

BIBLIOMETRIC ANALYSIS

Tengku Muhammad Hanis Bin Tengku Mokhtar

October 31, 2023

About me



Lead academic trainer at
Jom Research

Background

- PhD student of Public Health Epidemiology, USM
- MSc (Medical Statistics) from USM, 2019
- MBChB from Al-Azhar University, 2015

Interest:

- Medical statistics, meta-analysis, bibliometrics, scientometrics, text analysis
- Machine learning and deep learning application in medical sciences
- Application of R and python on health/medical data

Contact me:

- Email: tengkuhanismokhtar@gmail.com
- Website: <https://tengkuhanis.netlify.app/>

Outline

- Theory and concept
- Break - 10 mins
- Hands-on in databases - WOS
- Hands-on analysis in R:
 - Setting Posit Cloud
 - Run bibliometric in R (demo)

Download material

https://github.com/tengku-hanis/biblio_uitm

The screenshot shows the GitHub repository page for 'tengku-hanis/biblio_uitm'. The repository is public and has 1 branch and 0 tags. The 'Code' button is highlighted with a red box and labeled '1'. The 'Download ZIP' button is highlighted with a red box and labeled '2'. The repository contains several files, including .gitignore, 1_install_packages.R, 2_biblio_citation.R, 3_biblio_relation.R, 4_biblio_others.R, 5_biblio_theory.R, 6_biblioshiny.R, README.md, biblio_uitm.Rproj, and wos.bib. The README.md file is open, showing the title 'biblio_uitm' and the description 'Material for UITM's bibliometric webinar'.

tengku-hanis / biblio_uitm

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

biblio_uitm Public

master 1 branch 0 tags

Go to file Add file > Code 1

Local Codespaces

Clone

HTTPS SSH GitHub CLI

https://github.com/tengku-hanis/biblio_uitm.git

Use Git or checkout with SVN using the web URL.

Open with GitHub Desktop

Download ZIP 2

tengku-hanis Create README.md

File	Commit	Time ago
.gitignore	first commit	
1_install_packages.R	first commit	
2_biblio_citation.R	Edited R scripts	
3_biblio_relation.R	Edited R scripts	
4_biblio_others.R	Edited R scripts	
5_biblio_theory.R	Edited R scripts	
6_biblioshiny.R	Edited R scripts	
README.md	Create README.md	1 minute ago
biblio_uitm.Rproj	first commit	4 hours ago
wos.bib	Upload new data	19 minutes ago

README.md

biblio_uitm

Material for UITM's bibliometric webinar

About

Material for UITM's bibliometric webinar

Readme

Activity

0 stars

1 watching

0 forks

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

Languages

TeX 99.9% R 0.1%

Learning outcomes

- Understand basic concept and idea of bibliometric analysis
- Able to further explore and study bibliometrics on your own
- Able to grasp the general idea of how to do basic bibliometric analysis in R

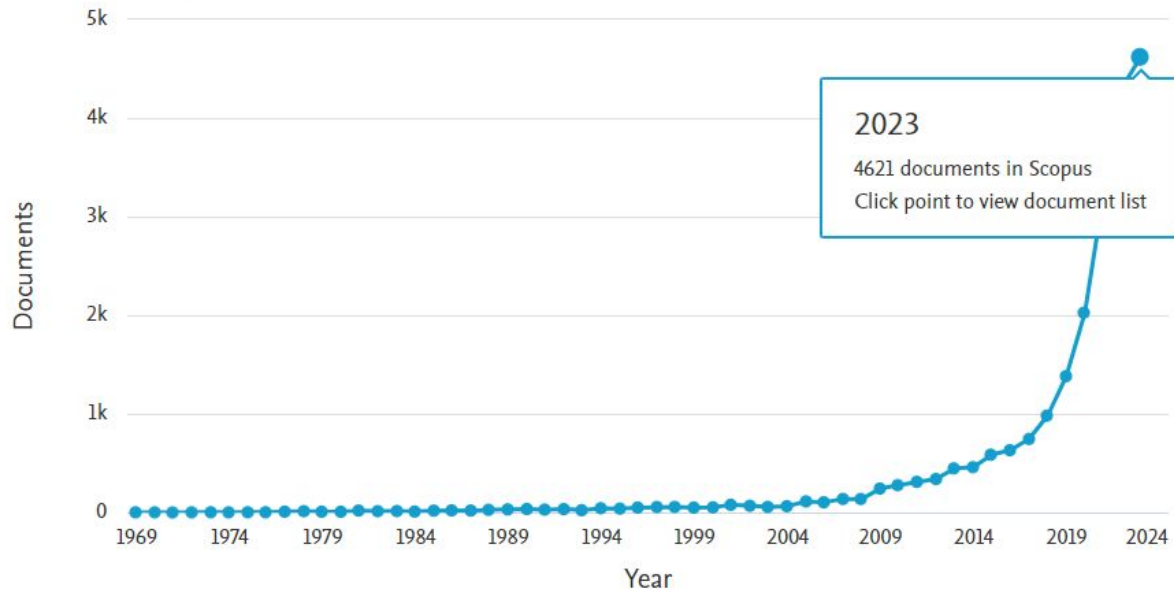
Bibliometric analysis

- Not a new analysis
- Not refers to any specific analysis, rather an umbrella term for a set of analyses
- Basically refers to an analysis of bibliographic information
- What we can do with bibliometric analysis:
 - Evaluate research progress
 - Quantitatively summarise research output
 - “Mapping” research contribution by author, institution, etc
 - Explore research trends - find out about over-research or under-research area

