

Classic articles on social work field in Social Science Citation Index: a bibliometric analysis

Yuh-Shan Ho

Received: 4 December 2012 / Published online: 13 April 2013
© Akadémiai Kiadó, Budapest, Hungary 2013

Abstract This study aimed to identify and analyze characteristics of classic articles published in the Web of Science social work subject category from 1856 to 2011. Articles that have been cited at least 50 times were assessed regarding publication outputs, distribution of outputs in journals, publications of authors, institutions, countries as well as citation life cycles of articles with the highest total citations since its publication up to 2011 and the highest citations in 2011. Five bibliometric indicators were used to evaluate source countries, institutions, and authors. Results showed that 721 of the most highly referenced articles, published between 1957 and 2008, had been cited at least 50 times. *Child Abuse & Neglect* and *American Journal of Community Psychology* published the most classic articles. USA produced 89 % of classic articles and also published the most number of single, internationally collaborative, first author, and corresponding author classic articles. The top 38 productive institutions were all located in the US. The University of Illinois was the most productive institution for the total classic articles while University of California, Los Angeles produced the most inter-institutionally collaborative articles and Arizona State University published the most single institution articles. Furthermore, a new indicator, Y-index was successfully applied to evaluate publication characteristics of authors and institutions. High percentage of authors had the same numbers of first author and corresponding author status of classic articles in social work field.

Keywords Y-index · SSCI · Bibliometric · Top-cited articles · Article life · Social work

Introduction

There is a long history on social work research. In the early nineteenth century, hospital social work was presented (Beard 1923). At the same time, most research focused on psychiatric social work (Jarrett 1918; Neilson 1919). Theory and practice in social work

Y.-S. Ho (✉)
Trend Research Centre, Asia University, No. 500, Lioufeng Road, Wufeng,
Taichung County 41354, Taiwan
e-mail: ysho@asia.edu.tw

and evaluation of social work were investigated in 1970s (Segal 1972; Sheldon 1978; Gibbons et al. 1978). Strong perspectives in social work practice were presented in latter last century (Weick et al. 1989; Saleebey 1996). In recent years, the short form of the Childhood Trauma Questionnaire (the CTQ-SF) (Bernstein et al. 2003) has been frequently applied in social work. Topics related to children have been paid more attention especially child sexual abuse (Wyatt 1985; Beitchman et al. 1992; Mullen et al. 1996).

Classic papers (Garfield 1976) also called most frequently cited articles (Garfield 1973), highly cited articles (Garfield 1974), top cited articles (Bentler 1992), or top publications (Korevaar and Moed 1996) in various fields have been studied, with focus on rehabilitation (Shadgan et al. 2010), environmental and occupational health (Smith 2009), ophthalmology (Ohba et al. 2007), water resources (Chuang et al. 2011), and library and information science (Blessinger and Hrycaj 2010). Bibliometric analysis of classic papers using Science Citation Index or Social Science Citation Index (SSCI) databases for a specific journal was also found including *Social Biology* (Osborne and Osborne 1999), *Veterinary Quarterly* (Elsinghorst and Sybesma 2000), *British Journal of Nutrition* (Trayhurn 2004), *American Journal of Roentgenology* (Bui-Mansfield 2005), *Clinica Chimica Acta* (Csako 2007), *Australian Dental Journal* (Smith 2008a), *Australian Veterinary Journal* (Smith 2008b), and *Journal of Orthopaedic Trauma* (Lefaivre et al. 2010). It has been reported that due to the presence of many most cited papers, there have been influential subsequent advances in molecular biology resulting in helping a great number of people (Picknett and Davis 1999). Highly cited articles nevertheless provide an interesting and useful insight into which authors, articles, and topics are influencing the research profession over time (Smith 2008b). Furthermore, using classic papers to teach physiology (Raff 2005), organometallic chemistry (Duncan and Johnson 2007), capillary filtration, and presentation skills development (McGeown 2006) were also presented.

Number of articles cited was often used as an indicator of scientific performance in subjects of anaesthesia and pain (Terajima and Åneman 2003), ophthalmology (Ohba et al. 2007), and obstetrics and gynecology (Brandt et al. 2010). Top cited articles were commonly listed to provide a basic source of information and were categorized according to publication year, journal, authors, countries, and institutions (Brandt et al. 2010). However, the number of citations of a paper is probably not sufficient to show the impact it had in the research field. Indicators such as numbers of authors cited, numbers of institutions cited, numbers of countries cited, numbers of subject areas cited, citations per year, and total number of citations of a paper to date have been applied to the high impact papers on the subject of water resources (Chuang et al. 2011). Citation life cycles of highly cited articles were also considered to be important (Aversa 1985). The citation histories of papers give more details of the impact characteristics of articles (Wang et al. 2011).

The articles analyzed in the present work were those in the field of social work in SSCI having at least 50 citations since 1956. This study identified and examined the characteristics covering publication year, journals, authors, institutions, countries, life citation cycles, and attributes of the top cited articles.

Methodology

The methodology used in this study was based on the SSCI database of Web of Science from Thomson Reuters (updated on 30 November 2012). According to Journal Citation Reports (JCR) of 2011, it indexes 2,966 journals in 56 Web of Science categories of social science edition. There were 41 journals listed in the category of social work in JCR in 2011. There

were 6,452,237 documents from 1956 to 2011 found in SSCI. Results were refined by the Web of Science category of social work (73,506 documents). *TC2011* denotes the total citations since publication of the article up to the end of 2011 (Wang et al. 2010; Chuang et al. 2011). $TC2011 \geq 50$ was used as a filter to extract the classic cited documents (782 documents). Documents with citations ≥ 50 were downloaded showing the total annual citations for each article. *C2011* denotes the total citations only in 2011. The advantage of *TC2011* and *C2011* is that they are invariable and ensure repeatability compared with the index of citation from Web of Science (Fu et al. 2012). Therefore, 1.1 % of the total documents published in the Web of Science category of social work are regarded as the classic papers including articles (721; 92 %), reviews (46; 5.9 %), proceedings papers (39; 5.0 %), editorial materials (8; 1.0 %), notes (6; 0.77 %), and one discussion. The 721 articles having $TC2011 \geq 50$ were retrieved as classic articles for further analysis. All results were graphed using Microsoft Excel 2007 for visual representation. In the SSCI database, the corresponding author is designated as the “reprint” author; this study will hereby use the term “corresponding author”. In a single author article where authorship is unspecified, the single author is both first and corresponding author. Similarly, in a single institutional article, the institution is classified as the first as well as the corresponding author institution. In a multi-author article where authorship is unspecified, the first author is classified as the corresponding author. In subsequent analysis, articles originating from England, Scotland, Northern Ireland, and Wales were classified as being from the United Kingdom (UK) (Chiu and Ho 2005). Articles from Hong Kong before 1997 were included with China. The contributions from institutions and countries were identified by the appearance of at least one author in the publications. Collaboration type was determined from the addresses of the authors. The articles were classified into five types based on the country and institution: (1) TP: the number of “total articles” of an institution or a country; (2) SP: the number of “single country article”, if the researchers’ addresses were from the same country or “single institution article”, if the researchers’ addresses were from the same institution; (3) CP: the number of “internationally collaborative article”, if the articles were coauthored by researchers from multiple countries (Chiu and Ho 2005) or “inter-institutionally collaborative article”, if authors were from different institutions; (4) FP: the number of “first author article”, if the first author was from the country or institution for analysis; and, (5) RP: the number of “corresponding author article”, if the corresponding author was from the country or institution for analysis.

