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Study and Evaluation of Medical Health Services: An Analysis

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Abstract: ***The study has been made to explore and evaluate the major research trends of medical health services .In this study, 422 research articles of prominent research area of medical health services have been obtained from online ceRa database (www.jgate.in) for analysis .The chi square study has also been applied on various aspects to reveal significant effectiveness of various fields and prominent health services of medical science.***

Keywords: Medical Research e resources, J gate database Chi square test Medical Health Services

1. Introduction

The evaluation of scientific publications is an interesting area for researchers to quantify the use of prominent journals in any fields of science. With the aid of scientometrics techniques, the scholarly journals which influence scientific productivity of researchers and individual works can be easily assessed .Citation analysis is thus one method used for quality evaluation of the journals or articles . Citation is not only a basic tool to evaluate the scientific reliability of any work but also can be used as index to evaluate the effect of scientific productivity of the research.

The reliability of scientific information depends on quality of scientific works. A scientific work is based on the past resources and cannot rely on itself. Thus Citations have a unique role in evaluation of scientific works. The vast availability of scientific work with adequate citations may reflect scientific impact of said work. The citation based studies can helps to visualize the scientific awareness and planning of the future researches as well.

Universities are categorized as centers of higher learning which promote creative and innovative knowledge for the improvements and economic development of mankind .In practice, all these activities is possible only through learning and doing research both .In the changing technological scenario, the library has also become knowledge resource centre of any university or organization .It has become hub centers of gathering knowledge for teaching, learning and research activities

Different studies have been made on several aspects of medical research and education. Subbiah Amnachalam [1] studied perception and usage of e resources by Indian Academics Aparna Basu [2] studied on National Mapping of Science - India: Multidisciplines. Vijay Kumar Kalia [3] discussed the detail study on Cost Effective Utilization of Existing Resources for Biomedical Research in India. Madhav G Deo [4] discussed about the need for Research Oriented Medical Education in India. B T Sampath Kumar; and G T Kumar [5] made study on perception and Usage of e-resources and the Internet by Indian Academics RVyas; *et al* [6] also carried out study of Clinical Training at Remote Sites Using Mobile Technology: An India-USA Partnership Har Kaur; and B M Gupta [7] made elaborative study of Mapping of Dental Science Research in India: A Scientometrics Analysis of India's Research Output. BM Gupta and Adarsh Bala [8] carried out the study of asthma research in India: A scientometrics analysis of publications output during 1999-2008 Nadjla Hariri et al[9] studied case study of medical sciences in Iran G Manivannan; and K Sanjeevi [10] focused on A Bibliometric Study on Research Output in Medical Science Research (2007-2011) Leili Zarifmahmoudi *et al* [11] carried on citation analysis of Iranian Journal of Basic Medical Sciences in ISI Web of Knowledge, Scopus, and Google Scholar . Prantosh Kumar Paul [12] emphasized the concept of Medical 2.0 and Health 2.0: Contemporary Information and Communication Tool-A Conceptual Study. Bhardwaj Raj Kumar and Ram Shri [13] conducted the detail study on Mapping of Indian Research Output on Osteoporosis. Kiran Dhaliwal; and Deepika Tandon [14] discussed the citation analysis of theses submitted at the Gastroenterology Department of the Postgraduate Institute of Medical Education and Research. A Thirumagal and R Nehru [15] also studied on Mapping of Dengue Fever Literature Growth and Development.

The chi square test analysis has also been applied for the present studies on different attributes to find out the significant differences and association on various attributes. The present purpose of the Chi square test is to examine the statistical relation between variables studies on various attributes, which will helps us to understand the significance of variables in statistical test for comparing expected data with observed data. Any significant difference causing change which allows rejecting null hypothesis which predicts about no relationship between variables, larger the differences between variable implicates about happening of significant.

2. Methods of Study

In this study, 422 research articles of prominent research area of medical health services have been obtained from online ceRa database (www.jgate.in) for analysis and consideration for the present studies on different attributes. All the data pertaining to present work have been collected into tables for calculations and analyzed statistically for interpretations with chi square test analysis.

