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Environmental social work in the disciplinary literature, 1991–2015

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Abstract

Despite increasing acknowledgment that the social work profession must address environmental concerns, relatively little is known about the state of scholarship on environmental social work. This study provides a scientometric summary of peer-reviewed articles (N=497) pertaining to environmental topics in social work journals between 1991 and 2015. We find that theoretical and empirical scholarship on environmental social work is growing, though this growth remains limited to specific geographical regions and topics. We note the need to clarify the relationship between environmental social work as a theoretical paradigm and as a research topic.

Keywords: Bibliometrics, ecological social work, green social work, publishing, scientometrics

Introduction

Over the past 25 years, a number of social work scholars have articulated an expanded version of the ‘person-in-environment’ framework that moves beyond the social environment to also include the natural and built environments (Dominelli, 2012; Gray et al., 2013; Hoff and Corresponding author: Amy Krings, School of Social Work, Loyola University Chicago, 820 North Michigan Avenue, Chicago, IL 60611, USA. Email: akrings@luc.edu 788397ISW0010.1177/0020872818788397International Social WorkKrings et al. research-article2018 Article 2 International Social Work 00(0) McNutt, 1994; McKinnon, 2008). This expansion is based upon established linkages between the wellbeing of humans and the planet, and an understanding of social work ethics that compel the discipline to address environmental issues including climate change, sustainable development, food security, and environmental justice, particularly because these challenges disproportionately impact groups that are poor and socially marginalized. An extension of disciplinary boundaries to include environmental issues has required the field to develop a corresponding knowledge base to effectively identify, prevent, and mitigate environmental impacts and promote sustainability. Such environmentally focused scholarship has more recently been collectively classified as environmental social work (Ramsay and Boddy, 2017), which has arguably emerged as a distinct disciplinary subfield of social work that develops, organizes, and disseminates knowledge necessary to effectively address environmental concerns.

The ascendance of environmental social work within the broader field of social work is evidenced in part by its inclusion in national and international social work agendas. For example, the International Association of Schools of Social Work, the International Council on Social Welfare, and the International Federation of Social Workers formed an international coalition to develop The Global Agenda for Social Work and Social Development (see Jones and Truell, 2012). Within the Global Agenda, ‘working toward environmental sustainability’ was listed as one of the top four priorities for social workers internationally. In addition, many national social work bodies have highlighted the importance of including environmental concerns within social work. The codes of ethics in countries such as India,

Chile, and El Salvador draw clear linkages between environmentalism and social work practice (McKinnon, 2008). Similarly, the American Academy of Social Work and Social Welfare put forth 'social responses to a changing environment' in its set of 12 Grand Challenges for social work practice in the United States (Sherraden et al., 2015).

Despite this increasing acknowledgment of environmental topics within social work disciplinary agendas, relatively little is known about the nature of the academic literature with respect to environmental social work. This necessarily limits the discipline's ability to evaluate whether the rate of publishing has increased to meet the rising demand for such knowledge, and whether that scholarship is aligned with practice and policy priorities. Scholars interested in disseminating their own research and students or practitioners seeking to review best practices could also benefit from an improved understanding of the disciplinary outlets that have published articles pertaining to environmental social work, along with the types of research (e.g. qualitative, quantitative, mixed methods) that tend to appear in a given journal. The overarching goal of the present study is therefore to provide a scientometric summary of the environmental social work subfield. To this end, we identified and analyzed peer-reviewed articles pertaining to environmental topics published in English-language social work journals between 1991 and 2015. Specifically, this study focused on the following five aims:

1. 1. Quantify the absolute and relative growth of environmental social work publications compared with the growth of social work disciplinary scholarship over time.
2. 2. Identify the scope and distribution of topics areas taken up within the subfield.
3. 3. Map the global distribution of place-based environmental social work scholarship.
4. 4. Identify disciplinary publishing outlets that have contributed to the dissemination of an environmental social work knowledge base.
5. 5. Describe the methodological approaches utilized within manuscripts published in the subfield (e.g. theoretical, quantitative, qualitative).

The emergence and development of the environmental social work subfield: *Growth of environmental social work*

Environmental issues have been included within the social work profession since it was founded (Kemp, 2011; McKinnon and Alston, 2016; Närhi and Matthies 2001; Närhi and Matthies, 2016). Settlement House workers, for example, implemented programs to address contamination and pollution while providing environmental amenities (McKinnon, 2008). However, as the profession shifted its focus toward individual-level therapeutic interventions, social workers began to minimize or ignore the influence of natural and built environments on human health. It was not until the 1960s that an increase in public consciousness, coupled with international conferences and governmental accords, pushed the profession to return to – and at times intervene in – environmental issues (Coates and Gray, 2012). More recently, scholars have called for the profession to include research and practice that relate the wellbeing of the earth to its inhabitants (Molyneux, 2010).

