

# Bibliometric analysis of publications on healthcare disparities among sexual and gender minorities: an exploratory study

Mirian Ramirez MLIS, • Hannah J. Craven, MLIS  
Ruth Lilly Medical Library, Indiana University School of Medicine, Indianapolis, Indiana

## BACKGROUND

Research on healthcare disparities among sexual and gender minorities is among the areas of expertise where researchers have made an effort to make problems and experiences visible. Academic and scientific literature related to the topic has increased significantly over the past decade<sup>1</sup>. Bibliometric analysis provides an overview of the production and research activity around disciplines and study fields. By observing scientific productions and the impact they have, users and policy makers can have a greater understanding of the problems they address and consequently plan and carry out more efficient actions to find appropriate solutions.

## OBJECTIVE

To perform a bibliometric descriptive analysis to explore and examine the characteristics, as well as the growth and authorship patterns of worldwide research output, addressing issues related to barriers and disparities of the availability or access to medical services for the LGBTQ population.

## MATERIALS and METHODS

### Data Source and Search Strategy

Data was obtained by performing a comprehensive search in Web of Science Core Collection (Clarivate Analytics) from 1985-2019 (our subscription covers since 1985). Query the database using Topic Field (TS=) using terms that represent all important terminology related to healthcare disparities and sexual and gender minorities. The terms to search the following fields within a record: Title, Abstract, Author Keywords, Keywords Plus.

### Bibliometric Analysis

The analyses showed were carried out with the open-source R package Bibliometrix<sup>2</sup> (v.3.0.3) which supports collection gathered from Web of Science. The dataset files were Imported in the Biblioshiny interface to generate visualization and reports.



## REFERENCES

- Bonvicini KA. LGBT healthcare disparities: What progress have we made? *Patient Educ Couns*. 2017;100(12):2357-2361. doi:10.1016/j.pec.2017.06.003
- Aria M, Cuccurullo C. bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*. 2017;11(4):959-975. doi:10.1016/j.joi.2017.08.007

### Bibliometrix and biblioshiny – R packages

Bibliometrix: <https://www.bibliometrix.org>  
A brief introduction to bibliometrix <https://cran.r-project.org/web/packages/bibliometrix/vignettes/bibliometrix-vignette.html>  
biblioshiny: The shiny interface for bibliometrix: <https://bibliometrix.org/Biblioshiny.html>  
Package 'bibliometrix': <https://cran.r-project.org/web/packages/bibliometrix/bibliometrix.pdf>

## ACKNOWLEDGMENTS

- Elizabeth C. Whipple, Assistant Director of Research and Translational Sciences, Ruth Lilly Medical Library, Indiana University School of Medicine.
- Rachel J. Hinrichs, Health Sciences Librarian, University Library, Indiana University-Purdue University Indianapolis.