3. Objectives

The present study has been made to know the significant differences and relationship between various attributes. The chi square test analysis has been applied to know the significant differences and effectiveness of various fields and medical health services .The present study involves on the following aspects:

- To explore the prominent research areas of medical health services
- To explore the existing requirements of medical health services
- To explore need and role of scientometrics studies in medical health services
- To study application of chi square analysis for effectiveness of medical health services
- To develop future action plan of prominent research areas of medical health services
- To explore financial planning for execution of medical health services etc.

4. Study and Analysis

The present study has been carried out with the help of data collected by sampling method and all the data pertaining to various attributes has been analyzed into table for chi square analysis test and significant interpretation in medical health services . The details of various studies are summarized into tables with interpretations:

Table 1: Study on prominent research area of medical health services

Prominent research area of medical health services	*Number of Articles (Observed value)*	*Percentages*
Public Medical Health	101	**24.0**
Theuropectics/Diseases	83	**20.0**
Medical Research and Education	75	**18.0**
Medicine/Biomedicine/Pharmacology/ Biotechnology	44	**10.0**
Medical Scientometrics /e Resources Databases	21	**5.0**
Clinical Research	19	**4.5**
Cardiac Problems	14	**3.5**
Diabetics /Insulin	13	**3.0**
Immunology /Vaccines	12	**2.8**
Herbal Medicines	12	**2.8**
Food Science/Contaminations	8	**2.0**
Fever cases (Dengue/Viral/ Malaria/Chikungenia)	5	**1.0**
Meditrips/Medical Tourism	5	**1.0**
Medical Donor Banks Stem Cell/ Fertility Eggs/	4	**1.0**
Online Health Services Mobile	3	**0.7**
Trauma cases	3	**0.7**
Total	**422**	**100.0**

