
Research Productivity and Academic Lineage in Clinical Psychology: Who Is Training the Faculty to Do Research?



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This study examined the research productivity of graduates of American Psychological Association accredited, clinical psychology doctoral programs who currently hold faculty positions. Normative averages of aggregated publications over the 2000–2004 five-year period were computed. Rankings based on the mean number of publications produced by graduates of each training program and the number of graduates were significantly correlated with *U.S. News & World Report* rankings, although some important differences were noted. Programs that have produced a larger number of faculty members were also more highly ranked but there was increased variability for the number of publications produced by the larger numbers of graduates. Objective outcome analyses such as graduates' publications may be preferable to more subjective reputation rankings of programs. Particularly for scientist–practitioner and clinical–scientist training programs, outcome data such as graduates' publications is an important aspect of the programs' continued self-study. © 2006 Wiley Periodicals, Inc. *J Clin Psychol* 62: 893–905, 2006.

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Analyses of the outcomes of graduate education and training is an important component of the ongoing assessment of program quality (Belar, 2000; Stricker, 2000). Organizations such as the National Research Council (NRC, 1995a, 1995b), the Council of Graduate Schools (www.cgsnet.org), regional and national accrediting bodies, university deans,

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department chairs, and program directors seek to find objective ways to describe and compare outcomes of their graduate units. The NRC strives to ask questions that training programs find relevant such as effectiveness of educational outcomes and citation indices (Hanges & Lyon, 2005). Often, however, attempts to rank programs involve impressionistic assertions of quality and standing in comparison to peer institutions. A national newsmagazine, *U.S. News and World Report (USNWR)*, publishes rankings of colleges and universities, departments, and degree programs based on a reputation survey (*U.S. News & World Report Online*, 2004). Often, even the more objective approaches such as the NRC evaluation involve subjective components and seem to be closely related to the *USNWR* rankings (Hanges & Lyon, 2005).

An empirical approach for evaluating objective outcomes of individual programs requires establishing some norms for comparison. For example, Ilardi and colleagues examined training institutions of the doctorates currently on graduate faculty in clinical psychology programs accredited by the American Psychological Association (Ilardi, Rodriguez-Hanley, Roberts, & Seigel, 2000; Ilardi & Roberts, 2002). This analysis provided comparative figures about how programs perform in producing faculty members. Maher (1999) used the data from the 1995 NRC evaluation to compare research-oriented and professional-applied oriented doctoral programs. In another secondary analysis, Yu et al. (1997) ranked training programs based on the scores of the Examination for Professional Practice in Psychology (EPPP) taken by graduates of each program. These types of analyses help define parts of a picture of graduate outcomes.

Another strategy for comparing programs and departments has been to examine research productivity. In 1977, Cox and Catt investigated rates of publication in APA journals as a standard of research productivity among academic psychologists and as an objective measure of quality. Since then researchers have attempted to refine Cox and Catt's (1977) approach, by using particular journals or breaking down analyses to look at the productivity of subgroups of psychologists within departments of psychology (Golden, Kuperman, & Osmon, 1980; Oliver, Blair, Gorman, & Woehr, 2005). These studies analyzed the productivity of current faculty members but did not examine the outcomes of training efforts by studying the scholarly productivity of graduates of clinical programs. The present study examines doctorate-granting clinical psychology programs accredited by the APA to determine an important training outcome—research productivity of the graduates over a 5-year period. A 5-year time period was chosen based on previous research (Oliver et al., 2005). The objective of this evaluation is not to provide a ranking of programs by perceived quality or reputation status but instead to provide normative data and a listing of programs based on the types and amount of research their graduates produce.

Methods

Participants: Identifying Graduates and Training Institutions

The APA 2004 Directory listed 224 programs that grant doctoral degrees in clinical psychology (APA Online, 2004a). Fifty-five of those programs were excluded because they grant only PsyD degrees, including professional schools of psychology, whose missions are generally to produce practitioners and not researchers (Barrom, Shadish, & Montgomery, 1988; Silvera, Laeng, & Dahl, 2003). This exclusion criterion resulted in 169 university-based, doctoral-level clinical psychology programs. Three of these programs had closed or were phasing out their clinical degree programs, resulting in 166 currently active programs.

