



Bibliometric Analysis of Publications from Pubmed on Non Communicable Disease and Ayushman Bharat Health and Wellness Center

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Background: Increase in Non-communicable diseases in spite of many steps taken for prevention and control is challenge for all over world, these epidemiological transition leads to need of health care services at community level with quality health care services. Under Ayushman Bharat Programme transformation of existing health facilities in Health and Wellness center to deliver universal and free comprehensive primary health care. Delivering Non communicable disease health services is one of major component of HWCs.

Objectives: Study was conducted to conduct analysis of Publication on Non communicable

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disease and Ayushman Bharat Health and Wellness Center.

Methodology: Retrospective observational study was conducted On 30.01.2021, the Pubmed was accessed to collect publication on Non communicable disease and Ayushman Bharat, Health and Wellness Centre. Bibliometric analysis was conducted with quantity indicators for measuring productivity and quality indicators for measurement of output. Structural indicator for measured inter linkage between authors, publication Information on PubMed was used for analysis with the help of R Studio.

Results: The PubMed search filtered for annual scientific production including journal ,book , document etc from 1978 to 2021 are found total publication are 2377.Out of Total publication after analysing most relevant sources include PLOS One was found most relevant source around 91.In Correspondence Authors from various countries India is on 3rd number which is around 114 authors.

Conclusion: There are many publications on this key words and most publication are published in recent 10 years. Indian contribution in this area in on 3rd no in all over world.

Keywords: Non communicable Disease; Ayushman bharat programme; Health and Wellness Center.

1. INTRODUCTION

Non communicable diseases are chronic disease of long duration which include Cardiovascular diseases, Cancers, Chronic respiratory diseases and Diabetes. NCDs are result of a multifactorial causation which include genetic, physiological, and environmental and behaviours factors. As per the estimation of WHO NCDs are responsible for 41 million deaths in each year, which are 71% of all deaths globally. In the age group of 30 to 69 years 15 million people die from a NCD in every year. All people are at risk of NCDs and main risk factors responsible for are unhealthy diet , Physical Inactivity Tobacco Consumption and Harmful use of Alcohol.An crucial way to control NCDs is to give focus on reducing the risk factors associated with these diseases [1].

Ayushman Bharat programme was launched by Government of India in 2018-19, having two components. First component is up gradation of existing primary health centres and sub centres in to Health and Wellness centres (HWCs), which will deliver comprehensive primary health care services at government facility level in rural area within no more than 30 minutes. HWCs in rural area will be act as first point of contact to government health facility to deliver expanded set of health-care services. Second component is Pradhan Mantri Jan Arogya Yojana to provide financial help to population for hospitalization required to access secondary and tertiary health care services [2]. Previously government primary health care facility are providing services mainly related to Reproductive and child health services and communicable diseases which are nearly 20% health care need of population . Services for Non communicable diseases and other chronic

diseases are major unmet need of population in rural area. HWCs is providing 12 services as a part of expanded range of services at SC and PHC level. Out of these services screening, prevention, control and management of non-communicable services is a need of majority of population. The major inputs at HWC SC level to deliver expanded range of services include a team of three service provider, one is Mid Level health provider, one female and one male health worker with support with ASHA per 1000 thousand population in SC area. HWC SC has adequate availability of medicine and diagnostics. HWC team had Tablet for digitalization of data keeping, and reporting like population enumeration, report of service delivery and keep a record of every individual for NCD screening, confirmation and follow up for treatment. Tele consultation facility is available at HWC SC level for seeking expert opinion, advice for some complicated cases. Performance based incentives are given to Health provider at SC level as per there achievements in various health programme indicators [3].

Bibliometric analysis is a statistical methods for evaluation of impact of publication like books, research articles, and other published document on specific topic. It is used to analyse the impact of research with the help of quantity indicators for measuring productivity on same topic, quality indicator for the measurement of output and structural indicator for measuring inter linkage between authors , publication etc [4].

Bibliometrics, the term coined by Pritchard in 1969 is one of the analytical methods, frequently used in library and information sciences for analyzing scientific literature [1]. It facilitates the

analysis of impact of research outputs, quality and impact of research. Bibliometrics is an important tool for the study and analysis of scientific activities of a researcher, institute, and University. The bibliometric data of researchers and institutions is essential for various purposes like applying for accreditation, project calls, funding grants, University strategic purposes, assessment of scientific outputs, reporting to public administration, accreditation of PhD programmes and outline research policies and dissemination activities of the institution. Bibliometrics is very much helpful in the assessment of qualitative indicators of research impact like peer review, grants received, patents and awards received.

