 6 7 very satisfied

Recommendations: If you were in a position to change any of the following what would you recommend?

44. Ways to improve the determinants of my salary: ______________________________
45. Ways to improve my performance evaluation: ______________________________
46. Ways to improve the expectations for my performance: ______________________________