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Scientific Communication in Clinical Psychology: Examining Patterns of Citations and References

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Previous studies of scientific communication used citation mapping, establishing psychology as a 'hub science' from which many other fields draw information. Within psychology, the clinical and counselling discipline is a major 'knowledge broker'. This study analyzed scientific communication among three major subdisciplines of clinical psychology—the cognitive–behavioural, psychodynamic and humanistic schools of thought—by examining patterns of references within and citations to 305 target articles published in leading journals of these subdisciplines. The results suggest that clinical researchers of each theoretical orientation engage in more insular scientific communication than an integrationist would find desirable and that cognitive–behavioural articles are more closely connected to mainstream psychology and related fields. Copyright © 2012 John Wiley & Sons, Ltd.

Key Practitioners Message:

- Eclectic practitioners draw on several different theoretical orientations to inform their practice; as such, they should be interested in understanding the patterns of scientific communication within and across theoretical orientations.
- Practitioners work in a variety of different mental health settings, with a variety of other professionals in psychology-related fields, and should be interested in how much influence their particular theoretical orientation has on the work of colleagues.
- Many practitioners rely on new, evidence-based research to inform their work. The results of this study provide these individuals with an objective measure of the influence of empirical work in different areas of clinical psychology.

Keywords: Scientific Communication, Citations, References, Clinical Psychology, Clinical Orientation, Theoretical Orientation

In science, both the generation of new ideas and the spread of useful ideas depend on effective lines of communication within and between communities possessing pertinent expertise. Practitioners contribute insights to and learn from scientific research in many ways, including direct communication with researchers or fellow practitioners (e.g., at conferences, by phone and via email) and more indirect channels (e.g., publications, listserves or web sites). Whereas practitioners' activities do not necessarily deposit traces that can be discovered and studied objectively, researchers do leave behind clues that can be used to identify sources of influence and at least partially reconstruct lines of communication. These clues are the citations to prior work from which theories, methodology, data and conclusions are drawn. Scientific advance continues to rely heavily on publications that properly document works cited. By analyzing patterns among citations, one can form a picture of how ideas spread within and beyond scientific fields of study.

Recent research on citations has revealed important information about communication within and beyond psychological science. Boyack, Klavans and Borner (2005) created a citation map detailing the intercommunication among a wide range of scientific fields. Their study revealed that psychology was a 'hub science' from which many other fields draw information (Cacioppo, 2007). Within the field of psychology, Yang and Chiu (2009) analyzed intercommunication among the different disciplines of psychology using 40 years of journal citations. Their results indicated that over the past four decades, the field of clinical and counselling psychology has become a major 'knowledge broker' (Yang & Chiu, 2009, p. 354) for the other areas, such as social, developmental and personality psychology. Given that clinical psychology[1] has been established as a hub discipline, a logical next question involves how information is being organized within this area. Indeed, researchers have yet to examine citation patterns within clinical psychology, a discipline that spans many schools of thought.

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[1]Purely for simplicity of expression, we will refer to 'clinical psychology' rather than 'clinical and counseling psychology'.

Clinical Psychology & Psychotherapy

Throughout clinical psychology's history, many theoretical orientations have developed among practitioners and researchers. Today, at least three major schools of thought are usually recognized in the literature (Thoma & Cecero, 2009): cognitive–behavioural (CB; consisting of the cognitive, behavioural and cognitive–behavioural approaches), psychodynamic (PD; consisting of the psychodynamic, psychoanalytic and interpersonal approaches) and humanistic (HU; consisting of the humanistic, client-centred, existential, gestalt and constructivist approaches) psychology. Although many other schools of thought exist, none attracts as many adherents, produces as influential scholarly journals and has been analyzed in relevant research (Thoma & Cecero, 2009).

