Who are the Top 100 Contributors to Social Work Journal Scholarship? A Global Study on Career Impact in the Profession

Research on Social Work Practice I-12 © The Author(s) 2022 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/10497315221136623 journals.sagepub.com/home/rsw SAGE

David R. Hodge^{1,2} and Patricia R. Turner¹

Abstract

Purpose: This study identified the top 100 most impactful global contributors to social work journal scholarship. **Methods:** To conduct this descriptive study, we used a publicly available database of the world's leading scientists. After extracting all scholars in the social work category, we rank ordered them according to a composite measure of scholarly impact that controls for self-citations and author order. **Results:** All identified contributors to the profession's journals ranked highly relative to the larger global population of published scientists. Furthermore, 23 individuals were in the top 100,000 scientists globally. Scholars were based in seven different nations and most had solid social work credentials according to three measures: current affiliation in a social work program and Master of Social Work/doctoral degree status. **Conclusions:** The results reveal that social work is home to some of the world's leading scientists. Leveraging their skills and knowledge can help advance the profession's collective knowledge development and dissemination.

Keywords

social work scholars, faculty productivity, career impact, h-index, bibliometrics

Social work has arguably developed into an academic discipline over the course of the past century (Canadian Association of Social Workers, 2022). A central characteristic of a profession is its disciplinary literature (Liu et al., 2022). As Flexner (2001 [1915]) observed in a pivotal essay, the first distinguishing mark of a profession is engagement in intellectual activities. Scientists or scholars with certain value commitments create knowledge that is disseminated in disciplinary vehicles, such as periodicals. This process creates a distinct discourse that functions to demarcate a particular field from other disciplines (Nichols et al., 2022). In social work, the formation of this knowledge base is informed by its ethical commitments. As an applied discipline, social work scholarship typically emphasizes enhancing human well-being and meeting people's basic needs, particularly among those who are vulnerable, oppressed, and living in poverty (National Association of Social Workers, 2021).

As social work has matured as a field, scholars have attempted to map various features of the profession's disciplinary knowledge production (Perron et al., 2017). Included among these are efforts to identify key contributors to social work discourse (Thyer et al., 2019). In other words, this growing body of research attempts to identify the scholars who are playing prominent roles in contributing to the profession's distinct knowledge base (Hodge et al., 2012). The present descriptive study builds upon these efforts by identifying the top 100 global contributors to social work discourse. As such, it provides what may be the first empirical picture of leading social work scholars from across the world. It also offers a snapshot of the individuals who are contributing to the profession's literature in terms of their backgrounds and level of social work training.

Below, we review the existing research on the creators of impactful scholarship in the profession. After discussing three key limitations of the existing research, we describe how the current study addresses these shortcomings to advance the profession's understanding of some of its most important scholars.

Before beginning, it is important to state that this article focuses on just one indicator of scholarly impact (Newson et al., 2018). Many indicators of such impact exist, encompassing the influence of a scientist's scholarship related to practice, policy, and pedagogy, to list just some areas (Huggins-Hoyt, 2018). Furthermore, some institutions may

¹School of Social Work, Arizona State University, Phoenix, AZ, USA ²Program for Research on Religion and Urban Civil Society, University of Pennsylvania, Philadelphia, PA, USA

Corresponding Author:

David R. Hodge, School of Social Work, Arizona State University, 411 N. Central Ave., Suite 800, Mail Code 3920, Phoenix, AZ 85004-0689, USA. Email: DavidHodge@asu.edu. prioritize teaching and/or service relative to scholarship. For instance, faculty at historically Black colleges and universities typically have elevated teaching, advising, mentoring, and service loads (Marshall Jr et al., 2016). These and other structural impediments can limit the ability of faculty to conduct and disseminate research (Huggins-Hoyt et al., 2017). Thus, when considering the impact of social work faculty, it is critical to adopt a holistic approach that acknowlblance the total is a factor of the second secon

edges the totality of personal and structural factors in an individual's life. Multiple quantitative and qualitative indicators should be considered and applied in a contextualized manner to recognize accomplishments across the domains of scholarship, teaching, and service. Unfortunately, social work has relatively few mechanisms for recognizing major contributions to the profession. This study represents one step toward rectifying this concern within the domain of scholarship.

Literature Review

Efforts to identify leading contributors to social work scholarship typically rely upon some type of bibliometric analysis based upon citation counts (Holden et al., 2005). To be clear, bibliometric approaches are not without their limitations (Martinez-Brawley & Zorita, 2007). For instance, it can be difficult to ascertain who is, and is not, a social worker (Thyer, 2002). Nevertheless, such approaches have long been acknowledged to offer an objective method to measure scholarly productivity in a manner that can be readily replicated by other interested parties.

Perhaps the most predominant measure of productivity in social work is the Google Scholar h-index (Lacasse et al., 2011). Widely used across disciplines, the h-index provides a useful quantification of the impact of a scholar's published work by combining productivity (number of papers published) and academic impact (number of citations) into a single number (Koltun & Hafner, 2021). A scholar with an h-index of 10, for example, has published 10 papers, each of which has been cited at least 10 times (Hirsch, 2005). This metric is widely viewed as providing an improvement over counting the total number of citations, an approach that can be unduly influenced by "one-hit wonders" or a single highly cited paper or two.

In social work, the h-index—calculated by harvesting citations from Google Scholar—has been widely used to identify prominent faculty and their associated characteristics (Huggins-Hoyt, 2018). More specifically, this general measure has been used to examine faculty dissemination of impactful scholarship in Australia (Tilbury et al., 2022), Canada (Holosko et al., 2018), Hong Kong (Holosko, 2022), and the United States (Thyer et al., 2019). The Google Scholar h-index has also been used to identify the top Fellows affiliated with the Society for Social Work and Research and the American Academy of Social Work and Social Welfare (Hodge et al., 2016).

Limitations of the Existing Research

The research reviewed above represents an important contribution to the profession's self-understanding. As is the case with all research, however, some limitations exist. Regarding the studies mentioned above, at least three concerns can be identified. These limitations are related to the use of the h-index, the Google Scholar database, and the sampling frame. We address each issue in turn.

H-index

Although the h-index is one of many bibliometric measures (Lacasse et al., 2011), it has arguably become the leading metric for quantifying the impact of a scholar's published work across disciplines (Koltun & Hafner, 2021). As its properties have become more well-known, some scholars may deploy strategies to increase their h-index score (Loan et al., 2022). For instance, authors may engage in excessive self-citations to inflate their scores. In some instances, over 90% of scientists' total citations have consisted of citations of their own work (Sandnes, 2020). Other research indicates authors in the social sciences may be particularly inclined to engage in opportunistic self-citation (Seeber et al., 2019).