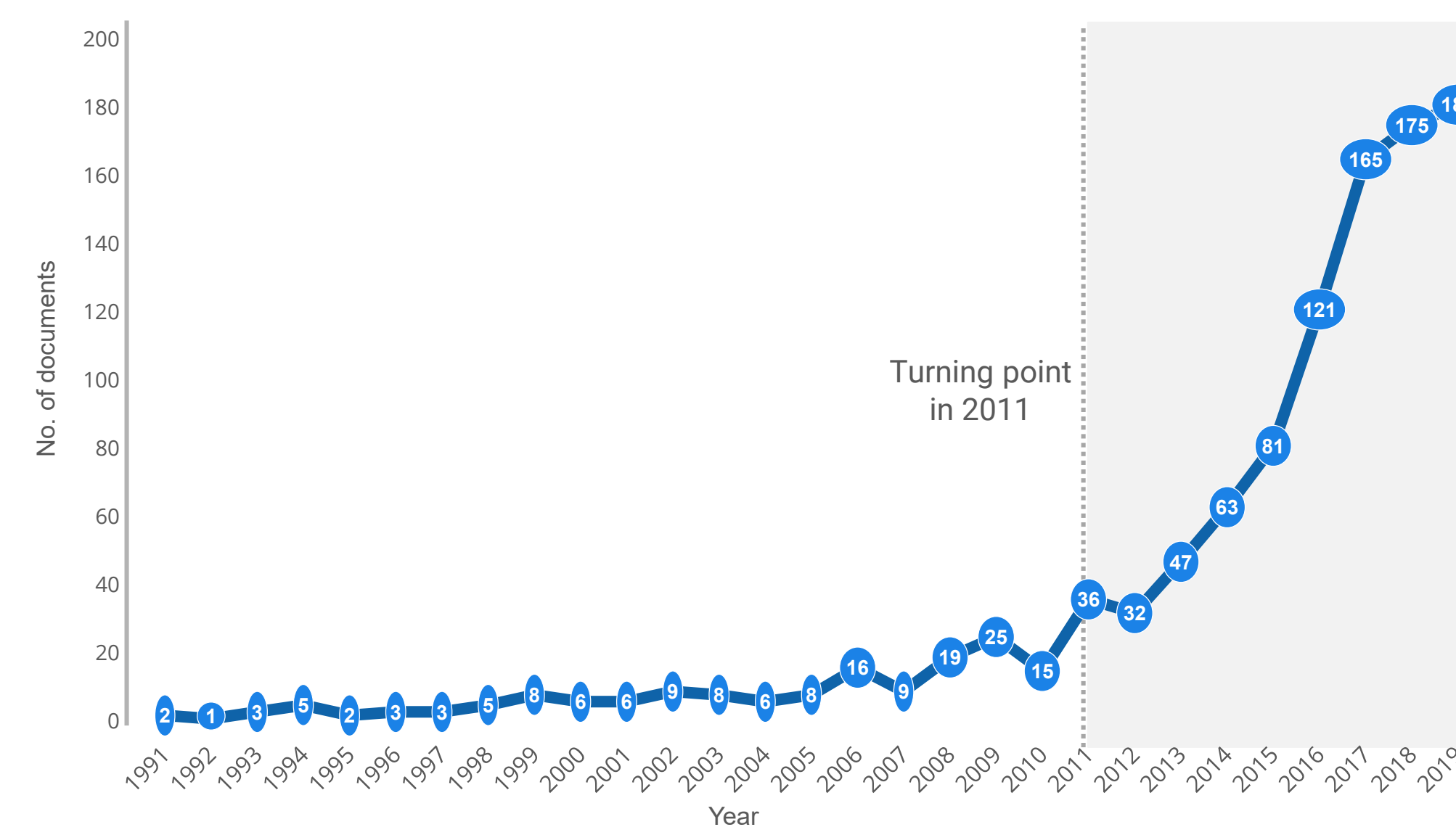
## RESULTS

The analysis identified a total of 1060 documents published 1991-2019, of which 84% are articles and 7% reviews (other doc types < 9%). 3998 authors were identified. No documents were identified between 1985-1990. The top 10 most productive authors have contributed with over 10% of the documents that have been cited 3968 times. The most cited paper is: "A population-based study of sexual orientation identity and gender differences in adult health" (CONRON KJ, 2010, AM J PUBLIC HEALTH) (Total cites= 454).