Results and discussion

Publication year

A total of 721 classic articles ($TC2011 \geq 50$) had records in social work field in SSCI. These papers were published between 1957 and 2008. *TC2011* ranged from 50 to 752 citations and 90 citations per publication (CPP) on average. Figure 1 illustrates the distribution of these 721 classic articles over the years, and their CPP. No classic articles have yet emerged in the most recent 3 years (2009–2011). Similar result in lack of recent classic articles was also found in the top cited articles in chemical engineering in SCI-Expanded (Ho 2012a). Obviously, newly published articles require time to accumulate citations (Picknett and Davis 1999). Only two of the classic articles were published prior to 1950s, while 47 % of the classic articles appeared in 1990s. It is accepted that with continual passing of time since publication there is an increasing chance of the paper being forgotten (Picknett and Davis 1999). In addition, as time goes by, even “true classics” are gradually

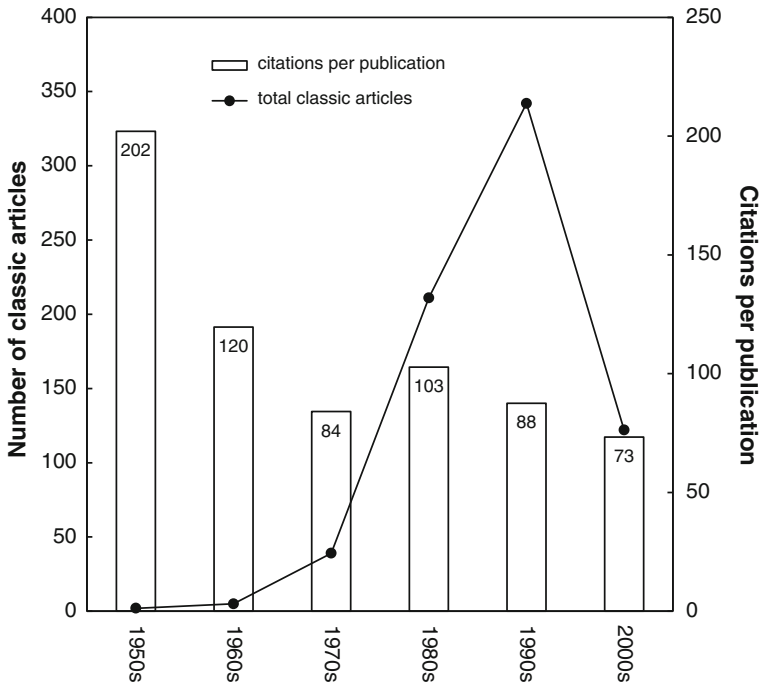


Fig. 1 Number of articles and citation per publications by decade

less often cited, probably because their substance is being absorbed by the current knowledge, a phenomenon that has been termed “obliteration by incorporation” (Garfield 1987). To cite the original paper would be appropriate (Ho 2004). It not only respects authors who presented a novel idea in research but also facilitates colleagues to read the original work to better understand the idea in detail (Ho 2010). In particular, the decade of the 1950s with two articles and the 1960s with five articles had much higher CPPs, 202 and 120, respectively, which can be attributed to the article by Greenwood in 1957 with a *TC2011* of 254 and Riessman in (1965) with a *TC2011* of 214. The CPPs of the other four decades ranged from 74 to 103. Furthermore, the mean number of CPP for the top 100 classic citations was 211, which was lower than the value of 100 classic citations in some medical fields, for example 283 in anesthetic journals (Baltussen and Kindler 2004), 318 in ophthalmology journals (Ohba et al. 2007), 405 in general surgical journals (Paladugu et al. 2002), 447 in orthopaedic surgery (Kelly et al. 2010), and 629 in urology (Hennessey et al. 2009). One of the reasons might be that researchers in social work field are less frequently cited and use fewer references than other medical areas. The earliest classic article in social work field was published in *Social Work* in 1957 (Greenwood 1957). The most recent classic article was published in 2008 in *American Journal of Community Psychology* with *TC2011* = 50 by Wandersman et al. (2008).

Journal

The classical articles were published by 32 journals in the Web of Science category of social work. Ten of the 32 journals were not listed in the category of social work in 2011

including *Family Coordinator* with 14 classic articles listed in Web of Science from 1968 to 1979, *Social Casework* with four articles (1956–1978), *Child Care Quarterly* with three articles (1972–1986), *Social Casework-Journal of Contemporary Social Work* with three articles (1979–1989), *Social Work Research & Abstracts* with three articles (1983–1993), *Journal of Education for Social Work* with two articles (1965–1984), and *Public Welfare* (1956–1996), *Urban & Social Change Review* (1969–1986), *Journal of Gerontological Social Work* (1980–2000), and *Journal of Social Distress and the Homeless* (1994–2002) with one article respectively. Forty-one journals were listed in the category of social work in JCR in 2011. The impact factor of a journal according to JCR for the year 2011 was determined. The classic articles in social work field were distributed in more journals than those classic articles in some medical fields, for example, the seven journals cited in the top 100 from classic papers of orthopaedic surgery (Kelly et al. 2010), ten journals cited in the top 100, from general surgical citations classics (Paladugu et al. 2002), eleven journals cited in the top 100 cited articles in obstetrics and gynecology (Brandt et al. 2010), 13 journals in 100 from ophthalmology class citations (Ohba et al. 2007), and 15 journals cited in the top 100 cited articles, from urology (Hennessey et al. 2009).

Of these 22 journals listed in the Web of Science category of social work in 2011, *Trauma Violence & Abuse* was the only journal with impact factor higher than 3. *Child Abuse & Neglect* published the most classic articles with 217 articles (30 %), followed by *American Journal of Community Psychology* with 194 articles, while their impact factors were 2.471 (rank 3 in 41 journals) and 1.736 (4/41) respectively (Table 1). As expected, the classic articles were published in journals with high impact factors, similar to the subject area of anesthetics (Baltussen and Kindler 2004). The leading journals attracted the classic publications, which in turn maintained the high impact factor of these journals (Schein and Fingerhut 2000). However, classic articles with $TC2011 \geq 50$ in social work field could also be found in journals with lower impact factors such as *Families in Society-The Journal of Contemporary Human Services* (IF = 0.286; 32/41) with four articles and *Administration in Social Work* (IF = 0.360; 33/41) with one article.

Authors, institutions, and countries

Each person listed as an author of an article has made an independent material contribution to the manuscript (Coats 2009). The results of author analysis have identified those researchers who have made significant contributions. Among the 1,536 authors contributing to 721 classic articles, 1,303 authors (85 %) published one classic article; 150 authors (10 %) published two classic articles; 50 authors (3.3 %) published three classic articles; 20 authors (1.3 %) published four classic articles; and 13 authors published five or more of the classic articles. The top 18 most productive authors worked in USA. Table 2 lists the authors with five or more classic articles with three indicators such as total number of classic articles, first author articles, and corresponding author articles. It has been accepted convention among the experimental sciences that the most important authorship positions are the first and the last, who very often is the corresponding author (Costas and Bordons 2011). The first author is the person who contributed most to the work, including conducting research and writing of the manuscript (Riesenberg and Lundberg 1990). The corresponding author supervised the planning and execution of the study and also participates in writing of the paper (Burman 1982). D. Finkelhor at University of New Hampshire in the US published not only the most classic articles but also the most first author and corresponding author classic articles. The most cited article among Finkelhor's ten classic articles was titled "Sexual abuse in a national survey of adult men and women:

Table 1 Characteristics of 21 journals in social work field with the classic articles

