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Representation of Global South countries in traumatic stress journals: A bibliometric review

by

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Abstract

Background: The majority of the world's population resides in Global South countries, where the risk of experiencing traumatic life events is inflated by factors such as conflict, poverty, social exclusion, and displacement. It would therefore be appropriate for the Global South to be well-represented in traumatic stress research. However, given that the vast majority of health and mental health research is produced in the Global North, it is possible that the knowledge base on traumatic stress may not adequately reflect Global South contexts and thus the experiences and needs of the vast majority of trauma survivors. Very few studies to date have investigated the representation of Global South countries in international traumatic stress literature, and a recent comprehensive review is lacking. The current study aimed to conduct a bibliometric review of the representation of Global South countries in journals specializing in traumatic stress over the past 10 years, in order to systematically describe and evaluate the state of Global South based traumatic stress research over the past decade.

Method: This bibliometric review sampled articles published between 2006 and 2015 in six peer-reviewed journals that focus specifically on traumatic stress. Overall, 2530 articles (including editorials, full articles, and brief reports) were sampled and categorised as originating from either the Global North or the Global South according to the World Bank's classification of countries by income.

Results: Of the total articles sampled, 90.24% were representative of Global North countries while only 9.76% of the articles were representative of Global South countries. The low percentage of Global South articles was consistent across all ten years under review. Furthermore, in 56.28% of the Global South articles, the first three authors were all affiliated with institutions in countries from the Global North. Overall 54 Global South countries were represented in the sampled journals, of which the most commonly studied country was Turkey, followed by China, Gaza, and Rwanda. Research from Latin America and the Caribbean was particularly under-represented. The most common research foci in articles from the Global South were protective and/ risk factors, prevalence, and symptomatology, with a predominant focus on PTSD rather than other trauma sequelae, while treatment research was relatively rare.

Conclusion: Overall, the results indicate that knowledge production about traumatic stress is heavily dominated by the Global North, with little representation from those regions where the majority of trauma survivors currently reside or originate from. Consequently, there is a need for

future traumatic stress research to redress this geographic bias in order to develop an internationally representative traumatic stress research base that is responsive to the needs of trauma survivors in a multiplicity of contexts. Specific recommendations for future research are discussed.

Key words: bibliometric review, traumatic stress, publication trends, Global South, neo-colonial knowledge production

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Introduction

Between 83 and 85% of the world's population resides in Global South countries, where the risk of experiencing traumatic life events and subsequently developing a mental health disorder is inflated due to factors such as poverty, social exclusion, experiences of loss, and displacement (Fodor et al., 2014). Furthermore, Global South countries have the highest levels of conflict and violence, including state terror, wars, human rights violations, and increased rates of hazard owing to violence on a community and interpersonal level (Fodor et al., 2014; Hofman, Primack, Keusch, & Hrynkow, 2005). Consequently, it is important that the needs and experiences of those residing in Global South countries be documented Yet Global North countries tends to dominate mental health research and research in public health and medicine as a whole (Boshoff, 2009; Patel & Kim, 2007; Saxena, Paraje, Sharan, Karam, & Sadana, 2006). Within mental health, Global North countries contributed 94% of the internationally accessible mental health literature between 1992 and 2001 (Saxena et al., 2006). Furthermore, Patel and Kim (2007) found that Global South countries contributed less than 4% of the 2624 articles published in six leading psychiatric journals between 2003 and 2005. Similarly, Rahman and Fukai (2003) found that North America and Europe produced 83% of the world's biomedical research between 1990 and 2000. The domination of health and mental health research by Global North countries is consistent with patterns across the scientific community as a whole (Karlsson, 2002).

The concepts of Global North and Global South were first introduced into academia through a comparative study on development among the countries of the world at the end of the Cold War in 1991 (Odeh, 2010). Global North countries are classified as high-income by the World Bank, and are democratic, technologically advanced, and aging demographically, whereas the opposite tends to hold true for Global South countries (Odeh, 2010; The World Bank, 2016). Although there is a broad correspondence between the classification of countries as either Global North or Global South and the Northern and Southern hemispheres, this is not absolute as countries such as Australia and New Zealand are classified as Global North despite being in the Southern hemisphere, whereas the opposite holds true for countries such as Morocco and Turkey (Kegley &Blanton, 2015; The World Bank, 2016). Global South countries also often have a history of colonisation by Global north countries.

With regards to knowledge production, the domination of the Global North can partially be accounted for by the disparity in economic development between Global North and Global South countries (Karlsson, 2002; Lansang & Dennis, 2004). This is best illustrated through the positive relationship that exists between a country's level of economic development and its level of scientific research output (Boshoff, 2009; Karlsson, 2002; Rahman & Fukui, 2003). It follows logically that countries with lower levels of economic development will dedicate fewer resources to scientific research in light of more pressing issues such as poverty (Karlsson, 2002; Saraceno & Saxena, 2004; Saxena, Maulik, Sharan, Levav, & Saraceno, 2004). A particular example within medical research is that of sub-Saharan Africa, where most countries' health budgets are funded with 1% of their gross domestic product, only 0.5% of which is allocated to health research in general (Lansang & Dennis, 2004).Within mental health research this is further confounded by the particularly low priority accorded specifically to mental health in Global South countries due partly to a lack of understanding about its connectedness with other health conditions (Prince et al. 2007).

As a result of the lack of funding accorded to scientific research in countries with lower levels of economic development, these countries tend to have fewer researchers, which in turn results in lower levels of scientific research production (Karlsson, 2002; Langer, Diaz-Olavarrieta, Berdichevsky, & Villar, 2004; Lansang & Dennis, 2004). In addition, scientific researchers in Global South countries often do not have sufficient access to scientific literature for reasons including a lack of internet access or computer availability (Langer et al., 2004), high journal subscription fees (Fodor et al., 2014; Langer et al., 2004), and the fact that international scientific research journals predominantly publish in English (Paranje, Sadana, & Karem, 2005). Consequently, scientific researchers in Global South countries are often not adequately resourced to sufficiently take part in international scientific debates (Langer et al., 2004).

However, higher levels of economic development alone are unable to account for the domination of the world's scientific community by Global North countries. Such domination can further be ascribed to the supposed superiority of Western science and the Western intellectual tradition based on their claims of universality (Boshoff, 2009; Cutajar, 2008; Dei, 2012; Hwang, 2007). Scientific knowledge produced in political and economic climates other than those of Global North countries is often regarded as situated and therefore partial, ultimately affording it the status of secondary or inferior research (Cutajar, 2008). These views are not only held by

those originating from Global North countries but by many researchers and research institutions from Global South countries as well, reflecting the degree to which neo-colonialist practices of knowledge production have become internalised (Boshoff, 2009; Cutajar, 2008). Consequently, scientific researchers in Global South countries become hesitant to produce novel scientific theories and methods, opting rather to mimic those of the Western intellectual tradition, which results in the institutionalisation of global scientific knowledge production (Boshoff, 2009; Cutajar, 2008; Hwang, 2007). Furthermore, the supposed inferiority of scientific knowledge emanating from Global South countries often results in a publication bias on the part of international scientific research journals, which favour research emanating from Global North countries, further contributing to the latter's domination of the world's scientific community (Langer et al., 2004; Rosselli, 1999). Thus, it can be argued that although colonialism has been abolished, neo-colonial patterns of knowledge production still persist through these processes (Cutajar, 2008).

A bias towards Global North countries in knowledge production processes has resulted in much of health and mental health knowledge having untested applicability to Global South settings (Fodor et al., 2014; Hinton & Lewis-Fernandez, 2011). Global South countries have specific contextual constraints and culturally-based health and mental health norms that are not prevalent in Global North countries (Hofman et al., 2005). Within the context of trauma, such biases in knowledge production are problematic as they do not factor in certain experiences that Global South countries encounter (Fodor et al., 2014). For example, it has been argued that theories of traumatic stress have developed within a contextual frame and cultural setting that is narrow and limited (Saxena et al., 2006). The lack of critique of such core theories leads to a dearth of more contextualised conceptualisations of the impact of traumatic exposure (Breslau, 2004). For example, some authors have suggested that such hegemonic theoretical representation has resulted in an over reliance on posttraumatic stress disorder (PTSD) as a theoretical structure to conceptualise the psychological impact of traumatic events (Eagle & Kaminer, 2013; Stevens et al., 2013). Some researchers in Global South countries have increasingly questioned the utility of the current diagnostic category of PTSD, as many individuals seem to be experiencing continuous or ongoing traumatic stress which may have a different impact from discrete past events and may require interventions beyond that of conventional PTSD treatment (Stevens et al., 2013). Furthermore, although cultural variations of trauma have been documented, these

have received little theorization and diagnostic recognition (Eagle & Kaminer, 2013). Moreover, recent scientific evidence has indicated that people in high-income countries are in fact more likely to suffer from PTSD than those in middle- to low-income countries (Boseley, 2016). It is speculated that because people living in high-income countries maintain illusions of living in safe environments they are much more likely to be negatively affected psychologically when something happens that shatters said illusions, whereas the opposite holds true for people living in middle- to low-income countries (Boseley, 2016).