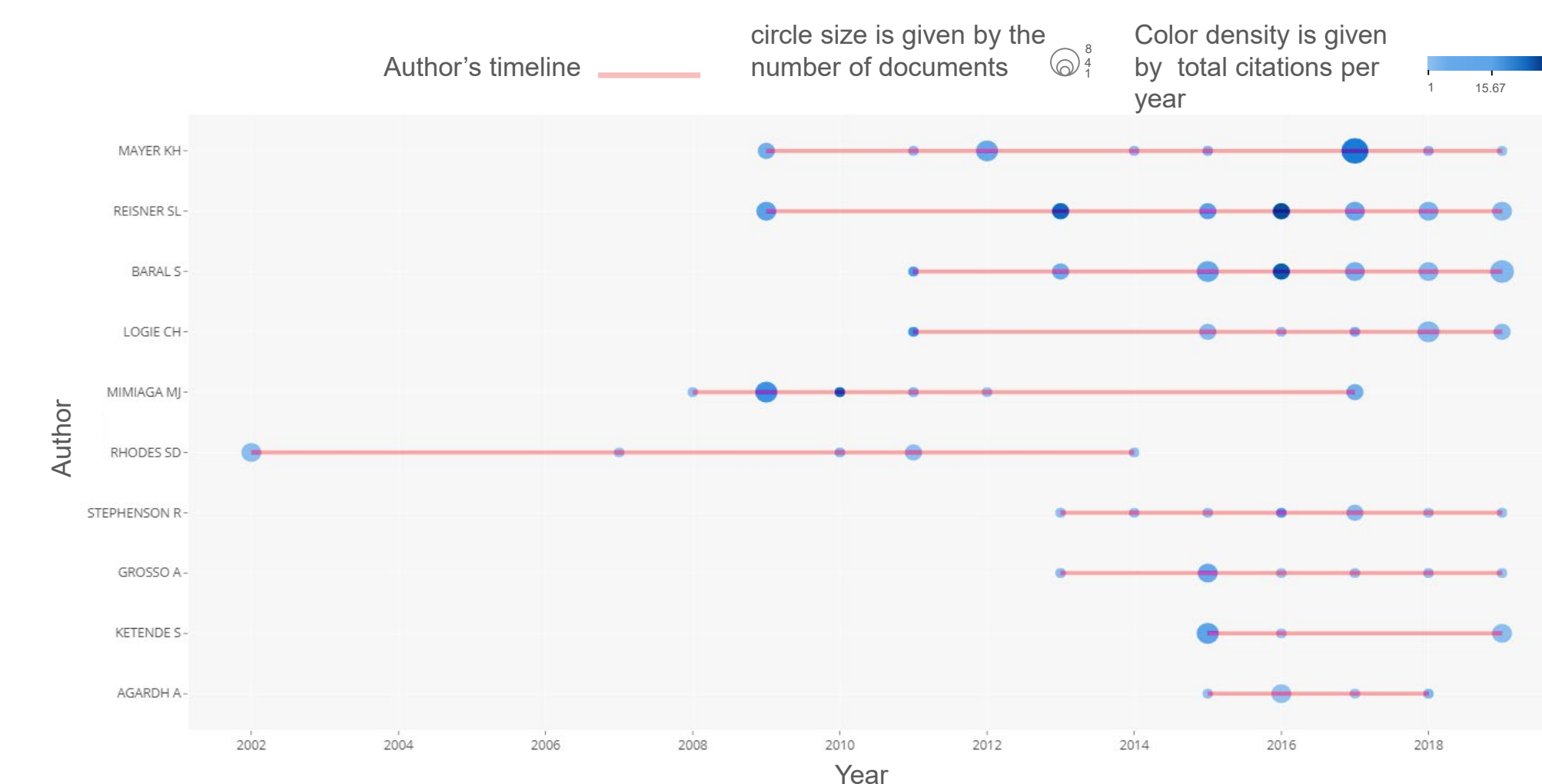
### MAIN INFORMATION OF THE BIBLIOGRAPHIC COLLECTION



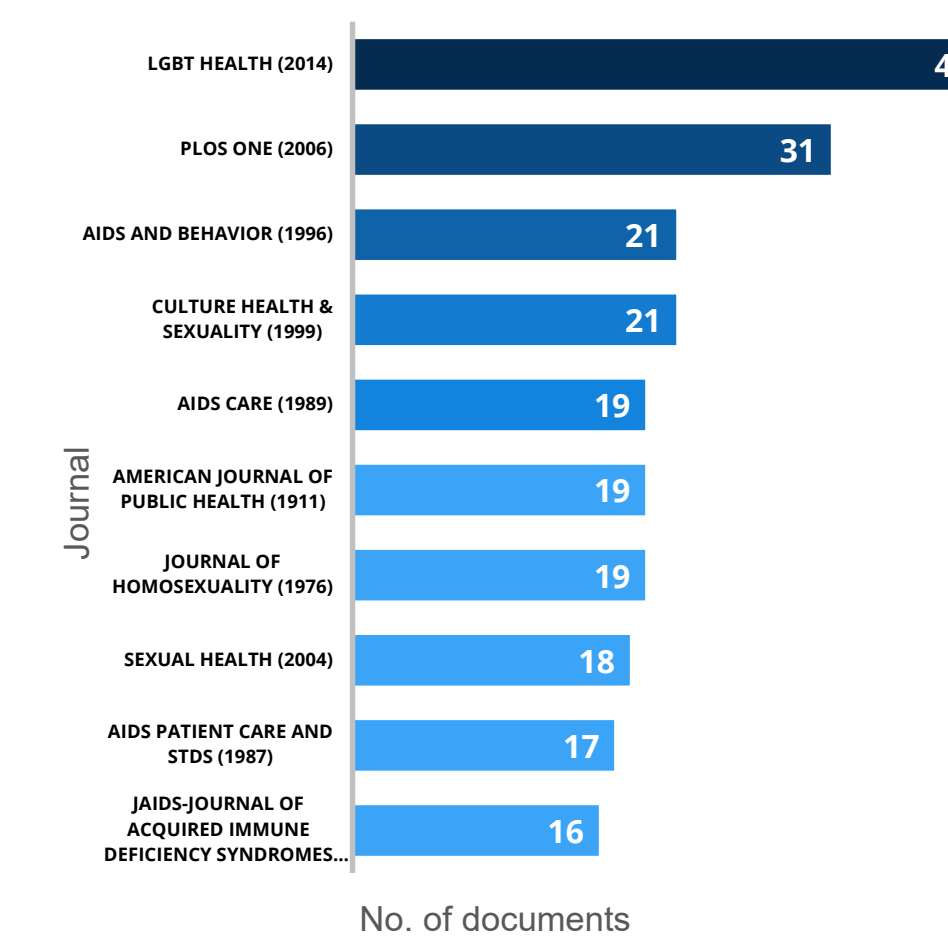
**Figure 1. Evolution of the production from 1991 to 2019.** 86% of the documents were published between in the last decade (2010-2019) **Since 2011 there is a significant increase** in the number of publications. The annual growth rate was on average 17.46%