Journal	TP (%)	IF (rank)
Child Abuse & Neglect	217 (30)	2.471 (3)
American Journal of Community Psychology	194 (27)	1.736 (4)
Family Relations	59 (8.2)	0.680 (20)
Journal of Community Psychology	57 (7.9)	0.985 (12)
Social Work	47 (6.5)	1.148 (9)
Child Welfare	21 (2.9)	0.589 (23)
Children and Youth Services Review	16 (2.2)	1.269 (6)
Social Service Review	15 (2.1)	0.721 (19)
Journal of Social Policy	13 (1.8)	1.113 (10)
British Journal of Social Work	8 (1.1)	1.190 (7)
Health & Social Work	8 (1.1)	0.936 (13)
Social Work Research	7 (1.0)	0.875 (15)
Social Policy & Administration	5 (0.69)	0.566 (25)
Research on Social Work Practice	4 (0.55)	1.532 (5)
Social Work in Health Care	4 (0.55)	0.620 (22)
Families in Society-The Journal of Contemporary Human Services	4 (0.55)	0.286 (36)
Health & Social Care in the Community	3 (0.42)	0.862 (16)
Child Maltreatment	2 (0.28)	2.770 (2)
Trauma Violence & Abuse	1 (0.14)	3.265 (1)
Journal of Social Work Education	1 (0.14)	0.768 (17)
International Journal of Social Welfare	1 (0.14)	0.543 (27)

TP total number of classic articles, IF impact factor in 2011

prevalence, characteristics, and risk factors” (Finkelhor et al. 1990) in *Child Abuse & Neglect* (TC2011 = 720). A. Wandersman at University of South Carolina of the US ranked second published nine classic articles and had one article as single author. Both M.A. Zimmerman at University of Michigan of the US and M.E. Courtney at University of Wisconsin of the US ranked second in first and corresponding author classic articles, respectively. J. Rappaport at University of Illinois of the US published four single author classic articles. The most frequently cited single author classic article (Rappaport 1987) was published by Rappaport in *American Journal of Community Psychology* with TC2011 = 410. Article entitled “Area, class and health: should we be focusing on places or people” (Macintyre et al. 1993) by authors in the UK in *Journal of Social Policy* with TC2011 = 458 was the most cited article by non-US authors.

The 710 classic articles with author address information in the Web of Science were further analyzed regarding institutions and countries. Altogether, 710 articles originated from 443 institutions in 17 countries. The top 38 most productive institutions were in US. Table 3 shows the top 11 institutions published more than 15 classic articles each with University of Illinois (29 articles) and University of California, Los Angeles (26 articles) leading the list. University of Illinois also published the most first and corresponding author articles while University of California, Los Angeles had the most inter-institutionally collaborative articles and Arizona State University had the most single institution articles. Of the total articles, 425 articles (60 %) came from single institutions themselves and 285 articles (40 %) from inter-institutional collaborations. The inter-institutional

Table 2 Thirteen highly productive authors of five or more classic articles

Author	Institution	R (TP)	R (FP)	R (RP)	R (SP)
D. Finkelhor	University New Hampshire, USA	1 (10)	1 (8)	1 (8)	3 (2)
A. Wandersman	University of South Carolina, USA	1 (10)	25 (2)	27 (2)	13 (1)
M. Barrera	Arizona State University, USA	3 (7)	6 (4)	10 (3)	N/A
I.N. Sandler	Arizona State University, USA	3 (7)	4 (5)	4 (5)	13 (1)
M.A. Zimmerman	University of Michigan, USA	3 (7)	2 (6)	2 (6)	3 (2)
M.E. Courtney	University of Wisconsin, USA	6 (6)	2 (6)	2 (6)	3 (2)
J. Briere	University of Southern California, USA	6 (6)	4 (5)	4 (5)	N/A
E.L. Cowen	University of Rochester, USA	6 (6)	10 (3)	10 (3)	3 (2)
R.P. Barth	University of California, Berkeley, USA	6 (6)	86 (1)	85 (1)	13 (1)
J. Rappaport	University of Illinois, USA	10 (5)	6 (4)	6 (4)	1 (4)
J.R. Conte	University of Chicago, USA	10 (5)	10 (3)	10 (3)	N/A
S.R. Dube	Centers for Disease Control and Prevention, USA	10 (5)	25 (2)	10 (3)	N/A
J. Landsverk	Rady Children’s Hospital, USA	10 (5)	86 (1)	N/A	N/A

TP total classic articles, FP first author classic articles, RP corresponding author classic articles, SP single author classic articles, R rank, N/A not available

Table 3 Characteristics of the 11 most productive institutions (TP >15)

Institution	Rank (TP)	Rank (SP)	Rank (CP)	Rank (FP)	Rank (RP)
University of Illinois, USA	1 (29)	2 (18)	5 (11)	1 (25)	1 (24)
University of California, Los Angeles, USA	2 (26)	3 (12)	1 (14)	7 (14)	3 (19)
Arizona State University, USA	3 (24)	1 (19)	24 (5)	2 (21)	2 (22)
University of California, Berkeley, USA	3 (24)	4 (11)	2 (13)	4 (17)	4 (18)
University of Michigan, USA	5 (22)	4 (11)	5 (11)	4 (17)	5 (16)
University of Washington, USA	6 (21)	7 (9)	3 (12)	3 (18)	9 (11)
University of North Carolina, USA	7 (18)	11 (6)	3 (12)	13 (9)	13 (9)
University of Wisconsin, USA	7 (18)	4 (11)	13 (7)	7 (14)	5 (16)
University of Southern California, USA	9 (16)	11 (6)	8 (10)	12 (10)	8 (12)
University of New Hampshire, USA	9 (16)	7 (9)	13 (7)	6 (15)	7 (15)
University of South Carolina, USA	9 (16)	17 (5)	5 (11)	10 (11)	16 (8)

TP total classic articles, SP single institution classic articles, CP collaborative classic articles, FP first author classic articles, RP corresponding author classic articles

collaboration rate was observed to be large in science fields, such as 62 % of global climate change (Li et al. 2011), 53 % of atmospheric simulation (Li et al. 2009), and 44 % of solid waste research (Fu et al. 2010). But inter-institutional collaboration rate was smaller in classic articles of some medical fields, such as 12 % of 100 top cited articles in general surgical journals (Paladugu et al. 2002), and 8 % of 100 ophthalmology class citations (Ohba et al. 2007). It might be concluded that the classic articles had less collaboration than those of non-classic.

Table 4 Characteristics of the 17 contributing countries

Country	Rank (TP)	Rank (SP)	Rank (CP)	Rank (FP)	Rank (RP)
USA	1 (629)	1 (611)	1 (18)	1 (619)	1 (627)
UK	2 (34)	2 (29)	3 (5)	2 (31)	2 (30)
Canada	3 (29)	3 (22)	2 (7)	3 (27)	3 (23)
Australia	4 (8)	4 (6)	5 (2)	4 (6)	4 (6)
New Zealand	5 (6)	5 (5)	6 (1)	4 (6)	4 (6)
Sweden	6 (5)	6 (4)	6 (1)	6 (5)	6 (5)
Israel	6 (5)	9 (1)	4 (4)	8 (3)	9 (1)
Finland	8 (4)	6 (4)	N/A	7 (4)	7 (4)
Italy	9 (2)	8 (2)	N/A	9 (2)	8 (2)
Switzerland	10 (1)	9 (1)	N/A	10 (1)	9 (1)
Ireland	10 (1)	9 (1)	N/A	10 (1)	9 (1)
Netherlands	10 (1)	9 (1)	N/A	10 (1)	9 (1)
France	10 (1)	N/A	6 (1)	10 (1)	N/A
China	10 (1)	9 (1)	N/A	10 (1)	9 (1)
Germany	10 (1)	N/A	6 (1)	N/A	N/A
Norway	10 (1)	9 (1)	N/A	10 (1)	9 (1)
Croatia	10 (1)	9 (1)	N/A	10 (1)	9 (1)

TP total classic articles, *SP* single country classic articles, *CP* collaborative classic articles, *FP* first author classic articles, *RP* corresponding author classic articles, N/A not available