This is of great concern, considering that between 83 and 85% of the world's population resides in Global South countries, where the risk of experiencing traumatic life events and subsequently developing a mental health disorder is inflated due to factors such as poverty, social exclusion, experiences of loss, and displacement (Fodor et al., 2014). Thus, much of scientific research in the field of mental health, and specifically traumatic stress, may be of limited applicability to the majority of the global population (Catapano & Castle, 2003; Patel & Sumathipala, 2001). Consequently, there is a need for Global South-based traumatic stress research in order to assess the burden of trauma related mental health difficulties specific to each country, create cost-effective and culturally appropriate interventions, as well as monitor and evaluate their implementation (Fodor et al., 2014; Lansang & Dennis, 2004; Rahman & Fukui, 2003; Saraceno & Saxena, 2004). Therefore, an increase in traumatic stress literature emanating from diverse cultures and societies is essential to meet global mental health needs (Bedard, Greif, & Buckley, 2004; Fodor et al., 2014).

To date, very few studies have specifically investigated the representation of Global South countries in international traumatic stress literature. A search of the relevant literature returned only two results. Firstly, Bedard and colleagues (2004) examined the author affiliations of over 13, 000 trauma publications between 1987 and 2001. They found that 74% of the 671 articles published in the *Journal of Traumatic Stress* between 1988 and 2001 had first authors from North America. Furthermore, the vast majority of the remaining articles had first authors from other high-income countries. However, the study is now more than a decade out of date and it is possible that trends in knowledge production about traumatic stress may have shifted over the past decade. Fodor et al. (2014) examined the extent to which low- and middle income countries were represented in the traumatic stress literature during the year 2012.They found that 87% of a random sample of traumatic stress articles published in 2012 (N = 1,000) involved

research in high-income countries and 88% had authors from high-income countries. However, trends in the knowledge production process in traumatic stress research over the past decade more broadly have not been established. Characterising both the quantity and the content of traumatic stress research from the Global South is a necessary first step in developing strategies to achieve a more comprehensive understanding of the global phenomenon of trauma as it is experienced across diverse cultures and societies.

Research aim and question

The current study aimed to conduct a bibliometric review of the representation of Global South countries in the articles published in the leading traumatic stress journals over the past 10 years, in order to systematically describe and evaluate the state of Global South based traumatic stress research over the past decade. This bibliometric review aimed to identify the percentage of traumatic stress articles that have emanated from Global South countries, the geographical distribution of samples used in Global South trauma research, the countries in which the primary authors have been based, the geographical sources of funding for trauma research in Global South countries, the focus of the traumatic stress research conducted in Global South countries (such as protective and/ risk factors, prevalence, or treatment), the most frequently used methods in trauma research in Global South countries, the study designs for treatment studies as well as the types of treatment evaluated, and the types of mental disorders focused on in trauma research in Global South countries. The objective of the study is to identify current trends as well as gaps in the knowledge base on traumatic stress in the Global South, as well as to surface processes of knowledge production about traumatic stress in the Global South.

Methods

Study design

A bibliometric review involves the application of quantitative research methods and analysis as well as statistics to publications; its core focus includes the identification of authors, affiliation, citation counts, and reader usage (Reuters, 2008). Bibliometric reviews have a wide range of utility, in that they can be used to describe research in a particular discipline as well as the quantity and focus of scientific research output by a particular organisation (Ziegler, 2009). Subsequently, bibliometric reviews are popular amongst research performance evaluators, particularly within university and government sectors, policymakers, research directors and administrators, information specialists, librarians and researchers themselves (Reuters, 2008).

This bibliometric review is based on the two main approaches in bibliometric research as highlighted by Klincewicz (2012, as cited in Zemigala, 2015), namely a descriptive and an evaluative approach. The former involves the analysis of scientific and technological developments, the "identification of crucial authors, researchers, inventors, technological centres and geographical regions" (Klincewicz, 2012 as cited in Zemigala, 2015, p. 125).The latter involves assessing the prevalence of particular researchers, geographical regions, authors and academic centres within certain academic fields (Klincewicz, 2012 as cited in Zemigala, 2015). Such approaches were deemed appropriate given the aims of this study as outlined above.

Sample

This bibliometric review's sample consisted of all articles published in six peer-reviewed, internationally accessible journals that focus specifically on traumatic stress, over the 10 year period between 2006 and 2015. The following journals were chosen: the *European Journal of Psychotraumatology* (*EJPT*), the *Journal of Loss and Trauma* (*JOLT*), the *Journal of Trauma and Dissociation* (*JOTD*), the *Journal of Traumatic Stress* (*JOTS*), *Psychological Trauma: Theory, Research, Practice and Policy* (*PTTRPP*), and *Trauma, Violence and Abuse* (*TVA*). Although many trauma-related articles are also published in general mental health journals, these six journals were deemed a relevant sample for this bibliometric review since they are specifically dedicated to traumatic stress research and therefore constitute the core of knowledge production on traumatic stress. It should be noted that *PTTRPP* and the *EJPT* were first published in 2008 and 2010 respectively; therefore the analysis for these two journals began from their first publications. Furthermore, articles published in *JOLT* for 2015 were not accessible due to publisher restrictions and were thus excluded from the analysis. The sampled journals, including their respective year of first publication, period and number of years sampled for analysis, as well as the number of issues per journal over the period sampled, are presented in Table 1.

The articles in these six journals were categorised as being an editorial, a full article, or a brief report according to which section of the journal they appeared in, and were also categorised according to whether they originate from the Global North or Global South, as determined by the location of the study sample, or the country of origin in the case of samples of displaced persons or refugees. Articles that simply spoke to a particular topic without drawing from a specific sample were categorised according to the affiliations of their first three authors as being Global

North, Global South, or mixed. The categorisation of countries as belonging to Global North and Global South was based on the Word Bank's classification of countries by income, which consists of low-income, lower-middle-income, upper-middle-income, and higher-income economies (The World Bank, 2016). This categorisation uses the World Bank Atlas Method, which is based on a country's Gross National Income per capita (The World Bank, 2016). As Global North countries are defined by a high level of economic development, all high-income countries were categorised as Global North, while low-income, lower-middle-income and upper-middle-income countries were categorised as Global South (Odeh, 2010). Consequently, a final sample of 247 articles with samples and/ or first three authors from Global South countries was obtained. All analyses were conducted on this sample.

Table 1

Journals Sampled

Journals	Year first published	Period sampled for analysis	No. of years sampled for analysis	No. of issues	% of all issues sampled
EJPT	2010	2010[a]/15	6	6	2.50
JOLT	1996	2006/14	9	51	21.25
JOTD	2000	2006/15	10	45	18.75
JOTS	1988	2006/15	10	60	25
PTTRPP	2008	2008[a]/15	8	38	15.83
TVA	2000	2006/15	10	40	16.67
Total				240	100

[a]Year of first publication

Data collection

The *EJPT* is an open-access journal and therefore it was accessed through the journal website. The remainder of the journals were accessed though the database EbscoHOST on the University of Cape Town's electronic library. The articles published between 2006 and 2015 in each of the respective journals were categorised according to the location of the study sample, the country of origin in the case of samples consisting of immigrants or refugees, or the affiliations of the first three authors for articles that simply spoke to a particular topic without drawing from a specific sample, into either Global North or Global South regions.

Data analysis

The data analysis for this bibliometric review was based on quantitative content analysis, a methodology commonly used within bibliometrics (Bellis, 2009). Content analysis can be defined as a "research technique for the objective, systematic, and quantitative description of the manifest content of communication," including journal articles (Berelson, 1952, p. 18). Content analysis enables researchers to systematically filter through large amounts of data in order to illustrate the focus in attention of individuals, groups, institutions, or societies (Krippendorff, 1980; Weber, 1990). It also enables the deduction of inferences (Weber, 1990). Content analysis is also frequently used for determining trends and patterns in the literature pertaining to a particular field of inquiry; therefore it was deemed appropriate for this study (Stemler, 2001).

Prior to data analysis it was decided that the following descriptive data for articles in the sample will be recorded: journal title; year; volume and issue numbers; article title; editorial, full article, or brief report; sample size; sample country; host country for immigrant and refugee samples; affiliation of first three authors as a group (Global North, Global South, or mixed); affiliation of first author (Global North, Global South, or mixed); affiliation of second author (Global North, Global South, or mixed); affiliation of third author (Global North, Global South, or mixed); source of funding (Global North, Global South, mixed, and country); focus of research (such as protective and/ risk factors, prevalence, or treatment); method (e.g. quantitative, qualitative, or mixed); study design for treatment studies; type of treatment for treatment studies; and type of mental disorder (only mental disorders once and/ currently classified in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) were recorded).

Inter-rater reliability for the coding of articles along these dimensions was established using intra-class correlations (ICC's; Bould et al., 2014; Tunon & Brydges, 2005). Firstly, both authors recorded the descriptive data above for a randomly selected 30% of the sample (n = 75) in respective data tables using *Microsoft Excel*. Subsequently, the authors compared and discussed their recorded data, after which definite subcategories for each of the following descriptive data categories were decided on: focus of research, study design for treatment studies, type of treatment for treatment studies, methods, methods of data collection, and type of mental disorder. Said data categories were then re-categorised according to these subcategories by both authors in their respective data tables. The coded data of both authors was exported into *Statistical Package for the Social Sciences* (*SPSS;* Version 23.0) so as to work out their

respective ICC's, as well the average ICC. It was established that the overall inter-rater reliability was .94. Furthermore, correlations were .76 or higher for all categories, indicating a high level of inter-rater reliability for each category. The ICC's for each of the descriptive data categories and the average ICC, as well as their respective *p*-values are presented in Table 2.