Core faculty members of those training programs were identified using a definition based on Ilardi et al. (2000). All members of the professional staff faculty were included unless they were listed as an adjunct, courtesy, clinical professor, supervisor, instructor, or professor emeritus in public information released about the individual programs. To ensure accurate listings of current core faculty, each program was sent an e-mail asking about their current core clinical faculty. Most of the programs ($n = 135$) directed the inquiry to their program Web site, although several clarified their current list in the e-mail citing instances of retirement or faculty movement to another university. Alternatively, some of the programs ($n = 7$) preferred to mail the information, and in those cases faculty information was taken from the brochure sent by mail. In cases where there was no response to the initial e-mail request ($n = 40$), a second e-mail was sent 2 weeks later and if there was still no response ($n = 19$), the investigators obtained the information from the university's clinical psychology program Web site.

Research productivity data were collected on 1,921 core faculty members at the 166 university-based doctorate-granting clinical psychology programs accredited by the American Psychological Association. Of these faculty members, five had medical degrees exclusively and were eliminated from the dataset, because they had no PhD training program as an alma mater. The remaining 1,916 individuals were then traced back to the institution from which they received their doctorate. This distribution resulted in identifying 215 universities in the United States and Canada, and a group of 18 international universities.

Information was then gathered concerning the individual's degree type, year of graduation, and publication history for the previous 5-year period (01/01/2000–12/31/2004). Information regarding the faculty members' degree, year of graduation, and graduating institution was found primarily through Web sites and links to curriculum vitas. When information was not listed in the faculty member's university Web site, this information was gathered by searching for their dissertation abstract in *PsycINFO*, by Internet searches using their name and affiliation, or by e-mailing the individual to fill in missing information. A few universities have more than one accredited clinical psychology program (e.g., University of Kansas, University of Virginia, York University), sometimes in separate academic departments and schools. Because of the difficulty distinguishing between the graduates' degree programs they were counted as graduates of the university.

To maintain the focus of the current study on the research productivity of the current trainers based on the institution at which they trained, professors whose alma maters were not in the current list of 166 programs had to be removed from the analysis. This resulted in a final list of the 1,737 current professors who were core faculty in one of the 163 APA accredited doctorate-granting clinical psychology programs, after collapsing dual programs within universities.

Measures: Research Productivity

PsycINFO was the primary data source for the measurement of research productivity. *PsycINFO* is an electronic bibliographic database containing abstracts and citations of publications within the field of psychology. Maintained by the APA, it currently contains over 2,000,000 references for texts written from 1887 to the present. This database can be considered the most comprehensive resource for author and topic searches in the area of psychology (APA Online, 2004b). Names of graduates for each training institution were entered into *PsycINFO* as they appeared in the information provided by the faculty members' current program affiliation. Alternative variations on author names were also searched.

In some cases, names listed on Web sites were not consistent with publication names. In all cases where a name search yielded zero publications in the prescribed period, names were rechecked and searches for name variations and birth names were performed.

Procedure

Each publication was then tallied by type (e.g., peer-reviewed journal articles, chapters, edited books, etc.) to provide every core faculty member with a total number of publications for each type of publication within the period being evaluated, and an overall total number of publications. Equal credit was given for each type of publication. Equal credit was also given for authorship position (i.e., equal credit for first author vs. third author).

Results

First, means, medians, and modes were calculated for the numbers of publications produced by program graduates who met criterion. Second, overall rank orders were computed for the entire list of universities on a list of variables including total number of faculty members produced, total number of publications, average number of publications, and median number of publications. Table 1 presents the entire rank listing of APA-accredited Ph.D. programs in clinical psychology. Table 1 also includes the number of graduates who are now faculty members, total number of their publications, and the *USNWR* rankings for 2004.