Classic articles usually originated from a small field centered in a few countries, for example, 100 top cited articles in general surgical journals were produced by six countries (Paladugu et al. 2002); top 100 most frequently cited articles in anesthetic journals originated from nine countries (Baltussen and Kindler 2004); the top 100 ophthalmology classic citation articles originated from 10 countries (Ohba et al. 2007). In this study, only 20 articles (2.8 %) were international collaboration and they were contributed by nine countries, while the other 690 articles (97 %) were articles contributed by 15 countries. The percentage of collaboration in the classic articles was much lower than that of other areas in SCI-Expanded, such as 14 % biosorption technology for water treatment (Ho 2008), 16 % of desalination research (Tanaka and Ho 2011), 18 % of financial crisis research (Chang and Ho 2010), and 14 % of acupuncture research (Han and Ho 2011). In general, collaboration played an important role in enhancing the impact of articles (Narin et al. 1991; Leta and Chaimovich 2002). The highly cited papers typically involve more collaborative research than the general norm (Aksnes 2003). However, results indicated that higher percentage of single country's classic articles was found in social work field. This phenomenon was also found in science (Fu et al. 2012) and engineering (Ho 2012a) fields. The characteristics of these 17 countries that published classic articles are illustrated in Table 4. The leading country was US (629 articles), accounting for 89 %, followed distantly by the UK (34 articles) and Canada (29 articles). Eight of 17 countries published only one classic article. Domination in classic articles by the US was not surprising since this pattern occurs in other scientific fields such as, obstetrics and gynecology (Brandt et al. 2010) and orthopaedic surgery (Kelly et al. 2010). As for the 20 internationally collaborative articles, 18 (90 %) involved contribution by the US; and as for non-collaborative articles, 574 articles (89 %) were published by the US. As US took the lead with an

overwhelming majority, they had the highest percentage of classic articles in social work field than other research fields, such as articles of general surgical (78 %) (Paladugu et al. 2002), anesthetic (70 %) (Baltussen and Kindler 2004), ophthalmology (86 %) (Ohba et al. 2007), and urology and subspecialty (76 %) (Hennessey et al. 2009). The top cited publications originated from the United States are explained in part by the large number of the American scientific publications (Zhou and Leydesdorff 2008). There is some evidence that US authors tend to reference articles from US journals than from other countries (Campbell 1990). Reviewers from the United States and outside the United States who also evaluate non-US papers are likely to evaluate papers submitted by US authors more favorably (Link 1998). In particular, all of the classic articles from Finland, Italy, Switzerland, Norway, Ireland, China, and Netherlands were single country articles, while France and Germany published only one internationally collaborative article each.

Citation life cycles of articles with the highest *TC2011*

The articles with the highest *TC2011* can be considered the most popular articles in the research field. Table 5 shows the four most frequently cited classic articles that were cited at least 500 times since publication of the articles up to the end of 2011. Two of the four articles were published in *American Journal of Community Psychology*. All four were published by authors from the US. A classic article, titled “Measures of perceived social support from friends and from family: three validation studies” (Procidano and Heller 1983), received the most citations (*TC2011* = 752). It was published in *American Journal of Community Psychology* by M.E. Procidano at Fordham University of the US and K. Heller at Indiana University. A bias was found that authors’ affiliations were recorded as INRA (Kenneth Heller Institut National de la Recherche Agronomique), France and Fordham University, USA in Web of Science. The detailed figures of cited units, such as authors, institutions, and countries were listed to reveal more of the characteristics that

Table 5 Characteristics of top four articles (*TC2011* >500)

Top cited classic articles	NA	AU	IN	CT	SC	NJ	C/Y	Journal (impact factor in 2011)	Country	R (<i>C2011</i>)	<i>TC2011</i>
Procidano and Heller (1983)	2	1652	548	34	75	330	26	American Journal of Community Psychology (1.736)	France, USA	7 (34)	752
Finkelhor et al. (1990)	4	1699	590	33	62	308	33	Child Abuse & Neglect (2.471)	USA	16 (25)	720
McMillan and Chavis (1986)	2	1023	402	33	82	264	21	Journal of Community Psychology (0.985)	USA	3 (62)	536
Barrera et al. (1981)	3	1316	424	31	65	237	16	American Journal of Community Psychology (1.736)	USA	67 (14)	501

NA number of authors in a classic article, AU number of authors cited, IN number of institutions cited, CT number of countries cited, SC number of Web of Science categories cited, NJ number of journals cited, C/Y citations/year, C2011 total citation in 2011, TC2011 total citations from publication to 2011, R rank

influenced the classic articles in social work field. In general, more citations meant that more authors, institutions, and countries were influenced by the article. Further analysis of citations showed that the article was cited by 1,652 authors from 548 institutions in 34 countries, cited in 330 journals in 75 Web of Science categories, and with an average of 25 times per year. Article life shows impact history of articles (Chuang et al. 2011). Five typical citation frequency curves of individual articles, such as initially much praised articles, basic recognized work, scarcely reflected work, well-received but later erroneous qualified work, and genial work were reported (Avramescu 1979). The citation life cycles of highly cited articles were studied in following years (Chuang et al. 2011). The citation lives of the top four classic articles ($TC_{2011} > 500$) are shown in Fig. 2. Three of the top cited articles were published in 1980s and one in 1990. Only one article entitled “Sense of community: a definition and theory” (McMillan and Chavis 1986) saw continually increasing trends in most years since published, while the others’ citation rates climbed initially to a plateau and then maintained steady for some years.

Citation life cycle of articles with the highest C_{2011}

Total citations indicated impact of an article in a research field. Article life shows characteristics of an article impact after publication. About 74 % of all classic articles had no citations, 17 % articles had one citation, and 4.7 % articles had two citations during their year of publication. TC_{2011} , an accumulative number may reach a large value as long as the time span is long enough. An article impact might not be always high (Fu et al. 2012). Although some recently published articles within the past few years had great potential,

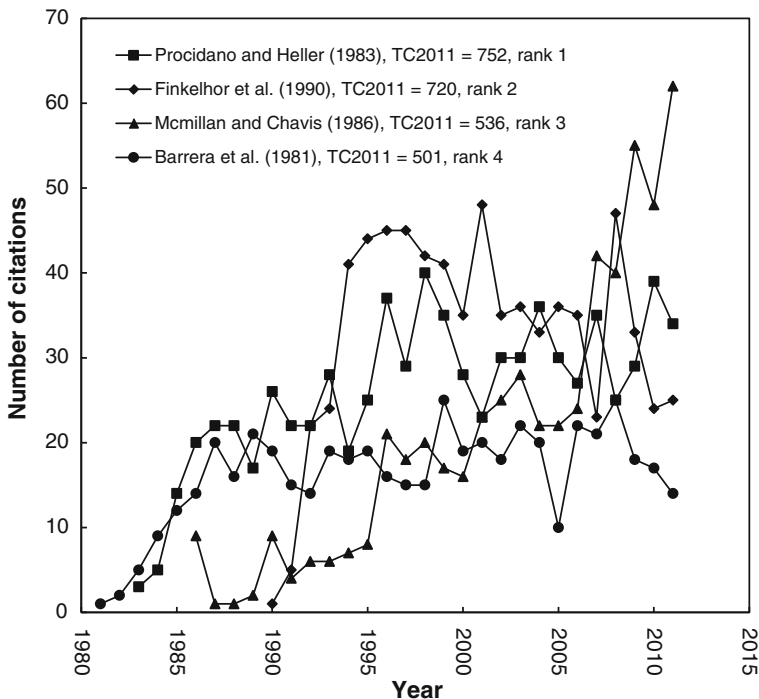


Fig. 2 Citation life cycles of the top four articles ($TC_{2011} \geq 500$)