Table 2

Intraclass Correlations for Descriptive Data Categories

Descriptive data categories	Intraclass correlations	*p*-value
Editorial, full, or brief reports	.97	< .001
Sample size	1.00	< .001
Sample country	1.00	< .001
Host country for immigrant and refugee samples	1.00	< .001
Affiliation of first three authors as a group: Global North, Global South, mixed	1.00	< .001
Affiliation of first authors: Global North, Global South, mixed	.91	< .001
First authors: Country	.85	< .001
Affiliation of second Authors: Global North, Global South, mixed	.92	< .001
Second authors: Country	1.00	< .001
Affiliation of third Authors: Global North, Global South, mixed	.80	< .001
Third Authors: Country	.76	< .001
Source of funding: Global North, Global South, mixed	.96	< .001
Source of funding: Country	1.00	< .001
Focus of research	.99	< .001
Study design for treatment studies	1.00	< .001
Type of treatment for treatment studies	1.00	< .001
Method	.88	< .001
Method of data collection	.85	< .001
Type of mental disorder	1.00	< .001
Average interclass correlation	.94	< .001

Once inter-rater reliability was established, the remainder of the sample (n = 172) was evenly divided between the authors for the coding of data. Subsequently, the data for all the articles were combined into one data set. Frequencies were then calculated using *Microsoft Excel*.

Ethical considerations

This bibliometric review used only primary research located in six internationally accessible traumatic stress journals and did not involve any contact with human participants. As such, there was no risk of harm to human participants.

Results

Representation of Global South countries

During the 10 year period between 2006 and 2015, a total number of 2530 articles, including editorials, full articles, and brief reports, were published in the six peer-reviewed traumatic stress journals that were sampled in the study. As illustrated in Figure 1, of the total number of articles, 2283 (90.24%) were representative of Global North countries as per the definition described under Data Collection, while only 247 (9.76%) of the articles were representative of Global South countries. The percentage of Global South Articles ranged from 6.08% to 11.73% across the ten years. The number of articles published per year, and the percentage and number of articles per year representative of the Global South, are presented in Table 3.

Source of Global South research on traumatic stress

Sample country. Overall 54 Global South countries were represented. As shown in Table 4, the most commonly studied country in the sample was Turkey, which constituted 8.91% *(n* = 22) of the sample, followed by China (8.10%; *n* = 20), Gaza (5.26%; *n* = 13), and Rwanda (5.67%; *n* = 14). There were 27 countries that were each only represented once across the ten year review period. In 35.63% (*n* = 88) of the sample, studies sampled refugees who had relocated from their country of origin, while 4.05% (*n* = 10) of studies sampled immigrant samples. In 13.77% (*n* = 34) of the sample, the sample country was recorded as not applicable, as these articles simply spoke to a particular topic without drawing from a specific sample. Note that 5.67% (*n* = 14) of the sample was recorded as not specified (refugees), as these articles were about refugee samples without specifying their country of origin, while 2.43% (*n* = 6) of the sample was recorded as not specified (immigrants). The sample countries, including their respective percentages of the sample and *n*-values, are presented in Table 4. For a complete list of sample countries and their respective frequencies by year, see Appendix A.

Table 3

Representation of Global South Countries by Year

Year	Journals	No. of articles	No. of articles from Global South	% of articles per year from Global South
2006	JOLT, JOTD, JOTS, TVA	162	19	11.73
2007	JOLT, JOTD, JOTS, TVA	181	11	6.08
2008	JOLT, JOTD, JOTS, PTTRPP, TVA	166	12	7.23
2009	JOLT, JOTD, JOTS, PTTRPP, TVA	205	21	10.24
2010	EJPT, JOLT, JOTD, JOTS, PTTRPP, TVA	247	20	8.10
2011	EJPT, JOLT, JOTD, JOTS, PTTRPP, TVA	266	24	9.02
2012	EJPT, JOLT, JOTD, JOTS, PTTRPP, TVA	303	34	11.22
2013	EJPT, JOLT, JOTD, JOTS, PTTRPP, TVA	341	38	11.14
2014	EJPT, JOLT, JOTD, JOTS, PTTRPP, TVA	373	35	9.38
2015	EJPT, JOTD, JOTS, PTTRPP, TVA	286	33	11.54
Total		2530	247	

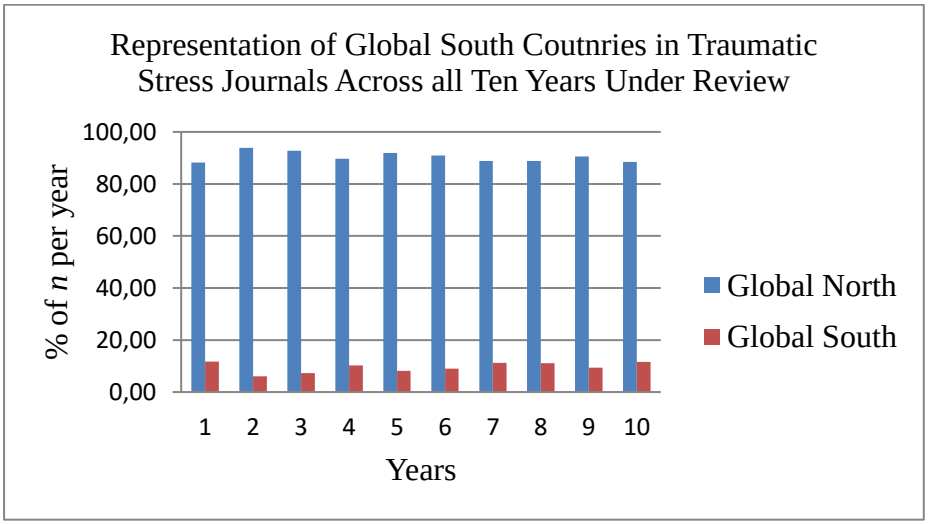

Figure 1. Graph of the representation of Global South countries in traumatic stress journal across all ten years under review.

Table 4

Frequency of Global South Countries Represented Over the 10 Year Review Period

Countries	% of *N*	*n*
Turkey	8.91	22
China	8.10	20
Gaza	5.26	13
Rwanda	4.86	12
Democratic Republic of Congo	2.83	7
India	2.83	7
South Africa	2.83	7
Iraq (refugees)	2.43	6
Somalia (refugees)	2.43	6
West Bank	2.43	6
Cambodia (refugees)	2.02	5
Turkey (refugees)	2.02	5
Bosnia (refugees)	1.62	4
Burundi	1.62	4
China (refugees)	1.62	4
Colombia	1.62	4
Democratic Republic of Congo (refugees)	1.62	4
Kosovo	1.62	4
Mexico	1.62	4
Romania	1.62	4
Sierra Leone (refugees)	1.62	4
Uganda	1.62	4
Cambodia	1.21	3
Indonesia	1.21	3
Iran (refugees)	1.21	3
Lebanon	1.21	3
Sri Lanka	1.21	3
Tanzania	1.21	3
Vietnam (refugees)	1.21	3
Afghanistan (refugees)	0.81	2
Angola (refugees)	0.81	2
Bosnia	0.81	2
El Salvador	0.81	2
Ethiopia	0.81	2
Ethiopia (refugees)	0.81	2
Ghana (refugees)	0.81	2
Guinea (refugees)	0.81	2
Iran	0.81	2
Iraq	0.81	2

Kenya	0.81	2
Kosovo (refugees)	0.81	2
Rwanda (refugees)	0.81	2
Sri Lanka (refugees)	0.81	2
Sudan (refugees)	0.81	2
Thailand	0.81	2
Vietnam	0.81	2
Afghanistan	0.40	1
Brazil	0.40	1
Cameroon (refugees)	0.40	1
Côte d'Ivoire	0.40	1
Côte d'Ivoire (refugees)	0.40	1
Gambia (refugees)	0.40	1
Gaza (immigrants)	0.40	1
Gaza (refugees)	0.40	1
Georgia	0.40	1
Haiti	0.40	1
Herzegovina	0.40	1
Iraq (immigrants)	0.40	1
Jordan	0.40	1
Kazakhstan (refugees)	0.40	1
Lebanon (immigrants)	0.40	1
Liberia (refugees)	0.40	1
Malaysia	0.40	1
Morocco (refugees)	0.40	1
Mozambique	0.40	1
Nigeria (refugees)	0.40	1
North Korea (refugees)	0.40	1
Pakistan	0.40	1
Pakistan (refugees)	0.40	1
Peru	0.40	1
Serbia	0.40	1
Serbia (refugees)	0.40	1
Sierra Leone	0.40	1
Somalia	0.40	1
Syria	0.40	1
Syria (refugees)	0.40	1
Timor-Leste	0.40	1
West Bank (immigrants)	0.40	1
Not applicable[a]	13.77	34
Not specified[b]	1.21	3
Not specified (immigrants)[c]	2.43	6
Not specified (refugees)[d]	5.67	14

Total	300[e]

[a]Instances where articles were not about a specific sample
[b]Instances where articles were about samples without specifying their country of origin
[c]Instances where articles were about immigrant samples without specifying their country of origin
[d]Instances where articles were about refugee samples without specifying their country of origin
[e]There were instances where articles had more than one sample country

Sample countries were also classified according to the World Bank's classification of countries by region and it was found that the most commonly studied region was Sub-Saharan Africa, which constituted 25.33% of the total sample of Global South studies. Following Sub-Saharan Africa by quite some distance were Europe and Central Asia (16%; n = 48) and East Asia and Pacific (15%; n = 45). The least commonly studied region was Latin America and the Caribbean (4.33%; n = 13), and North American (0%). An additional category termed 'Other' was added in order to record the following variables: not specified, not specified (immigrants), not specified (refugees), and not applicable. The category 'Other', constituted 19% (n = 57) of the total frequency for sample countries. For a complete breakdown of sample countries by region, including their respective percentages of the total frequency of sample countries and percentage of the sample, as well as their respective *n*-values, see Appendices B and C.