The mean number of faculty members produced across the 163 training programs was 10.64 ($SD = 9.73$). The median number of faculty members produced was eight. Nine current programs had no graduates serving as current faculty members. There were 158 (9.17%) individuals currently listed as core faculty members at the same University where they received their PhD. The average year of graduation with a PhD degree was 1985 ($SD = 11.18$ years).

A count of the numbers of types of publications totaled among the 1,737 faculty members showed publication of a total of 13,805 peer-reviewed journal articles ($M = 7.95$, $SD = 9.59$); 2,495 chapters ($M = 1.44$, $SD = 3.11$); 158 authored books and 203 edited books were combined together for a book total for each author ($M = 0.21$, $SD = .65$). Due to the low frequency of review articles, encyclopedias, and non-peer-reviewed journal articles, these items were removed from subsequent analyses.

Across all programs, the average number of publications per graduate over the 5-year period inclusive of 2000–2004 was 9.77 ($SD = 11.76$), with a range between 0 and 118. The average number of publications per program over this 5-year period was 102.9 ($SD = 101.8$, range = 0–632). The mean number of publications per program was also calculated and those averages were compared to each other. There was a small, but significant correlation between year of graduation and number of publications ($r = -.09$, $p < .01$). This result shows a slight advantage in the average number of publications for those who are farther along in their careers, with those who have graduated more recently having had less time to build their research programs. However, due to the small correlation, this relationship requires further inquiry that is beyond the scope of this study.

A correlation matrix was completed to help understand the relations between the different rankings (see Table 2). Using the Bonferroni approach to correct for Type I error across the 10 correlations, a p value of less than .005 (.05/10) was required for significance. All of the rankings were significantly correlated to one another at the $p < .001$ level. The ranking of programs based on the number of current faculty members they had

produced was highly correlated to the ranking of programs based on the total number of publications produced ($r = .93, p < .001$). In other words, the rank listing for the total number of graduates' publications differs only slightly from the rank listing for number of faculty members. This is intuitive because a university that has produced more graduates who are now faculty members would be expected to have more total publications.

The ranking based on the mean number of publications produced by the different programs was significantly correlated with all the other rankings, but was only moderately correlated to ranking based on the number of faculty ($r = .47, p < .001$) and even less well correlated to the rankings provided by *U.S. News & World Report* ($r = .36, p < .001$). The rankings based on mean number of publications appear to be measuring a different construct than the *USNWR* rankings. They may also be a more accurate representation of research productivity averages than the total number of publications produced because it controls for size of program.

Other correlations were computed between types of publication data to examine some of these relationships more closely beyond the rankings (see Table 3). A Bonferroni correction was also used in these analyses to correct for Type I error across the 12 correlations, with a p value of less than .004 (.05/12) needed for significance. Total number of publications produced by the graduates of a program was significantly correlated with the number of graduates produced ($r = .93, p < .001$). As the number of graduates for a program increases, the variability of their publication rates also increases, which is shown by the significant correlation between the number of graduates and the standard deviation based on the mean number of publications ($r = .44, p < .001$).

Another facet of the data is the median number of publications produced by a set of graduates. As a school produces more graduates, who produce more variability in the number of their publications, their median number of publications also tended to increase. Median number of publications was significantly correlated with total number of publications ($r = .92, p < .001$), and was also significantly correlated with the total number of graduates who became faculty members ($r = .85, p < .001$). In other words, the greater number of faculty members produced, the greater the chance that the research productivity of the average faculty member would be higher. The maximum number of publications produced by the most productive researcher from each program was significantly correlated with the total number of graduates ($r = .63, p < .001$) and the median number of publications produced by those graduates ($r = .68, p < .001$). In other words, the more graduates who became faculty members, the greater the chance that some of them will produce higher than average numbers of publications.