One might expect to observe considerable communication between works situated in these subdisciplines of clinical psychology because 26.3% of practicing clinicians are self-proclaimed integrationists, drawing on theories and research from more than one school of thought (Thoma & Cecero, 2009). However, it is possible that scholarly communication is more constrained. A comprehensive study of American clinical psychologists by Thoma and Cecero (2009) found that clinicians tended to prefer their own school-specific techniques over those of other orientations. Thus, it is possible that citation patterns will be fairly insular as well, crossing the boundaries between subdisciplines less frequently than an integrationist might expect.

A healthy field of science should also draw from (and contribute to) work originating in related fields. The extent to which clinical psychology and its subdisciplines draw upon general psychological science and other disciplines of science may provide insight into how closely they adhere to rudimentary scientific principles. Furthermore, the degree to which each subdiscipline of clinical psychology is connected to work performed in other areas of clinical psychology, in non-clinical disciplines of psychology, and in other scientific fields constitutes a measure of its openness to new ideas and its ability to generate ideas useful to outsiders. Participation in the broader scientific enterprise, rather than doing work that only draws from and is communicated to insiders, should help a subdiscipline of clinical psychology thrive into the future.

Previous research on trends in psychology from 1950 to 1997 suggests that the psychodynamic perspective has become separated from mainstream psychological science, whereas cognitive psychology has risen in prominence (Robins, Gosling, & Craik, 1999). Therefore, we might expect that the CB journals will receive more citations from clinical psychology and general psychology journals than the other two groups. Furthermore, logic suggests that because of content similarities, articles will feature more within-orientation citations and between-orientation citations. The present study examined these possibilities in addition to performing exploratory analyses to undercover citation patterns within, among, and beyond three important subdisciplines of clinical psychology.

METHOD

Data Source

Two leading journals were identified for each of three subdisciplines of clinical and counselling psychology: CB, PD and HU. Journals were chosen on the basis of their 2-year and 5-year journal impact factors. Because there was only one HU journal with an impact factor, we consulted colleagues familiar with this subdiscipline as well as journal affiliations to select an additional journal that seemed a good outlet for scholars in that area. The two cognitive–behaviourally oriented journals were *Behavior Therapy* and *Behavior Research and Therapy*. The two psychodynamically oriented journals were *The Journal of the American Psychoanalytic Association* and *The International Journal of Psychoanalysis*. The two humanistically oriented journals were *The Journal of Humanistic Psychology* and *The Humanistic Psychologist*. The PsycINFO database was used to identify references[2] contained within and citations to articles published in these journals. Searching PsycINFO reveals all references but not all citations. Whereas the full list of works cited for each target article is available in this database, citations originating in sources not covered by PsycINFO (e.g., many non-psychology journals, books, chapters, as well as online sources) will be missed. The implications of this study's examination of references and citations are considered later.

Reference and citation data were obtained for articles published during the years 2005–2007. These years were chosen to allow a sufficiently large number of citations to have accumulated, while keeping the results fairly current. All original empirical and theoretical publications were included to evaluate the extent to which references and citations extended beyond a subdiscipline. Other kinds of non-empirical articles (e.g., book reviews and commentaries) were excluded because it was expected that they would contain almost exclusively within-subdiscipline references. For each journal, data collection proceeded on an issue-by-issue basis, descending by date from the most recent 2007 issue until the number of citations in each subdiscipline numbered in the hundreds, enabling us to perform analyses and examine meaningful trends in the data. In all, 305 articles were used in the study, including 60 from CB journals (26 from *Behavior Therapy* and 34 from *Behavior Research and Therapy*), 156 from PD journals (82 from *The Journal of the American Psychoanalytic Association* and 74 from

[2]Throughout the article, we will refer to citations of target articles as 'citations' and citations by target articles as 'references'.

The International Journal of Psychoanalysis) and 89 from HU journals (42 from *The Humanistic Psychologist* and 47 from *The Journal of Humanistic Psychology*). Differences in numbers of articles across subdisciplines reflect the number of qualifying articles available within the specified time frame and the number of citations per article. We included more PD and HU articles than CB articles because the former were cited less frequently than the latter, and we wanted to obtain a sufficient number of citations from each subdiscipline to afford a meaningful examination of trends. In other words, to obtain an adequate number of citations from the PD and HU journals, we needed to code a greater number of articles from them.