Host country for immigrant and refugee samples. In 23.48% (n = 58) of the sample, articles were about immigrant or refugee samples. The most commonly recorded host country in the case of either immigrant or refugee samples was the United States of America, which constituted 8.73% of the total frequency for host country for immigrant and refugee samples (n = 252). Following well behind the United States of America were Germany (2.38%; n = 6) and the Netherlands (1.98%; n = 5). These figures correspond with those of the United Nations Refugee Agency (UNRA), which indicate that the United States of America has granted 1,225,00 individuals refugee status during the period between 2000 and 2014, third only to Turkey and Lebanon ("UNHCR Statistical Yearbook 2014", 2016). Furthermore, after the Russian Federation, Germany and the United States of America had the highest number of applications for asylum or refugee status in 2014, 173,100 and 121,200, respectively ("UNHCR Statistical Yearbook 2014", 2016). The least recorded host countries were Egypt, France, Hungary, Norway, South Korea, and Thailand, each of which were only recorded once. For a complete list

of host countries for immigrant and refugee samples and their respective frequencies by year, see Appendix D.

Location of first three authors. In 69.64% (n = 172) of the sample, the first author was exclusively affiliated with institution(s) in countries from the Global North; in 27.53% (n = 68) of sample, the first author was exclusively affiliated with institution(s) in countries from the Global South; and in 2.83% (n = 7) of the sample, the first author was affiliated with institutions in countries from both the Global North and Global South, i.e. mixed. This indicates that the majority of the articles in the sample had a first author from the Global North.

The most commonly recorded first author country was the United States of America, which constituted 33.60% (n = 84) of the sample, followed at quite a distance by Germany (11.34%; n = 28) and Turkey (9.31%; n = 23).These figures illustrate that a third of all the articles examining traumatic stress in the Global South were led by authors based in the United States of America. The first author countries, including their respective percentages of the sample and n-values, are presented in Table 5.

In 59.11% (n = 146) of the sample, the second author was exclusively affiliated with institution(s) in countries from the Global North; in 28.34% (n = 70) of sample, the second author was exclusively affiliated with institution(s) in countries from the Global South; and in 0.81% (n = 2) of the sample, the second author was affiliated with institutions in countries from both the Global North and Global South, i.e. mixed. This indicates that the majority of articles in the sample had a second author from the Global North. In 7.69% (n = 19) of the sample, second author: Global North, Global South, or mixed was recorded as not applicable, as these articles only had one author.

The most commonly recorded second author country was the United States of America, which constituted 29.55% (n = 74) of the sample, followed by Germany (10.53%; n = 26), and Turkey (8.50%; n = 21). These figures illustrate that almost a third of all articles in the six traumatic stress journals that sampled Global South samples had second authors based in the United States of America. The second author countries, including their respective percentages of the sample and n-values, are presented in Table 5.

Similarly, in 47.77% (n = 118) of the sample, the third author was exclusively affiliated with institution(s) in countries from the Global North; in 21.05% (n = 52) of sample, the third author was exclusively affiliated with institution(s) in countries from the Global South; and in

1.21% (*n* = 3) of the sample, the third author was affiliated with institutions in countries from both the Global North and Global South, i.e. mixed. This indicates that the majority of articles in the sample had a third author from the Global North. In 29.96% (*n* = 74) of the sample, third author: Global North, Global South was recorded as not applicable, as 7.69% (*n* = 19) and 22.27% (*n* = 55) of the sample only had one or two authors, respectively.

As with the first and second authors, the most commonly recorded third author country was the United States of America, which constituted 22.27% (*n* = 55) of the sample, followed by Germany (8.50%; *n* = 21), and Turkey (6.07%; *n* = 15). These figures illustrate that almost a quarter of all articles in the six traumatic stress journals that sampled Global South samples had third authors based in the United States of America. The third author countries, including their respective percentages of the sample and *n*-values, are presented in Table 5.

As illustrated in Figure 2, in 56.28% (*n* = 139) of the Global South sample, the first three authors were all affiliated with institutions in countries from the Global North; in 20.24% (*n* = 50) of the sample, the first three authors were all affiliated with institutions in countries from the Global South; and in 23.48% (*n* = 53) of the sample, the first three authors were all affiliated with institutions in countries from both the Global North and Global South, i.e. mixed. Therefore, over half of the primary author teams were based exclusively in the Global North, in just under a quarter of the sample, there were North-South collaborations between the primary authors, and the remaining primary author teams were exclusively Global South based.

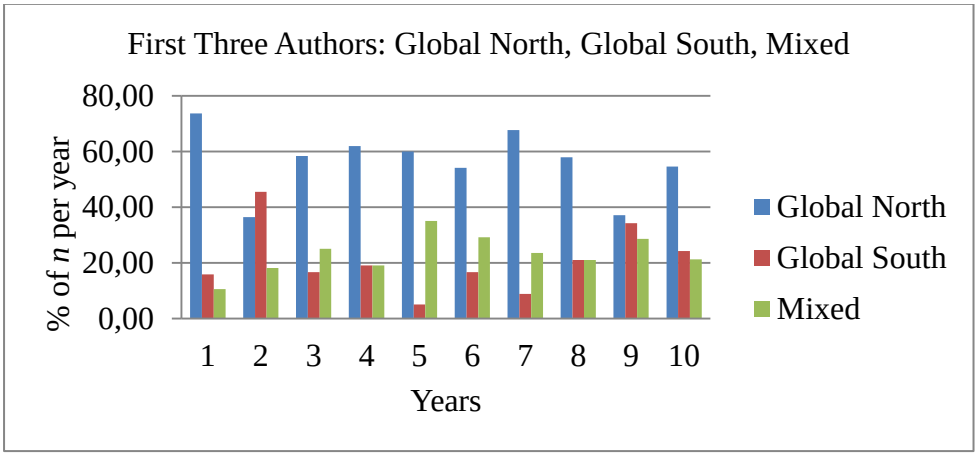

Figure 2. Graph of first three authors: Global North, Global South, mixed, as a percentage of *n* per year.

Table 5

Countries in which First Three Authors were Based

Countries	First Author		Second Author		Third Author	
	% of *N*	*n*	% of *N*	*n*	% of *N*	*n*
United States of America	33.60	84	29.55	74	22.27	55
Germany	11.34	28	10.53	26	8.50	21
Turkey	9.31	23	8.50	21	6.07	15
China	6.07	15	4.86	12	2.83	7
United Kingdom	4.86	12	4.05	10	3.64	9
Netherlands	4.45	11	3.64	9	3.24	8
Australia	3.64	9	2.83	7	2.83	7
Switzerland	2.83	7	2.43	6	1.21	3
Israel	2.83	7	3.64	9	2.02	5
South Africa	2.43	6	2.43	6	2.02	5
India	2.02	5	1.62	4		
Norway	2.02	5	1.62	4	0.81	2
Italy	1.21	3	0.81	2	0.81	2
Lebanon	1.21	3	1.62	3	0.81	2
Malaysia	1.21	3	0.40	1	0.40	1
Romania	1.21	3	0.81	2		
Belgium	0.81	2			0.40	1
Brazil	0.81	2	0.40	1	0.81	2
Canada	0.81	2	0.81	2	0.40	1
France	0.81	2	0.40	1		
Hong Kong	0.81	2	0.40	1	0.40	1
Hungary	0.81	2	0.40	1		
Iran	0.81	2				
Kenya	0.81	2	0.40	1	0.40	1
Bosnia	0.40	1	0.40	1		
Burundi	0.40	1	0.40	1	0.81	2
Denmark	0.40	1	1.21	3	0.81	2
Finland	0.40	1	0.40	1	0.40	1
Gaza	0.40	1	0.40	1	1.62	4
Georgia	0.40	1	0.40	1	0.40	1
Herzegovina	0.40	1				
Ireland	0.40	1				
Jordan	0.40	1				
Mexico	0.40	1	0.40	1	0.81	2
Nigeria	0.40	1				
Rwanda	0.40	1	0.81	2	1.21	3

South Korea	0.40	1	0.40	1	0.40	1
Spain	0.40	1	0.40	1	0.40	1
Sri Lanka	0.40	1	0.81	2		
Uganda	0.40	1			0.81	2
West Bank	0.40	1	0.81	2		
Thailand			1.21	3	0.40	1
Cambodia			0.40	1		
Colombia			0.40	1	0.40	1
Croatia			0.40	1	0.40	1
Democratic Republic of Congo					0.40	1
Egypt			0.40	1	0.40	1
El Salvador			0.40	1		
Haiti			0.40	1	0.40	1
Indonesia					0.40	1
Iraq					0.40	1
Jamaica			0.40	1		
New Zealand			0.40	1		
Serbia					0.40	1
United Arab Emirates			0.40	1		
NA[a]			7.69	19	30.36	75
Total		257[b]		251[b]		251[b]

[a]Instances where cases did not have a second author or third author
[b]There were instances where authors were affiliated with institutions in more than one country

Source of funding. In 55.87% (n = 138) of the sample, the source of funding was not specified. In 32.39% (n = 80) of the sample, the source of funding was located in countries from the Global North, for 8.50% (n = 21) the source of funding was located in countries from the Global South, while in 3.24% (n = 8) of the sample the source of funding was located in countries from both the Global North and Global South, i.e. mixed. The most commonly recorded source of funding country was the United States of America, which constituted 20.24% (n = 50) of the sample, followed at quite a distance by Germany (5.67%; n = 14), and China (3.24%; n = 8). The source of funding countries, including their respective percentages of the sample and n-values, are presented in Table 6.