Contemporarily, environmental social work has been characterized as both marginalized within the discipline (Bexell et al., 2018; Coates and Gray, 2012; McKinnon, 2008) and experiencing an

'explosion of published works' (Besthorn, 2012: 250). Ramsay and Boddy (2017) state that the number of social work publications that integrate environmental themes is 'growing exponentially' (p. 68), having 'tripled twice in the last fifteen years' (p. 69). However, production of overall social work scholarship has also grown in the past 25 years (Perron et al., 2017). Thus, the first aim of this study was to quantify the overall growth of publications within the subfield and assess the extent to which this growth has or has not kept pace with the growth of all social work scholarship between 1991 and 2015.

Environmental social work topics

The second aim of the study was to assess the number of publications relating to environmental topics. Social work scholars have noted that multidisciplinary interventions focused on protecting the environment would benefit from social work skills and values (Dominelli, 2012; Hoff and McNutt, 1994; Zapf, 2010). In particular, the profession has been largely absent from conversations about environmental policy. By quantifying the breadth and depth of disciplinary knowledge according to topical areas, it is possible that researchers and practitioners will have a clearer picture of the subfield's strengths to inform where and how they might focus their attention and resources. Moreover, an analysis of topical areas might reveal opportunities for future research.

Distribution of place-based research

Environmental social work scholars have called for place-based and international approaches to environmental scholarship (Kemp, 2011). The use of a place-based approach matters for a number of reasons. First, it allows scholars to consider variations in worldviews, environmental impacts and interventions. For example, some non-Western traditions, particularly those of indigenous groups, integrate the natural environment into their worldviews and could inform social work education and practice globally (Coates et al., 2006). Second, variations in place – caused by differences in natural and built environments – influence how localities experience environmental impacts. Third, a place-based approach can allow for a critical analysis of how environmental inequalities map onto racial, class, or ethnic identities (Hoff and Rogge, 1996; Kemp, 2011). Finally, comparative place-based studies can shed light on how structural forces shape local strategies and impacts.

Top journals for publishing environmental social work scholarship

The production and dissemination of scholarship is a central task for social work faculty and contributes to practice knowledge. In addition, rigorously conducted research can support social work practice by bolstering local claims about environmental impacts that might be otherwise perceived as anecdotal (Krings et al., 2018). Quantifying the number of environmentally based articles published in a given disciplinary journal could help researchers locate publication outlets. In addition, identifying the journals that print articles on this subtopic could help social work librarians, students, and practitioners access prominent conversations that are important to their own research and learning. However, we could not find existing scholarship that systematically examines where environmental social work scholars publish their work, thus, this became the fourth aim of our study.

Empiricism and methods

Social work scholars have called for the development and testing of theories and interventions to help professionals engage with environmental practice, research, education, and policy-making globally (Gray et al., 2013; Kemp, 2011; Molyneux, 2010; Zapf, 2010). Three important studies have systematically evaluated the state of the field relating to research design.

Molyneux (2010) reviewed ecosocial work literature (N=21) published in 'the last 10 years' (she does not state which 10) and found that while 'admirable attempts' (p. 61) had been made to broaden the concept of person-in-environment, the field 'lacked the empirical work necessary to analyze the practical realities of environmental impacts or pragmatic suggestions about how to improve the environment' (p. 6). She called for social work researchers to evolve environmental social work into an evidence-based practice. Bexell et al. (2018) reviewed the social work literature (2010–2015) including peer-reviewed manuscripts, dissertations, and White Papers relating to environmental sustainability. Of these, 25.4 percent or 18 articles drew upon empirical data. Like Molyneux (2010), the Bexell et al. study suggests that the profession is failing to examine how environmental sustainability issues impact clients, thus hindering practice.

In contrast, Mason et al. (2017) conducted a scoping review of empirically based social work literature published between 1985 and 2015. The Mason team used a broad search strategy in which relevant articles could explicitly examine a global environmental change topic (such as ecosocial work in the Molyneux article or environmental sustainability in the Bexell et al. article) or could implicitly address climate change, meaning that it examines a relevant topic yet the author does not frame their contribution in this way. Their scoping review identified 112 empirical articles relating to global climate change, 42percent of which used qualitative methods, 39.3percent used quantitative methods, and 18.8 percent used mixed methods.

The fifth aim of the article, therefore, is to extend these analyses by assessing the balance between theoretical and empirical environmental social work research, and to determine the proportion of empirical articles that utilize qualitative versus quantitative methodologies.

Methods: *Data sources*

This study focused exclusively on articles published in English-language disciplinary social work journals. We relied on the list of social work journals established by Perron et al. (2017) to define the scope of eligible journals for this study. Any peer-reviewed article published within this set of 90 disciplinary journals from 1991 through 2015 was eligible for inclusion. Books, book chapters, Krings et al. 5 book reviews, or editorial articles were not included in our sample. We elected to cap our observation period in 2015 to account for delays in article indexing on electronic databases. We then extended our observation period back to 1991, based on other scientometric work suggesting that trends should ideally be observed for at least two decades to control for potential data anomalies (Sahu and Panda, 2014; Victor et al., 2018).