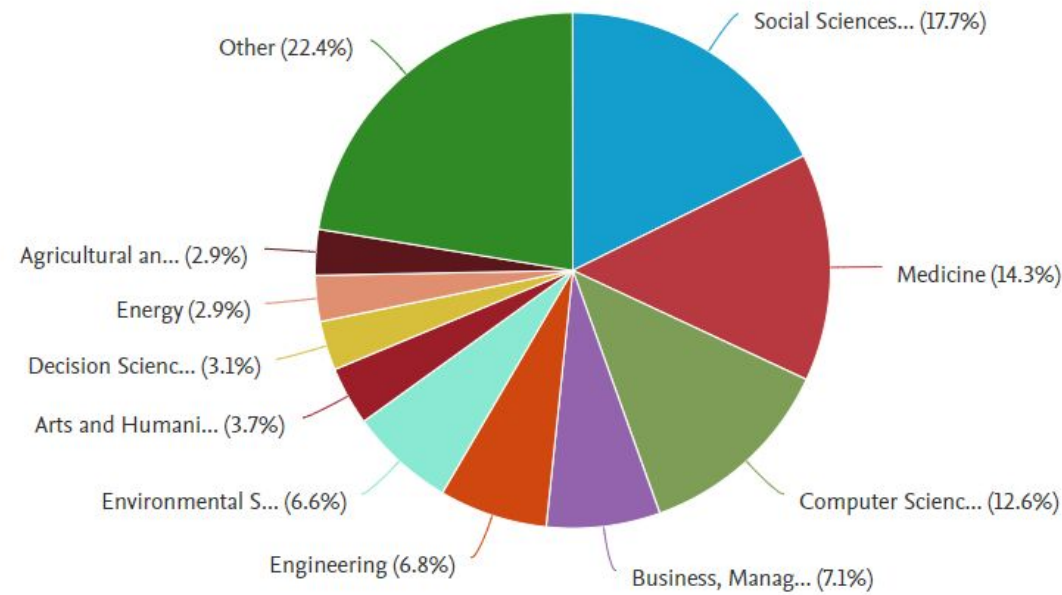
Bibliometric research

Scopus: 22, 038 (Oct 29, 2023)

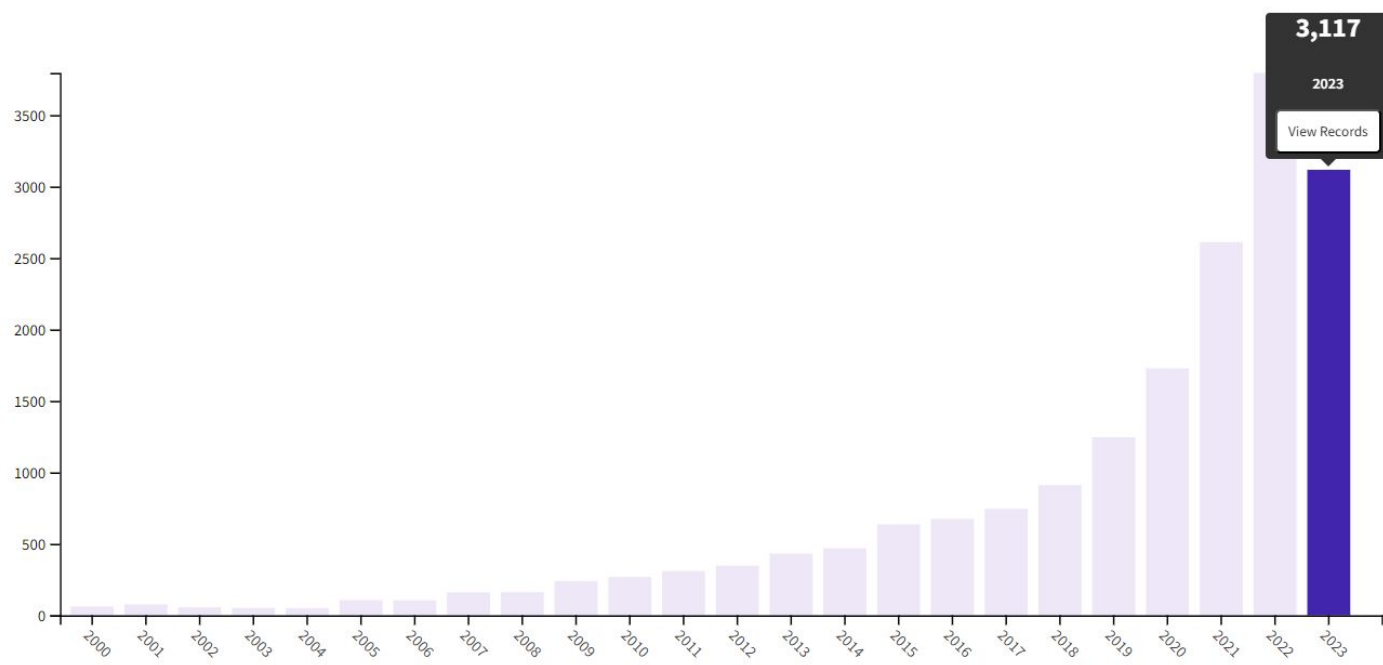
Documents by year



Documents by subject area





Web of Science: 19, 162 (Oct 29, 2023)