Table 6

Source of Funding Countries

Countries	% of *N*	*n*
United States of America	20.24	50
Germany	5.67	14
China	3.24	8
United Kingdom	2.83	7
South Africa	2.43	6
Netherlands	2.02	5
Norway	1.62	4
Belgium	1.21	3
Turkey	1.21	3
Israel	0.81	2
Lebanon	0.81	2
Malaysia	0.81	2
Switzerland	0.81	2
Brazil	0.40	1
Australia	0.40	1
Burundi	0.40	1
Canada	0.40	1
Colombia	0.40	1
France	0.40	1
Georgia	0.40	1
Hong Kong	0.40	1
Kenya	0.40	1
Mexico	0.40	1
Romania	0.40	1
South Korea	0.40	1
Thailand	0.40	1
Sweden	0.40	1
Not specified[a]	55.47	137
Total		258[b]

[a]Instances where the source of funding country was not specified

[b]There were instances where articles had more than one source of funding country

Type of Global South research on traumatic stress

Research focus. The most common research focus in the sample was protective and/ risk factors for trauma exposure and trauma-related symptoms, which constituted 26.32% (n = 65) of the sample, followed closely by prevalence studies (25.10%; n = 62) and then symptomatology (16.19%; n = 44), i.e. where studies simply discussed the symptoms of a particular mental disorder once or currently classified in the DSM. Prevalence studies can further be classified as

community samples (n = 43), nationally representative samples (n = 14), reviews of prevalence studies (n = 4), or editorials (n = 1). The least common research focus was research methods in traumatic stress research, which constituted only 0.40% (n = 1) of the sample. The research foci, including their respective percentages of the sample and n-values, are presented in Table 7.

Research foci classified as 'Other' included studies on perceptions of support (n = 2), studies of training development for persons working with communities in Global South countries who have survived disaster or emergency situations (n = 2), and one study each on ethnic syndromes, health service use, and traumatic events appraisal.

Table 7

Research Foci

Research foci	% of *N*	*n*
Protective &/ risk factors	26.32	65
Prevalence	25.10	62
Symptomatology	17.81	44
Treatment	10.12	25
Impact (other than symptomatology)	9.72	24
Measure development	5.26	13
Other	2.83	7
Theory development	1.21	3
Trauma research (general)	1.21	3
Research methods in traumatic stress research	0.40	1
Total	100	247

Treatment studies. Within the 25 journal articles that focussed on treatment of traumatic stress, 7 articles described the development of a treatment model, while 18 were treatment outcome studies. The most commonly used study design for treatment studies in the sample was the randomised controlled trial (n = 10). The remainder of the treatment studies used control groups but no randomisation (n = 7) or no control groups (n = 2). As indicated in Table 8, the type of treatment that was most frequently evaluated in the treatment studies was narrative exposure therapy (NET; n = 4). A variety of other treatment models were evaluated, but only with one or two studies. Note that type of treatment for treatment studies was recorded for both

articles that are sub-classified as treatment (treatment study) and as treatment (description of treatment model) under research focus.

Method. The most commonly used methodological approach in the sample was quantitative, which constituted 57.49% (*n* = 142) of the sample. Qualitative methods alone were employed by only 7.29% (*n* = 18) of the sample, while a combination of quantitative and qualitative, i.e. mixed, was utilised by 22.27% (*n* = 55). In 12.96% (*n* = 32) of articles in the sample, none of the above approaches applied (e.g. the article was a literature review, an editorial, or a theoretical article).

As summarised in Table 9, the most commonly used method of data collection in the sample was rating scales, which were used by 69.23% (*n* = 171) of articles in the sample, followed by questionnaires (42.11%; *n* = 104), and individual interviews (28.74%; *n* = 71). This reflects a heavy reliance on more etic processes of knowledge production, whereby existing instruments are transferred from other contexts to the Global South countries.

Type of mental disorder. As summarised in Table 10, the most commonly researched mental disorder in the sample was PTSD, which was assessed in 72.87% (*n* = 180) of the sample, followed by major depressive disorder (MDD; 27.13%; *n* = 67) and generalised anxiety disorder (GAD; 13.77%; *n* = 34). Dissociative and somatisation disorders were also represented in Global South studies (*n* = 17 and n = 12, respectively). A range of other disorders were also studied, particularly anxiety disorders, but there have been few studies of each. In 18.62% (*n* = 46) of the sample, type of mental disorder was recorded as not applicable, as these articles either spoke to a particular topic without drawing on a specific sample or researched phenomena other than a specific mental disorder as once and/ currently classified in the DSM, did not specify the mental disorder being studied, or discussed mental disorders which have never been classified in the DSM, such as Prolonged Grief Disorder, Suicide Ideation, Developmental Trauma Disorder, Dissociative Depression, and Overanxious Disorder.

Table 8

Types of Treatment for Treatment Studies

Treatments	% of *N*	*n*
Narrative exposure therapy	1.62	4
Eye-movement desensitisation therapy	0.81	2
Group-based trauma Recovery programme	0.81	2
Transcendental meditation	0.81	2
Trauma-focused psychotherapy	0.81	2
Writing intervention	0.81	2
Asylum interviews	0.40	1
Biofeedback	0.40	1
Cognitive-behavioural therapy	0.40	1
Cognitive processing therapy	0.40	1
Integrative contextual model	0.40	1
Interpersonal psychotherapy	0.40	1
Opinion-leader programme	0.40	1
Post-traumatic stress psycho-education workshop	0.40	1
Socio-therapy	0.40	1
Sport-based psychosocial intervention	0.40	1
Stabilisation	0.40	1
Strengths-based community-delivered intervention	0.40	1
Transference-focused psychotherapy	0.40	1
Not applicable[a]	89.47	221
Total		249[b]

[a]Instances where articles were not treatment studies

[b]There were instances where articles had more than one type of treatment

Table 9

Methods of Data Collection

Methods of data collection	% of *N*	*n*
Rating scales	69.23	171
Questionnaires	42.11	104
Individual interviews	28.74	71
Systematic Review	3.64	9
Focus-Groups	2.83	7
Literature Review	1.21	3
Bibliometric Review	0.81	2
Meta-Analysis	0.40	1
Retrospective Analysis	0.40	1
Not applicable[a]	8.10	20
Total		369[b]

[a]Instances where articlesdid not have a method of data collection

[b]There were instances where articles had more than one method of data collection

Table 10

Types of Mental Disorders

Mental Disorders	% of *N*	*n*
Post-traumatic stress disorder	72.87	180
Major depressive disorder	27.13	67
Genralised anxiety disorder	13.77	34
Dissociative disorders (not specified)	6.88	17
Somatisation disorder	4.86	12
Borderline personality disorder	2.02	5
Panic disorder	1.62	4
Dysthymia	0.81	2
Seperation anxiety disorder	0.81	2
Specific phobia (not specified)	0.81	2
Acute stress disorder	0.40	1
Attention deficit hyperactivity disorder	0.40	1
Conversion disorder	0.40	1
Social phobia	0.40	1
Not applicable[a]	18.62	46
Total		373[b]

[a]Instances where articles did not study a specific mental disorder or where mental disorders are not currently classified in the DSM, nor have they been in the past

[b]There were instances where articles had more than one mental disorder

Discussion

This bibliometric review found that only 9.76% of all articles published in the six traumatic stress journals sampled over the period 2005 – 2015 represented knowledge produced in or by the Global South. The low percentage of Global South articles is consistent across all ten years under review, never exceeding 11% of articles published per year. There is a very slight increase in the percentage of Global South articles between the first five years (8.68%) and the last five years (10.46%), which may indicate a slowly emerging upward trend. Overall, however, it is apparent that knowledge production about traumatic stress has been, and remains, massively geographically skewed. The experiences and needs of trauma survivors throughout the Global South are enormously under-represented, considering that war, civil conflict, and accidental traumas are all far more common in low- and middle- income countries than in high-income countries. These findings resemble those of Fodor et al. (2014)'s review of the extent to which low- and middle income countries were represented in the traumatic stress literature during the year 2012. They found that 87% of a random sample of traumatic stress articles published in 2012 (N = 1,000) involved research in high-income countries and 88% had authors from high-income countries. However, the results of the present study indicate that this is a consistent trend across all ten years under review. This raises questions about the potentially limited applicability of much traumatic stress research to the majority of the global population, echoing similar concerns about mental health research in general (Catapano & Castle, 2003; Patel & Sumathipala, 2001).