Coding

Each reference appearing within a target article, as well as each source that cited a target article, was coded into one of seven mutually exclusive and exhaustive categories: CB journal, PD journal, HU journal, other clinical psychology journal, non-clinical psychology journal, non-psychology journal or non-journal source. Journals were placed into the narrowest possible category based upon their focus. For example, the *Journal of Clinical and Counseling Psychology* was coded as 'other clinical psychology journal' because it has a multidisciplinary clinical focus and does not feature articles from one particular subdiscipline. In contrast, *Cognitive Therapy and Research* was coded as 'CB journal' because of its focus on strategies of cognitive therapy and their effectiveness. Categorization of unfamiliar journals was accomplished by checking the aims and scope of the journals on their publishers' websites. A database of about 750 journal titles was compiled by entering each newly encountered journal to record its coding. To ensure that each journal was classified consistently, this database was updated regularly and consulted as data were collected. Non-journal sources were originally coded into separate categories of books, magazines/newspapers, websites, unpublished documents and other; because most of these categories were used less often than journals and because it would have been extremely difficult to classify many of them by subdiscipline, they were collapsed into a superordinate 'non-journal' category. A total of 1356 citations and 11 572 references were coded in this study.

Two coders performed all data collection separately after an initial session of simultaneous coding. The joint coding sessions continued through the first 22 articles and established common rules for coding the data. The remaining articles were divided among the coders for individual coding. After data collection had ceased, inter-rater reliability was established by having each coder randomly recode 20 of the other coder's articles. Each coder counted the number of citations/references in each of the seven categories, for the 20 randomly selected target articles. This was performed independently, and then, these frequencies were correlated between the two coders across the target articles to assess reliability. This resulted in a total of 14 correlations (seven categories × two source types) across the 20 target articles. These correlations were very high ($r \geq 0.89$) for all but humanistic citations ($r = 0.49$). This exception might be expected given the comparatively small number of citations to humanistic articles, the possibility that the number of citations per article could have changed over time (between the original coding and the second coding performed for the reliability check), and therefore the potentially large influence of even small changes in actual numbers of citations or minor coding errors.

RESULTS

Tables 1 and 2 provide reference and citation data, respectively, for target articles published in journals corresponding to the three subdisciplines of clinical psychology. To help visualize the patterns for typical articles, Figure 1 shows the mean references and mean citations per target article in each subdiscipline. Whereas there was relatively little difference in the number of references contained in target articles across subdisciplines (Ms = 44.28, 36.50 and 36.19 for CB, PD and HU articles, respectively), $F(2, 302) = 1.27$, $p = 0.281$, $\eta^2 < 0.01$, there was a substantial difference in the number of citations, with CB articles cited much more frequently (M = 13.42) than either PD (M = 2.51) or HU articles (M = 1.79), $F(2, 302) = 115.87$, $p < 0.001$, $\eta^2 = 0.77$.[3] Subsequent analyses provide a more nuanced look at the nature of these references and citations.

First, communication between subdisciplines was exceptionally rare. The upper three rows of Figure 1 illustrate these highly insular trends within the subdiscipline-specific journals. Among references within target articles to journals classified as CB, PD or HU, there was a strong association between the subdisciplines of the target and referenced articles, $\chi^2(4, N = 2734) = 4337.91$, $p < 0.001$. Only 112 of these references (or 4.10%) crossed subdisciplines. Among citations coming from journals classified as CB, PD or HU in orientation, there was an even stronger association between the subdisciplines of the target and citing articles, $\chi^2(4, N = 480) = 793.78$, $p < 0.001$. Only four of these citations (0.83%) were to target articles in a different subdiscipline.

[3]Although distributions of citations were modestly positively skewed, the difference across subdisciplines was large and not due to outliers. One should interpret *p* values with some caution because the normality assumption is violated, but the η^2 statistic does not require normality and underscores the very large difference across subdisciplines.