The *USNWR* rankings were significantly correlated with the total number of graduates who became faculty members ($r = -.72, p < .01$) and with the standard deviation based on the mean number of publications by those graduates ($r = -.32, p < .01$), but were more modestly correlated to the mean number of publications produced by those graduates ($r = -.28, p < .01$). The negative correlations are due to the nature of ranking systems, with a lower number signifying a higher rank. This result suggests that, as a program produces more graduates who become faculty members, other professionals in the field may raise their estimation of the impact or reputation of that program, but possibly only based on the performance of one or two of those graduates.

Discussion

The results of this study revealed that the average faculty member who graduated from a clinical psychology program had an average of 9.59 publications (peer-reviewed journal articles, chapters, and books) over a 5-year period, or less than two per year. The modal

Table 1
 APA-Accredited Training Institutions Granting a PhD in Clinical Psychology

Training institution (In alphabetical order)	# of graduates who are current faculty	Rank on # of graduates who are current faculty	Total # of publications	Rank on total # of publications	M # of publications	SD on # of pubs	Mdn # of pubs	Rank on M # pubs	Rank on Mdn # pubs	USNWR ranking
Adelphi University	4	108	23	109	7.25	6.97	5.5	110	68	120
University of Alabama	22	18	144	45	6.77	7.37	7	98	59	68
University of Alabama at Birmingham	8	81	33	101	4.50	3.62	2.5	131	90	62
University at Albany/State University of New York	12	56	110	54	9.58	6.93	11	70	50	38
American University	4	108	39	94	10.25	5.30	2	62	100	77
University of Arizona	8	81	43	90	5.75	4.19	4.5	118	78	26
Arizona State University	11	60	105	56	9.55	6.70	4	65	83	38
University of Arkansas	3	125	30	107	10.00	8.15	3.5	59	86	120
Auburn University	6	96	32	106	5.33	4.19	1	119	116	68
Binghamton University/State University of New York	11	60	87	65	7.91	5.34	8	82	55	68
Biola University	4	108	14	130	3.50	3.41	1.5	134	107	
Boston University	9	73	54	88	6.33	6.55	4.5	108	78	32
Bowling Green State University	8	81	52	89	6.50	6.56	2.5	99	90	77
Brigham Young University	5	100	28	109	5.80	4.15	1	114	116	92
University of British Columbia	16	41	199	29	12.94	10.60	12.5	28	40	
University at Buffalo/State University of New York	14	46	177	34	12.93	11.55	10.5	24	53	44
University of California, Berkeley	16	41	82	67	5.25	3.74	6.5	123	63	2
University of California, Los Angeles	49	1	632	1	13.16	11.23	67.5	21	1	1
Alliant: California School of Professional Psychology—Fresno	4	108	4	142	1.00	1.41	0.5	150	125	
Alliant: California School of Professional Psychology—Los Angeles	8	81	24	116	3.13	3.60	3.5	139	86	
Alliant: California School of Professional Psychology—San Diego	1	150	11	133	11.00	7.78	1.5	51	107	
Carlos Albizu University—San Juan Campus	9	73	0	149	0.11	0.24	0	154	138	
Case Western Reserve University	10	69	32	104	3.30	3.22	1.5	138	107	55
Catholic University of America	5	100	60	83	12.00	8.47	2.5	36	90	92
University of Central Florida	0	157	0	152	0.00	0.00	0	154	138	
Central Michigan University	0	157	0	152	0.00	0.00	0	154	138	
University of Cincinnati	7	89	37	100	5.29	4.77	1.5	120	107	100
City University of New York at City College	20	27	94	59	4.90	4.62	8	129	55	113