Operationalizing environmental social work

In order to effectively identify articles within disciplinary journals, we first defined ‘environmental social work’ so that search terms could be generated. For the purposes of this study, we defined ‘environmental social work’ as an umbrella term that includes any social work scholarship that addresses environmental topics and/or in which the author frames their work as being about the environment. Thus, our use of the term ‘environmental social work’ is not intended to imply adherence to a theoretical commitment or worldview; rather, because our objective was to provide a broad overview of the environmental social work literature, we opted for an inclusive definition while recognizing that there is not complete agreement on the scope of environmental social work.

To further refine our definition, the study team then developed a comprehensive list of environmental topics. Our list began with the set of environmental social work themes established by Coates and Gray (2012) and was expanded to include the conceptual analysis of environmental social work conducted by Ramsay and Boddy (2017). We considered our topics as substantive in nature so as to include all theoretical and empirical work on the topic. For example, we wanted each topic to include the broadest possible range of intervention levels (i.e. micro to macro) and types (i.e. proactive to reactive), as well as problem-oriented (i.e. food insecurity) and solution-focused (i.e. food justice) analyses. Finally, a topic-based approach allowed us to include theoretical work, position papers, and empirical studies.

Through this process, we arrived at the following 10 topics:

- animals, human–animal, human–environmental, or human–nonhuman relationships;
- climate change, global warming, or environmental degradation;
- conservation or access to nature, wildlife, or green spaces;
- ecospirituality or ecocentric values;
- food (in)security or food (in)justice;
- industrial pollution, toxins, or environmental hazards;
- natural disasters or environmental crises;
- natural resources including land, water, and fossil fuels;
- sustainable development, technologies, or policies; macro-level interventions;
- sustainable practices (e.g. individual-level interventions such as reducing environmental footprint, recycling).

Search terms and article extraction

After defining environmental social work and establishing our list of topics, the study team developed a set of search terms designed to identify eligible articles (see Table 1). These terms were then used to search for articles across four databases – ERIC, psycINFO, Social Service Abstracts, and Social Work

Abstracts – using the database aggregators EbscoHost and ProQuest. This returned an initial list of 1034 articles. Article metadata (i.e. title, abstract, journal, authors, etc.) were exported from the database aggregators as a generic text file and converted into an analyzable data frame using the BibWrangleR package for R (Victor et al., 2015).

Table 1. Search terms.

Search terms						
Air	Earth day	Environmental degradation	Fossil fuel	Industry	Parks	Toxic
Animal	Earthquake	Environmental issue	Gardening	Land	Permaculture	Toxic waste
Biosphere	Ecocentric	Environmental justice	Global warming	Mining	Pesticide	Toxins
Built environment	Ecofeminist social work	Environmental organizing	Green social work	Natural disaster	Physical environment	Tsunami
Climate change	Eco-feminist social work	Environmental social work	Green space	Natural environment	Pollutant	Typhoon
Coal	Ecological justice	Equitable development	Green washing	Natural resources	Pollution	Urban farming
Contaminant	Ecological social work	Food cooperatives	Green washing	Nuclear	Recycling	Water
Contamination	Ecospiritual social work	Food insecurity	Hazardous waste	Oil	Soil	Wildlife
Desertification	Environmental activism	Food justice	Hurricane	One health	Sustainable development	
Drought	Environmental advocacy	Food security	Industrial	Organic	Sustainable social work	

Review of titles and abstracts

The research team then conducted a review of the title and abstract for each article to determine whether the scope of the article addressed a minimum of 1 of our 10 topics. To start, we randomly selected 50 articles and independently coded each title and abstract so that an interrater reliability score could be determined. Having achieved 95 percent agreement between authors, we divided the remaining articles among the research team to be coded for inclusion or exclusion from the study. Each author also recorded the topic(s) that justified inclusion in the study, recording multiple topics when applicable. For example, an article addressing sustainable development as a response to climate change would be coded as addressing two topics (sustainable development and climate change). This resulted in a final study sample of 497 articles.

Data extraction The full text of each included article was then reviewed in order to extract the following measures.

Article type. Each of the included articles was first assigned an article type value of either empirical or nonempirical. We defined empirical research as any study that used scientific methods to analyze data to produce new results. Review articles were not considered empirical research.

Study methods. Articles marked as empirical were further assessed to assign one of three study types based on methodology: qualitative, quantitative, or mixed methods.

Place-based. Each included article was reviewed to determine whether it was place-based, and if so, which country or countries were considered in the article. For empirical articles, place was recorded based on where the study's data was collected. For nonempirical articles, a place was assigned if the article included a discussion of environmental social work topics that occurred in a particular location (i.e. neighborhood, city, state, and country). All places were recorded at the country level.

Analysis

We first calculated the annual number of environmental social work articles in our sample. To determine relative growth rates we also established the annual number of all articles published in English-language social work journals from 1991 to 2015. The annual number of overall social work articles was derived from the open access Social Work Research Database (Perron et al., 2017) that we updated through 2015 for this study. Next we identified the share of articles pertaining to each of the 10 environmental topics, and established counts of place-based articles by country. We then aggregated the data at the journal level to determine (1) the total number of articles in the sample from each journal, (2) the share of articles in each journal that were empirical, and (3) the methodological distribution among empirical articles in each journal. Data cleaning and analysis were carried out using the statistical programming language R (R Core Team, 2017). All figures and maps were produced using Tableau v10.3.