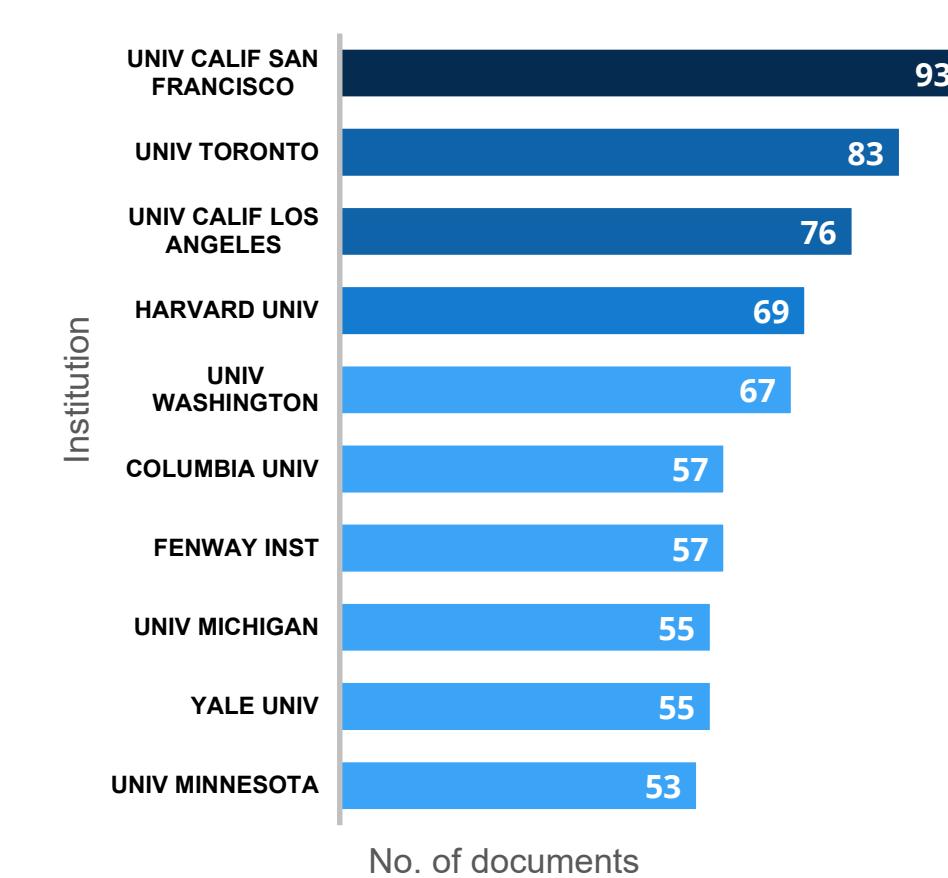
**Figure 3. Top 10 prolific authors' production over time (2002-2019).**