Clark University	8	81	40	95	5.00	5.61	4.5	124	78	68
University of Colorado at Boulder	12	56	141	42	12.67	12.18	29.5	43	10	15
Concordia University	4	108	24	118	6.00	4.63	2	105	100	
University of Connecticut	17	37	156	39	9.53	8.42	11	69	50	55
Dalhousie University	5	100	26	112	5.40	2.87	1	121	116	
University of Delaware	5	100	59	83	12.00	10.76	0.5	41	125	62
University of Denver	7	89	70	73	10.43	4.97	13	59	37	49
DePaul University	14	46	81	67	6.00	6.80	6.5	109	63	92
University of Detroit Mercy	1	150	1	149	1.00	0.71	0	150	138	
Drexel University	3	125	22	122	7.33	4.27	0	90	138	
Duke University	17	37	208	25	12.76	9.76	16.5	32	29	11
Duquesne University	2	138	5	140	2.50	1.89	0.5	144	125	
Emory University	7	89	34	103	4.86	4.03	3	126	88	20
Fairleigh Dickinson University	4	18	25	112	6.75	5.04	4	101	83	
The Fielding Institute	2	138	3	146	1.50	1.50	0	147	138	
Rosalind Franklin University of Medicine and Science	2	138	38	99	19.00	6.67	1.5	3	107	92
University of Florida	25	15	293	15	12.04	12.41	41.5	45	3	20
Florida State University	20	27	238	23	12.30	12.17	13.5	39	35	44
Fordham University	5	100	39	95	8.00	5.66	5.5	84	68	100
Fuller Theological Seminary	4	108	13	127	4.50	3.99	2.5	136	90	
Gallaudet University	0	157	0	152	0.00	0.00	0	154	138	
George Mason University	1	150	8	138	8.00	5.66	1	81	116	
George Washington University	4	108	22	122	5.50	4.10	1	115	116	77
University of Georgia	33	6	324	10	10.06	8.68	19	61	23	32
Georgia State University	3	125	37	95	13.33	8.96	0.5	29	125	100
University of Hawaii at Manoa	5	100	55	85	11.60	9.93	5.5	51	68	68
University of Houston	13	51	87	65	6.69	6.18	5	97	75	77
Howard University	2	138	3	146	1.50	1.50	0.5	147	125	
Idaho State University	0	157	0	152	0.00	0.00	0	154	138	
University of Illinois at Chicago	11	60	135	48	12.36	9.40	13	31	37	49
University of Illinois at Urbana-Champaign	48	3	355	4	7.69	6.45	37.5	89	6	8
Illinois Institute of Technology	4	108	23	116	6.25	5.19	2	110	100	113
Indiana University	27	11	317	11	12.15	9.83	29.5	44	10	4
Indiana University—Purdue University Indianapolis	0	157	0	152	0.00	0.00	0	154	138	113
University of Iowa	21	21	250	21	12.10	12.14	13.5	38	35	15
Jackson State University	0	157	0	152	0.00	0.00	0	154	138	
University of Kansas (2 programs included)	18	35	154	41	8.67	7.02	18.5	78	26	32
Kent State University	9	73	61	81	6.78	5.90	5	96	75	77
University of Kentucky	11	60	67	74	6.27	6.39	4.5	104	78	49

(continued)