Table 1. Summary of 11 572 references in 305 target articles

Citing source	Target source: Cognitive–behavioural articles ($n = 60$)	Psychodynamic articles ($n = 156$)	Humanistic articles ($n = 89$)
Cognitive–behavioural journal	474	39	17
	7.90	0.25	0.19
	17.84%	0.68%	0.53%
Psychodynamic journal	1	1913	26
	0.02	12.26	0.29
	0.04%	33.60%	0.81%
Humanistic journal	0	29	235
	0.00	0.19	2.64
	0.00%	0.51%	7.30%
Other clinical psychology journal	945 (344.9)	213 (586.9)	239 (465.2)
	15.75	1.37	2.69
	35.57%	3.74%	7.42%
Non-clinical psychology journal	433 (227.1)	194 (386.5)	293 (306.4)
	7.22	1.24	3.29
	16.30%	3.41%	9.10%
Non-psychology journal	246 (172.8)	194 (294.1)	260 (233.1)
	4.10	1.24	2.92
	9.26%	3.41%	8.07%
Non-journal	558 (1437.1)	3,112 (2445.5)	2,151 (1938.4)
	9.30	19.95	24.17
	21.00%	54.65%	66.78%
Total	2657	5694	3221
	44.28	36.50	36.19
	100.00%	100.00%	100.00%

Within each cell, the top value is total references, the middle value is references per article and the bottom value is column percentage. Values in parentheses are expected frequencies for the subdiscipline by type of source χ^2 test of independence.

Second, articles in CB journals were more often connected to other clinical journals and other psychology journals, and less often to non-journal sources, than were articles in PD and HU journals. The bottom four rows of Figure 1 illustrate these trends outside of the subdiscipline-specific journals. For reference data, a statistically significant association was found between target article subdiscipline (CB, PD and HU) and type of source (other clinical journals, non-clinical journals, non-psychology journals and non-journal sources), $\chi^2(6, N = 8838) = 2486.26$ $p < 0.001$. Three substantial discrepancies between observed and expected citation frequencies (see Table 1) drove this effect; these are described from the strongest to weakest contributors to the effect. First, articles in CB journals referenced fewer non-journal sources than expected by chance, whereas articles in PD and HU journals referenced more non-journal sources than expected. Second, articles in CB journals referenced other clinical journals more often than expected, whereas articles in PD and HU journals referenced other clinical journals less often than expected. Third, articles in CB journals referenced other psychology journals more often than expected, whereas articles in PD journals referenced other psychology journals less often than expected.

For citation data, another statistically significant association was found between target article subdiscipline and type of source, $\chi^2(6, N = 876) = 68.10$, $p < 0.001$. Two substantial discrepancies between observed and expected citation frequencies (see Table 2) drove this effect. First, the largest contributor to this effect was that articles in CB journals were cited more often than expected by chance in other clinical journals, whereas articles in PD and HU journals were cited less often than expected in other clinical journals. Second, articles in CB journals were cited less often than expected in non-journal sources, whereas articles in PD journals were cited more often than expected in non-journal sources.

DISCUSSION

In terms of both references and citations, there appear to be clear differences among the subdisciplines in clinical psychology. When it comes to specialized journals, authors overwhelmingly cited articles published within journals corresponding to their own theoretical orientations. An examination of citation patterns cannot determine the reason why communication across subdisciplinary boundaries was