Another concern pertains to the weight or value attributed to various forms of authorship by the h-index (Ioannidis et al., 2016). In the social sciences, author order typically denotes the level of contribution to a given article (Seipel, 2003). Furthermore, in social work, sole authored publications have traditionally represented the gold standard in terms of scientifically meaningful contributions (Victor et al., 2017).

However, the h-index attributes the same value to all authors, regardless of their contribution to the paper. A sole authored piece counts the same as, for example, a multiauthored piece in which the author appears further down in the authorship list. This can encourage the creation of what have been called "citation farms," the formation of a small group of authors who trade authorship and agree to cite each other's papers (Ioannidis et al., 2019). As a result of these and other limitations, Koltun and Hafner (2021) argue the use of the h-index as a measure of scientific impact should be reconsidered in favor of more robust alternatives.

Google Scholar

Another limitation relates to the use of Google Scholar as a database from which to harvest citations. Although other academic databases exist (e.g., Microsoft Academic), Google Scholar, Scopus, and the Web of Science are the most widely known and used in bibliometric analyses (Levine-Clark & Gil, 2021). Studies in social work have traditionally used Google Scholar because it provides better coverage of the social science literature relative other databases (Harzing & Alakangas, 2016; Martín-Martín et al., 2021).

Although Google Scholar harvests *more* citations than other options, the quality of the citations tends to be *lower* in terms of their academic impact (Martín-Martín et al., 2018). In other words, Google Scholar indexes more theses, dissertations, conference proceedings, blogs entries, magazine articles, unpublished documents, etc. (Harzing & Alakangas, 2016). This difference in citation quality stems from the fact that Scopus and the Web of Science are feebased services that employ a set of selection criteria, developed and applied by knowledgeable editors, to determine the academic literature included in their respective databases (Martín-Martín et al., 2019). Alternatively, Google Scholar employs an automated method in which its robot crawlers index any plausible scholarly document.

Furthermore, the lack of human vetting provides opportunities for data manipulation in Google Scholar. The automated processes allow scholars to claim publications they have not authored, create mock publications, and split highly cited articles into multiple pieces (Loan et al., 2022). Consequently, for studies focusing on citations from peerreviewed articles, Scopus may be a better choice (Levine-Clark & Gil, 2021). Compared to the Web of Science, Scopus offers broader coverage of the social sciences, a trait that suggests its utility for bibliometric studies in social work (Harzing & Alakangas, 2016; Tilbury et al., 2022).

Sampling Frame

A third limitation is the sampling frame employed by different studies (Babbie, 2020). Social work is global profession (Ioakimidis & Sookraj, 2021). To be clear, each nation is characterized by its own unique academic culture and norms (Van Noorden & Chawla, 2019). Although national and regional variation exists, social work scholars from many nations around the world contribute to the profession's knowledge base (Roche & Flynn, 2020).

As noted above, the scholarly impact of social workers' scholarship has been examined in several studies (e.g., Holosko, 2022; Thyer et al., 2019). This research makes an important contribution to the literature, but the studies typically employ different sampling frames. Furthermore, studies have been conducted over different timeframes. As a result, it is difficult to make comparisons across studies (Babbie, 2020).

The existing literature has commonly focused on the scholarly impact of individual social workers. A sample of faculty is chosen, and an h-index value is calculated for each faculty member. This approach provides a helpful understanding of the academic impact of the selected faculty across all disciplines in which the scholars have disseminated their work. However, it does not necessarily identify the key contributors to the social work literature. To ascertain such individuals who may or may not be social workers—the sample must focus on scholars who disseminate much of their work in the social work literature (Tilbury et al., in press).

To sum up, to accurately identify the leading global contributors to the profession's discourse, it is necessary to use a sampling frame that encompasses pertinent individuals from across the world. Researchers are interested in making cross-national comparisons using bibliometric measures (Tilbury et al., 2022). However, an accurate understanding of diverse scholars' contributions to the social work knowledge base is contingent upon using a worldwide sample of published authors.

The Present Study

The present descriptive study was designed to address the limitations reviewed above. In place of using a single measure of scholarly impact, we use a composite measure to ascertain career impact. In addition to correcting for selfcitations, this metric also attributes more value to sole and first authored publications, and corrects for author order (Ioannidis et al., 2016).

To circumvent the problems associated with Google Scholar, Scopus is used as a source of scholarly citations (Harzing & Alakangas, 2016; Tilbury et al., 2022). The emphasis in Scopus on vetted, peer-reviewed articles makes it a good fit for social work since refereed articles represent the most important form of scholarly productivity in the profession (Seipel, 2003; Victor et al., 2017). Finally, we use a global sampling frame of contributors to disciplinary periodicals. This positions us to determine the scholars across the world who have the most academic impact on social work discourse.

Method

To identify the top global contributors to social work scholarship, we conducted a secondary analysis of a publicly available database which contains data on the world's most impactful scientists (Ioannidis et al., 2020). This database was created by Ioannidis et al. (2019) and subsequently improved and updated in 2020. It has been widely used in other research (Chan & Torgler, 2020; Nichols et al., 2022; Oliveira et al., 2021; Sandnes, 2020; Walach, 2019), including studies in the fields of ecology (Rau & Jaksic, 2021), nursing (Jackson et al., 2022), and medicine (Jones, 2021).

Scientists across the globe were ranked based upon a measure of career impact developed in prior bibliometric work (Ioannidis et al., 2016). Calculations were made using Scopus citation data through to May 6, 2020 (Ioannidis et al., 2020). The composite indicator incorporates six different metrics: (1) total number of citations, (2) h-index values, (3) h-index values adjusted for co-authorship, (4) citations to papers as sole author, (5) citations to papers as sole or first author, and (6) citations to papers as sole, first, or last

author (Ioannidis et al., 2016). The algorithm used to compute the final composite value corrects for self-citations.

A total of 8,547,891 scientists from across the globe were identified who had authored or co-authored at least five papers (Ioannidis et al., 2020). Each scientist's work was classified into one of 22 large fields (e.g., social sciences) and 176 subfields (e.g., social work) based on Elsevier's Science-Metrix journal classification system. In the 2020 update, interdisciplinary journals that were not previously indexed in the Science-Metrix system were assigned a specific field and subfield using a character-based convolutional deep neural network. Ioannidis et al. (2020) reported that using this machine learning approach-which was developed and refined using over one million cases-provided a more accurate categorization of scholars who disseminate many papers in interdisciplinary periodicals. This is an important advantage of the 2020 dataset given that many social workers publish in interdisciplinary journals (Sellers et al., 2006).