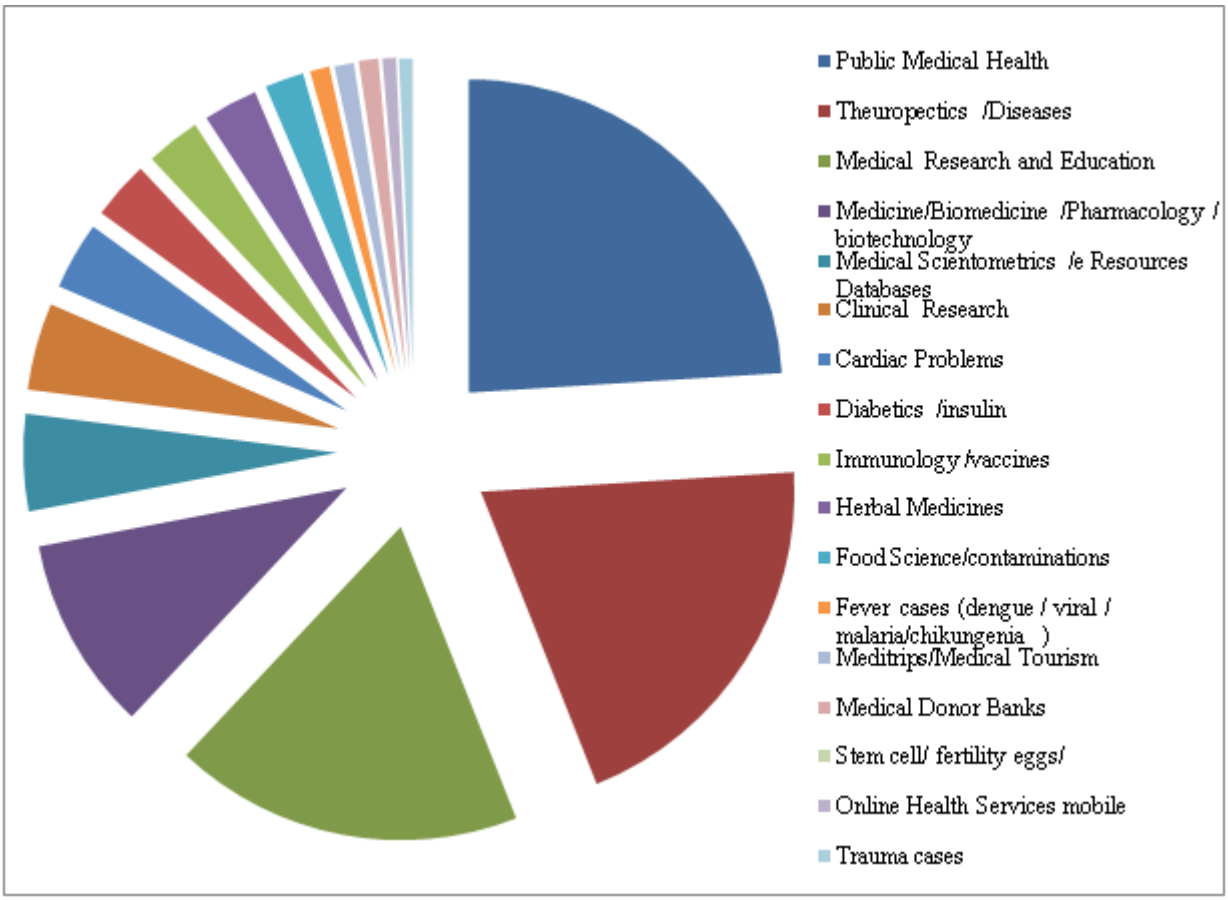

Figure 1: Study on Prominent Research Area of Medical Health Services

The study of Figure No.1 reveals that the prominent research area of medical health services are Public Medical Health (24%), Theuropectics/ Diseases (20%) Medical Researchand Education (18%), Medicine/Biom-edicine /Pharmacology / Biotechnology (10%) and Medical Scientometrics /e Resources Databases(55) constituting 77% prominent area of research and rest below 5% area of research includes 23% only .

Table 2: Chi Square Study on Medical Health Services

Prominent Research Area of Medical Health Services	*Number of Articles (Observed value)*	*Expected*	*|O -E|*	*(O — E)2*	*(O — E)2/ E*
Public Medical Health	101	26	75	5626	**216.3**
Theuropectics /Diseases	83	26	57	3249	**124.9**
Medical Research and Education	75	26	49	2401	**92.3**
Medicine/Biomedicine /Pharmacology /Biotechnology	44	26	18	324	**12.4**
Medical Scientometrics/e Resources Databases	21	26	-5	25	**0.96**
Clinical Research	19	26	-7	49	**1.88**
Cardiac Problems	14	26	-12	144	**5.5**
Diabetics /Insulin	13	26	-13	169	**6.75**
Immunology /Vaccines	12	26	-14	196	**6.5**
Herbal Medicines	12	26	-14	196	**6.5**
Food Science/Contaminations	8	26	-18	324	**12.4**
Fever Cases (Dengue / Viral / Malaria/Chikungenia)	5	26	-21	441	**16.9**
Meditrips/Medical Tourism	5	26	-21	441	**16.9**
Medical Donor Banks Stem Cell/ Fertility Eggs/	4	26	-22	484	**18.6**
Online Health Services Mobile	3	26	-23	529	**20.0**
Trauma Cases	3	26	-23	529	**20.0**
Total	422	416			**579.09**

The study of Table No 2 reveals that the calculated value of chi square is 579.09 which is greater than table value 24.996(df=15) at 5% level of significance ,is proved to be significant , hence the hypothesis is rejected , it is thus concludes that the research in medical sciences is an intrinsic element for better visualization of Public Health Problems and evaluation with proper execution of medical health services . In this study , the major thrust area of research are Public Medical Health, Theuropectics /Diseases and Medical Research and Education which makes main domain of problematic area of research, where more funds be allocated for better medical system and services. The study also reveals that there is also need of standard medical education in India which includes public health issues like vaccination, heath care, and Theuropectics door to door study of health cards by visualizing problems of people. It is reveals that people are getting more medical treatment in accordance with existing facilities but they are unaware of better treatment due to increasing cost of medical treatment ,however the other problems like Fever cases (Dengue / viral / Malaria/Chikungenia), Meditrips/Medical Tourism ,Medical Donor Banks Stem cell/ Fertility Eggs/, Online Health Services /Mobile and Trauma cases do show significant chi-square values and effective area of research, hence more emphasis should be given for better treatment and services to keep better up-to-date public health system.