they did not have a high *TC2011*. Thus it would be interesting to investigate new publications that have shown high impact in 2011. Of the articles evaluated in 2011, 13 % of all classic articles had no citations, 10 % articles had one citation, and 10 % articles have two citations. Indicators including the number of authors of the article, the number of authors cited, institutions cited, countries cited, journals cited, citations per year, country, *C2011*, and *TC2011* with *C2011* greater than 40 are all shown in Table 6 (Chuang et al. 2011). In terms of citations per year, the article by Bernstein et al. (2003) had the highest value, 30 citations per year. “The long-term impact of the physical, emotional, and sexual abuse of children: a community study” (Mullen et al. 1996) was the only one internationally collaborative article by authors in New Zealand and Australia. Other five articles originated from US. The article by Bernstein et al. (2003) had the greatest total citations in 2011 (*C2011* = 78), *TC2011* = 271, ranked 18th and received the highest citations per year. The article by McMillan and Chavis (1986) had *C2011* = 62, *TC2011* = 536, ranked 3rd, was cited by the most authors (1,023), Web of Science categories (82), and journals (264) which showed evidently the article was more multidisciplinary. This article also had the highest citation in its publication year. However, it sometimes turns out that even if an article is cited very frequently, it does not influence as many institutions, countries, and categories as would have been expected, for example the article by Reichman et al. (2001). Of all the articles listed in Table 6, only McMillan and Chavis (1986) were also listed in Table 5, indicating strong performance both in quantity as well as in the impact of their research. Although Table 6 shows the classic articles with the highest citations, it does not provide any information on the history of citation impact. In addition, it was reported that very high percentage of the most frequently cited articles have changed their ranking with time (Bui-Mansfield 2005). A historical perspective on the classic papers in the literature that are still influential in social work was examined (Fig. 3). Six articles had more than 40 citations in 2011. Among them, three articles were published in *Child Abuse & Neglect* and one in *Journal of Community Psychology*, *Children and Youth Services Review*, and *Child Maltreatment* respectively. The article by Bernstein et al. (2003) is the only article with more than 10 authors. Its annual number of citations sharply increased from the time of its publication. The article by Straus et al. (1998) had the second highest number of citations in 2011. It had an article life pattern similar to the most frequently cited review paper by Bernstein et al. (2003). Overall, it appeared to be going strong and showed no sign of leveling off. An early article by McMillan and Chavis (1986) was the only one in both Figs. 2 and 3 with *TC2011* >500 and *C2011* >40. Three articles, Bernstein et al. in 2003, Reichman et al. (2001), Finkelhor et al. (2005), had high citations in 2011 (*C2011* >40) but low total citations (*TC2011* <500). In comparison with the six articles in Fig. 3, these latter three articles did not have enough time to accumulate citations, but all of them have sharply increased in citations since their publication.

Publication characteristics of authors and institutions

The first author is known to have made the most contribution and should receive a greater proportion of the credit (Riesenberg and Lundberg 1990; Yank and Rennie 1999; Marušić et al. 2004). It has been reported that the first author is the person who contributes most to the work and writing of the article (Gaeta 1999). The corresponding author responsibilities include supervision of the planning and execution of the study, along with writing the paper (Burman 1982). At the institutional level, the determined institution of the corresponding author might be a home base of the study or origin of the paper. A new *Y-index* (j, θ) is developed to evaluate publication characteristics of authors and institutions. It is

Table 6 Characteristics of top six articles ($C_{2011} > 40$)

Top cited classic articles	NA	AU	IN	CT	SC	NJ	C/Y	Journal (impact factor in 2011)	Country	C_{2011}	$R (TC_{2011})$
Bernstein et al. (2003)	11	972	341	23	47	146	30	Child Abuse & Neglect (2.471)	USA	78	18 (271)
Straus et al. (1998)	5	782	306	38	37	129	24	Child Abuse & Neglect (2.471)	USA	69	11 (336)
McMillan and Chavis (1986)	2	1023	402	33	82	264	21	Journal of Community Psychology (0.985)	USA	62	3 (536)
Reichman et al. (2001)	4	255	120	8	31	72	18	Children and Youth Services Review (1.269)	USA	48	35 (200)
Mullen et al. (1996)	5	927	415	36	50	168	21	Child Abuse & Neglect (2.471)	New Zealand, Australia	45	10 (342)
Finkelhor et al. (2005)	4	496	223	28	36	85	27	Child Maltreatment (2.770)	USA	42	39 (189)

NA number of authors in a classic article, *AU* number of authors cited, *IN* number of institutions cited, *CT* number of countries cited, *SC* number of Web of Science categories cited, *NJ* number of journals cited, *C/Y* citations/year, C_{2011} total citation in 2011, TC_{2011} total citations from publication to 2011, R rank

related to numbers of first author publications (FP) and corresponding author publications (RP), defined as:

$$j = \text{FP} + \text{RP} \quad (1)$$

$$\theta = \tan^{-1} \left(\frac{\text{RP}}{\text{FP}} \right) \quad (2)$$

An author, institution, or country with a higher j indicates more publications as first or corresponding author, playing the leadership role. θ , differentiates the nature of the leadership role. When $\theta > 0.7854$, indicates more corresponding author publications and $\theta < 0.7854$, means more first author publications. When $\theta = 0$, j = the number of first author publications and when $\theta = \infty$, j = the number of corresponding author publications.

There is a limitation for analysis of publication characteristics of authors and institutions by Y-index. Only articles with both first author and corresponding author information could be considered. A total of 721 classic articles by 1,570 authors in social work field were analyzed. Only 575 of the 1,570 authors had both first author and corresponding author classic articles. Five of 575 authors had $\theta > 0.7854$ and two authors had $\theta < 0.7854$ while 568 (99 %) had the same numbers of first author and corresponding author articles. Percentage of author published classic articles with $\theta = 0.7854$ in social work field was found to be much higher than authors published in the top cited articles in the SCI-Expanded (Ho 2012b) and in the chemical engineering field (Ho 2012a). Figure 4 displays

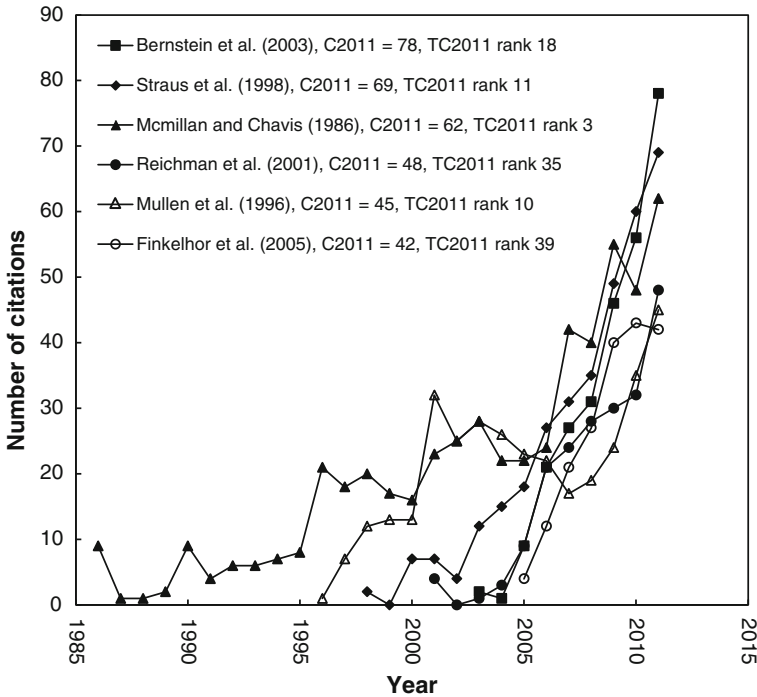


Fig. 3 Citation life cycles of the top six articles ($C2011 \geq 40$)