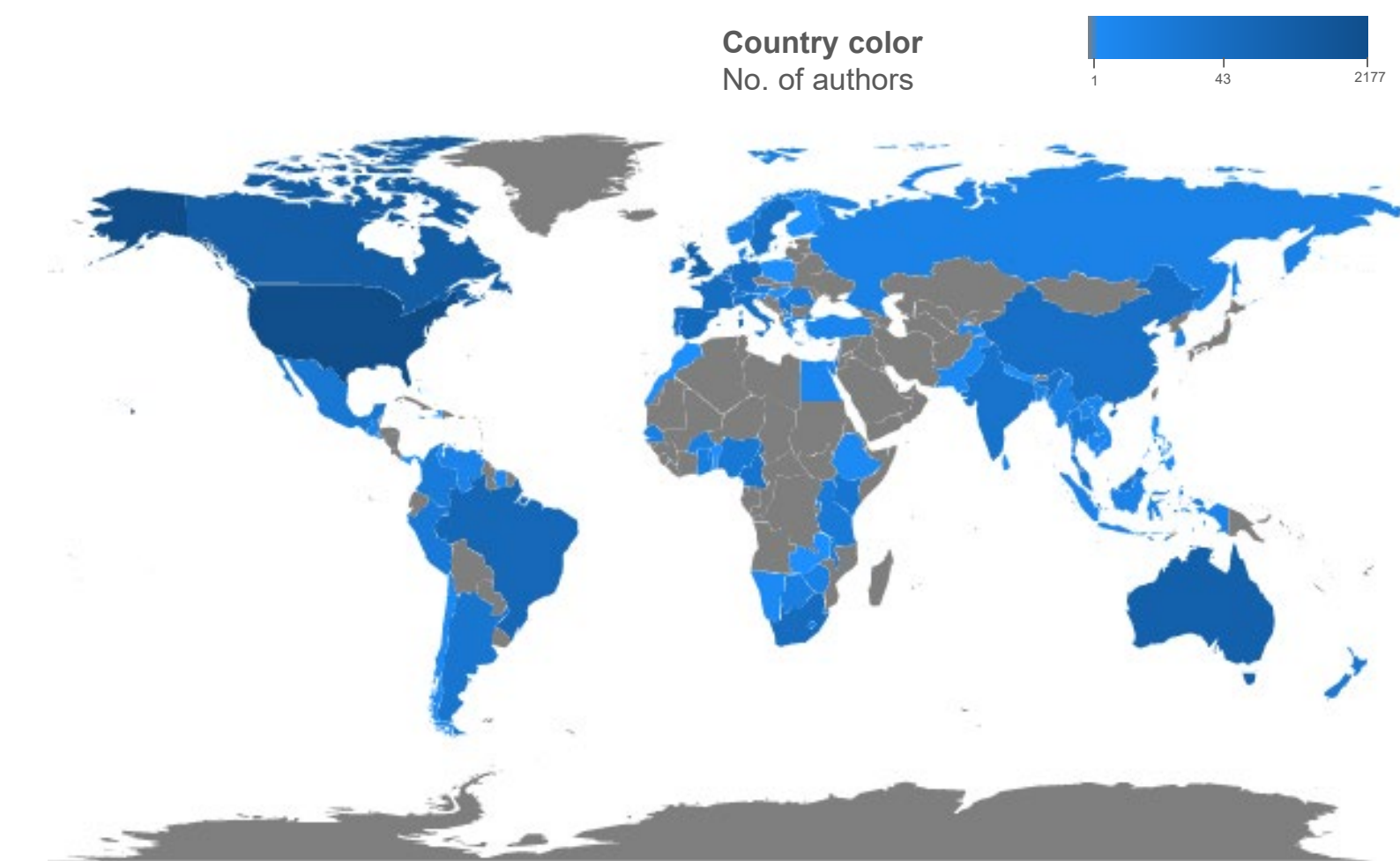
**Figure 2. Top 10 most relevant sources.** 437 journals are represented in the dataset, the **five most productive journals** are: *LGBT Health, Plos One, AIDS and Behavior, Culture Health & Sexuality* and *AIDS Care*.