Example of bibliometric papers


antibiotics



Article

A Global Bibliometric Analysis on Antibiotic-Resistant Active Pulmonary Tuberculosis over the Last 25 Years (1996–2020)

Md Asiful Islam ^{1,2,*}, Shoumik Kundu ³, Tengku Muhammad Hanis ⁴, Khalid Hajissa ^{5,6} and Kamarul Imran Musa ^{1,4,*}

- ¹ Department of Haematology, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian 16150, Kelantan, Malaysia
- ² Institute of Metabolism and Systems Research, University of Birmingham, Birmingham B15 2TT, UK
- ³ Department of Biochemistry and Molecular Biology, Jahangirnagar University, Savar, Dhaka 1342, Bangladesh; shoumik33@gmail.com
- ⁴ Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian 16150, Kelantan, Malaysia; tengkumhanis@usm.my
- ⁵ Department of Medical Microbiology & Parasitology, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian 16150, Kelantan, Malaysia; khalidh@usm.my
- ⁶ Department of Zoology, Faculty of Science and Technology, Omdurman Islamic University, P.O. Box 382, Omdurman 14415, Sudan


* Correspondence: asiful@usm.my or ayenec70@yahoo.com (M.A.I.); drkamarul@usm.my (K.I.M.)

Abstract: Background: Tuberculosis (TB) is still a leading global cause of mortality and an increasingly crucial problem in fighting TB is antibiotic resistance. We aimed to conduct a bibliometric analysis on the articles of the past 25 years on antibiotic-resistant active pulmonary TB. Methods: Appropriate keywords were combined using the Boolean and wildcard operators and searched in Scopus database for articles published between 1996 and 2020 in English language. For all the bibliometric analyses, the *Bibliometrix* package in RStudio and *Biblinking* web apps were used. We identified the publication and citation trends, topmost cited documents, most productive authors, countries and institutions and most influential journals and funding agencies. We constructed collaborative networks of countries and co-citations. In addition, we developed a Three-Fields plot and a Thematic Map to explore

Check for updates

Citation: Islam, M.A.; Kundu, S.; Hanis, T.M.; Hajissa, K.; Musa, K.I.A. Global Bibliometric Analysis on Antibiotic-Resistant Active

Current Medicinal Chemistry, XXXX, XX, XX–XX



REVIEW ARTICLE

Top 100 Most-Cited Publications on Breast Cancer and Machine Learning Research: A Bibliometric Analysis

Tengku Muhammad Hanis ¹, Md Asiful Islam ^{2,*} and Kamarul Imran Musa ^{1,*}

¹ Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia; ² Department of Haematology, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

Abstract: Background: Rapid advancement in computing technology and digital information leads to the possible use of machine learning on breast cancer.

Objective: This study aimed to evaluate the research output of the top 100 publications and further identify a research theme of breast cancer and machine-learning studies.

Methods: Databases of Scopus and Web of Science were used to extract the top 100 publications. These publications were filtered based on the total citation of each paper. Additionally, a bibliometric analysis was applied to the top 100 publications.


Results: The top 100 publications were published between 1993 and 2019. The most productive author was Giger ML, and the top two institutions were the University of Chicago and the National University of Singapore. The most active countries were the USA, Germany, and China. Ten clusters were identified as both basic and specialised themes of breast cancer and machine learning.


Conclusion: Various countries demonstrated comparable interest in breast cancer and machine-learning research. A few Asian countries, such as China, India and Singapore, were listed in the top 10 countries based on the total citation. Additionally, the use of deep learning and breast imaging data was trending in the past 10 years in the field of breast cancer and machine-learning research.

Keywords: Bibliometrics, breast cancer, machine learning, research trend, research output, research productivity.

Check for updates

Citation: Hanis, T.M.; Islam, M.A.; Musa, K.I.A. Top 100 Most-Cited Publications on Breast Cancer and Machine Learning Research: A Bibliometric Analysis


healthcare



Article

Bibliometric Analysis of Global Research Activity on Premature Mortality

Wan Shakira Rodzlan Hasani ^{1,2,*}, Tengku Muhammad Hanis ¹, Nor Asiah Muhamad ³, Md Asiful Islam ^{4,5}, Chen Xin Wee ⁶ and Kamarul Imran Musa ^{1,4,*}

- ¹ Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian 16150, Kelantan, Malaysia
- ² Institute for Public Health, National Institutes of Health, Ministry of Health Malaysia, Setia Alam 40170, Selangor, Malaysia
- ³ Sector for Evidence-Based Healthcare, National Institutes of Health, Ministry of Health Malaysia, Setia Alam 40170, Selangor, Malaysia
- ⁴ Department of Haematology, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian 16150, Kelantan, Malaysia
- ⁵ WHO Collaborating Centre for Global Women's Health, Institute of Metabolism and Systems Research, University of Birmingham, Birmingham B15 2TT, UK
- ⁶ Department of Public Health Medicine, Faculty of Medicine, Sungai Buloh Campus, Universiti Teknologi MARA, Sungai Buloh 47000, Selangor, Malaysia