the distribution of the top 84 authors with $j \geq 4$, ($j \cos \theta$ and $j \sin \theta$ are chosen as the x and y coordinate axes). Each dot represents one value that could be one author or many authors. The authors who contributed the most classic article were D. Finkelhor ($j = 16$), followed by M.A. Zimmerman and M.E. Courtney with $j = 12$ respectively. Publication characteristics constant, θ , could help to obtain the different proportion of corresponding author articles to first author articles. It is very helpful especially when j of authors is the same to distinguish the different performance of authors. For example, the j of S.E. Hobfoll and M. Barrera were both the same of 7. However θ of Hobfoll was 0.9273 but θ of Barrera was 0.6435. Hobfoll had greater proportion of corresponding author articles to first author articles than Barrera. Within these 84 authors, only four authors with $\theta > 0.7854$ such as S.E. Hobfoll ($\theta = 0.9273$), and S.R. Dube, C.M. Sullivan, and G.M.H. Pretty with $\theta = 0.9828$ respectively. These authors had more corresponding author articles than first author articles indicating that top cited authors contributing to the classic articles were more likely to be designated as the corresponding authors. The top cited authors probably contributed more to the initial conception and supervision of study (Wren et al. 2007). M. Barrera ($\theta < 0.7854$) was the only one who had more first author articles than corresponding author articles. Other 79 authors just on the boundary line ($\theta = 0.7854$) having the same quantity first authors articles and corresponding author articles.

Only 710 classic articles with both first author and corresponding author institution information were analyzed for publication characteristics by Y-index. There were 443 institutions contributing to the 710 articles. Within these institutions, 202 (46 %) institutions had no first author articles nor corresponding author articles; 60 (14 %) institutions

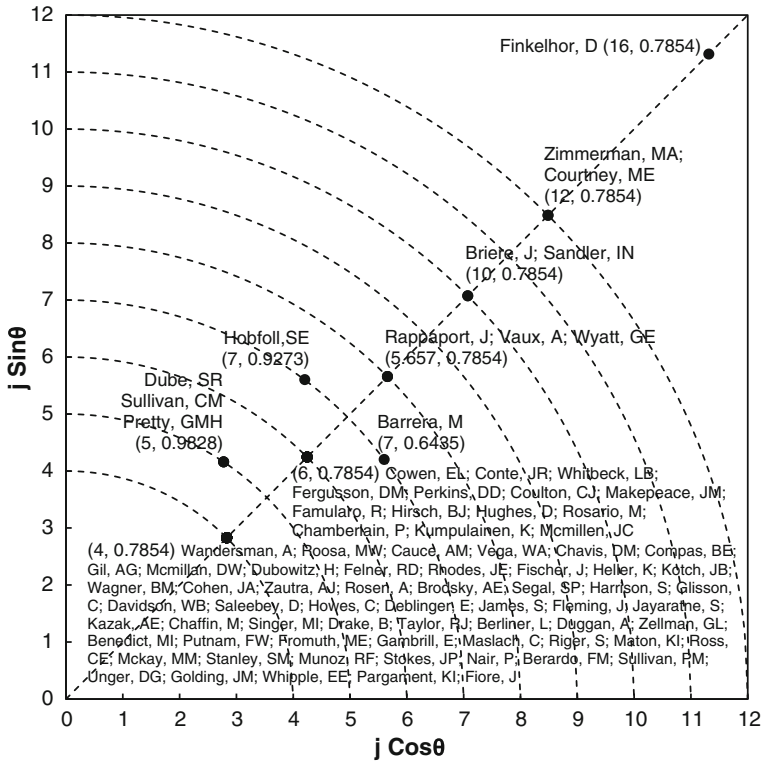


Fig. 4 Top 84 authors with Y-index ($j \geq 4$)

had only corresponding author but no first author articles ($\theta = \infty$); 35 (7.9 %) institutions had $\theta > 0.7854$; 171 (39 %) institutions had $\theta = 0.7854$; 36 (8.1 %) institutions had $0 < \theta < 0.7854$; and 52 (12 %) institutions had $\theta = 0$. With respect to j , 90 (20 %) institutions had $j = 0$, with no first author articles nor corresponding author articles; 274 (62 %) institutions had $1 \leq j < 5$; 67 (15 %) institutions had $5 \leq j < 20$; and 12 (2.7 %) had institutions had $j \geq 20$. The top 36 institutions were located in US. The top 26 institutions with $j \geq 10$ are shown in Fig. 5. University of Illinois (49, 0.7650) and Arizona State University (43, 0.8086) took the leading positions. Eleven institutions including Suny Albany (10, 1.166), Rutgers State University (11, 1.052), University of California, Los Angeles (33, 0.9358), Johns Hopkins University (20, 0.8851), University of Southern California (22, 0.8761), Centers for Disease Control and Prevention (11, 0.9761), University of Wisconsin (30, 0.8520), Case Western Reserve University (17, 0.8442), Washington University (17, 0.8442), University of California, Berkeley (35, 0.8140), and Arizona State University (43, 0.8086), had more corresponding author articles ($\theta > 0.7854$), while ten institutions including University of Washington (29, 0.5485), University of Virginia (10, 0.5880), University of South Carolina (19, 0.6288), University of Rochester (14, 0.6435), Columbia University (14, 0.6435), University of Maryland (15, 0.7188), Michigan State University (21, 0.7378), University of Chicago (23, 0.7419), University of Michigan (33, 0.7551), and University of Illinois (49, 0.7650) had more first author articles than corresponding author articles ($\theta < 0.7854$). Other five institutions had

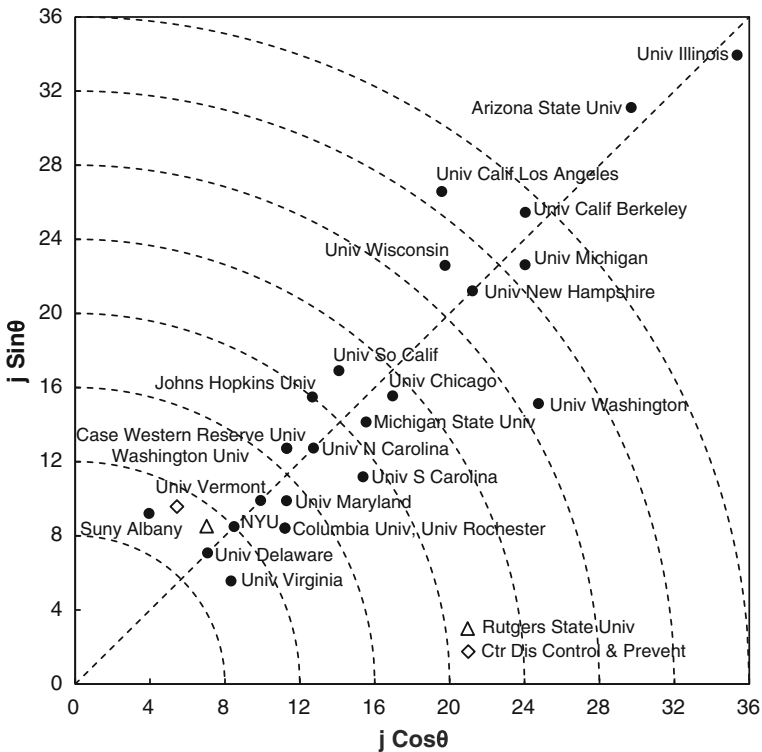


Fig. 5 Top 26 institutions with Y-index ($j \geq 10$)

the same number of first author articles and corresponding author articles ($\theta = 0.7854$). The proportion of institutions had articles with $\theta > 0.7854$, $\theta = 0.7854$, and $\theta < 0.7854$ were found to be 11:5:10 for top 26 articles and 35:170:36 for all articles with $0 < \theta < \infty$.