Table 2. Summary of 1356 citations to 305 target articles

Citing source	Target source: Cognitive–behavioural articles ($n = 60$)	Psychodynamic articles ($n = 156$)	Humanistic articles ($n = 89$)
Cognitive–behavioural journal	173	0	0
	2.88	0.00	0.00
	21.49%	0.00%	0.00%
Psychodynamic journal	1	252	2
	0.02	1.62	0.02
	0.12%	64.29%	1.26%
Humanistic journal	0	1	51
	0.00	0.01	0.57
	0.00%	0.26%	32.08%
Other clinical psychology journal	287 (253.6)	40 (55.9)	25 (42.6)
	4.78	0.26	0.28
	35.65%	10.20%	15.72%
Non-clinical psychology journal	112 (113.8)	15 (25.1)	31 (19.1)
	1.87	0.10	0.35
	13.91%	3.83%	19.50%
Non-psychology journal	85 (76.4)	10 (16.8)	11 (12.8)
	1.42	0.06	0.12
	10.56%	2.55%	6.92%
Non-journal	147 (187.3)	74 (41.3)	39 (31.5)
	2.45	0.47	0.44
	18.26%	18.88%	24.53%
Total	805	392	159
	13.42	2.51	1.79
	100.00%	100.00%	100.00%

Within each cell, the top value is total citations, the middle value is citations per article and the bottom value is column percentage. Values in parentheses are expected frequencies for the subdiscipline by type of source χ^2 test of independence.

highly unusual. This could be due to mere exposure, as researchers are probably more likely to encounter articles published in journals aligned with their own theoretical orientation. For example, a member of the Association for Behavioral and Cognitive Therapies receives the CB journal *Behavior Therapy*, a member of the American Psychoanalytic Association receives the PD journal *The American Psychoanalyst* and a member of the Association for Humanistic Psychology receives the HU *Journal of Humanistic Psychology*. Having been exposed to more work associated with a particular subdiscipline makes it more available in memory when citing pertinent research (Tversky & Kahneman, 1974), and of course, mere exposure can also lead to more favourable attitudes towards this work (Bornstein & Craver-Lemley, 2004). The present results suggest that although many individuals are self-proclaimed integrationists and researchers may read and be influenced by a number of schools of thought, there remains a strong tendency to draw from and contribute to work performed within one's own subdiscipline, rather than to cross such lines.

Looking beyond specialized journals, citation patterns continued to differ across subdisciplines of clinical psychology. Compared with articles in PD and HU journals, articles in CB journals more frequently cited and were cited by articles in journals published in non-clinical psychology journals and non-specialized journals of clinical psychology. In contrast, articles in PD and HU journals more frequently cited non-journal sources. Because target articles' full reference lists were used to identify these citations to non-journal sources, a wide range of such sources were identified (e.g., scholarly books and chapters, popular press books, magazines, newspapers and web sites). These findings demonstrate a fairly strong tendency for authors of CB articles to cite more journal sources than authors of PD or HU articles. Because PsycINFO was used to identify citations to target articles, non-journal sources in the citation portion of the present study consisted largely of scholarly books and book chapters. CB articles were much more often cited in these sources than were PD or HU articles. The overall picture is one in which authors of CB articles are more likely than authors of PD or HU articles to rely on journal sources and to influence and draw from a wider range of authors, including fellow researchers, scholars in other scientific fields and practitioners. Future research might examine why authors publishing in PD and HU journals seem to rely more heavily on non-journal sources, in