The most commonly studied region in the sample was sub-Saharan Africa, which is somewhat surprising given that this region is particularly resource-scarce compared with other Global South regions. The most commonly studied countries within this region were Rwanda, Democratic Republic of Congo, Somalia, and South Africa, which have all experienced protracted political conflicts. Although not in the sub-Saharan African region, Turkey was the most commonly studied country in the sample. Turkey is the site of a long-standing Kurdish-Turkish conflict, as well as frequent natural disasters, and is also an upper-middle income country with potentially better resources for research than many countries in the Global South. Turkey was closely followed by China, which could possibly be explained by the increased interest in traumatic stress research in China after the Sichuan earthquake in 2008, along with China's recent push to increase their scientific research output in general, so as to improve their

economic growth (Xie, Zhang, Lai, 2014; Zang, 2014). The third most commonly studied country was Gaza, which could be explained by the Arab-Israeli conflict over the Gaza strip that has been ongoing since 1948 (Beinin & Hajjar, 2014). Many Global South countries were only represented once over the ten year period. Furthermore, it was found that there was a paucity of research on traumatic stress from North Africa, as well as Latin America and the Caribbean, despite the presence of long-standing civil conflicts, natural disasters, and community violence in these regions. It is possible that studies from these regions are published in non-English journals given that language might be a barrier for researchers residing there.

With regards to the location of the first three authors, it was found that the majority of articles with a Global South focus were produced by a group of primary authors from the Global North. Researchers from the United States of America particularly seem to dominate knowledge production about traumatic stress in the Global South. Although this could be the result of sheer research funding capacity, it also reflects the dominance of research based in the United States of America across the trauma field more broadly. The domination of Global North researchers within traumatic stress research is consistent with simply their domination over the world's scientific community as a whole (Karlsson, 2002). This can partially be accounted for by the disparity in economic development between Global North and Global South countries and the consequent reliance on research resources from Global North countries to capacitate research on traumatic stress in Global South countries (Karlsson, 2002; Lansang & Dennis, 2004). It does however, point to an urgent need to better capacitate Global South trauma researchers to lead research in their own settings, rather than playing a secondary role in knowledge production. This might enable the development of research that is more closely embedded in local contexts of trauma and provides more contextualised knowledge about traumatic stress to supplement more universal aspects.

With regard to type of Global South research on traumatic stress, the most common research foci within the sample were about the frequency with which trauma occurs, risk and protective factors, and trauma impact. Studies focusing on treatment of traumatic stress in Global South contexts were far less common, representing only 10% of all Global South articles. Although studies on the prevalence and symptomatology of trauma in Global South contexts are a step in the right direction, in terms of gaining a more comprehensive understanding of the global phenomenon of traumatic stress, it does little to address the actual treatment of trauma in

such contexts. A possible explanation for the lack of treatment studies in Global South countries is that they are costly to implement, and as mentioned before, countries with lower levels of economic development will dedicate fewer resources to scientific research in light of more pressing issues such as poverty (Karlsson, 2002; Saraceno & Saxena, 2004; Saxena, et al., 2004). A related issue is the lack of experts to implement treatment studies, once again resulting from the lack of funding accorded to scientific research in countries with lower levels of economic development (Karlsson, 2002; Langer, 2004; Lansang & Dennis, 2004). Furthermore, Global South contexts often have under-resourced and poorly functioning healthcare systems, which are not always able to manage the workloads associated with the implementation of treatment studies (Jackson et al., 2007).

A number of interesting observations were made with regards to the methodological approaches and methods of data collection utilised by the studies in the sample. Firstly, the most commonly used methodological approach in the sample was quantitative, constituting 57.49% (*n* = 142) of the sample. There was a notable reliance on symptom rating scales, which were used by 69.23% of articles in the sample, and closed-ended questionnaires, used by 42.11%. Taken together with the fact that the least common research focus was research methods in traumatic stress research, this indicates an overreliance on more etic processes of knowledge production, whereby existing instruments from the Global North are transferred to other contexts. Global South countries have specific contextual characteristics and culturally-based health and mental health norms that are not prevalent in Global North countries, and an over-reliance on instruments developed in the Global North may result in these localised aspects of traumatic stress remaining hidden and unformulated (Hofman et al., 2005). Thus, more emic approaches to knowledge production in Global South traumatic stress research could usefully supplement top-down, etic processes.

Conclusion

This bibliometric review has a number of limitations. The review was confined to articles published in six peer-reviewed, internationally accessible journals that focus specifically on traumatic stress. However, traumatic stress research is often published in journals other than those specifically focussing on traumatic stress; should such journals have been included in the current review a different trend in the representation of Global South countries in traumatic stress research might have emerged. Nevertheless, the six journals included in this review are

representative of core conceptual and empirical developments in traumatic stress research and therefore changes in the representation of Global South countries within trauma research should be reflected within these journals. Another potential limitation is that articles published in *JOLT* for 2015 were not accessible due to publisher restrictions and were thus excluded from the analysis. However, there is no reason to believe that a different trend would have emerged should these articles have been included in the review.

Despite these limitations, the continued geographically skewed production of knowledge about traumatic stress is apparent from this review and points to something of an epistemological crisis in the field of traumatic stress. Global South countries often have unique contextual constraints and culturally-based health and mental health norms, which differ from those in Global North countries, and therefore more emic processes of knowledge production are needed. However, this might prove difficult given the limited resources allocated to scientific research within Global South countries. Furthermore, researchers in Global South countries often lack sufficient access to scientific literature for a number of reasons, including lack of internet access or computer availability, high journal subscription fees, and the fact that international scientific research journals predominantly publish in English. Consequently, traumatic stress journals could consider strategies to promote the participation of Global South researchers in systems of knowledge production, such as providing more open access to journals and considering ways to facilitate language translation support. Moreover, international traumatic stress organisations could increase their focus on promoting the participation of Global South researchers in systems of knowledge production.

Furthermore, in terms of research collaboration between researchers from the Global North and the Global South, those involved should be aware of how such collaborations can reproduce colonial patterns of knowledge production, whereby researchers from the Global North dominate the traumatic stress research agenda and knowledge production processes to a degree that may distort or skew the traumatic stress knowledge base (Boshoff, 2009). For example, within such collaborations, Global South partners are often expected to conduct the fieldwork, while the research conceptualisation, interpretation, analysis and presentation of findings are conducted by partners from the Global North (Boshoff, 2009). Research collaborations that provide opportunities for Global South researchers to play a more substantive role in research development could address this disparity.

Finally, it is recommended that this kind of bibliometric review be done every ten years, so that current trends, as well as gaps in the knowledge base on traumatic stress in the Global South might be identified. Additionally, such reviews might do well to include journals other than those specifically specialising in traumatic stress.

Overall, the results of this bibliometric review indicate that traumatic stress literature and knowledge production is heavily dominated by the Global North, with little representation from those regions where the majority of trauma survivors currently reside or originate from. Consequently, there is a need for future traumatic stress research to redress this geographic bias in order to develop an internationally representative traumatic stress research base that is responsive to the needs of trauma survivors in a multiplicity of contexts. Specific recommendations for future research were discussed. It is hoped that this will enable the development of strategies to generate further traumatic stress research emanating from diverse cultures and societies so that a more comprehensive understanding of the global phenomenon of traumatic stress can be achieved.

References

Bedard, M., Greif, J. L., & Buckley, T. C. (2004). International publication trends in traumatic stress literature. *Journal of Traumatic Stress, 17*(2), 97 – 101. doi: 10.1023/B:JOTS.0000022615.03388.78

Beinin, J. & Hajjar, L. (2014). Palestine, Israel and the Arab-Israeli conflict: A primer. *Middle East Report, 247*, 1 - 16

Bellis, D. E. (2009). *Bibliometrics and citation analysis: From the science citation index to cybermetrics*. Maryland, United States of America: Scarecrow Press.

Berelson, B. (1952). *Content analysis in communication research*. New York, United States of America: Free Press.

Boseley, S. (2016, July 27). PTSD more likely to affect people in affluent countries, scientists say. *Mail and Guardian,* p. 11. Retrieved from https://www.thegaurdia.com/society/2016/jul/27/post-traumatic-stress-disorder-ptsd-more-likely-to-affect-people-in-afluent-countries-scientists-say

Boshoff, N. (2009). Neo-colonialism and research collaboration in Central Africa. *Scientometrics, 81*(2), 413 – 434. doi: 10.1007/s11192-008-2211-8

Breslau, J. (2004). Introduction: Cultures of trauma: Anthropological views of posttraumatic stress disorder in international health. *Culture, Medicine and Psychiatry, 28*(2), 113-126.

Bould, M. D., Hladkowicz, E. S., Pigford, A. E., Ufholz, L., Postonogova, T., Shin, E., & Boet, S. (2014). References that anyone can edit: Review of Wikipedia citations in peer reviewed health science literature. *British Medical Journal, 348,* 141 – 154. doi: org/10.1136/bmj.g1585

Catapano, L. A., & Castle, J. D. (2003). How international are psychiatry journals? *The Lancet, 361*(9374), 2087.