Conclusions

During the period from 1957 to 2008, 721 classic articles were published in 32 journals covered in social work field in SSCI from 17 countries. The results indicated that 57 % of the total classic articles in social work field were published in *Child Abuse & Neglect* and *American Journal of Community Psychology*. 97 % of the classic articles were single country publications and 3 % were internationally collaborative publications. US produced the most single, collaborative, first author, and corresponding author articles followed distantly by the UK and Canada. Information from citation life cycles of articles with the highest *TC2011* and *C2011* gives more details about impact of the classic articles. The classic articles might not always be highly cited. Results from evaluation by Y-index show that D. Finkelhor, M.A. Zimmerman, and M.E. Courtney were the three most contributing authors to the classic articles in social work. University of Illinois and Arizona State University were the main institutional contributors. University of Illinois published more first author articles and Arizona State University published more corresponding author articles.

Acknowledgments The author is thankful to Professor Stevan E. Hobfoll in Department of Behavioral Sciences, Rush University Medical Center, Chicago, Illinois for consulting with me on the paper.

References

- Aksnes, D. W. (2003). Characteristics of highly cited papers. *Research Evaluation*, 12(3), 159–170.
- Aversa, E. S. (1985). Citation patterns of highly cited papers and their relationship to literature aging: A study of the working literature. *Scientometrics*, 7(3–6), 383–389.
- Avramescu, A. (1979). Actuality and obsolescence of scientific literature. *Journal of the American Society for Information Science*, 30(5), 296–303.
- Baltussen, A., & Kindler, C. H. (2004). Citation classics in anesthetic journals. *Anesthesia and Analgesia*, 98(2), 443–451.
- Barrera, M., Sandler, I. N., & Ramsay, T. B. (1981). Preliminary development of a scale of social support: Studies on college students. *American Journal of Community Psychology*, 9(4), 435–447.
- Beard, J. L. (1923). What is hospital social work? *American Journal of Nursing*, 23(9), 743–746.
- Beitchman, J. H., Zucker, K. J., Hood, J. E., Dacosta, G. A., Akman, D., & Cassavia, E. (1992). A review of the long-term effects of child sexual abuse. *Child Abuse and Neglect*, 16(1), 101–118.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the *Bulletin. Psychological Bulletin*, 112(3), 400–404.
- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., & Ahluvalia, T., et al. (2003). Development and validation of a brief screening version of the childhood trauma questionnaire. *Child Abuse and Neglect*, 27(2), 169–190.
- Blessinger, K., & Hrycaj, P. (2010). Highly cited articles in library and information science: An analysis of content and authorship trends. *Library & Information Science Research*, 32(2), 156–162.
- Brandt, J. S., Downing, A. C., Howard, D. L., Kofinas, J. D., & Chasen, S. T. (2010). Citation classics in obstetrics and gynecology: The 100 most frequently cited journal articles in the last 50 years. *American Journal of Obstetrics and Gynecology*, 203(4), 355.e1–355.e7.
- Bui-Mansfield, L. T. (2005). Whatever happened to the 50 most frequently cited articles published in *AJR*? *American Journal of Roentgenology*, 185(3), 597–601.
- Burman, K. D. (1982). Hanging from the masthead—reflections on authorship. *Annals of Internal Medicine*, 97(2), 602–605.
- Campbell, F. M. (1990). National bias: A comparison of citation practices by health professionals. *Bulletin of the Medical Library Association*, 78(4), 376–382.
- Chang, C. C., & Ho, Y. S. (2010). Bibliometric analysis of financial crisis research. *African Journal of Business Management*, 4(18), 3898–3910.
- Chiu, W. T., & Ho, Y. S. (2005). Bibliometric analysis of homeopathy research during the period of 1991 to 2003. *Scientometrics*, 63(1), 3–23.
- Chuang, K. Y., Wang, M. H., & Ho, Y. S. (2011). High-impact papers presented in the subject category of water resources in the essential science indicators database of the institute for scientific information. *Scientometrics*, 87(3), 551–562.
- Coats, A. J. S. (2009). Ethical authorship and publishing. *International Journal of Cardiology*, 131(2), 149–150.
- Costas, R., & Bordons, M. (2011). Do age and professional rank influence the order of authorship in scientific publications? Some evidence from a micro-level perspective. *Scientometrics*, 88(1), 145–161.
- Csako, G. (2007). Analysis of the most highly cited articles from the 50-year history of *CCA*. *Clinica Chimica Acta*, 375(1–2), 43–48.
- Duncan, A. P., & Johnson, A. R. (2007). A “classic papers” approach to teaching undergraduate organometallic chemistry. *Journal of Chemical Education*, 84(3), 443–446.
- Elsinghorst, T. A. M., & Sybesma, W. (2000). Highly cited article published in the *Veterinary Quarterly* in 1991. *Veterinary Quarterly*, 22(3), 122.
- Finkelhor, D., Hotaling, G., Lewis, I. A., & Smith, C. (1990). Sexual abuse in a national survey of adult men and women: Prevalence, characteristics, and risk factors. *Child Abuse and Neglect*, 14(1), 19–28.
- Finkelhor, D., Ormrod, R., Turner, H., & Hamby, S. L. (2005). The victimization of children and youth: A comprehensive, national survey. *Child Maltreatment*, 10(1), 5–25.

- Fu, H. Z., Ho, Y. S., Sui, Y. M., & Li, Z. S. (2010). A bibliometric analysis of solid waste research during the period 1993–2008. *Waste Management*, 30(12), 2410–2417.
- Fu, H. Z., Wang, M. H., & Ho, Y. S. (2012). The most frequently cited adsorption research articles in the Science Citation Index (Expanded). *Journal of Colloid and Interface Science*, 379(1), 148–156.
- Gaeta, T. J. (1999). Authorship: “Law” and order. *Academic Emergency Medicine*, 6(4), 297–301.
- Garfield, E. (1973). Which journals attract most frequently cited articles—here’s a list of top 15. *Current Contents*, 39, 5–6.
- Garfield, E. (1974). Journal citation studies. 8. Some highly cited articles from highly cited general medical and clinical journals. *Current Contents*, 27, 5–12.
- Garfield, E. (1976). Highly cited articles. 26. Some classic papers of late 19th and early 20th centuries. *Current Contents*, 21, 5–9.
- Garfield, E. (1987). 100 citation classics from the Journal of the American Medical Association. *JAMA—Journal of the American Medical Association*, 257(1), 52–59.
- Gibbons, J. S., Butler, J., Urwin, P., & Gibbons, J. L. (1978). Evaluation of a social work service for self-poisoning patients. *British Journal of Psychiatry*, 133, 111–118.
- Greenwood, E. (1957). Attributes of a profession. *Social Work*, 2(3), 45–55.
- Han, J. S., & Ho, Y. S. (2011). Global trends and performances of acupuncture research. *Neuroscience and Biobehavioral Reviews*, 35(3), 680–687.
- Hennessey, K., Afshar, K., & MacNeily, A. E. (2009). The top 100 cited articles in urology. *CUAJ—Canadian Urological Association Journal*, 3(4), 293–302.
- Ho, Y. S. (2004). Citation review of Lagergren kinetic rate equation on adsorption reactions. *Scientometrics*, 59(1), 171–177.
- Ho, Y. S. (2008). Bibliometric analysis of biosorption technology in water treatment research from 1991 to 2004. *International Journal of Environment and Pollution*, 34(1–4), 1–13.
- Ho, Y. S. (2010). Comments on “Removal and recovery of Cu(II) and Zn(II) using immobilized *Mentha arvensis* distillation waste biomass”. *Ecological Engineering*, 36(6), 832.
- Ho, Y. S. (2012a). Top-cited articles in chemical engineering in Science Citation Index Expanded: A bibliometric analysis. *Chinese Journal of Chemical Engineering*, 20(3), 478–488.
- Ho, Y. S. (2012b). The top-cited research works in the Science Citation Index Expanded. *Scientometrics*, 94(3), 1297–1312.
- Jarrett, M. C. (1918). Psychiatric social work. *Mental Hygiene*, 2(2), 283–290.
- Kelly, J. C., Glynn, R. W., O’Brian, D. E., Felle, P., & McCabe, J. P. (2010). The 100 classic papers of orthopaedic surgery a bibliometric analysis. *Journal of Bone and Joint Surgery—British Volume*, 92B(10), 1338–1343.
- Korevaar, J. C., & Moed, H. F. (1996). Validation of bibliometric indicators in the field of mathematics. *Scientometrics*, 37(1), 117–130.
- Lefavre, K. A., Guy, P., O’Brien, P. J., Blachut, P. A., Shadgan, B., & Broekhuysse, H. M. (2010). Leading 20 at 20: Top cited articles and authors in the Journal of Orthopaedic Trauma, 1987–2007. *Journal of Orthopaedic Trauma*, 24(1), 53–58.
- Leta, J., & Chaimovich, H. (2002). Recognition and international collaboration: The Brazilian case. *Scientometrics*, 53(3), 325–335.
- Li, J. F., Wang, M. H., & Ho, Y. S. (2011). Trends in research on global climate change: A Science Citation Index Expanded-based analysis. *Global and Planetary Change*, 77(1–2), 13–20.
- Li, J. F., Zhang, Y. H., Wang, X. S., & Ho, Y. S. (2009). Bibliometric analysis of atmospheric simulation trends in meteorology and atmospheric science journals. *Croatica Chemica Acta*, 82(3), 695–705.
- Link, A. M. (1998). US and non-US submissions—an analysis of reviewer bias. *JAMA—Journal of the American Medical Association*, 280(3), 246–247.
- Macintyre, S., Maciver, S., & Sooman, A. (1993). Area, class and health: Should we be focusing on places or people. *Journal of Social Policy*, 22(2), 213–234.
- Marušić, M., Božikov, J., Katavić, V., Hren, D., Kljaković-Gašpić, M., & Marušić, A. (2004). Authorship in a small medical journal: A study of contributorship statements by corresponding authors. *Science and Engineering Ethics*, 10(3), 493–502.
- McGeown, J. G. (2006). Passing on the legacy: Teaching capillary filtration and developing presentation skills using classic papers. *Advances in Physiology Education*, 30(3), 108–112.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6–23.
- Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1996). The long-term impact of the physical, emotional, and sexual abuse of children: A community study. *Child Abuse and Neglect*, 20(1), 7–21.