From the larger group of scientists, the top 100,000 scientists in the world were enumerated, based upon the composite index, in tandem with their university affiliation and national setting. In addition, the top 2% of scientists in their main subfield discipline were also identified. This study focuses on those scientists whose scholarship classified them in the social work subfield. Additional information about the methods used to develop the composite measure and databases is available elsewhere (Ioannidis et al., 2016, 2019, 2020).

After extracting the scholars whose articles categorized them in the social work subfield, several procedures were implemented to clean and enhance the data (Ioannidis et al., 2020). It is important to mention that the application of these procedures was complicated by the proliferation of names used to describe social work programs, differences in academic nomenclature, and social work classification systems across the world. First, each scholar's name was entered into the Google search engine along with the keywords "social work." The search engine's settings were customized to focus on the nation or region associated with the scientist. Only websites published in English or that could be translated into English through Google Translate were searched. Up to 30 min was spent attempting to verify the name and current affiliation of each scholar. If the search procedures revealed that the person had died (e.g., an obituary), which was the case for three individuals, then the person was removed from the list (Thyer et al., 2019).

In light of the concerns that have been raised regarding the difficulties associated with classifying social workers in bibliometric work, measures were included to identify people affiliated with a social work department as well as those with explicit training in social work at the masters or doctoral level (Thyer, 2002). Toward that end, identified scholars' university websites and/or posted CVs were examined. Individuals were subsequently coded as having: (1) a current affiliation with a social work (MSW) degree or international equivalent (yes or no), or (3) a doctoral degree in social work or near equivalent social service field (yes or no). Social service fields included social welfare, social policy and welfare, and social policy. The underlying aim was to identify scholars with a doctoral degree from a social work program, regardless of specific name of the degree. If the person did not have a doctorate in social work, the discipline their degree was from was recorded if the pertinent information was available.

Results

The results of the study are depicted in Table 1, which lists the top 100 global contributors to social work journal scholarship. The table records each scholar's name, their institutional affiliation, and the national setting of their institution. The table also indicates whether or not an individual had a graduate degree in social work in the form of an MSW and/or a doctorate in social work or a closely related field. The final column lists the ranking of a given individual within the overall population of the scientists included in the worldwide ranking of scientists.

The scholars are listed based upon their composite scores. As can be seen in the Table 1, 23 individuals were in the top 100,000 scientists in the world across all fields. All 100, however, ranked relatively highly within the larger global population of published scientists.

In terms of their national setting, most scholars (n = 58) were from institutions in the United States. Of the remaining contributors to social work discourse, 21 were from Great Britain, seven were from Canada, six each were from Australia and Israel. There was also one scholar each from both Ireland and Germany.

Table 2 depicts the social work programs with multiple contributors to social work scholarship. The University of California, Berkeley had five scholars in the top 100, the University of California, Los Angeles, the University of Toronto and Washington University in St. Louis each had four scholars, followed by Arizona State University, and the University of Washington with three contributors. An additional 13 programs had two scholars.

Three measures of social work status or identity were included in the study: current social work affiliation, MSW degree, and doctoral degree in social work. Based upon these criteria, the vast majority had solid social work credentials. Of the top 100 most impactful contributors to social work scholarship, 92 were currently affiliated with a social work program (see Table 1). Some 71% had an MSW degree or equivalent, and 72% had a doctorate in social work or equivalent.

The results also indicate a significant minority of nonsocial workers are also important contributors to social work scholarship. Eight individuals were not affiliated with a social work program. In addition, 29% of the scholars did not have an MSW or did not have sufficient information available online to make a determination regarding MSW degree status. This was also the case for the 28 individuals for

Name	Institution	Nation	SW^a	MSW	Doc ^b	Rank
I. Ungar, Michael	Dalhousie University	CAN	۲c	Y	Y	13,373
2. Barth, Richard P.	University of Maryland	USA	Y	Y	Y	15,555
3. Hodge, David R.	Arizona State University	USA	Y	Y	Y	35,903
4. Glisson, Charles	University of Tennessee	USA	Y	Y	Y	41,022
5. Proctor, Enola K.	Washington University in St. Louis	USA	Y	Y	Y	52,474
6. Courtney, Mark E.	University of Chicago	USA	Y	Y	Y	54,524
7. Ying, Yu Wen	University of California, Berkeley	USA	Y	U	U	65,047
8. Parton, Nigel	University of Huddersfield	GBR	Ν	Y	U	66,107
9. Gray, Mel	University of Newcastle	AUS	Y	Y	Y	67,526
10. Al-Krenawi, Alean	Ben-Gurion University of the Negev	ISR	Y	Y	Y	72,549
II. Drake, Brett	Washington University in St. Louis	USA	Y	U	Y	74,682
12. Alston, Margaret	University of Newcastle	AUS	Y	U	Y	75,208
13. Thyer, Bruce A.	Florida State University	USA	Y	Y	Y	76,859
14. Jonson-Reid, Melissa	Washington University in St. Louis	USA	Y	Y	Y	77,120
15. Berger, Lawrence M.	University of Wisconsin, Madison	USA	Y	Y	Y	77,721
16. Coulton, Claudia	Case Western Reserve University	USA	Y	Y	Y	81,273
17. Morrow, Virginia	University College London	GBR	Y	Ν	Y	82,671
18. Zayas, Luis H.	University of Texas, Austin	USA	Y	Y	Ν	84,833
19. Regehr, Cheryl	University of Toronto	CAN	Y	Y	Y	89,543
20. McMillen, J. Curtis	University of Chicago	USA	Y	Y	Y	90,042
21. Nurius, Paula S.	University of Washington	USA	Y	Y	Y	92,215
22. Gambrill, Eileen	University of California, Berkeley	USA	Y	Y	Y	93,587
23. Manthorpe, Jill	King's College London	GBR	Y	Ν	Ν	94,555
24. Munro, Eileen	London School of Economics and Political Science	GBR	Y	Ν	Y	100,885
25. Dominelli, Lena	University of Stirling	GBR	Y	Y	Ν	101,046
26. Bogo, Marion	University of Toronto	CAN	Y	Y	Ν	101,975
27. Garrett, Paul M.	University of Galway	IRL	Y	U	Y	103,713
28. Mishna, Faye	University of Toronto	CAN	Y	Y	Y	108,444
29. Cnaan, Ram A.	University of Pennsylvania	USA	Y	Y	Y	110,581
30. Harper, Douglas	Duquesne University	USA	Y	Ν	Ν	112,569
31. Prout, Alan	University of Leeds	GBR	Ν	Ν	U	115,139
32. Fraser, Mark W.	University of North Carolina, Chapel Hill	USA	Y	Y	Y	118,371
33. O'keefe, Maura	California State University, Sacramento	USA	Y	Y	U	118,398
34. Abrams, Laura S.	University of California, Los Angeles	USA	Y	Y	Y	123,193
35. Midgley, James	University of California, Berkeley	USA	Y	Y	Ν	124,010
36. Pritchard, Colin	Bournemouth University	GBR	Y	Y	Ν	124,399
37. Guo, Shenyang	Washington University in St. Louis	USA	Y	U	U	125,082
38. Ferguson, Harry	University of Birmingham	GBR	Y	Y	Ν	126,817
39. Crisp, Beth R.	Deakin University	AUS	Y	Ν	Y	130,847
40. Berrick, Jill Duerr	University of California, Berkeley	USA	Y	Y	Y	131,546
41. Scourfield, Jonathan	Cardiff University	GBR	Y	Y	Y	132,282
42. Berger, Roni	Adelphi University	USA	Y	Y	Y	135,707
43. Jones, Loring P.	San Diego State University	USA	Y	Y	Y	136,745
44. Howe, David	University of East Anglia	GBR	Y	Ν	U	136,897
45. Freeman, Michael	University of Essex	GBR	Ν	Ν	Ν	136,976
46. Toseland, Ronald W.	State University of New York, Albany	USA	Y	Y	Y	145,589
47. Bride, Brian E.	Georgia State University	USA	Y	Y	Y	146,552
48. White, Sue	University of Sheffield	GBR	Ŷ	Ý	N	148,526
49. Featherstone, Brid	University of Huddersfield	GBR	Ŷ	Ý	U	148,659
50. Ben-Arieh, Asher	Hebrew University of Jerusalem	ISR	Ŷ	Ū	Ŷ	149,497
51. Rubin, Allen	University of Houston	USA	Ŷ	Ŷ	Ŷ	151,358
52. Lindsey, Duncan	University of California, Los Angeles	USA	Ŷ	Ū	Ý	152,029