* Correspondence: drkamarul@usm.my

Abstract: Premature mortality is defined as death that occurs before the average age of death for a particular population. Although premature mortality is a public health problem globally, the literature indicates no bibliometric studies that have made a holistic evaluation of the publications on this issue. This study aims to explore the characteristics of the publications on premature mortality in terms of the number of publications, citations, countries, collaboration, and the author's productivity and to further identify the trending keyword and relevant research topics. All the articles related to premature mortality data were retrieved from the Web of Science (WOS) database using the search terms "premature death," "premature mortality," or "years of life loss." The retrieved articles were

Check for updates

Citation: Rodzlan Hasani, W.S.; Hanis, T.M.; Muhamad, N.A.; Islam, M.A.; Wee, C.X.; Musa, K.I.

Data sources

Open access

Original research

BMJ Open

Net survival differences of breast cancer between stages at diagnosis and age groups in the east coast region of West Malaysia: a retrospective cohort study

Tengku Muhammad Hanis ¹, Najib Majdi Yaacob, ¹ Suhaily Mohd Hairon, ² Sarimah Abdullah ¹

To cite: Hanis TM, Yaacob NM, Mohd Hairon S, et al. Net survival differences of breast cancer between stages at diagnosis and age groups in the east coast region of West Malaysia: a retrospective cohort study. *BMJ Open* 2021;11:e045642. doi:10.1136/bmjopen-2020-045642

► Publication history for this paper is available online. To view these files, please visit the journal online (<http://journals.bmj.com/>).

Received 10 August 2020
Revised 08 February 2021
Accepted 01 April 2021

Check for updates

© Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Unit of Biostatistics and Research Methodology, School of Medical Sciences, Universiti Sains Malaysia - Kampus Kesihatan, Kubang Keratan, Malaysia

²Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia - Kampus Kesihatan, Kubang Keratan, Malaysia

ABSTRACT

Objective Estimation of the net survival of breast cancer helps in assessing breast cancer burden at a population level. Thus, this study aims to estimate the net survival of breast cancer at different cancer staging and age at diagnosis in the east coast region of West Malaysia.

Setting Kelantan, Malaysia.

Participants All breast cancer cases diagnosed in 2007 and 2011 identified from Kelantan Cancer Registry.

Design This retrospective cohort study used a relative survival approach to estimate the net survival of patients with breast cancer. Thus, two data were needed, breast cancer data from Kelantan Cancer Registry and general population mortality data for Kelantan population.

Primary and secondary outcome measures Net survival according to stage and age group at diagnosis at 1, 3 and 5 years following diagnosis.

Results The highest net survival was observed among stage I and II breast cancer cases, while the lowest net survival was observed among stage IV breast cancer cases. In terms of age at diagnosis, breast cancer cases aged 65 and older had the best net survival compared with the other age groups.

Conclusion The age at diagnosis had a minimal impact on the net survival compared with the stage at diagnosis. The finding of this study is applicable to other populations with similar breast cancer profile.

INTRODUCTION

Breast cancer is the most common cancer and the leading cause of cancer-related death among women globally.¹ In the Asia region, the incidence of breast cancer had increased at least moderately in the Eastern and Southern-eastern region over the last two decades.²

Several studies have suggested that the increased incidences of breast cancer in Asia are due to factors such as economic growth and adoption of a more westernised lifestyle including no breastfeeding, reduced parity and increased animal fat consumption.³⁻⁵

However, the risk of developing breast cancer in Malaysia is still lower compared with the

Strengths and limitations of this study

- This population-based study used state cancer registry data to describe the net survival of breast cancer in the east coast region of West Malaysia.
- The use of relative survival approach to estimate the net survival is considered as a standard practice for a population-based study.
- This study expanded an abridged life table of the general population mortality data into a complete life table to estimate the net survival due to unavailability of a complete life table.
- The use of different method to expand the mortality data leading to a lack of standardisation in this research area.
- This study lacked socioeconomic, sociodemographic and clinical information which may further explain our finding.

8, respectively.⁶ In terms of breast cancer survival, a 5-year relative survival between 2005 and 2009 in Malaysia was 67.8%, while other Asian countries such as South Korea (82.7%), Indonesia (77.7%) and Thailand (71.3%) had a better survival.⁷ Breast cancer staging and age are important prognostic factors of breast cancer. Early-stage patients with breast cancer are expected to have better survival compared with those diagnosed at a later stage.⁸ Several studies considered age as an important prognostic factor of breast cancer,⁹⁻¹⁵ although several Malaysian studies did find it otherwise.¹¹⁻¹³ There is a need to provide more information on breast cancer survival, generally in the Asia Pacific region and especially in Malaysia as it will help in planning effective public health management and control of the disease.