- Narin, F., Stevens, K., & Whitlow, E. S. (1991). Scientific cooperation in Europe and the citation of multinationally authored papers. *Scientometrics*, 21(3), 313–323.
- Neilson, W. A. (1919). The Smith College experiment in training for psychiatric social work. *Mental Hygiene*, 3(1), 59–64.
- Ohba, N., Nakao, K., Isashiki, Y., & Ohba, A. (2007). The 100 most frequently cited articles in ophthalmology journals. *Archives of Ophthalmology*, 125(7), 952–960.
- Osborne, R. H., & Osborne, B. T. (1999). The most frequently cited articles published in *Social Biology*, 1961–1999. *Social Biology*, 46(3–4), 194–206.
- Paladugu, R., Schein, M., Gardezi, S., & Wise, L. (2002). One hundred citation classics in general surgical journals. *World Journal of Surgery*, 26(9), 1099–1105.
- Picknett, T., & Davis, K. (1999). The 100 most-cited articles from *JMB. Journal of Molecular Biology*, 293(2), 173–176.
- Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*, 11(1), 1–24.
- Raff, H. (2005). Using classic papers to teach physiology. *Advances in Physiology Education*, 29(3), 138.
- Rappaport, J. (1987). Terms of empowerment exemplars of prevention: Toward a theory for community psychology. *American Journal of Community Psychology*, 15(2), 121–148.
- Reichman, N. E., Teitler, J. O., Garfinkel, I., & McLanahan, S. S. (2001). Fragile families: Sample and design. *Children and Youth Services Review*, 23(4–5), 303–326.
- Riesenberg, D., & Lundberg, G. D. (1990). The order of authorship: Who's on first. *JAMA-Journal of the American Medical Association*, 264(14), 1857.
- Riessman, F. (1965). The “helper therapy” principle. *Social Work*, 10(2), 27–32.
- Saleebey, D. (1996). The strengths perspective in social work practice: Extensions and cautions. *Social Work*, 41(3), 296–305.
- Schein, M., & Fingerhut, A. (2000). Where can surgeons publish? *British Journal of Surgery*, 87(3), 261–264.
- Segal, S. P. (1972). Research on outcome of social work therapeutic interventions: A review of the literature. *Journal of Health and Social Behavior*, 13(1), 3–17.
- Shadgan, B., Roig, M., HajGhanbari, B., & Reid, W. D. (2010). Top-cited articles in rehabilitation. *Archives of Physical Medicine and Rehabilitation*, 91(5), 806–815.
- Sheldon, B. (1978). Theory and practice in social work: Re-examination of a tenuous relationship. *British Journal of Social Work*, 8(1), 1–22.
- Smith, D. R. (2008a). Highly-cited articles in the *Australian Dental Journal*. *Australian Dental Journal*, 53(3), 265–266.
- Smith, D. R. (2008b). Citation indexing and highly cited articles in the *Australian Veterinary Journal*. *Australian Veterinary Journal*, 86(9), 337–339.
- Smith, D. R. (2009). Highly cited articles in environmental and occupational health, 1919–1960. *Archives of Environmental & Occupational Health*, 64, 32–42.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the parent-child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse and Neglect*, 22(4), 249–270.
- Tanaka, H., & Ho, Y. S. (2011). Global trends and performances of desalination research. *Desalination and Water Treatment*, 25(1–3), 1–12.
- Terajima, K., & Aneman, A. (2003). Citation classics in anaesthesia and pain journals: A literature review in the era of the internet. *Acta Anaesthesiologica Scandinavica*, 47(6), 655–663.
- Trayhurn, P. (2004). Recent highly cited articles in the *British Journal of Nutrition* (including *Supplements*): An update. *British Journal of Nutrition*, 92(1), 1–3.
- Wandersman, A., Duffey, J., Flaspohler, P., Noonan, R., Lubell, K., & Stillman, L., et al. (2008). Bridging the gap between prevention research and practice: The interactive systems framework for dissemination and implementation. *American Journal of Community Psychology*, 41(3–4), 171–181.
- Wang, M. H., Li, J. F., & Ho, Y. S. (2011). Research articles published in water resources journals: A bibliometric analysis. *Desalination and Water Treatment*, 28(1–3), 353–365.
- Wang, M. H., Yu, T. C., & Ho, Y. S. (2010). A bibliometric analysis of the performance of *Water Research*. *Scientometrics*, 84(3), 813–820.
- Weick, A., Rapp, C., Sullivan, W. P., & Kisthardt, W. (1989). A strengths perspective for social work practice. *Social Work*, 34(4), 350–354.
- Wren, J. D., Kozak, K. Z., Johnson, K. R., Deakne, S. J., Schilling, L. M., & Dellavalle, R. P. (2007). The write position—a survey of perceived contributions to papers based on byline position and number of authors. *EMBO Reports*, 8(11), 988–991.

- Wyatt, G. E. (1985). The sexual abuse of Afro-American and White-American women in childhood. *Child Abuse and Neglect*, 9(4), 507–519.
- Yank, V., & Rennie, D. (1999). Disclosure of research contributions: A study of original research articles in *The Lancet. Annals of Internal Medicine*, 130(8), 661–670.
- Zhou, P., & Leydesdorff, L. (2008). China ranks second in scientific publications since 2006. *ISSI Newsletter*, 13, 7–9.