Table 1
Continued

Training institution (In alphabetical order)	# of graduates who are current faculty	Rank on # of graduates who are current faculty	Total # of publications	Rank on total # of publications	M # of publications	SD on # of pubs	Mdn # of pubs	Rank on M # pubs	Rank on Mdn # pubs	USNWR ranking
Loma Linda University	0	157	0	152	0.00	0.00	0	154	138	
Long Island University	3	125	22	120	7.67	5.71	2.5	90	90	
Louisiana State University	17	37	160	40	9.47	8.13	14	67	32	77
University of Louisville	3	125	34	102	11.67	11.91	1.5	48	107	100
Loyola University of Chicago	5	100	63	76	12.80	10.06	6	26	67	77
University of Maine	4	108	67	75	16.75	14.34	1.5	48	107	100
University of Manitoba	4	108	13	131	3.25	2.07	0	136	138	
Marquette University	1	150	3	142	4.00	2.83	0.5	139	125	113
University of Maryland Baltimore County	2	138	4	142	2.00	2.00	0	145	138	
University of Maryland College Park	10	69	86	64	8.80	8.08	6.5	77	63	38
University of Massachusetts at Amherst	20	27	124	49	6.45	5.55	12	103	44	
University of Massachusetts at Boston	0	157	0	152	0.00	0.00	0	154	138	77
McGill University	30	8	356	5	12.13	8.85	12	40	44	
The University of Memphis	21	21	184	33	8.90	6.79	12.5	74	40	92
Miami University (OH)	2	138	54	81	30.50	24.30	11	1	50	100
University of Miami (FL)	19	32	170	36	9.05	7.34	14	73	32	26
University of Michigan	30	8	206	28	7.00	7.24	11.5	95	48	15
Michigan State University	17	37	147	44	8.82	5.98	12	76	44	49
University of Minnesota	37	5	559	3	15.46	12.23	40.5	9	4	4
University of Mississippi	9	73	97	57	11.00	7.33	12	55	44	92
University of Missouri—Columbia	18	35	285	17	16.11	20.53	26.5	7	13	26
University of Missouri—St. Louis	0	157	0	152	0.00	0.00	0	154	138	100
University of Montana	3	125	4	142	1.33	1.03	0.5	149	125	120
University of Nebraska—Lincoln	13	51	204	27	16.31	15.28	20.5	8	20	62
University of Nevada, Reno	7	89	33	104	4.71	3.86	2.5	128	90	55
University of New Brunswick (Clinical-CPA Concurrent)	1	150	12	132	12.00	8.49	0.5	36	125	
University of New Mexico	7	89	93	61	13.43	17.43	7	18	59	68
The New School for Social Research	8	81	23	118	3.00	2.89	3	143	88	
University of North Carolina at Chapel Hill	21	21	194	30	9.52	8.09	23	68	16	8
University of North Carolina at Greensboro	9	73	62	76	7.11	5.86	1.5	94	107	55
University of North Dakota	3	125	10	135	3.33	2.07	0.5	135	125	120

University of North Texas	12	56	62	79	5.17	5.65	2	122	100	120
Northern Illinois University	4	108	16	128	4.00	2.88	0	132	138	120
Northwestern University	21	21	174	32	9.00	9.25	17	79	28	11
Northwestern University Medical School	1	150	9	137	9.00	6.36	0	71	138	44
Nova Southeastern University	7	89	44	92	6.29	7.92	2	100	100	100
Ohio State University	19	32	141	43	7.95	7.45	12.5	88	40	38
Ohio University	9	3	118	53	13.22	10.93	8	19	55	77
Oklahoma State University	6	96	62	79	10.33	5.83	1	58	116	100
University of Oregon	23	16	289	16	12.91	10.42	25	27	14	20
University of Ottawa	2	138	2	148	1.00	1.00	0	150	138	
Pacific Graduate School of Psychology	3	125	5	140	1.67	2.04	0	146	138	
University of Pennsylvania	22	18	298	14	14.05	12.98	37.5	15	6	10
Pennsylvania State University	27	11	190	31	7.15	5.80	20.5	93	20	20
University of Pittsburgh	23	16	322	12	14.13	17.84	19	12	23	20
Purdue University	21	21	281	18	13.71	11.73	38	17	5	38
Queen's University	8	81	112	55	14.13	15.53	5.5	12	68	
University of Rhode Island	6	96	85	63	14.83	10.20	7	11	59	100
University of Rochester	22	18	278	19	12.86	14.72	30	25	9	44
Rutgers, The State University of New Jersey	20	27	209	26	10.80	8.27	13	57	37	26
San Diego State University/University of California, San Diego	14	46	169	37	12.21	9.79	4	35	83	38
University of Saskatchewan	4	108	30	107	7.50	7.57	5.5	87	68	
Simon Fraser University	6	96	58	85	9.67	7.46	5.5	63	68	
University of South Carolina	13	51	56	85	4.46	3.86	5.5	130	68	92
University of South Dakota	3	125	18	125	6.33	7.28	0	105	138	
University of South Florida	9	73	44	90	5.11	3.87	0.5	125	125	55
University of Southern California	20	27	227	24	11.65	11.59	18	47	27	20
Southern Illinois University	11	60	63	78	5.73	6.55	2.5	112	90	92
University of Southern Mississippi	3	125	9	135	3.33	4.08	1	139	116	
St. John's University	2	138	11	133	5.50	4.86	0.5	115	125	113
St. Louis University	4	108	22	120	5.75	4.09	2	115	100	100
Stony Brook University/State University of New York	46	4	599	2	13.35	11.45	58	20	2	15
Suffolk University	0	157	0	152	0.00	0.00	0	154	138	
Syracuse University	11	60	87	62	8.36	8.66	2.5	82	90	62
Teachers College, Columbia University	14	46	87	60	6.86	6.84	14.5	102	31	62
Temple University	10	69	118	52	12.00	8.19	8	41	55	32
University of Tennessee, Knoxville	14	46	83	67	6.00	7.94	1.5	108	107	77
Texas A&M University	5	100	39	98	7.80	4.46	1	84	116	55
University of Texas at Austin	27	11	342	6	12.89	17.97	20	23	22	11