Results: *Annual counts and relative growth of environmental social work articles*

Our first aim was to document the absolute and relative growth of environmental social work articles published in disciplinary journals over a 25-year period. Figure 1 presents the annual number of environmental social work articles published in disciplinary social work journals from 1991 to 2015, compared with the annual number of all articles published in disciplinary social work journals during the same period. The lowest number of environmental social work articles were published in 1991 (N=5) and the highest number in 2013 (N=51).

To assess whether the growth in environmental social work publications was an artifact of the growth in social work publications overall, we determined the relative share of overall publications per year that addressed environmental topics. Environmental social work articles accounted for just 0.7percent and 0.4percent of articles published in disciplinary journals in 1991 and 2004, respectively. This share reached its peak in 2013 when environmental social work articles made up 2.4percent of the scholarship published in disciplinary journals. The annual number of environmental social work publications trended upward between 1991 and 2015, and environmental social work articles now make up a larger share of all articles published in English-language disciplinary journals.

Prevalence of environmental social work topics

The prevalence of each environmental topic in this study is listed in Table 2. The category Natural disasters or environmental crises was the most commonly addressed topic (N=174; 35.0%). Interestingly,

articles pertaining to just three natural disasters – Hurricane Katrina (N=42), the Indian Ocean Tsunami (N=26), and the 2008 Sichuan Earthquake (N=22) – accounted for the majority of the articles that took up this topic and nearly a fifth of all environmental social work articles included in the study. The second most prevalent topic was Natural resources, including land, water, and fossil fuels (N=110; 22.1%), followed by issues of Food security or food justice (N=75; 15.1%). Articles that took up the topic of Conservation or access to nature and green spaces were the least common, accounting for just 1.8percent (N=9) of the overall sample.

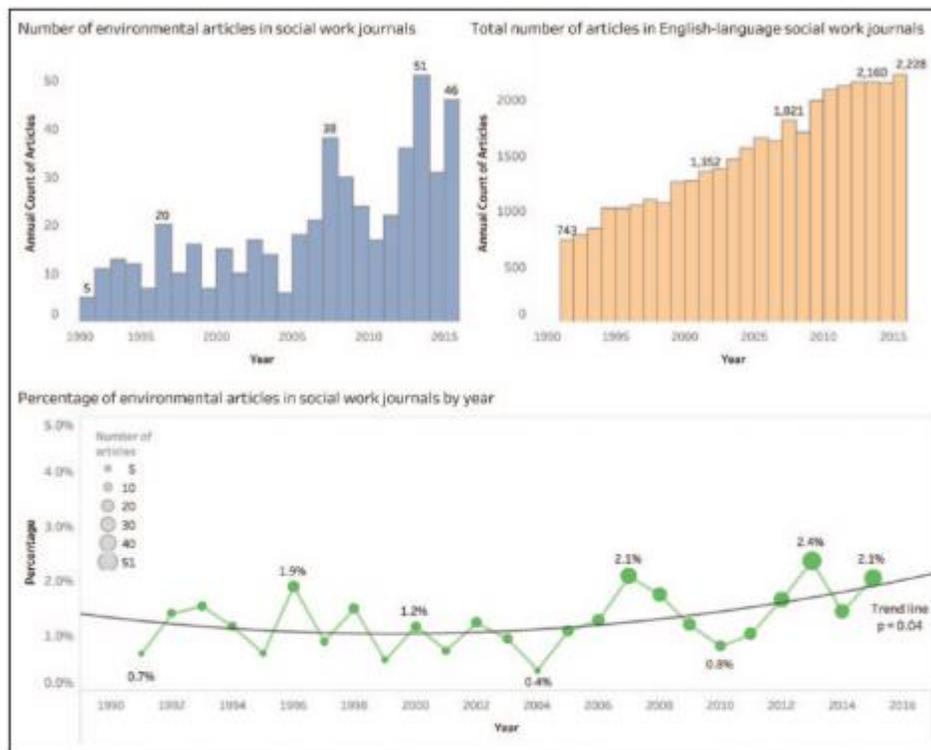


Figure 1. Annual article counts and relative growth of environmental social work articles.

Table 2. Environmental social work topics by prevalence.