Net survival (NS) is a hypothetical measure in which the only possible cause of death is the disease of interest.¹⁶⁻¹⁸ NS aims to reflect

6

Open access

the Kelantan general population mortality data from the DOSM was only available in an abridged life table format. Thus, the mortality data were expanded by the researcher in this study. Other studies may use a different method to expand the mortality data leading to a lack of standardisation in this research area. Admittedly, the expanded life table remained as an approximation to an actual complete life table. However, the use of different life tables in the relative survival analysis had been shown to have a minor change in the overall estimate of the NS rate.¹⁹ Currently, the approach used in our study may serve as an alternative for populations without a complete life table. In fact, previous cancer studies had used a similar approach to estimate an NS statistic.²⁰⁻⁴⁰ Also, this study was restricted by the limited information due to the use of secondary data to further explore the finding of this study. Information such as lymph node involvement, degree of metastasis and hormone receptor status was not available in this study.

CONCLUSIONS

This study presents the NS difference of patients with breast cancer according to cancer staging and age at diagnosis in the east-coast region of West Malaysia. The best survival was observed among patients with breast cancer aged 65 and older and those diagnosed at stages I and II. The age at diagnosis appeared to have a minimal impact on the NS compared with the stage at diagnosis. The NS is multifactorial in nature, thus detailed sociodemographic and clinical information on the breast cancer profile in this region is needed to extend this finding to other neighbouring populations.

Acknowledgements The publication of this study was supported by the School of Medical Sciences, Universiti Sains Malaysia. Also, the authors would like to thank the Kelantan State Health Department for providing the data in this study.

Contributors TMH: conceptualisation, methodology, formal analysis, writing-original draft; NMH: conceptualisation, methodology, writing-review and editing, validation; SMH: methodology, writing-review and editing, validation; SA: validation, supervision.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Ethics approval This study was carried out in accordance with the Declaration of Helsinki. Ethical approval was obtained from the Human Research Ethics Committee, Universiti Sains Malaysia (JPM/1609/0420), Medical Research and Ethics Committee, Ministry of Health Malaysia (M09/18-2675-43980(R)) and written approval from the Kelantan State Health Department.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request. Data may be obtained from a third party and are not publicly available. The general population mortality data for Kelantan is available from eStatistik (<https://www.statistik.gov.my/index.php?type=pub>). Additionally, the breast cancer data is available from Non-communicable Diseases (NCD) unit, Kelantan State Health

Department and Medical Research and Ethics Committee, Ministry of Health Malaysia.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID ID