 Table 1. Top 100 Global Contributors to Social Work Journal Scholarship.

(continued)

Doc^b

Rank

MSW

 SW^{a}

Nation

Iname	Institution	Ination	200	11244	Doc	Капк
53. Coohey, Carol	University of Iowa	USA	Y	Y	Y	152,428
54. Gutiérrez, Lorraine M.	University of Michigan, Ann Arbor	USA	Y	Y	Y	152,920
55. Hong, Jun Sung	Wayne State University	USA	Y	Y	Y	153,118
56. Sprang, Ginny	University of Kentucky	USA	Ν	Ν	U	153,791
57. Cacciatore, Joanne	Arizona State University	USA	Y	Y	Y	156,577
58. Corcoran, Jacqueline	University of Pennsylvania	USA	Y	Y	Y	161,204
59. Ferguson, Kristin M.	Arizona State University	USA	Y	Y	Y	162,208
60. Pecora, Peter J.	University of Washington	USA	Y	Y	Y	164,645
61. Mor Barak, Michàlle	University of Southern California	USA	Y	Y	Y	165,716
62. Littell, Julia	Bryn Mawr College	USA	Y	Y	Y	168,134
63. Carpenter, John	University of Bristol	GBR	Y	U	Y	173,418
64. Humphreys, Cathy	University of Melbourne	AUS	Y	Ν	Y	176,736
65. Benbenishty, Rami	Bar-Ilan University	ISR	Y	U	Y	177,348
66. Gilgun, Jane F.	University of Minnesota, Twin Cities	USA	Y	Y	Ν	177,427
67. Alaggia, Ramona	University of Toronto	CAN	Y	Y	Y	178,224
68. Taylor, Brian J.	Ulster University	GBR	Y	Ν	Ν	180,308
69. Austin, Michael J.	University of California, Berkeley	USA	Ν	Y	Y	180,655
70. Collins, Mary E.	Boston University	USA	Y	Y	Y	181,424
71. Healy, Karen	University of Queensland	AUS	Y	U	Y	182,395
72. James, Sigrid	Universität Kassel	DEU	Y	Y	Y	183,367
73. Barber, Jim	University of New England	AUS	Ν	Ν	U	183,925
74. Bender, Kimberly	University of Denver	USA	Y	Y	Y	186,711
75. Reamer, Frederic G.	Rhode Island College	USA	Y	Y	Y	189,283
76. Newhill, Christina E.	University of Pittsburgh	USA	Y	Y	Y	191,301
77. Thompson, Sanna J.	University of Texas, Austin	USA	Y	Y	Y	192,689
78. Landau, Ruth	Hebrew University of Jerusalem	ISR	Y	Y	Y	194,633
79. Hill, Malcolm	University of Strathclyde	GBR	Y	Ν	Y	195,040
80. Denov, Myriam S.	McGill University	CAN	Y	Ν	Ν	195,331
81. Eamon, Mary K.	University of Illinois Urbana-Champaign	USA	Y	Y	Y	195,437
82. Baum, Nehami	Bar-Ilan University	ISR	Y	Y	Y	195,837
83. Spencer, Renée	Boston University	USA	Y	Y	Ν	195,946
84. Schilling, Robert F.	University of California, Los Angeles	USA	Y	Y	Y	195,988
85. LaSala, Michael C.	Rutger's University, New Brunswick	USA	Y	Y	Y	196,209
86. Ben-Ari, A.	University of Haifa	ISR	Y	U	Y	196,951
87. Weaver, Hilary N.	State University of New York, Buffalo	USA	Y	Y	Y	198,910
88. Thomas, Nigel P.	University of Central Lancashire	GBR	Y	Ν	Ν	199,577
89. Cummings, Sherry	University of Tennessee, Knoxville	USA	Y	Y	Y	201,964
90. Koeske, Gary	University of Pittsburgh	USA	Y	U	U	202,115
91. Ai, Amy L.	Florida State University	USA	Y	Y	Y	203,534
92. Holland, Sally	Cardiff University	GBR	Ν	Y	Y	204,374
93. Lundy, Laura	Queen's University, Belfast	GBR	Ν	Ν	Ν	206,355
94. Baines, Donna	University of British Columbia	CAN	Y	U	U	208,289
95. Tran, Thanh V.	Boston College	USA	Y	Y	Y	208,878
96. Ruch, Gillian	University of Sussex	GBR	Y	Y	U	209,637
97. Webb, Stephen	Glasgow Caledonian University	GBR	Y	Y	Y	210,324
98. Holden, Gary	New York University	USA	Y	Y	Y	210,713
99. Ryan, Joseph P.	University of Michigan, Ann Arbor	USA	Y	Y	Y	211,178
100. Jackson, Aurora P.	University of California, Los Angeles	USA	Y	Y	Y	211,449
	-					

Institution

Table I. (continued)

 $^{\rm a}\!SW\!=\!Af\!filiated$ with a social work program.