Topic	Articles addressing topic N (%)
1. Natural disasters or environmental crises	174 (35.0)
2. Natural resources (land, water, fossil fuels, etc.)	110 (22.1)
3. Food (in)security or food (in)justice	75 (15.1)
4. Sustainable development, technologies, or policies	64 (12.9)
5. Animals, human-animal, or human-environmental relationships	55 (11.1)
6. Climate change, global warming, or environmental degradation	51 (10.3)
7. Ecospirituality or ecocentric values	45 (9.1)
8. Industrial pollution, toxins, or environmental hazards	40 (8.0)
9. Sustainable practices (e.g. reduction of environmental footprint, and recycling)	15 (3.0)
10. Conservation, access to nature, wildlife, green spaces	9 (1.8)

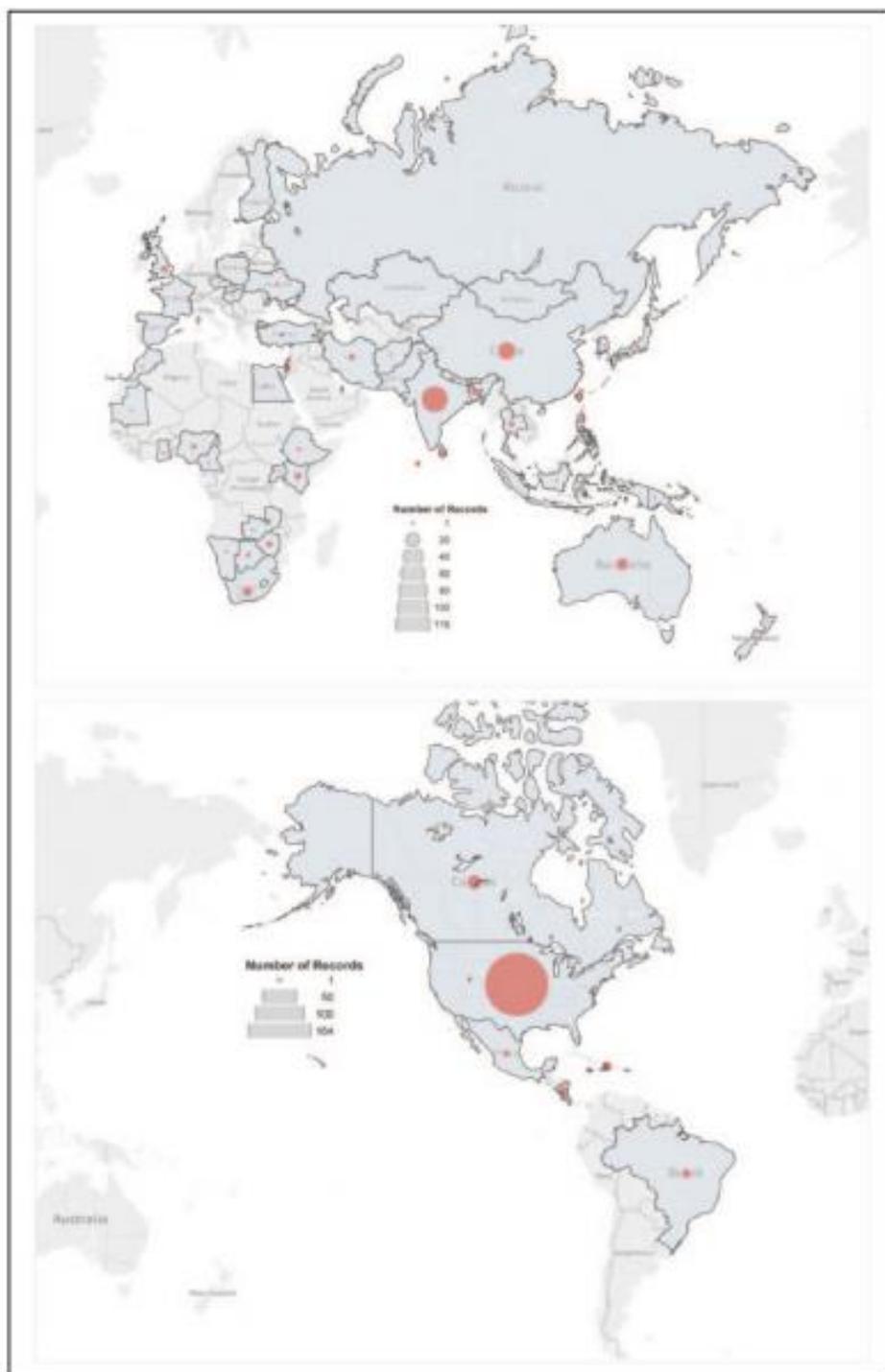


Figure 2. Distribution of place-based articles.