Tengku Muhammad Hanis <http://orcid.org/0000-0003-1466-7705>

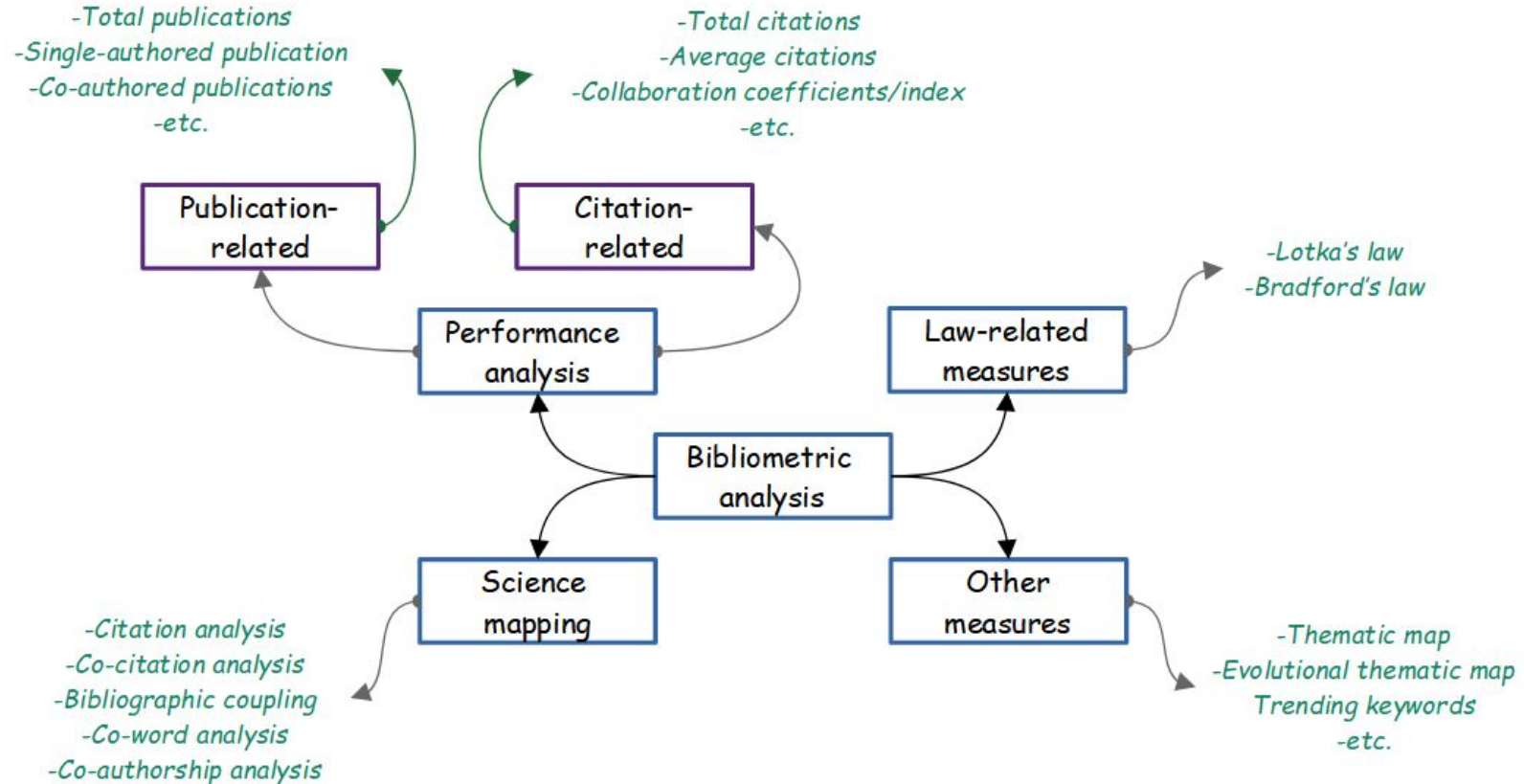
REFERENCES

- Ginsburg O, Bray F, Coleman MP, et al. The global burden of women's cancers: a grand challenge in global health. *Lancet* 2017;389:847-60.
- Youlten DR, Cramb SM, Yip CH, et al. Incidence and mortality of female breast cancer in the Asia-Pacific region. *Cancer Biol Med* 2014;11:101-15.
- Yip CH, Shoo P, Patten N, Teo SH. A review of breast cancer research in Malaysia. *Med J Malaysia* 2016;69:22-22.
- Fan L, Goss PE, Strasser-Weippl K. Current status and future projections of breast cancer in Asia. *Breast Care* 2015;10:372-8.
- Kinukunjan R, Chee J, T. Mahamad-Ary N. Awareness of breast cancer among surgical patients in a tertiary hospital in Malaysia. *Asian Pac J Cancer Prev* 2017;18:115-20.
- Allesina C, Wei HK, Carreira H, et al. Global surveillance of cancer survival 1995-2009: analysis of individual data for 25,676,887 patients from 279 population-based registries in 67 countries (CONCORD-2). *Lancet* 2015;385:977-1010.
- Iqbal J, Ginsburg O, Rochon PA, et al. Differences in breast cancer stage at diagnosis and cancer-specific survival by race and ethnicity in the United States. *JAMA* 2015;313:165-73.
- Wong FY, Tham WY, Nai WL, et al. Age exerts a continuous effect in the outcomes of Asian breast cancer patients treated with breast-conserving therapy. *Cancer Commun* 2018;28:39-11.
- Bharat A, An RL, Gao F, et al. Patient and tumor characteristics associated with increased mortality in young women (<40 years) with breast cancer. *J Surg Oncol* 2009;100:248-51.
- Partridge AH, Hughes ME, Warner ET, et al. Subtype-dependent relationship between young age at diagnosis and breast cancer survival. *J Clin Oncol* 2016;34:3308-14.
- Ibrahim NE, Dahlui M, Aris EN, et al. Who are the breast cancer survivors in Malaysia? *Asian Pac J Cancer Prev* 2012;13:2213-8.
- Nordin N, Yaacob NM, Abdulah N, et al. Survival time and prognostic factors for breast cancer among women in north-east Peninsular Malaysia. *Asian Pac J Cancer Prev* 2018;19:497-502.
- Tan NA, Akmal M, Mohamed I. Improvement in survival of breast cancer patients - trends over two time periods in a single institution in an Asia Pacific country, Malaysia. *Asian Pacific J Cancer Prev* 2011;12:345-9.
- Maricotto AB, Noone A-M, Howlander N, et al. Cancer survival: an overview of measures, uses, and interpretation. *J Natl Cancer Inst Monit* 2014;2014:145-86.
- Lambert PC, Dickinson PW, Rutherford MJ. Comparison of different approaches to estimating age standardized net survival. *BMC Med Res Methodol* 2015;15:1-13.
- UKACR. Standard operating procedure: guidelines on population based cancer survival analysis, 2016. Available: <http://ukacr.org/publication/guidelines-population-based-cancer-survival-analysis>
- Sartif D, Blakeley T, Pearce N. Measuring cancer survival in populations: relative survival vs cancer-specific survival. *Int J Epidemiol* 2010;39:598-610.
- Elioranta S, Adolfsson J, Lambert PC, et al. How can we make cancer survival statistics more useful for patients and clinicians: an illustration using localized prostate cancer in Sweden. *Cancer Causes Control* 2013;24:505-15.
- Schaffer R, Rachtel B, Belet A, et al. Estimation of net survival for cancer patients: relative survival setting more robust to some assumption violations than cause-specific setting: a sensitivity analysis on empirical data. *Eur J Cancer* 2017;77:278-93.
- National Cancer Institute. Malaysian National Cancer Registry Report 2007 - 2011. Putrajaya, 2015. <http://nci.moh.gov.my>

Comparison of major review methods.