Cutajar, J. (2008). Knowledge and post-colonial pedagogy. *Mediterranean Journal of Educational Studies, 13*(2), 27 – 47. doi: 10.1.1.568.477&rep=rep1&type=pdf

Dei, G. S. (2012). Indigenous anti-colonial knowledge as 'heritage knowledge' for promoting Black/African education in diasporic contexts. *Decolonization: Indigeneity, Education & Society, 1*(1), 102 – 119.

Eagle, G. & Kaminer, D. (2013). Continuous traumatic stress: Expanding the lexicon of traumatic stress. *Peace and Conflict: Journal of Peace Psychology, 19*(2), 85 – 99.

Fodor, K. E., Unterhitzenberger, J., Chou, C.-Y., Kartal, D. Leistner, S., Milosvljevic, M., ... & Alisic, E. (2014). Is traumatic stress research global? A bibliometric analysis. *European Journal of Psychotraumatology, 5*(23269), 1 – 7. doi: 10.3402/ejpt.v5.23269

Hinton, D. E., & Lewis-Fernández, R. (2011). The cross-cultural validity of posttraumatic stress disorder: implications for DSM-5. *Depression and anxiety, 28*(9), 783-801. doi: 10.1002/da.20753

Hofman, K. J., Primack, A., Keusch, G. T., & Hrynkow, S. (2005). Addressing the growing burden of trauma and injury in low- and middle-income countries. *American Journal of Public Health, 95*(1), 13 – 17. doi: 10.2105/AJPH.2004.039354

Hwang, K. (2007). International collaboration in multilayered centre-periphery in the globalization of science and technology. *Science, Technology, & Human Values, 33*(1), 101 – 133. doi: 10.1177/0162243907306196

Jackson, D. J., Chopra, M., Doherty, T. M., Colvin, M. S. E., Levin, J. B., Willumsen, J. F., ... & Moodley, P. (2007). Operational effectiveness and 36 week HIV-free survival in the South African programme to prevent mother-to-child transmission of HIV-1. *AIDS, 21*(4), 509 – 516.

Karlsson, S. (2002). The North-South knowledge divide: Consequences for global environmental governance. In D. Esty & M. Ivanova (Eds.), *Global environmental governance: Options and opportunities* (pp. 1 - 24). New Haven, United States of America: Yale School of Forestry and Environmental Studies.

Kegley, C. W. & Blanton, S. L. (2015). The Global South in a world of powers. In *World Politics: Trends and Transformation, 2016 – 2017* (pp. 115 – 119). Toronto, Canada: Nelson Education.

Krippendorff, K. (1980). *Content analysis: An introduction to its methodology*. California, United States of America: Sage.

Langer, A. Diaz-Olavarrieta, C., Berdichevsky, K., Villar, J. (2004). Why is research from developing countries underrepresented in international health literature, and what can be done about it? *Bulletin of the World Health Organisation*, *82*(10), 802 – 803.

Lansang, M. A. & Dennis, R. (2004). Building capacity in health research in the developing world. *Bulletin of the World Health Organisation*, *82*(10), 764 – 770. doi

Norris, F. H. (1992). Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Consulting and Clinical Psychology*, *60*(3), 409 – 418. doi: 10.1037/0022-006X.60.3.409

Odeh, L. E. (2010). A comparative analysis of Global North and Global South economies. *Journal of Sustainable Development in Africa, 12*(3), 338 – 348.

Paranje, G., Sadana, R. & Karem, G. (2005). Increasing international gaps in health-related publications. *Science, 308,* 959 – 960. doi: 10.1126/science.1108705

Patel, V. & Kim, Y.-R. (2007). Contribution of low- and middle-income countries to research published in leading general psychiatry journals, 2002 – 2004. *British Journal of Psychiatry, 190*, 77 – 78. doi: 10.1192/bjp.bp.106.025692

Patel, V. & Sumathipala, A. (2001). International representation in psychiatric literature: Survey of six leading journals. *British Journal of Psychiatry, 178*, 406 – 409. doi: 10.1192/bjp.178.5.406

Prince, M., Patel, V., Saxena, S., Maj, M., Maselko, J. Phillips, M. R., & Rahman, A. (2007). No health without mental health. *The Lancet, 370*, 859 – 877. doi: 10.1016/S014

Rahman, M. & Fukui, T. (2003). Biomedical publication – global profile and trend. *Public Health, 117*, 274 – 280. doi: 10.1016/S0033-3506(03)00068-4

Reuters, T. (2008). *Using Bibliometrics: A guide to evaluating research performance with citation data*. Philadelphia: Thompson Reuters.

Rosselli, D. (1999). Geography of biomedical publications. *The Lancet, 354*, 516 – 517. doi: 10.1016/S0140-6736(05)75555-0

Saraceno, B. & Saxena, S. (2004). Bridging the mental health research gap in low- middle-income countries. *Acta Psychiatrica Scandinavica, 110*, 1 – 3. doi: 10.1111/j.1600-0447.2004.00348.x

Saxena, S., Maulik, P. K., Sharan, P., Levav, I., & Saraceno, B. (2004). Mental health research on low- middle-income countries in indexed journals: A preliminary assessment. *The Journal of Mental Health Policy and Economics, 7*, 127 – 131.

Saxena, S., Paraje, G., Sharan, P., Karam, G., & Sadana, R. (2006). The 10/90 divide in mental health research: Trends over a 10-year period. *British Journal of Psychiatry, 188*, 81 – 82. doi: 10.1192/bjp.bp.105.011221

Schnyder, U. (2013). Trauma is a global issue. *European Journal of Psychotraumatology, 4*(20419), 1 – 2.

Stemler, S. (2001). An overview of content analysis. *Practical Assessment, Research and Evaluation, 7*(17), 1- 15.

Stevens, G., Eagle, G., Kaminer, D., & Southon-Smith, C. (2013). Continuous traumatic stress: Conceptual conversations in contexts of global conflict, violence and trauma. *Peace and Conflict: Journal of Peace Psychology, 19*(2), 75 – 84. doi: 10.1037/a0032484

The World Bank. (2016, March 18). Country and lending groups [Website]. Retrieved from http://data.worldbank.org/about/country-and-lending-groups

Tunon, J. & Brydges, B. (2005, August). *Improving the quality of university libraries through citation mining and analysis using two new dissertation bibliometric assessment tools*. Paper presented at the meeting of the International Federation of Libraries and Associations, Oslo, Norway.

UNHCR Statistical Yearbook 2014. (2016, October 26). [Website]. Retrieved from http://www.unhcr.org

Weber, R. P. (1990). *Basic content analysis* (2nd ed.). California, United States of America: Sage.

Xie, Y., Zhang, C., & Lai, Q. (2014). China's rise as a major contributor to science and technology. *Proceedings of the National Academy of Sciences, 111*(26), 4 – 6. doi: 10.1073/pnas.1407709111

Zang, Y. H. (2014). The treatment and research for posttraumatic stress disorder with Chinese medicine. *European Journal of Psychotraumatology, 5*, 1 – 6.

Zemigala, M. (2015). Bibliometric analysis of corporate social responsibility - Different countries' perspective. *Human Resources Management and Ergonomics, 9*, 123 – 138.

Ziegler, B. (2009). *Methods for bibliometric analysis of research: Renewable energy case study*. (Unpublished mater's thesis). Massachusetts Institute of Technology, Massachusetts, United States of America.

Appendix A

Table 11

Frequencies for Sample Countries

Countries	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total counts
Turkey	1	2	1	2	1	1	2	1	6	5	22
China	1	0	1	1	1	5	1	4	4	2	20
not specified (refugees)[a]	0	1	0	0	2	1	4	2	1	3	14
Gaza	0	0	1	0	1	1	6	2	0	2	13
Rwanda	1	0	0	0	0	3	1	3	2	2	12
Democratic Republic of Congo	0	0	0	0	1	2	0	3	0	1	7
India	0	1	1	1	0	1	1	1	1	0	7
South Africa	2	1	0	2	0	0	0	1	0	1	7
Iraq (refugees)	0	0	0	0	0	1	2	1	1	1	6
Not specified (immigrants)[b]	0	0	1	0	2	1	1	0	1	0	6
Somalia (refugees)	1	0	0	0	1	2	1	1	0	0	6
West Bank	1	0	1	1	0	0	1	1	0	1	6
Cambodia (refugees)	2	1	0	0	1	0	0	1	0	0	5
Turkey (refugees)	1	0	0	0	0	0	2	0	0	2	5
Bosnia (refugees)	0	0	0	2	1	0	1	0	0	0	4
Burundi	0	0	1	0	1	0	0	0	0	2	4
China (refugees)	2	0	1	1	0	0	0	0	0	0	4
Colombia	1	0	0	0	0	2	0	0	0	1	4
Democratic Republic of Congo (refugees)	0	0	0	0	0	0	1	1	1	1	4
Kosovo	1	0	1	0	0	0	0	1	1	0	4
Mexico	0	0	1	0	1	0	1	0	1	0	4
Romania	0	0	0	0	0	1	0	2	1	0	4
Sierra Leone (refugees)	2	0	0	0	0	0	1	0	0	1	4
Uganda	0	0	0	0	1	1	0	0	1	1	4
Cambodia	0	0	1	0	0	1	0	0	0	1	3
Indonesia	0	1	0	0	0	0	0	1	1	0	3