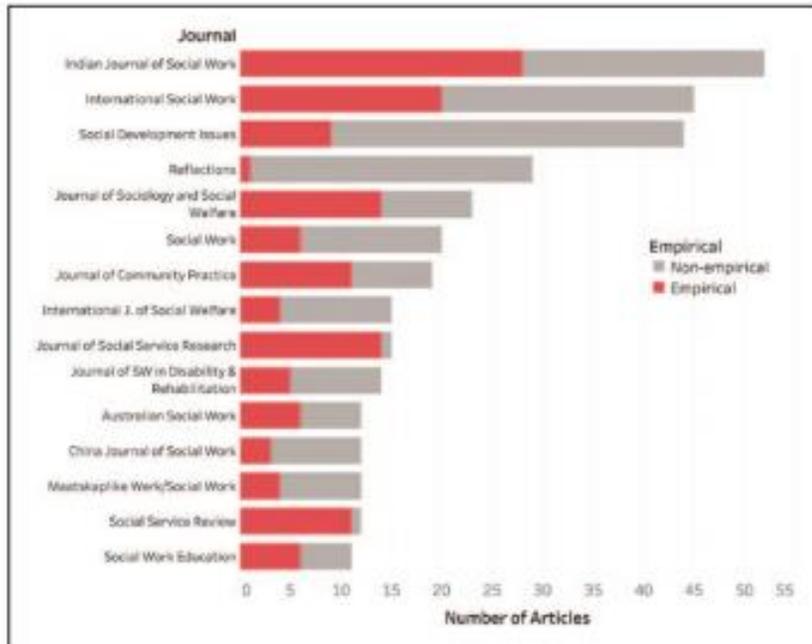


Figure 3. Top 15 journals by article count.

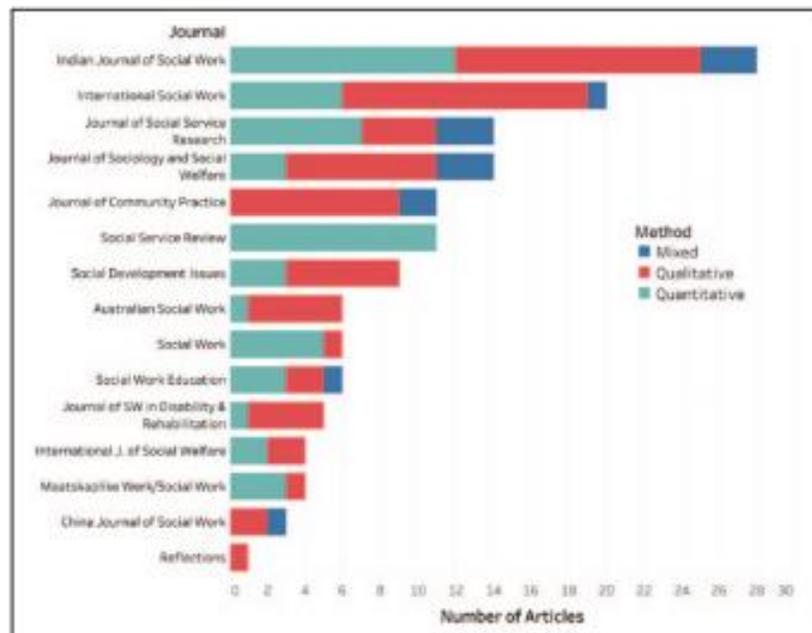


Figure 4. Methodological distribution among empirical articles in the top 15 journals by volume.

Distribution of place-based research

Of the 497 articles included in the sample, 385 articles (77%) were place-based. That is, 385 articles reported findings from a study in a specific country or countries, or the article included a discussion of

environmental social work topics that occurred in or described implications for a particular location (i.e. neighborhood, city, province, and country). The worldwide distribution of these place-based articles, coded at the country level, is presented in Figure 2. The top three countries by volume were the United States (N=164), India (N=68), and China (N=30). Australia (N=14) and South Africa (N=10) were also the focus of a sizable number of studies; however, many countries in Northern and sub-Saharan Africa, Western and Eastern Europe, and South America were not the focus of any articles in the sample.

Top journals for publishing environmental social work scholarship

The 15 journals that published the greatest number of environmental social work articles between 1991 and 2015 are presented in Figure 3. The Indian Journal of Social Work ranked first with 52 articles, followed closely by International Social Work with 45, and Social Development Issues with 44. Collectively, these three journals accounted for 28 percent of the articles in the sample.

Empiricism and methods

Overall, 43percent of the articles (N=214) were classified as empirical, meaning that they used scientific methods to analyze data and generate original findings. Among the empirical articles, qualitative methods were used most often (50%; N=107) closely followed by quantitative methods (40%; N=86). Mixed methods were used relatively infrequently, appearing in just 10 percent of empirical articles (N=21).

To further aid in the identification and selection of publishing targets, we reran this analysis at the journal level. The bars in Figure 3 are colored to display the share of environmental social work articles that were empirical in each of the top 15 journals by volume. The Journal of Social Service Research had the greatest share of empirical articles (93%) while Reflections had the lowest (3%). The distribution of methods among a journal's empirical articles is depicted in Figure 4. For example, all empirical articles appearing in the Journal of Community Practice employed either qualitative or mixed methods, while all empirical articles in Social Service Review used quantitative methods.

Discussion

The goal of this study was to provide a scientometric summary of the environmental social work subfield so as to better understand the growth of the field over time, the breadth of topics and methodological approaches taken up within the research, and the publishing outlets that contribute to the dissemination of relevant research.