Bibliometric is a unique tool, made in the measurable and realistic language of R, as a consistent bibliometric operating system. R is very flexible due to the fact that it is available in the language used, and in these ways it is really easy to do computer research and develop new skills. With an open source system, it is also easy to get support from the client area, especially made by visual analysts. Next, the bibliometric is adaptable and can be updated quickly and can be integrated with other measurable R-bundles. Hence, it is useful for ever-changing science, for example, bibliometrics.

Today the bibliometric is a non-measurable object. It becomes a network of client designers and clients who sell queries, impressions, inputs, and models within the open source business. Bibliometric incorporates all basic bibliometric investigative techniques, but we use it primarily for mapping science and not for measuring science, researchers, or logical efficiency. Planning a test for past testing is one of the most important tasks in moving the test line. Different techniques exist to summarize the rate of logical action in space, but bibliometrics can introduce a research process that is deliberate, straightforward and productive. This applies at a time when the number of subject allocations is increasing rapidly and impossibly continuously monitoring all distributions; and where the emphasis on commitment to observation brings strong and diversified testing streams, and a challenging sector. Audit is considered to be an urgent task to incorporate past research findings in order to take advantage of the current knowledge base, improve the line of evaluation, and provide evidence-based challenges to practice and further adjudication and expertise.

The mind-boggling volume of new information, event flexibility and information is a state in which bibliometrics get help, by providing systematic research on compiling big data, collecting trends over time, screened topics, observation of limitations, dividing the majority of organizers and organizations, and demonstrating "strategy". primary "test survival.

Objectives: This study was performed to analysed the Publication on Non communicable disease and Ayushman Bharat Health and Wellness Center.

Methodology: Retrospective observational study was conducted On 30.01.2021, the Pubmed was accessed to collect publication on Non communicable disease and Ayushman Bharat, Health and Wellness Centre. Data was searched from PubMed from 1978 to 2021 using key words with English as language of publication. Bibliometric analysis was conducted with quantity indicators for measuring productivity and quality indicators for measurement of output. Structural indicator for measured inter linkage between authors, publication Information on PubMed was used for analysis with the help of R Studio.

Bibliometric quantity indicators information was derived on year wise publication, most relevant sources of publication , document type of publication authors name , authors affiliation and journal name etc. Bibliometric analysis was conducted using quantitative analysis approach. Information on PubMed was used for quantitative analysis and R studio was used for network analysis . Structural indicator focused on the network and linkage between author institutions, and authors keywords, countries.

2. RESULTS

The PubMed search filtered for annual scientific production including journal ,book , document etc from 1978 to 2021 are found total publication are 2377 which include 646 sources (Journal and book) and 1731 Document. Publication are increasing gradually with the period and highest publication in 2020 till now. Average year from publication is 5.47.

Out of Total publication after analysing most relevant sources include PLOS One was found most relevant source around 91 and which is followed by BMC Public Health around 83.and followed by LANCET(LONDON ENGLAND) is around 48.