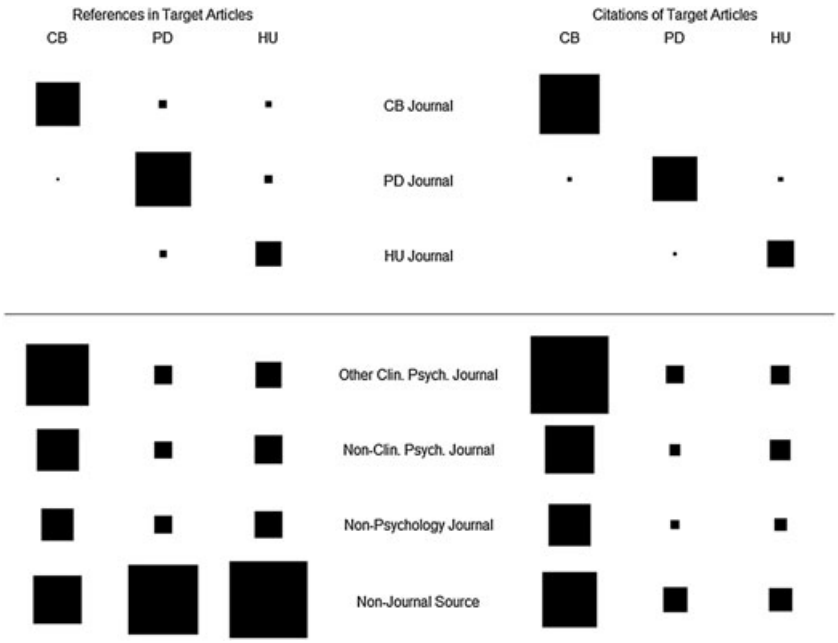

Figure 1. The mean numbers of references within target articles (left) and citations to target articles (right) are proportional to the areas of the corresponding squares. Scaling differs across references and citations to facilitate comparisons within each side of the figure; if a common scale was used across the entire figure, the largest square for references would be about five times the area of the largest square for citations. CB = cognitive–behavioural. PD = psychodynamic. HU = humanistic

addition to examining trends within specific types of non-journal sources (e.g., books, newspapers, magazines, websites and unpublished documents).

These results suggest that the CB subdiscipline of clinical psychology plays a role analogous to the 'hub discipline' role of psychology within scientific fields. In other words, CB might be considered a 'hub subdiscipline' of clinical psychology, both drawing from and contributing significantly to a broad range of relevant areas of inquiry. These results are not entirely surprising given findings from previous research. Indeed, Robins et al. (1999) presented several streams of evidence showing that cognitive psychology is the most influential of four psychological schools that they studied. In comparison, they found that psychoanalytic research had not had much influence on mainstream psychology for several decades. Additionally, Spear (2007) showed that the rise of neuroscience has much in common with that of cognitive psychology and that cognitive neuroscience appears to be in the process of emerging as a significant influence within psychology. And finally, Haslam and Lusher (in press) found that behaviour therapy journals had strong ties with core clinical psychology journals. The CB subdiscipline of clinical psychology relies on the cognitive model of psychopathology from cognitive psychology (Beck Institute for Cognitive Behavior Therapy, n.d.), as well as the principles of behavioural restructuring and practice form behavioural psychology (National Association of Cognitive-Behavioral Therapists, 2010), which could explain why it appears to currently occupy a position more closely aligned with mainstream psychology than the PD or HU subdisciplines. It must be noted that the journal selection used in this analysis may have biased the results. Authors publishing in the PD and HU journals may cite orientation-specific sources more often to gain acceptance into these journals. PD and HU researchers publishing in more general, higher impact journals may utilize a wider array of sources and appear more closely tied with mainstream psychology and science. Future research might analyze authorship and citation patterns in the most influential clinical psychology journals to examine the relative influence of authors publishing from CB, HU and PD perspectives.

The three subdisciplines of clinical psychology do not appear to draw from or contribute to one another to as significant an extent as an integrationist might desire. Whether the publication of specialized journals is a cause or an effect of this insularity (or both) cannot be determined through analyses of the reference and citation data that we collected. One way that future research could provide additional clues would be to examine the publication patterns of clinical researchers who belong to specialized organizations (e.g., Association for Behavioral and Cognitive Therapies, American Psychoanalytic Association and Association for Humanistic Psychology), less specialized organizations (e.g., American Psychological Association and

Association for Psychological Science) or both, as well as when they publish in more or less specialized journals. Doing so might help to determine whether individuals' citation patterns cross the lines of clinical subdisciplines more often when these individuals are members of less specialized organizations or when they publish in less specialized journals of clinical psychology.