Our first aim was to quantify the absolute and relative growth of environmental social work publications between 1991 and 2015. As previously stated, the subfield has been described as both marginalized (Coates and Gray, 2012; McKinnon, 2008) and growing exponentially (Ramsay and Boddy, 2017). Our findings provide evidence to support both claims. First, the volume of environmental social work publications has expanded considerably. For example, in 1991, the first year of our study, only 5 International Social Work 00(0) articles included environmental topics, while 2015, the last year of our study, included 46 publications. The highest count was 51 in 2013. To put these numbers in context, we

also assessed the percentage of environmentally based articles that were published in relation to the entire social work field. Our findings demonstrate that the percentage of publications also grew from 0.7percent in 1991 to 2.1percent in 2015. This suggests that, while limited in scope, social work research priorities and resources are increasingly allocated to environmental concerns. Thus, as international and national social work governing bodies emphasize environmental concerns as an emerging priority for social work, we also see a growing body of knowledge to inform the implementation of these priorities in practice.

Second, we appraised the distribution of topics within the identified sample of environmental social work articles. Our motivation was to identify topics in which social work scholars have engaged and are thus suited to inform interventions. In addition, we hoped to identify gaps in the literature as a means to highlight paths for future scholarship. As described, we found that a full third of the environmental social work scholarship published between 1991 and 2015 addressed natural disasters or environmental crises. In addition, closer examination of the literature revealed that nearly a fifth of the scholarship related to three natural disasters. These findings suggest that while the profession has a robust body of literature relating to crises, there appear to be gaps in the research relating to 'slow disasters', such as those caused by industrial contamination, food insecurity, or a lack of access to natural resources including land and water – social problems that disproportionately impact the vulnerable populations with whom social workers engage. Similarly, there is a need for research about long-term interventions that can mitigate or prevent crises, such as macro-level sustainable development and conservation.

The third aim of the study was to map the global distribution of place-based environmental social work scholarship. Perhaps unsurprisingly, geographically based scholarship was most often focused within the United States, India, and China. These three nations have large populations and infrastructure that can support a local research agenda. Further, each of these countries was the location of one of the three relatively well-studied natural disasters identified above. Importantly, no articles were identified that addressed environmental issues in nearly all South American countries or large regions of Africa, the Pacific Islands, and Europe. While bearing in mind that this study only examined English-language social work journals, it is nonetheless important to note these geographic gaps in the literature that are relevant to social work. First, an internationally representative body of research is necessary for scholars to identify variations in worldviews, impacts, and interventions. For example, not only are environmental impacts experienced differently according to one's geography (consider a drought-stricken nation vs one with a large supply of fresh water), but the global political economy has also incentivized the disproportionate placement of environmental burdens within developing nations. While this distribution of literature does not neatly follow the contours of developed versus undeveloped or Global North versus South, increased attention to South American, African, and Pacific Islander nations is warranted. Second, variations in environmental interventions may reflect place and local culture. For example, Marlow and Van Rooyen (2001) suggest that, in comparison with social work students in South Africa, social work students in the United States were less likely to be exposed to ideas that connect the environment to social work and their interventions rely upon individual rather than collective responses. By studying a limited number of places, it is likely that

innovative strategies for advancing environmental sustainability will go undocumented and could reflect biases in how to conceive of or address social issues.

The fourth aim of the study was to identify the disciplinary journals that published environmental social work articles. Our findings indicate that while there are a number of disciplinary outlets for environmental social work scholarship, a considerable share of the articles in our sample was concentrated within just three journals. These journals – the *Indian Journal of Social Work*, *International Social Work*, and *Social Development Issues* – might serve as a starting point for scholars looking to locate or publish research related to environmental social work. Krings et al. 13

Our fifth and final aim was to describe the environmental social work articles in our sample based on their methodological orientation. Specifically, Figure 2 analyzed the distribution of empirical or nonempirical articles published in each journal, and Figure 3 presented the distribution of methodological approaches (quantitative, qualitative, or mixed methods) among all empirical research. Overall, we discovered that nearly half of the identified environmental social work articles were empirically oriented and, of that percentage, 50 percent used qualitative methods, 40 percent used quantitative methods, and 10 percent used mixed methods.

The finding that environmental social work publications reflect an overall well-balanced mix of empirical and nonempirical work as well as a variety of methodological approaches contrasts with the work of Molyneux (2010) and Bexell et al. (2018), which found that the literature rarely moves beyond calls for engagement with environmental issues and lacks empirical work following up on such calls. However, given the differences in method between this scientometric study and theirs, this contrast should not necessarily be interpreted as contradictory. Rather, we believe that these differences may reflect differing ideas within the subfield about what makes up ‘environmental social work’ and thus these studies may be tracking distinct trends in the literature.

For example, Molyneux (2010) employed a sampling strategy that reflected a comparatively narrow interpretation of what constitutes environmental social work: her literature review began with three search terms (‘social work’ and ‘eco’ or ‘ecology’) over 10 years, whereas our search utilized 68 terms (see Table 2) applied to 25 years (1991–2015). Given the parameters of her search, it seems likely that Molyneux was tracking a set of publications by scholars who explicitly position their work as ‘ecological social work’. As an assessment of the subfield, this reflects a conceptualization of environmental social work as a new paradigm for the profession, including key values and principles (Ramsay and Boddy, 2017). In contrast, our broad approach included cases in which scholars inquired about topics related to the environment – for example, examining interventions with animals or wilderness, the impacts of natural disasters, or food insecurity – even when they did not align their work with a specific theoretical or ethical paradigm. Like our study, Mason et al. (2017) utilized a broad approach and found that only about half of the studies in her sample (53.6%) explicitly framed their contribution as informing global environmental change. Consequently, it is probable that those who see a lack of empirical scholarship in environmental social work are not picking up on scholarship that takes up ‘environment’ not as a paradigm but as a topic of research.