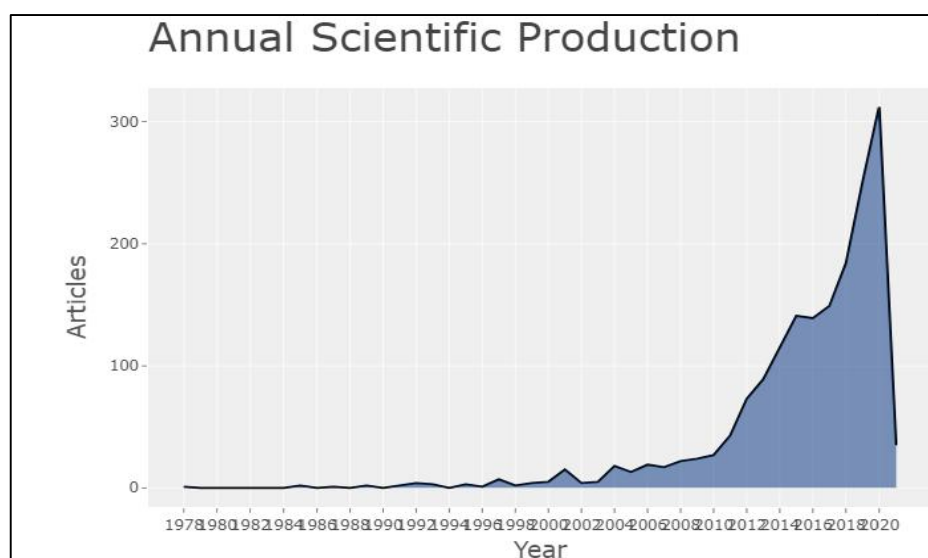


Fig. 1. Year wise number of Publication from 1978 to 2021

Table 1. Most relevant sources of Publication

Sources	Articles
PLOS ONE	91
BMC PUBLIC HEALTH	83
LANCET (LONDON ENGLAND)	48
BMJ OPEN	40
GLOBAL HEALTH ACTION	28
BMC HEALTH SERVICES RESEARCH	21
BMJ (CLINICAL RESEARCH ED.)	21
NUTRIENTS	20
ZHONGHUA YU FANG YI XUE ZA ZHI [CHINESE JOURNAL OF PREVENTIVE MEDICINE]	20
BMJ GLOBAL HEALTH	19
INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH	19
THE LANCET. GLOBAL HEALTH	19
ZHONGHUA LIU XING BING XUE ZA ZHI = ZHONGHUA LIUXINGBINGXUE ZAZHI	19
INTERNATIONAL JOURNAL OF EPIDEMIOLOGY	18
PUBLIC HEALTH	16
GLOBALIZATION AND HEALTH	15
PUBLIC HEALTH NUTRITION	14
SCIENTIFIC REPORTS	14
HEALTH POLICY AND PLANNING	13
HEALTH RESEARCH POLICY AND SYSTEMS	12

In Correspondence Authors from various countries India is on 3rd number which is around 114 authors. Out of total publication maximum authors are from USA and followed by Australia.

The interconnection between Journal, key words and Affiliated universities can offer useful insights. In Fig 3 we present an innovative three field plot showing interaction between the most

relevant publishing Journals (left) , Key words and affiliation of Universities (Right) within the big data.

3. DISCUSSION

The published material on Non communicable disease and Ayushman Bharat Health and Wellness Center shows an increased gradually