A comparison of findings across reference and citation data reveals that, with one exception, the trends were similar. The exception is illustrated in the bottom row of Figure 1, which shows that whereas CB target articles cited far fewer non-journal sources than did PD or HU target articles, CB target articles were cited more frequently by non-journal sources than were PD or HU articles. The stronger reliance on non-journal sources among PD and HU target articles might be due to any number of factors. Perhaps more of the early, foundational texts of the PD and HU subdisciplines were published outside of scholarly journals (e.g., books by Freud, Jung and Rogers) than is the case for the CB subdiscipline. The training of those who publish in CB journals might emphasize greater attention to information published in journals than does the training of those who publish in PD and HU journals. Similarly, the professional incentives (e.g., tenure or promotion criteria) might differ for individuals who tend to publish in these different outlets, and might tend to work in somewhat different settings or have different divisions of responsibilities (e.g., research, practice and teaching) in their workloads. The reasons for the differential reliance on non-journal sources across subdisciplines of clinical psychology would be an interesting subject for further empirical investigation.

The present study possessed a number of strengths and limitations. The most significant strengths stem from the analysis of references to and citations of target articles in the major subdisciplines of clinical psychology. Both references and citations constitute objective measures of scientific communication. In addition, categorizing both references and citations allowed an examination of influence in two directions: what kinds of sources do investigators draw from, and what future work do they inform? Moreover, studying references enabled us to examine the many sources outside the coverage of PsycINFO or other electronic databases. The preponderance of citations in the PsycINFO database are from peer-reviewed psychology journals. Many citations appearing in non-psychology journals, scholarly books or book chapters, online sources and other outlets are likely to be missed when searching PsycINFO. Studying full reference lists provides a broader assessment of the patterns of influence.

There were two primary limitations of the present study. The first was the number of journals within each subdiscipline and the related limitation on the number of target articles selected for analysis. Our decision to focus on two leading journals within each subdiscipline was made to avoid the potential criticism that target articles were drawn from specialized journals of low impact. By consulting journal impact factors and knowledgeable colleagues familiar with each subdiscipline, we chose two journals that exert substantial influence in the field. However, we cannot know whether our findings would generalize to other journals within—or beyond—these three subdisciplines of clinical psychology. Within each chosen journal, there were also a limited number of target articles whose references and citations could be classified. The total number of references was very large ($N = 11\,572$), as was the number contained within target articles in each subdiscipline (each $n \geq 2657$). The total number of citations was fairly large ($N = 1356$), but far more of these were to CB target articles ($n = 805$) than to PD ($n = 392$) or HU ($n = 159$) target articles. Although even larger numbers of citations would have been desirable, the trends that we have discussed were both statistically significant and sufficiently large in magnitude to be visually apparent (see Figure 1).

The second limitation of this study is that analyzing references and citations is narrow in scope and only sheds light on scientific communication in published research. Conclusions based on our findings may not generalize to clinical practice or pedagogy. For example, there are no citation records indicative of what influences professional practice or teaching, and individuals applying and teaching clinical psychology may be more eclectic than those studying it. It would be interesting to examine references within course syllabi, practice-oriented conference presentations or workshops or other sources to study communication patterns in a broader range of important professional contexts.

CONCLUSION

This study provides insight into the organization, dissemination and utilization of information within the field of clinical psychology. There was little evidence of scientific communication among subdisciplines of clinical psychology in the present study. Additionally, investigators publishing in less specialized clinical journals, or in journals in other areas of psychology or related disciplines, seem to be more familiar with and influenced by the CB literature than the PD and HU literatures. By analogy to research on broader patterns in scientific communication, CB could be considered a hub subdiscipline of clinical psychology, the one from which other fields draw most frequently. In comparison, PD and HU target articles cited more non-journal sources and were cited less often by all non-specialized sources.

Although our findings provide little evidence of eclecticism in published clinical research, there are many ways that future research could build on this initial inquiry to provide a more comprehensive evaluation of professional communication within clinical psychology. Interested investigators might assess references and citations over a

wider range of journals, perhaps including leading journals that are not orientation-specific, or make comparisons across members of more or less specialized professional organizations as they publish in more or less specialized journals. Perhaps even more innovative and informative would be analyses of references contained in course syllabi, practice-oriented conference presentations or workshops or other important modes of communication among clinical psychologists. Wherever one stands on the virtues of eclecticism and scientific mainstreaming, empirical examinations of information flow would be invaluable in reflecting on and debating the merits and shortcomings of current practices.

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