^bDoc = Doctoral degree in social work or closely related field.

 $^{c}Y = yes$, N = no, U = unavailable/other.

AUS = Australia; CAN = Canada; GBR = Great Britain; ISR = Israel; MSW = Master of Social Work.

Name

Institution	Contributors		
University of California, Berkeley	5		
University of California, Los Angeles	4		
University of Toronto (CAN)	4		
Washington University in St. Louis	4		
Arizona State University	3		
University of Washington	3		
Bar-Ilan University (ISR)	2		
Boston University	2		
Cardiff University (GBR)	2		
Florida State University	2		
Hebrew University of Jerusalem (ISR)	2		
University of Chicago	2		
University of Huddersfield (GBR)	2		
University of Michigan, Ann Arbor	2		
University of Newcastle (AUS)	2		
University of Pennsylvania	2		
University of Pittsburgh	2		
University of Tennessee	2		
University of Texas, Austin	2		

AUS = Australia; CAN = Canada; GBR = Great Britain; ISR = Israel.

whom it could not be verified if they had a doctorate in social work or equivalent.

Figure 1 portrays these data in a proportional Euler diagram. As illustrated in the diagram, a high degree of overlap exists among the three measures of social work status or identity. Most of the top contributors where affiliated with a social work department and had both an MSW and a doctoral degree in social work. Only three of the 85 scholars who had an MSW and/or a doctorate in social work were affiliated with nonsocial work departments.

Efforts were also undertaken to identify the disciplinary degrees of those without a doctorate in social work. Of those with sufficient information available to make a determination regarding degree status, the three most common doctoral degrees were in sociology, human development or developmental psychology, and law.

Discussion

To the best of our knowledge, this is the first study to identify the leading global contributors to social work scholarship. Through their journal publications, these authors play a unique role in contributing to the profession's distinct knowledge base. Most academic papers receive few, if any, citations (Tahamtan et al., 2016). Accordingly, the 100 individuals listed in this study have made substantial contributions to the profession's intellectual life over the course of their careers (Thyer et al., 2019). In addition to the sheer number of works these scholars have disseminated, the utility or usefulness of their scholarship is particularly notable.

It is important to mention that citations, regardless of how they are used in various bibliometric measures, do not necessarily denote influence on social work practice. However, they do provide a measure of knowledge production and utilization in the profession's scientific enterprise (Tilbury et al., 2022). In turn, this academic knowledge—with its applied orientation—informs and shapes practice.

All 100 scholars ranked highly compared to the global population of over eight million published scientists. However, 23 individuals landed in the top 100,000 scientists globally across all fields. The members of this latter group might be considered a select group of scientists (Jones, 2021). Their efforts characterize them as some of the leading scientists globally, not just in social work, but across all disciplines.

It is interesting to compare the number of scholars in the top 100,000 in social work to other disciplines. For instance, the field of forensic science and legal medicine had 30 authors in the top 100,000 (Jones, 2021) and the field of complementary and alternative medicine had 40 authors listed among most influential authors worldwide (Walach, 2019). It is widely acknowledged, however, that making comparisons across disciplines is problematic due to the different citation cultures that exist within various professions. In medicine, in particular, citations may be substantially more profusive (Zhang et al., 2021). Given these caveats, the social work profession seems to compare quite favorably to various fields in medicine.

The findings illustrate the profession's discourse does, in fact, reflect the reality that social work is global profession (Ioakimidis & Sookraj, 2021). Individuals from the more populous nations, such as the United States and Great Britain, dominate the list. But it is clear that scholars from smaller nations are also significant contributors to the profession's knowledge base. Indeed, seven different nations were represented among the 100 contributors, and five among the top 10.

A total of 19 programs from five nations had multiple scientists in the top 100 contributors to social work scholarship. This suggests that these programs may be excelling in developing a positive research culture (Barner et al., 2015). To be clear, many factors contribute to the creation of productive research cultures in academia. Furthermore, just because a school does not rank in this study does not mean that it has not developed such a culture (Lacasse et al., 2017). Multiple placements in the top 100 does, however, suggest that these social work programs have created cultures that facilitate knowledge production and dissemination.

As a group, the individuals included in this study would seem to have solid social work credentials based upon their current affiliations in social work programs and MSW/doctoral degree status. The degree to which these individuals might be considered social work faculty is an interesting question. Who qualifies as a social worker is contested

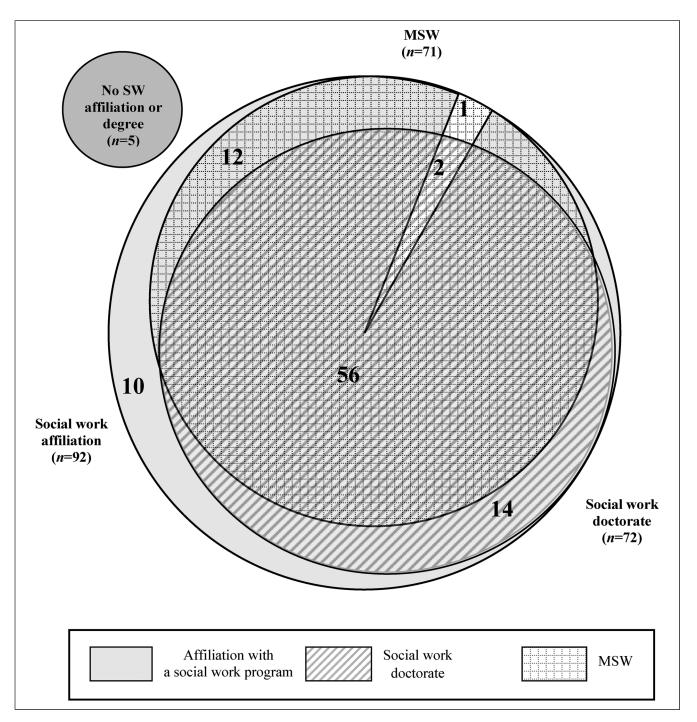


Figure 1. Affiliation and educational status of the top 100 contributors to social work discourse. MSW = Master of Social Work.

(Thyer, 2002; Thyer et al., 2019). Some might consider individuals who are appointed at a social work program to be social work faculty, even though they do not have any specific social work training. Others deem the MSW degree to be the central qualification, while yet others might require a doctorate in social work, or some combination of affiliation, MSW and/or doctorate. In this study, we included all three measures, which often overlap, so readers can make their own determinations. However, based upon these three signifiers, most of the people in this study would be considered social workers. Indeed, a majority of contributors have specific training in social work at the masters and doctoral levels and are affiliated with a social work program.