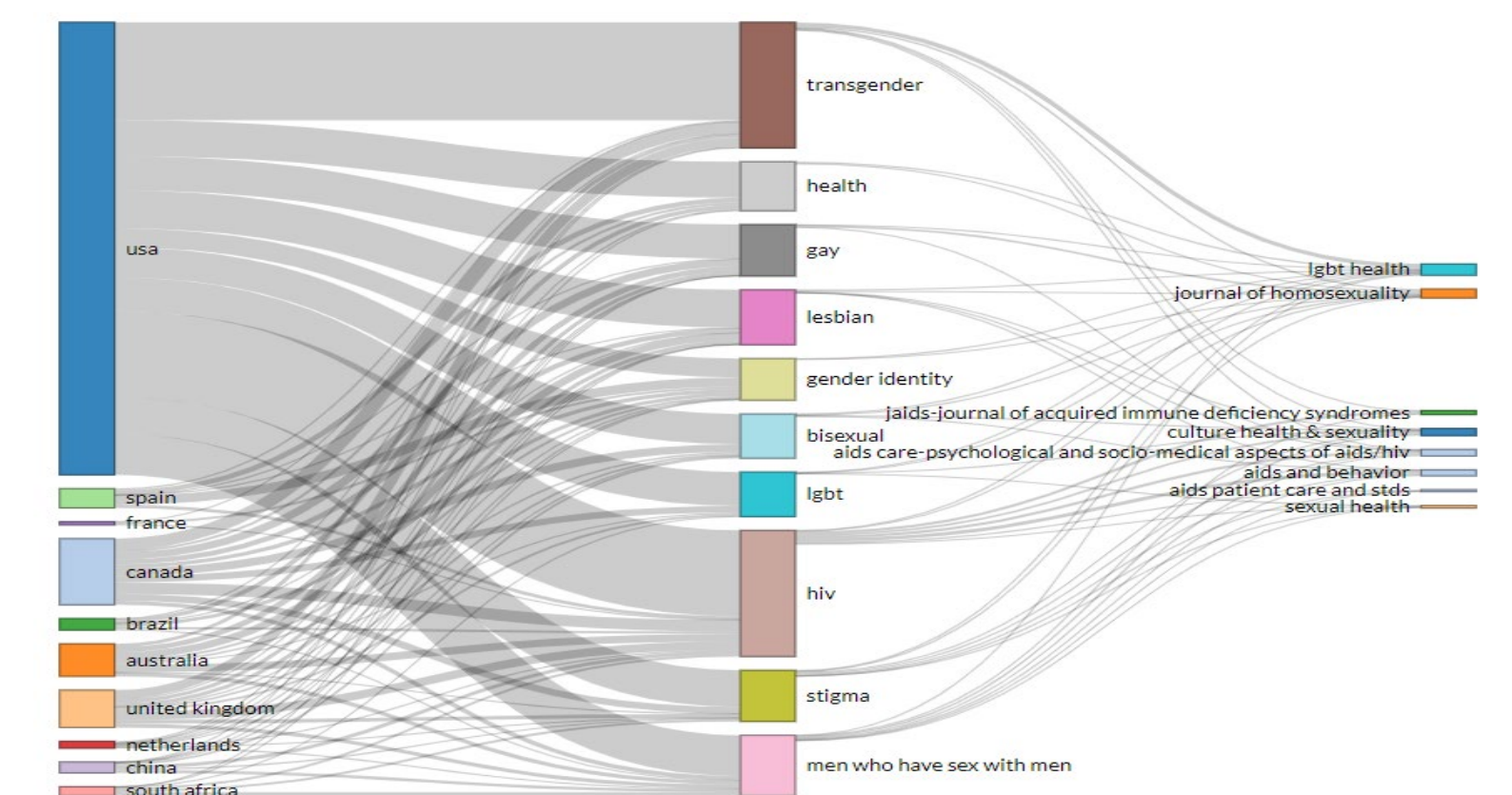
**Figure 4. Top 10 most relevant affiliations.** The **University of California San Francisco** is the leading institution based on the number of documents published (n=93).



**Figure 5. Author's country of origin.** The result showed that authors were from 85 different countries. Over 77.7% of them are from **USA, Canada, Australia, UK, Brazil, Spain, Netherlands and South Africa**.



**Figure 6. Relationships between main countries, author's keywords and sources** for researching healthcare disparities among sexual and gender minorities.



**Figure 7. Thematic evolution across the three time periods.** Vertical nodes represents clusters of author's keywords and the edges demonstrate the flow or temporal evolution tracked based on author's keyword co-occurrence of the keywords between two time slices. The size of the cluster is given by the total co-occurrences.