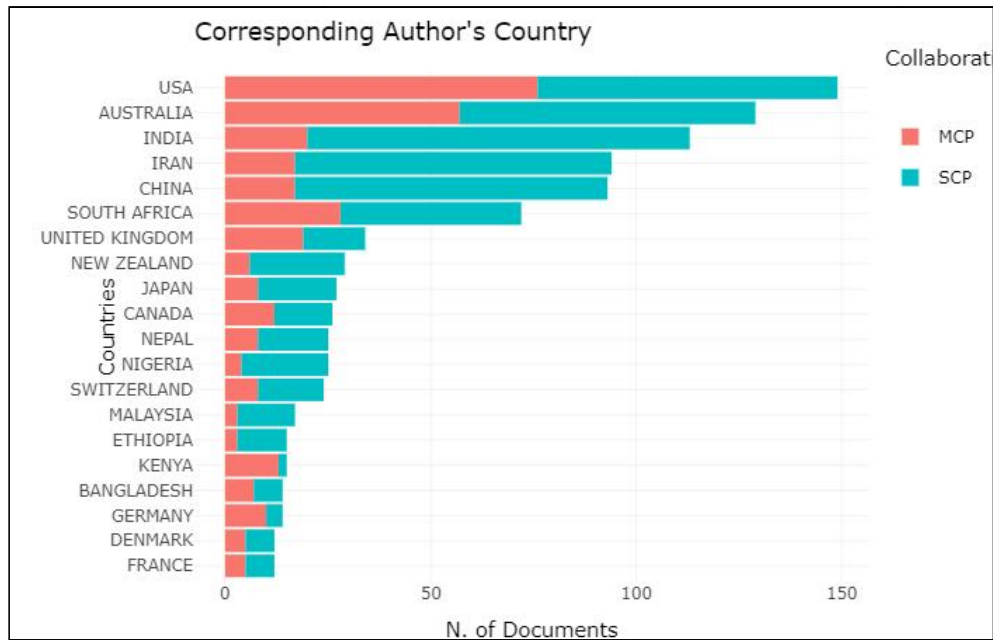


Fig. 2. Corresponding author's counties

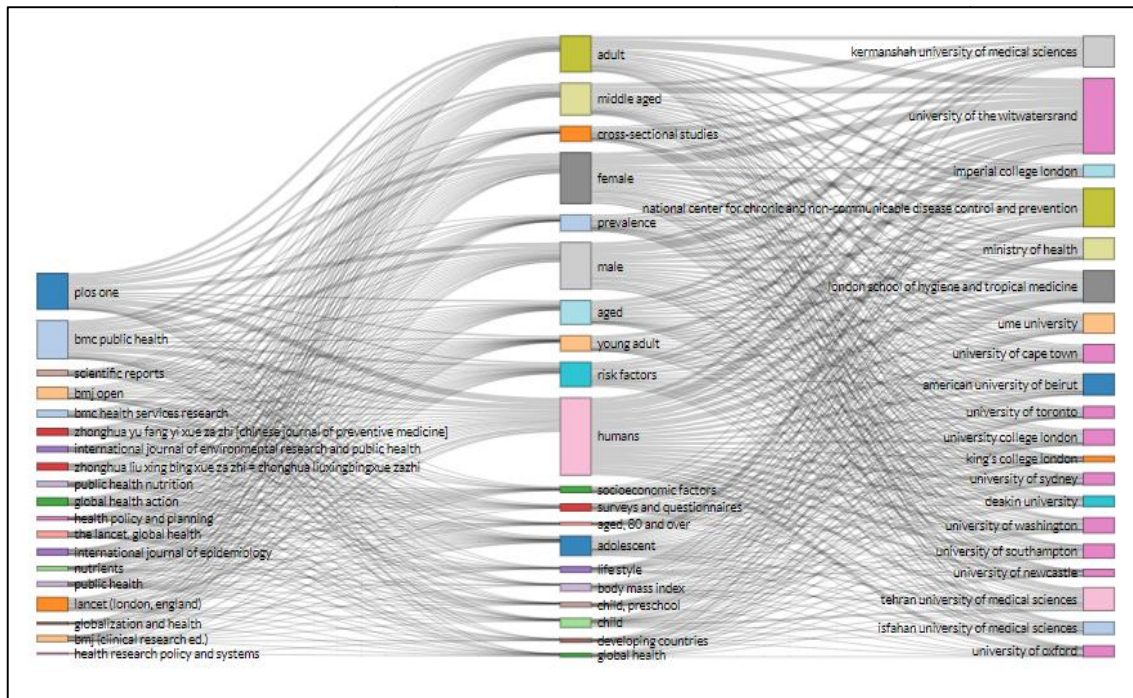


Fig. 3. Three field Plot of Journals

by time from 1978 to 2021. Whereas the maximum material published in last 3 years prominently. Research Study conducted in south India to assess the delivering of non-communicable disease services in primary care

revealed that less than 10% of population get their medicines from a government hospital or PHC in that area. Maximum dependence on on private pharmacies to get medicines which is nearly about 76% of population. maximum

population households thought that medicines were more expensive from private medical store. Maximum population not afford medicine expenses from private which is around 75%. Nearly 60% of population thought that free medicines could get from a government health facility. After launching of Ayushman Bharat Programme all Medicine related to Diabetes and Hypertension are available at Health Wellness Center near to community level to avoid patient hardship and reduce out of pocket expenditure [5].

HWCs are being made for purpose to deliver high quality CPHC at peripheral level through HWC SC with the help of Mid level health provider, ANM, MPW and ASHA. All staff had performance based linked incentives which promote them to perform well and that will be calculated on the base of monitoring data in Health IT system [6]. Study conducted to assess the implementation of NPCDCS programme in Udupi District Karnataka revealed that unavailability of medical officer and other staff in Ayushman Bharat programme Mid level health provider are appointed at HWC SC level to provide health services [7]. Qualitative study conducted on Health system preparedness in NCDS in Odisha and Kerala clearly indicated that many different aspects of health system improvement approach is required to provide high quality primary services for non-communicable at health facility situated in rural area to tackle increasing burden of NCDs [8].

Study on Bibliometric analysis of published non-communicable disease research in India was conducted for 5-year period from 2004 to 2009 for original articles published in our peer-reviewed journals published from India and indexed in Medline were included in which they find total of 1122 article and they categories as per Global Burden of Diseases (GBD) categories based on ICD-10 codes and they found 40.2 % of article on Non communicable diseases and injuries [9].

Bibliometric analysis of Scientific productions of the Health Sciences University in Central India generated a list of 33 publications between 2018 to 2020 on different non-communicable diseases from Scopus. These included 12 publications related to Obesity and Overweight [10-21], about 12 publications related to Diabetes [22-33], only 4 articles on Coronary and Acute Ischaemic Diseases [34-37] and 1 article each on abdominal malignancy [38], dermatological

disease [39], Thalassemia [40] and Leukemia [41].

4. CONCLUSION

There are many publications on this key words and most publication are published in recent 10 years. Indian contribution in this area in on 3rd no in all over world. Out of Total publication after analysing most relevant sources include PLOS One was found most relevant source.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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