It is also interesting that a significant minority did not have some of these three signifiers. Nine scholars were not affiliated with a social work program and, in roughly 30% of the cases, we could not verify if the individual had an MSW or doctoral degree in social work. To some extent, this could be due to the difficulty associated with classifying degrees in an international context as well as the proliferation of names used to label the graduate degrees offered by social work programs. Nevertheless, the findings suggest that scholars without affiliations or training in social work are making important contributions to the profession's knowledge.

Implications

Several implications flow from the study's results. Collaborative mentoring relationships play a critical role in advancing scientific progress (Holosko et al., 2018). The present study adds to the emerging literature identifying leading scholars in social work. For example, potential social work students interested in a research career might seek out doctoral programs where they can learn from the scholars identified in this study. Similarly, junior faculty might benefit from collaborating with more experienced faculty in areas of shared interest.

In short, the knowledge possessed by scholars profiled in this study might be leveraged to help create more productive research cultures (Barner et al., 2015). These scholars can function as role models and provide guidance and tips for success. They can share strategies to help emerging scholars navigate the academic pipeline (Chan & Torgler, 2020). Programs with multiple contributors to social work scholarship are particularly well positioned in this regard.

The scholars highlighted in this study also function as a benchmark for outstanding academic success. As mentioned in the introduction, scholarly impact can be measured in many ways (Tilbury et al., 2022). Some specific indicators of impact include: external funding, practice innovations, policy change, interventions that ameliorate societal problems or enhance teaching effectiveness, awards, and invitations to serve in various prestigious capacities, such advisory board members, honorary societies, and keynote speakers (Newson et al., 2018). Bibliometric measures, however, have long been considered an important measure of scholarly impact in higher education. Accordingly, it is important to acknowledge the effort and dedication it takes to produce discourse-shaping scholarship. Their accomplishments serve as one important benchmark of success in social work and should be recognized as such.

The results confirm that social work discourse is, indeed, global in nature with individuals from seven different nations among its most impactful scholars. Concurrently, the results suggest that some geographical disparities may exist regarding the profession's knowledge production and dissemination (Roche & Flynn, 2020). For instance, faculty from Africa were absent from the list of top contributors, despite the fact that English is the language of instruction in many areas of Africa. This suggests that the profession may benefit by implementing strategies to increase collaborations between faculty in developed nations and faculty who work in

more resource constrained settings (Hodge & Kibirige, 2022). As is the case with scholars from developed nations, faculty from developing nations can make unique contributions that enhance the profession's knowledge (Lateef et al., 2022).

The results also suggest that social work is maturing as a profession. Sellers et al. (2006) reported that many social work faculty held an uncomplimentary view of social work journals, often choosing to publish their most impactful research in extra-disciplinary outlets. Since the Sellers et al.'s study was conducted, various efforts have been implemented to improve the quality of disciplinary periodicals (Yaffe, 2017). The finding that scholars who are either unaffiliated with a social work program or without training in social work are selecting social work journals as outlets for papers that are subsequently highly cited suggest that perceptions may have changed regarding the creditability of social work periodicals, and perhaps the profession's discourse more generally.

Limitations

As is the case with any bibliometric study, several limitations should be noted. The first concerns the coverage of the Scopus database (Chan & Torgler, 2020). Values calculated using Google Scholar are typically higher than those produced with Scopus due to the larger amount of social science literature indexed by Google Scholar (Tilbury et al., 2022). What effect this might have on the relative ranking of social workers in this study is unknown; however, it does highlight the importance of replication studies using other databases such as Google Scholar.

In keeping with similar studies conducted in social work, only articles indexed in Scopus were considered in calculating the composite metric used in this study (Victor et al., 2017). Thus, highly cited books or book chapters were not accounted for in the results (Jones, 2021). Scholarship published in languages other than English, as well as research produced in developing nations, is also underrepresented in Scopus (Martín-Martín et al., 2018). This may help explain the lack of scholars with African affiliations in the list.

It should also be reiterated that the composite measure of impact allocates some weight to the last author position (Ioannidis et al., 2020). In some other disciplines, the last author assumes additional responsibility for the publication (Jones, 2021). This is not a common practice in social work, as credit tends to decrease in lockstep with author order (Seipel, 2003). This raises the possibility that an alternative composite measure, with a different weighting system, may yield a different ordering of top contributors.

Faculty affiliated with social work programs encompass a diverse set of academic interests. Scholars specializing in gerontology or substance use, for example, might disseminate their work in periodicals that cater to these fields. Consequently, social workers may be leaders in their area of specialization, and even rank among the top 100,000 scientists in the world, and still not be included in this study, which focuses on social work periodicals. For instance, Robert J. Taylor at the University of Michigan and Nancy Morrow-Howell at Washington University in St. Louis both rank among the top 100,000 scientists but did not appear in Table 1. Additional studies are needed in other fields to fully capture the accomplishments of all social workers.

It is important to mention that self-citations are not inherently problematic. Some observers consider self-citations to be "cheating," but they can also be legitimate (Sandnes, 2020). The Committee on Publication Ethics (2019) guidance on citation manipulation states good reasons exist for citing one's previous work. An example might be a scholar building upon their previous research. Indeed, failing to cite pertinent prior works can lead to potential ethical problems, such as allegations of self-plagiarism. Although the present study corrected for self-citations, ideally a more judicious approach would be used that incorporated legitimate self-citations.

Finally, it may be helpful to recall the study results are based upon one measure of scholarly impact. As is the case with pedagogy, service, and other germane areas, multiple quantitative and qualitative indicators of impact exist. As implied above, using a different measure may result in a different set of results. For example, a measure of the direct effects of scholarship on practice outcomes might lead to an alternative rank ordering of scholars. Concurrently, the present composite measure corrects for many of the limitations associated with other widely used measure of academic impact (e.g., the Google Scholar h-index), and consequently represents an important methodological advancement in both measuring scholarly impact as well as the profession's understanding of its leading scientists.

Conclusion

A relatively small number of individuals contribute to any profession's knowledge base (Thyer et al., 2019). This study identifies those scientists who have played a major role in contributing to social work scholarship over the course of their careers. It also provides a point of comparison with other scientists outside social work.