Taking these studies together, we suggest that, in conjunction with the concept work and calls for change that one expects in an emerging field of inquiry, the social work literature is producing a growing body of qualitative and quantitative research on environmental issues and interventions.

Limitations

The aims of this scientometric study were primarily descriptive, rather than analytical. Specifically, we surveyed trends in social work literature from a relatively high altitude, without looking more closely into the mechanisms that might have produced the patterns we have found. As such, the limitations of our findings also point to possible areas for further inquiry.

Although we could quantify the geographic orientation of scholarship at a national level, our analysis neglected to consider within-country variation. It is well documented that environmental hazards are disproportionately located within communities that are poor and composed of people of color (Bullard et al., 2008). Future research might examine within-country variation to determine the degree to which research on environmental social work is located within places where socially and economically marginalized people live. It might also examine the scope of engagement with indigenous groups or women – groups that disproportionately bear environmental burdens (Alston, 2013; International Labor Office, Gender, Equality and Diversity Branch, 2017).

Relatedly, our study was limited to articles published in English-language social work journals. The scientometric description provided here might therefore diverge from academic work published in non-English social work journals. As environmental issues become of increasing concern to social workers across the globe, international social work bodies might consider developing an information exchange where important research findings can be translated into multiple languages to permit dissemination through international social work networks.

Conclusion

Contemporary social work has a clear need for a strong body of literature on environmental topics. Environmental issues like resource scarcity and industrial pollution disproportionately impact those populations that social work has long served. Climate change will exacerbate many of these impacts while also raising new challenges. Responding to these issues, international and national social work associations have recently prioritized environmental concerns. Social work scholars will need to provide the conceptual and empirical resources for intervention in this area and incorporate this new knowledge into social work curricula and practice. This scientometric study provides a high-altitude perspective on how this literature has developed thus far, quantifying the volume of environmental social work research, describing the distribution of topics addressed therein, and providing guidance to scholars looking to access this literature and publish their original research. In so doing, we have identified strengths of the subfield, including attention to natural disasters and to environmental concerns in the United States, China, and India. We have also identified several areas where there is need for further inquiry.

While scholarship on the impacts of natural disasters speaks to crucial, and often urgent, needs of the populations social workers serve, we believe this strength in the literature may also reflect an overemphasis on reactive as opposed to preventative strategies. Social work has long recognized the need to address the root causes of social inequality. With regard to the impacts of natural disasters, the search for root causes may seem to trespass into the foreign territories of atmospheric science, oceanography, or civil engineering. But environmental policy, infrastructure projects, and disaster preparedness protocols also influence how so-called 'natural' disasters become so disastrous – and represent opportunities for social workers to lend their expertise. Building on the literature on natural disaster impacts and responses, there is a need for innovative research that looks further upstream to better understand social factors in the making of these disasters and explores how social work practitioners can contribute to change.

Similarly, the geographic strengths of the environmental social work literature also point to areas for growth. We have noted above that limiting our search to English-language publications may have skewed this area of our findings; in particular, we suspect that it limits our assessment of scholarship on environmental concerns in Europe and Latin America. Nonetheless, given the global nature of many current environmental problems, we believe there is a need for more attention to environmental issues and interventions in South America, Africa, and the Pacific Islands. This is not merely because of a lack of attention to these regions thus far, but because climate change has and will continue to disproportionately impact these areas. Moreover, the many so-called developing nations in these regions will face greater challenges in addressing the impacts of climate change and other global environmental problems. Thus, a promising area for future research may be comparative research on environmental social work in these regions and in India, where there is already a substantial literature.

Finally, future research should examine how the broad trend of growth identified here may, or may not, be related to attempts to promote a new environmental paradigm for social work (e.g. Besthorn, 2012; Coates et al., 2006; Dominelli, 2012). If, as we have suggested, this study and Molyneux's literature review describe two distinct trends in social work scholarship on the Krings et al. 15 environment, should these both be regarded as parts of a single environmental social work subfield? To what extent is the broad scholarship on environmental topics influenced by the ideas and values of those who promote environmental social work?

Such questions are important because they pertain not only to the description of environmental social work as an area of inquiry, but also to how we imagine and anticipate the future of this emerging subfield. For example, some proponents of a new paradigm have called for social workers to give greater consideration to their responsibilities to the nonhuman world (Coates and Gray, 2012). With a broad definition of the subfield, defined as research on environmental topics, such calls to action may be drowned out. On the other hand, if the definition is closely tied to a specific theoretical agenda or set of values, then we are likely to see more limited growth. We offer this study, therefore, as provocation for further inquiry into what environmental social work has been thus far and exploration of what it could become.

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