Iran (refugees)	1	0	0	0	0	0	0	0	0	2	3
Lebanon	0	0	0	0	0	1	0	0	1	1	3
Not specified[c]	1	0	0	0	0	0	1	1	0	0	3
Sri Lanka	0	0	0	1	0	0	0	2	0	0	3
Tanzania	0	0	0	0	0	1	0	0	1	1	3
Vietnam (refugees)	1	0	0	0	0	0	2	0	0	0	3
Afghanistan (refugees)	0	0	0	0	0	0	1	0	0	1	2
Angola (refugees)	2	0	0	0	0	0	0	0	0	0	2
Bosnia	0	0	0	0	1	1	0	0	0	0	2
El Salvador	1	0	0	0	0	0	0	0	0	1	2
Ethiopia	0	0	0	0	0	1	0	0	1	0	2
Ethiopia (refugees)	0	0	0	1	1	0	0	0	0	0	2
Ghana (refugees)	1	0	0	0	1	0	0	0	0	0	2
Guinea (refugees)	0	0	0	0	0	0	2	0	0	0	2
Iran	0	0	0	0	1	1	0	0	0	0	2
Iraq	0	0	0	0	0	0	0	1	1	0	2
Kenya	0	0	0	0	0	1	1	0	0	0	2
Kosovo (refugees)	0	0	0	0	0	0	0	1	0	1	2
Rwanda (refugees)	0	0	0	0	1	0	1	0	0	0	2
Sri Lanka (refugees)	0	0	0	0	0	0	1	1	0	0	2
Sudan (refugees)	0	0	0	0	0	0	0	1	1	0	2
Thailand	0	0	0	0	0	0	0	0	1	1	2
Vietnam	0	0	0	1	1	0	0	0	0	0	2
Afghanistan	0	0	0	1	0	0	0	0	0	0	1
Brazil	0	1	0	0	0	0	0	0	0	0	1
Cameroon (refugees)	0	0	0	0	0	0	1	0	0	0	1
Côte d'Ivoire	0	0	0	0	0	0	1	0	0	0	1
Côte d'Ivoire (refugees)	0	0	0	0	0	0	1	0	0	0	1
Gambia (refugees)	0	0	0	0	0	0	0	0	0	1	1
Gaza (immigrants)	0	0	0	1	0	0	0	0	0	0	1
Gaza (refugees)	0	0	0	0	0	0	1	0	0	0	1
Georgia	0	0	0	0	0	0	0	0	1	0	1
Haiti	0	0	0	0	0	0	0	0	1	0	1

Herzegovina	0	0	0	0	0	1	0	0	0	0	1
Iraq (immigrants)	0	0	1	0	0	0	0	0	0	0	1
Jordan	0	0	0	0	0	0	0	0	1	0	1
Kazakhstan (refugees)	0	0	0	0	0	1	0	0	0	0	1
Lebanon (immigrants)	0	0	1	0	0	0	0	0	0	0	1
Liberia (refugees)	0	0	0	0	0	0	1	0	0	0	1
Malaysia	0	0	0	0	0	0	0	1	0	0	1
Morocco (refugees)	1	0	0	0	0	0	0	0	0	0	1
Mozambique	0	0	0	1	0	0	0	0	0	0	1
Nigeria (refugees)	0	0	0	0	0	0	0	0	0	1	1
North Korea (refugees)	0	0	0	0	0	0	0	1	0	0	1
Pakistan	0	0	0	0	1	0	0	0	0	0	1
Pakistan (refugees)	0	0	0	0	0	0	0	1	0	0	1
Peru	0	0	0	0	0	0	1	0	0	0	1
Serbia	0	0	0	0	1	0	0	0	0	0	1
Serbia (refugees)	0	0	0	0	0	0	0	0	0	1	1
Sierra Leone	0	0	0	0	0	0	1	0	0	0	1
Somalia	0	0	0	0	0	1	0	0	0	0	1
Syria	0	0	0	0	0	0	0	0	0	1	1
Syria (refugees)	0	0	0	0	0	0	1	0	0	0	1
Timor-Leste	0	0	0	0	1	0	0	0	0	0	1
West Bank (immigrants)	0	1	0	0	0	0	0	0	0	0	1
Not applicable[d]	2	2	1	5	0	1	3	9	3	8	34
Total	24	9	13	16	23	32	43	45	31	39	300[e]

[a]Instances where cases studied refugee samples without specifying their country of origin

[b]Instances where cases studied immigrant samples without specifying their country of origin

[c]Instances where cases either studied samples without specifying their country of origin and/ where authors are affiliated with institutions in countries from the Global South

[d]Instances where cases did not study a specific sample

[e]There were instances where cases had more than one sample country

Appendix B

Table 12

Sample Countries by Region (Part 1)

East Asia & Pacific	Counts	Europe & Central Asia	counts	Latin America & the Caribbean	counts	Middle East & North Africa	Counts
Cambodia	3	Bosnia	2	Brazil	1	Gaza	13
Cambodia (refugees)	5	Bosnia (refugees)	4	Colombia	4	Gaza (immigrants)	1
China	20	Georgia	1	El Salvador	2	Gaza (refugees)	1
China (refugees)	4	Herzegovina	1	Haiti	1	Iran	2
Indonesia	3	Kazakhstan (refugees)	1	Mexico	4	Iran (refugees)	3
Malaysia	1	Kosovo	4	Peru	1	Iraq	2
North Korea (refugees)	1	Kosovo (refugees)	2			Iraq (immigrants)	1
Thailand	2	Romania	4			Iraq (refugees)	6
Timor-Leste	1	Serbia	1			Jordan	1
Vietnam	2	Serbia (refugees)	1			Lebanon	3
Vietnam (refugees)	3	Turkey	22			Lebanon (immigrants)	1
		Turkey (refugees)	5			Morocco (refugees)	1
						Syria	1
						Syria (refugees)	1
						West Bank	6
						West Bank (immigrants)	1
Total	45	Total	48	Total	13	Total	44
% of total counts for sample countries	15	% of total counts for sample countries	16	% of total counts for sample countries	4.33	% of total counts for sample countries	14.67
% of *N*	18.22	% of *N*	19.43	% of *N*	1.75	% of *N*	0.18

Appendix C

Table 13

Sample Countries by Region (Part 2)

South Asia	Counts	Sub-Saharan Africa	counts	Other	counts
Afghanistan	1	Angola (refugees)	2	Not specified[a]	3
Afghanistan (refugees)	2	Burundi	4	Not specified (immigrants)[b]	6
India	7	Cameroon (refugees)	1	Not specified (refugees)[c]	14
Pakistan	1	Democratic Republic of Congo	7	Not applicable[d]	34
Pakistan (refugees)	1	Democratic Republic of Congo (refugees)	4		
Sri Lanka	3	Côte d'Ivoire	1		
Sri Lanka (refugees)	2	Côte d'Ivoire (refugees)	1		
		Ethiopia	2		
		Ethiopia (refugees)	2		
		Gambia (refugees)	1		
		Ghana (refugees)	2		
		Guinea (refugees)	2		
		Kenya	2		
		Liberia (refugees)	1		
		Mozambique	1		
		Nigeria (refugees)	1		
		Rwanda	12		
		Rwanda (refugees)	2		
		Sierra Leone	1		
		Sierra Leone (refugees)	4		
		Somalia	1		
		Somalia (refugees)	6		
		South Africa	7		
		Sudan (refugees)	2		
		Tanzania	3		
		Uganda	4		
Total	17	Total	76	Total	57
% of total counts for sample countries	5.67	% of total counts for sample countries	25.33	% of total counts for sample countries	19
% of *N*	0.07	% of *N*	30.77	% of *N*	23.08

[a]Instances where articles were about samples without specifying their country of origin
[b]Instances where articles were about immigrant samples without specifying their country of origin
[c]Instances where articles were about refugee samples without specifying their country of origin
[d]Instances where articles were not about a specific sample

Appendix D

Table 14

Frequencies for Host Countries

Countries	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total counts
United States of America	4	2	1	0	3	2	6	2	2	0	22
Germany	0	0	0	1	1	0	2	0	0	2	6
Netherlands	2	0	0	0	1	1	1	0	0	0	5
Israel	0	1	0	2	0	0	1	0	0	0	4
Uganda	0	0	0	0	1	0	0	1	1	1	4
Australia	0	0	0	0	1	1	1	0	0	0	3
United Kingdom	0	0	0	0	0	0	3	0	0	0	3
Belgium	1	0	0	0	0	0	0	1	0	0	2
Denmark	0	0	0	1	0	0	0	1	0	0	2
India	0	0	1	1	0	0	0	0	0	0	2
Italy	0	0	0	0	1	0	1	0	0	0	2
Switzerland	0	0	0	0	0	0	1	0	0	1	2
Egypt	0	0	0	0	0	0	0	0	1	0	1
France	0	0	0	0	0	0	1	0	0	0	1
Hungary	0	0	0	0	0	1	0	0	0	0	1
Norway	0	0	0	0	0	0	0	0	1	0	1
South Korea	0	0	0	0	0	0	0	1	0	0	1
Thailand	0	0	0	0	0	0	0	1	0	0	1
Not applicable[a]	13	8	10	16	12	19	20	32	30	29	189
Total	20	11	12	21	20	24	37	39	35	33	252[b]

[a]Instances where cases did not study immigrant or refugee samples

[b]There were instances where cases had more than one host country