The results reveal that scientists from across the globe make important contributions to social work scholarship. In addition, some social workers are among the most impactful scientists in the world across all disciplines. In addition to recognizing their accomplishments as global leaders, this study suggests new opportunities exist to leverage their skills and knowledge to help advance the profession's collective knowledge development and dissemination.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article

ORCID iDs

David R. Hodge D https://orcid.org/0000-0001-6672-9070 Patricia R. Turner D https://orcid.org/0000-0001-8594-4446

References

- Babbie, E. R. (2020). *The practice of social research* (15th ed.). Cengage Learning.
- Barner, J. R., Holosko, M. J., Thyer, B. A., & King, S.Jr (2015). Research productivity in top-ranked schools in psychology and social work: Does having a research culture matter? *Journal of Social Work Education*, 51(1), 5–18. https://doi. org/10.1080/10437797.2015.977123
- Canadian Association of Social Workers (2022). What is social work? Retrieved from https://www.casw-acts.ca/en/what-social-work.
- Chan, H. F., & Torgler, B. (2020). Gender differences in performance of top cited scientists by field and country. *Scientometrics*, 125(3), 2421–2447. https://doi.org/10.1007/ s11192-020-03733-w
- Committee on Publication Ethics (2019). *Citation manipulation*. Retrieved from https://publicationethics.org/citation-manipulationdiscussion-document.
- Flexner, A. (2001 [1915]). Is social work a profession? Research on Social Work Practice, 11(2), 152–165. https://doi.org/10.1177/ 104973150101100202
- Harzing, A. W., & Alakangas, S. (2016). Google Scholar, Scopus and the Web of Science: A longitudinal and cross-disciplinary comparison. *Scientometrics*, 106(2), 787–804. https://doi.org/ 10.1007/s11192-015-1798-9
- Hirsch, J. E. (2005). An index to quantify an individual's scientific research output. *Proceedings of the National Academy of Sciences*, 102(46), 16569–16572. https://doi.org/10.1073/pnas. 0507655102
- Hodge, D. R., & Kibirige, K. (2022). Addressing the global inequality in social work research: Challenges, opportunities, and key insights and strategies in sub-Saharan Africa. *Social Work Research*, 46(1), 84–92. https://doi.org/10.1093/swr/svab020
- Hodge, D. R., Kremer, K. P., & Vaughn, M. G. (2016). High-impact social work scholars: A bibliometric examination of SSWR and AASWSW fellows. *Research on Social Work Practice*, 26(7), 751–761. https://doi.org/10.1177/1049731516645929
- Hodge, D. R., Lacasse, J. R., & Benson, O. (2012). Influential publications in social work discourse: The 100 most highly cited articles in disciplinary journals: 2000–09. *British Journal of Social Work*, 42(4), 765–782. https://doi.org/10.1093/bjsw/bcr093
- Holden, G., Rosenberg, G., & Barker, K. (2005). Tracing thought through time and space: A selective review of bibliometrics in social work. *Social Work in Health Care*, 41(3-4), 1–34. https://doi.org/10.1300/J010v41n03_01
- Holosko, M. J. (2022). Citation impact factors among social work faculty in Hong Kong. *China Journal of Social Work*, 15(1), 86–99. https://doi.org/10.1080/17525098.2021.1883210
- Holosko, M. J., Mishna, F., Graham, J. R., & Allen, J. L. (2018). Citation impact factors among faculty in Canadian social

work programs. *Research on Social Work Practice*, 28(5), 619–627. https://doi.org/10.1177/1049731517707058

- Huggins-Hoyt, K. Y. (2018). African American faculty in social work schools: A citation analysis of scholarship. *Research on Social Work Practice*, 28(3), 300–308. https://doi.org/10. 1177/1049731517700499
- Huggins-Hoyt, K. Y., Holosko, M. J., Briggs, H. E., & Barner, J. R. (2017). African American faculty in social work schools: The impact of their scholarship. *Journal of Evidence-Informed Social Work*, 14(3), 147– 157. https://doi.org/10.1080/23761407.2017.1302861
- Ioakimidis, V., & Sookraj, D. (2021). Global standards for social work education and training. *International Social Work*, 64(2), 161–174. https://doi.org/10.1177/0020872821989799
- Ioannidis, J. P., Baas, J., Klavans, R., & Boyack, K. W. (2019). A standardized citation metrics author database annotated for scientific field. *PLoS Biology*, 17(8), e3000384. https://doi.org/10. 1371/journal.pbio.3000384
- Ioannidis, J. P., Boyack, K. W., & Baas, J. (2020). Updated science-wide author databases of standardized citation indicators. *PLoS Biology*, *18*(10), e3000918. https://doi.org/10.1371/journal.pbio.3000918
- Ioannidis, J. P., Klavans, R., & Boyack, K. W. (2016). Multiple citation indicators and their composite across scientific disciplines. *PLoS Biology*, 14(7), e1002501. https://doi.org/10.1371/ journal.pbio.1002501
- Jackson, D., Usher, K., Durkin, J., & Wynne, R. (2022). What can we learn from citation metrics? Measuring nurse researchers in Australia and New Zealand. *Journal of Advanced Nursing*, 78(2), e33–e35. https://doi.org/10.1111/jan.15035
- Jones, A. W. (2021). Scientometric evaluation of highly cited scientists in the field of forensic science and legal medicine. *International Journal of Legal Medicine*, *135*(2), 701–707. https://doi.org/10.1007/s00414-020-02491-x
- Koltun, V., & Hafner, D. (2021). The h-index is no longer an effective correlate of scientific reputation. *PLoS ONE*, *16*(6), e0253397. https://doi.org/10.1371/journal.pone.0253397
- Lacasse, J. R., Hodge, D. R., & Bean, K. F. (2011). Evaluating the productivity of social work scholars using the h-index. *Research on Social Work Practice*, 21(5), 599–607. https:// doi.org/10.1177/1049731511405069
- Lacasse, J. R., Prost, S. G., & Thyer, B. A. (2017, January 11–15). Author affiliations in six major social work journals: Top producing authors and institutions. [Conference presentation]. Society for Social Work and Research. New Orleans, LA.
- Lateef, H., Nartey, P. B., Amoako, E. O., & Lateef, J. S. (2022). A systematic review of African-centered therapeutic interventions with Black American adults. *Clinical Social Work Journal*, 50, 256–264.
- Levine-Clark, M., & Gil, E. L. (2021). A new comparative citation analysis: Google Scholar, Microsoft Academic, Scopus, and Web of Science. *Journal of Business & Finance Librarianship*, 26(1-2), 145–163. https://doi.org/10.1080/08963568.2021.1916724
- Liu, W., Cheng, H., & Han, X. (2022). Rebuilding geography for the 21st century through disciplinary reunification and social engagement. *EPF: Philosophy, Theory, Models, Methods and Practice* 1(1), 114–124.
- Loan, F. A., Nasreen, N., & Bashir, B. (2022). Do authors play fair or manipulate Google Scholar h-index? *Library Hi Tech*, 40(3), 676–684.
- Marshall Jr, I., Davis Smith, B., Green, M. T., Anderson, B., Harry, S. V., Byrd, Y. M., & Hill, S. (2016). Scholarly productivity of social work faculty at historically black colleges and

universities: Are h-index scores a suitable measure? *Journal* of Social Work Education, 52(1), 95–107. https://doi.org/10. 1080/10437797.2016.1112645