(continued)

Table 1
Continued

Training institution (In alphabetical order)	# of graduates who are current faculty	Rank on # of graduates who are current faculty	Total # of publications	Rank on total # of publications	M # of publications	SD on # of pubs	Mdn # of pubs	Rank on M # pubs	Rank on Mdn # pubs	USNWR ranking
University of Texas Southwestern Medical Center at Dallas	4	108	19	125	4.75	4.24	2.5	127	90	68
Texas Tech University	3	125	22	122	7.33	8.02	2.5	90	90	113
University of Toledo	2	138	1	149	0.50	0.50	0	153	138	
University of Tulsa	1	150	15	128	16.00	11.31	2	10	100	
Uniformed Services University of the Health Sciences	3	125	27	112	9.00	5.39	1	71	116	77
University of Utah	13	51	158	38	12.69	11.61	14	34	32	55
Vanderbilt University (2 programs included)	27	11	332	8	12.70	12.66	29.5	30	10	11
University of Vermont	9	73	122	49	14.33	13.32	11.5	14	48	49
University of Victoria	3	125	29	109	9.67	7.76	0	63	138	
University of Virginia (2 programs included)	15	44	143	46	9.87	8.93	16	66	30	15
Virginia Commonwealth University	4	108	76	70	20.00	17.70	6.5	3	63	68
Virginia Polytechnic Institute and State University	13	51	73	72	5.69	4.54	5	113	75	62
University of Washington	31	7	341	6	11.23	8.84	23	51	16	4
Washington State University	4	108	42	93	10.50	6.61	4.5	56	78	77
Washington University	11	60	122	22	22.73	7.02	19	50	23	32
University of Waterloo	16	41	124	51	7.81	6.40	12.5	86	40	
Wayne State University	12	56	146	47	12.25	11.71	7	33	59	68
West Virginia University	19	32	308	13	16.53	14.76	23	6	16	49
Western Michigan University	2	138	27	112	13.50	11.02	0.5	16	125	120
University of Western Ontario	11	60	96	57	9.00	6.57	9	75	54	
University of Windsor	2	138	0	152	0.00	0.00	0	154	138	
University of Wisconsin—Madison	29	10	334	9	11.62	8.96	23.5	46	15	2
University of Wisconsin—Milwaukee	7	89	76	71	10.86	12.70	0.5	54	125	100
University of Wyoming	2	138	6	139	3.00	1.91	0	139	138	100
Yale University	21	21	267	19	13.48	10.37	21	22	19	4
York University	15	44	167	35	11.60	11.33	32	49	8	

Table 2
Correlations Between Types of Rankings

Type of ranking or data	Graduates rank	Total publication rank	Rank <i>M</i> # of publications	Rank <i>Mdn</i> # of publications
Total publication rank	.93*			
Rank <i>M</i> # of publications	.47*	.72*		
Rank <i>Mdn</i> # of publications	.87*	.92*	.65*	
USNWR ^a	.74*	.75*	.36*	.72*

^aUSNWR = *U.S. News & World Report*.