Review type	Goal	When to use	When not to use	Scope	Dataset	Analysis
Bibliometric analysis	<ul style="list-style-type: none"> Summarizes large quantities of bibliometric data to present the state of the intellectual structure and emerging trends of a research topic or field. 	<ul style="list-style-type: none"> When the scope of review is broad. When the dataset is too large for manual review. 	<ul style="list-style-type: none"> When the scope of review is specific. When the dataset is small and manageable enough that its content can be manually reviewed. 	<ul style="list-style-type: none"> Broad 	<ul style="list-style-type: none"> Large 	<ul style="list-style-type: none"> Quantitative (evaluation and interpretation) Qualitative (interpretation only)
Meta-analysis	<ul style="list-style-type: none"> Summarizes the empirical evidence of relationship between variables while uncovering relationships not studied in existing studies. 	<ul style="list-style-type: none"> When the focus of review is to summarize results rather than to engage with content, which may be broad or specific. When studies in the field are homogenous. When the number of homogeneous studies available is sufficiently high. When the number of homogeneous studies remaining after removing low quality studies is sufficiently high. 	<ul style="list-style-type: none"> When studies in the field are heterogeneous. When the number of homogenous studies is relatively low. When the number of high-quality homogeneous studies is relatively low. 	<ul style="list-style-type: none"> Broad Specific 	<ul style="list-style-type: none"> Large Small but adequate 	<ul style="list-style-type: none"> Quantitative (evaluation and interpretation)
Systematic literature review	<ul style="list-style-type: none"> Summarizes and synthesizes the findings of existing literature on a research topic or field. 	<ul style="list-style-type: none"> When the scope of review is specific. When the dataset is small and manageable enough that its content can be manually reviewed. 	<ul style="list-style-type: none"> When the scope of review is broad. When the dataset is too large for manual review. 	<ul style="list-style-type: none"> Specific 	<ul style="list-style-type: none"> Small 	<ul style="list-style-type: none"> Qualitative (evaluation and interpretation)

Summary of analysis



Type of analysis

1. Performance analysis - account for contribution in research area
 - Publication-related metrics (proxy of productivity):
 - Total publications
 - Single-authored publications
 - Co-authored publications
 - etc
 - Citation-related metrics (proxy of influence)
 - Total citations
 - Average citations
 - Collaboration index/collaboration coefficient
 - etc

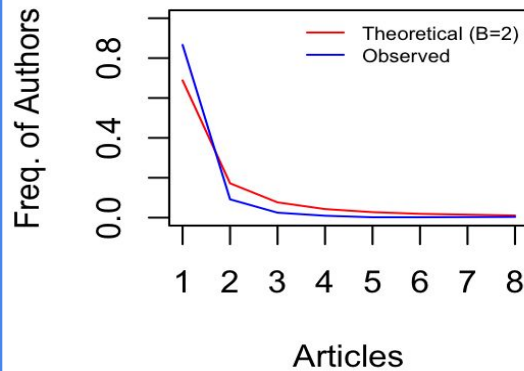
2. Science mapping - assess relationship in research area (author, article, etc)
 - Citation analysis - most influential publications
 - Co-citation analysis
 - Relationship among cited publication (paper 1 and paper 2 cited in paper 3, paper 1 & 2 = co-cited paper)
 - foundation/basic theme (look in the past)
 - Bibliographic coupling
 - Relationship among publications with same references
 - Latest development

- Co-word analysis
 - Certain words (keywords, title, etc) shared by publications
 - May indicate future trend or support co-citation analysis and bibliographic coupling
- Co-authorship analysis
 - Interaction among researchers
 - Also can be applied to institutions, countries