- Martín-Martín, A., Orduna-Malea, E., Thelwall, M., & Delgado-López-Cózar, E. (2019). Google Scholar, Web of Science, and Scopus: Which is best for me? . *Impact of Social Sciences Blog.* Retrieved from http://eprints.lse.ac.uk/ 103443/1/impactofsocialsciences_2019_12_03_google_scholar_ web_of_science_and.pdf
- Martín-Martín, A., Orduna-Malea, E., Thelwall, M., & López-Cózar, E. D. (2018). Google Scholar, Web of Science, and Scopus: A systematic comparison of citations in 252 subject categories. *Journal of Informetrics*, 12(4), 1160–1177. https://doi.org/10. 1016/j.joi.2018.09.002
- Martín-Martín, A., Thelwall, M., Orduna-Malea, E., & Delgado López-Cózar, E. (2021). Google Scholar, Microsoft Academic, Scopus, Dimensions, Web of Science, and OpenCitations' COCI: A multidisciplinary comparison of coverage via citations. *Scientometrics*, 126(1), 871–906. https://doi.org/10.1007/ s11192-020-03690-4
- Martinez-Brawley, E. E., & Zorita, P. M. (2007). Tacit and codified knowledge in social work: A critique of standardization in education and practice. *Families in Society*, 88(4), 534–542. https:// doi.org/10.1606/1044-3894.3675
- National Association of Social Workers (2021). Code of ethics. Retrieved from https://www.socialworkers.org/About/Ethics/ Code-of-Ethics/Code-of-Ethics-English.
- Newson, R., King, L., Rychetnik, L., Milat, A., & Bauman, A. (2018). Looking both ways: A review of methods for assessing research impacts on policy and the policy utilisation of research. *Health Research Policy and Systems*, 16(1), 1–20. https://doi. org/10.1186/s12961-017-0276-7
- Nichols, J. J., Morgan, P. B., Efron, N., & Jones, L. W. (2022). Global optometrist research ranking derived from a sciencewide author database of standardised citation indicators. *Clinical and Experimental Optometry*, 105(1), 20–25. https:// doi.org/10.1080/08164622.2021.1981744
- Oliveira, L. D., Reichert, F., Zandonà, E., Soletti, R. C., & Stanisçuaski, F. (2021). The 100,000 most influential scientists rank: The underrepresentation of Brazilian women in academia. *Anais da Academia Brasileira de Ciências*, 93(Suppl. 3), e20201952. https://doi.org/10.1590/0001-3765202120201952
- Perron, B. E., Victor, B. G., Hodge, D. R., Salas-Wright, C. P., Vaughn, M. G., & Taylor, R. J. (2017). Laying the foundations for scientometric research: A data science approach. *Research* on Social Work Practice, 27(7), 802–812. https://doi.org/10. 1177/1049731515624966
- Rau, J. R., & Jaksic, F. M. (2021). Are Latin American ecologists recognized at the world level? A global comparison. *Revista Chilena de Historia Natural*, 94(4). http://dx.https://doi.org/ 10.1186/s40693-021-00101-7
- Roche, S., & Flynn, C. (2020). Geographical inequity in social work research: A snapshot of research publications from the Global South. *International Social Work*, 63(3), 306–322. https://doi. org/10.1177/0020872818797999
- Sandnes, F. E. (2020). A simple back-of-the-envelope test for selfcitations using Google Scholar author profiles. *Scientometrics*, 124(2), 1685–1689. https://doi.org/10.1007/s11192-020-03521-6
- Seeber, M., Cattaneo, M., Meoli, M., & Malighetti, P. (2019). Self-citations as strategic response to the use of metrics for

career decisions. *Research Policy*, *48*(2), 478–491. https://doi.org/10.1016/j.respol.2017.12.004

- Seipel, M. M. (2003). Assessing publication for tenure. *Journal of Social Work Education*, 39(1), 79–88. https://doi.org/10.1080/ 10437797.2003.10779120
- Sellers, S. L., Smith, T., Mathiesen, S. G., & Perry, R. (2006). Perceptions of professional social work journals: Findings from a national survey. *Journal of Social Work Education*, 42(1), 139–160. https://doi.org/10.5175/JSWE.2006.200303095
- Tahamtan, I., Safipour Afshar, A., & Ahamdzadeh, K. (2016). Factors affecting number of citations: A comprehensive review of the literature. *Scientometrics*, 107(3), 1195–1225. https://doi.org/10.1007/s11192-016-1889-2
- Thyer, B. A. (2002). Developing discipline-specific knowledge for social work: Is it possible? *Journal of Social Work Education*, 38(1), 101–113. https://doi.org/10.1080/10437797.2002.10779085
- Thyer, B. A., Smith, T. E., Osteen, P., & Carter, T. (2019). The 100 most influential contemporary social work faculty as assessed by the h-index. *Journal of Social Service Research*, 45(5), 696–700. https://doi.org/10.1080/01488376.2018.1501793
- Tilbury, C., Bigby, C., & Hughes, M. (2022). The production and dissemination of Australian social work scholarship: A citation analysis. *Australian Social Work*, 75(4), 407–419.

- Tilbury, C., Hughes, M., Bigby, C., & Roche, S. (in press). The types of scholarly publications produced by Australian social work researchers. *Australian Social Work*. https://doi.org/10.1080/ 0312407X.2021.2001834
- Van Noorden, R., & Chawla, D. S. (2019). Policing self-citations. *Nature*, 572(7771), 578–579. https://doi.org/10.1038/d41586-019-02479-7
- Victor, B. G., Hodge, D. R., Perron, B. E., Vaughn, M. G., & Salas-Wright, C. P. (2017). The rise of co-authorship in social work scholarship: A longitudinal study of collaboration and article quality, 1989–2013. *British Journal of Social Work*, 47(8), 2201–2216.
- Walach, H. (2019). Complementary medicine has reached the centre of scientific interest: Some thoughts on Ioannidis' citation database. *Complementary Medicine Research*, 26(6), 373–375. https://doi.org/10.1159/000504467
- Yaffe, J. (2017). From the editor—on peer review: Improving the credibility of social work scholarship. *Journal of Social Work Education*, 53(4), 577–579. https://doi.org/10.1080/10437797. 2017.1376953
- Zhang, C., Liu, L., & Wang, Y. (2021). Characterizing references from different disciplines: A perspective of citation content analysis. *Journal of Informetrics*, 15(2), 101134. https://doi. org/10.1016/j.joi.2021.101134