* $p < .005$.

number of publications in this sample was zero, similar to many other studies (Brems, Johnson, & Gallucci, 1996; Howard, Cole, & Maxwell, 1987). Two hundred and twenty professors had not produced a publication within this period. Whatever the reason for the lack of publications, this analysis is a snapshot of a period of time, not a list of lifetime publications and productivity. This study demonstrates an empirical, normative basis for evaluating graduate outcomes. If research productivity and placement of graduates in academic positions is a program goal (which is not necessarily true for all clinical psychology programs) then these results provide comparative evidence on outcomes (Belar, 2000; Kazdin, 2000). Analyzing the contributions of graduates provides an understanding of the training process. Although publishing research is but one of the many activities in which psychology graduates engage, the publications are tangible evidence of an important aspect especially for those from clinical science or scientist-practitioner training models. Other subfields of psychology might similarly compare program graduates for research productivity to identify (a) the productivity norms for the subfield, and (b) the rank order of programs in producing scholars with low-to-high research productivity.

These results may be helpful to programs in providing norms for research productivity that will help them determine how they compare to other programs and help them to determine if they are meeting their training missions, provided of course, that this is one of their program goals. If a program's objectives include production of research and that program produces few academically inclined researchers, the program may want to reevaluate its methods. If a program is mainly concerned with graduating active clinicians, then it would not expect to find itself ranked high on a list of research productivity.

Table 3
Correlations Between Types of Raw Data

Type of data	Total graduates produced	Total # of publications	<i>M</i> # of publications	<i>SD</i> of <i>M</i> # of publications	<i>Mdn</i> # of publications
Total # of publications	.93*				
<i>M</i> # of publications	.39*	.55*			
<i>SD</i> of <i>M</i> # of publications	.44*	.59*	.92*		
<i>Mdn</i> # of publications	.85*	.92*	.49*	.92*	
USNWR ^a ranking	-.72*	-.71*	-.28*	-.32*	-.67*

^aUSNWR = *U.S. News & World Report*.

* $p < .004$.

Rankings of numbers of publications and numbers of faculty members produced both correlated well with the *USNWR* rankings. However, the *USNWR* rankings tend to favor programs that have produced a larger number of faculty members; these programs also had a greater amount of variability in publication rates among those graduates. It appears that for a program that produces many graduates, the more prolific researchers may be more prominent in the memories of other professionals when making subjective reputation rankings of training institutions. Smaller programs may have less chance of making an impression on other professionals because they may not have as many graduates or as many star researchers/publishers, although a small and a large program may have the same overall average publication rate. Therefore, it may be easier for programs with a large number of graduates to place a few of those graduates in prominent positions and to thereby maintain or enhance their reputation, although their average graduate may not produce more than the average number of publications. This mirrors the situation with the reputation ranking conducted by the *USNWR* survey. Because reputation develops over time, these rankings can lag behind or may be unrelated to the results of more objective measures such as research productivity. This finding illuminates why reputation rankings can be misleading: they rely on the memories of the people making the rankings, who must be knowledgeable about how productive the professors are, knowledgeable about their graduating institution, and knowledgeable about their current position. The *USNWR* rankings and rankings based on average number of publications are similar in some respects; this may indicate that the *USNWR* rankings may be partially based on research productivity.

In this study, we found that rates of research productivity correlate with reputation rankings on average, but that rates of research productivity also added interesting information to help explain the more subjective *USNWR* rankings. Although reputation rankings may be based on biased opinions and misconceptions, rankings of programs based on more objective criteria can be used for meaningful self-evaluation. Future research should continue to focus on objective criteria (e.g., graduate placement, receiving grants for research and education) for evaluating these programs. As a discipline psychologists need to be accountable for the skills that graduates have acquired in graduate school and, it is hoped, continue to use throughout their careers.

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