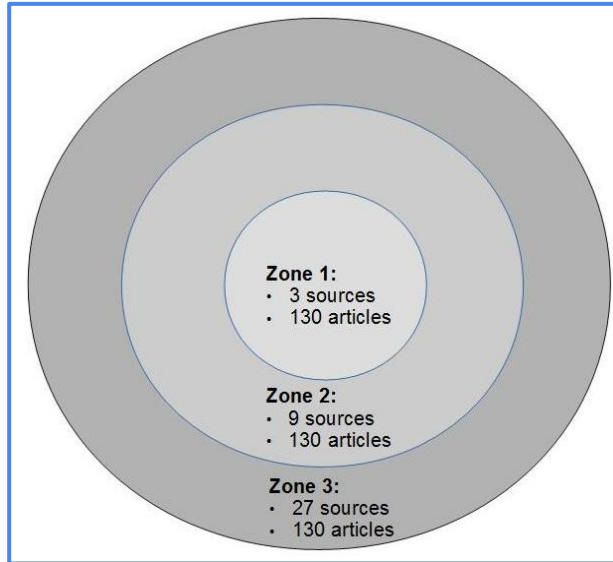
3. Theory/law-related metrics

- Lotka's law
- Bradford's law

Scientific Productivity



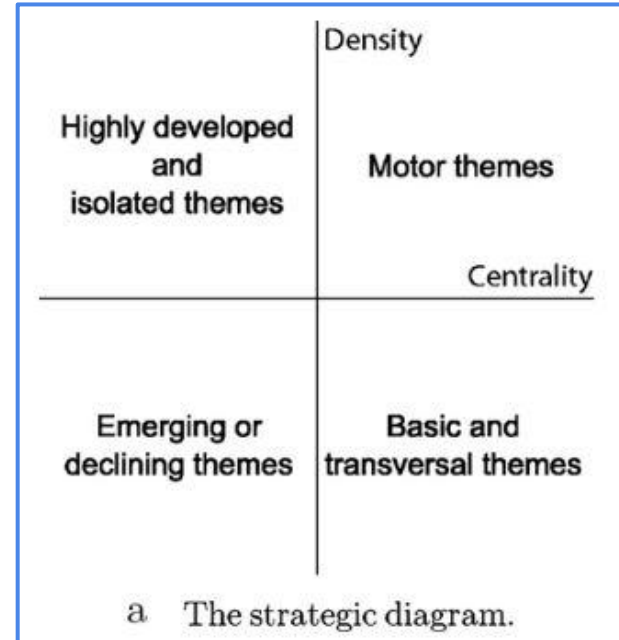
Lotka's law



Bradford's law

4. Other measures

- Thematic map
- Evolutional thematic map
- Trending keywords
- etc



Thematic map

Extension of bibliometrics

1. Basic textual analysis:
 - TF-IDF (Term Frequency-Inverse Document Frequency)
 - Wordcloud
2. Clustering
 - k-means
 - Hierarchical clustering
 - etc
3. Topic models
 - Latent dirichlet allocation (LDA)
 - Latent semantic analysis (LSA)
 - Correlated topic model (CTM)
4. Network analysis

Steps to do a bibliometric analysis

1. Develop research questions
2. Define:
 - Scope - limit by country/year/etc
 - Objectives - more specific than RQ
 - Selection criteria - related to RQ and objectives
3. Specify bibliometric techniques (based on objectives)
4. Pick a database or databases
5. Comes up with search terms - always check with the databases whether the terms valid or not
6. Test run your search terms on the databases

7. Data searching on databases
8. Review downloaded data/abstracts if needed (brief review)
9. Apply selection criteria if needed
10. Run bibliometric analysis and report findings

Bibliometrix package

Compatible databases:

Source	URL	Format	Extension
Web of Science	https://www.webofknowledge.com/	<ul style="list-style-type: none">◦ 'BibTeX'◦ 'plaintext'◦ 'EndNote Desktop'	<ul style="list-style-type: none">◦ '.bib'◦ '.txt'◦ '.ciw'
Scopus	https://www.scopus.com/	<ul style="list-style-type: none">◦ 'BibTeX'◦ 'CSV export'	<ul style="list-style-type: none">◦ '.bib'◦ '.txt'
Dimensions	https://app.dimensions.ai/	<ul style="list-style-type: none">◦ 'Bibliometric mapping'◦ 'Excel'	<ul style="list-style-type: none">◦ '.csv'◦ '.xlsx'
The Lens	https://lens.org/	<ul style="list-style-type: none">◦ 'CSV export file'	<ul style="list-style-type: none">◦ '.csv'
PubMed	https://pubmed.ncbi.nlm.nih.gov/	<ul style="list-style-type: none">◦ 'PubMed export file'	<ul style="list-style-type: none">◦ '.txt'
Cochrane Library	https://www.cochranelibrary.com/	<ul style="list-style-type: none">◦ 'plaintext'	<ul style="list-style-type: none">◦ '.txt'

Field tags/column names

Field Tag	Description
AU	Authors
TI	Document Title
SO	Publication Name (or Source)
JI	ISO Source Abbreviation
DT	Document Type
DE	Authors' Keywords
ID	Keywords associated by SCOPUS or ISI database
AB	Abstract
C1	Author Address
RP	Reprint Address
CR	Cited References
TC	Times Cited
PY	Year
SC	Subject Category
UT	Unique Article Identifier
DB	Bibliographic Database

More field tags - https://www.bibliometrix.org/documents/Field_Tags_bibliometrix.pdf

Suggested readings

- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296.
<https://doi.org/10.1016/j.jbusres.2021.04.070>
- Aria, M., & Cuccurullo, C. (2017). bibliometrix : An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Bibliometrix website -
https://www.bibliometrix.org/vignettes/Introduction_to_bibliometrix.html
- Hood, W.W., Wilson, C.S. The Literature of Bibliometrics, Scientometrics, and Informetrics. *Scientometrics* 52, 291 (2001).
<https://doi.org/10.1023/A:1017919924342>



Any question?

Hands-on in WOS

- Use advanced search: TITLE("male breast cancer")
- Download either in plaintext or BibText format

Hands-on in R - setting Posit Cloud

- Not going to cover how to install R
- Can either use:
 - RStudio IDE in your PC/laptop
 - Posit Cloud - [sign up for a free account](#)

Hands-on in R - bibliometric analysis

1. Go to https://github.com/tengku-hanis/biblio_uitm
2. Click `<> Code` → `local` → `Clone` → `HTTPS` → copy the link

tengku-hanis / biblio_uitm

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

biblio_uitm Public

Go to file Add file <> Code 1

Local Codespaces

Clone 2

HTTPS SSH GitHub CLI

https://github.com/tengku-hanis/biblio_uitm.git

Use Git or checkout with SVN using the web URL

Open with GitHub Desktop

Download ZIP

Material for UITM's bibliometric webinar

Readme Activity 0 stars 1 watching 0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Languages

TeX 99.9% R 0.1%

README.md

biblio_uitm

Material for UITM's bibliometric webinar

- Log in to Posit Cloud
- Click New Project → New Project from Git Repository → paste the url



tengkuhanismokhtar@gmail.com