The calculated chi square values of Medicine/Biomedicine /Pharmacology /Biotechnology (12.4),Clinical Research(1.88), Cardiac Problems (5.5), Diabetics/ Insulin Immunology /Vaccines(6.75) ,Herbal Medicines (6.5) ,Food Science/ Contaminations (12.4) are lesser than table value 15.51 (df =8) at 5% level of significance is proved to be non significant , hence null hypothesis is accepted , it is thus concluded that the above area of research are not independent from prominent area of medical health services and such area are more based on casual events and do not show major thrust problematic research area of medical health services.

The some of the areas like Fever Cases (Dengue / Viral / Malaria/Chikungenia,)(16.9) Meditrips/Medical Tourism (16.9), Medical Donor Banks/ Stem Cell/ Fertility Eggs(18.6) ,Online Health Services Mobile faculties (20.0) and Trauma Cases (20.0) do show greater chi square value than table value ie 24.996(df=15) at 5% level of significance ,hence it is proved to be more significant and the hypothesis is rejected showing significance area of subject research and such areas are more independent and major problematic research area of medical health services .

References

[1] Subbiah Amnachalam How Relevant is Medical Research Done in India? - A Study Based on Medline Current Science; Vol 72No 12,25Jun1997; PP: 912-922
[2] Aparna Basu National Mapping of Science - India: Multidisciplines *Information Today and Tomorrow; 19 4 2000
[3] Vijay Kumar Kalia Cost Effective Utilization of Existing Resources for Biomedical Research in India current science vol 95, 9 2008 pp 118-1120
[4] Madhav G Deo Need for Research Oriented Medical Education in India Indian Journal of Medical Research ;Vol 130 No 2, Aug2009 ; PP: 105-107
[5] B T Sampath Kumar; and G T Kumar Perception and Usage of e-resources and the Internet by Indian Academics Electronic Library ;Vol 28(1) 2010; PP: 137-156
[6] R Vyas; et al Clinical Training at Remote Sites Using Mobile Technology: An India-USA Partnership Distance Education ;Vol 31No 2,2010 ; PP: 211-226

[7] Har Kaur; and B M Gupta Mapping of Dental Science Research in India: A Scientometrics Analysis of India's Research Output, 1999-200 Scientometrics ;Vol 85No 1,Oct2010 ; PP: 361-376
[8] BM Gupta and Adarsh Bala Mapping of asthma research in India: A scientometrics analysis of publications output during 1999-2008 2011 28 (4)239-246 http://www.lungindia.com/backissues.asp
[9] G Manivannan; and K Sanjeevi A Bibliometric Study on Research Output in Medical Science Research (2007-2011) Library Progress ; Vol 32 No 1, Jun 2012
[10] Nadjla Hariri et al Co-citation scientific maps: A case study of medical sciences in Iran Journal of Paramedical Sciences 2012 vol 3(1)
[11] Leili Zarifmahmoudi et al Citation Analysis of Iranian Journal of Basic Medical Sciences in ISI Web of Knowledge, Scopus, and Google Scholar J Basic Med Sci. 2013 Oct; 16(10): 1027–1030.
[12] Prantosh Kumar Paul Medical 2.0 and Health 2.0: Contemporary Information and Communication Tool-A Conceptual Study Journal of Advances in Medicine ;Vol 2 No 2, Dec 2013
[13] Bhardwaj Raj Kumar and Ram Shri Mapping of Indian Research Output on Osteoporosis Annals of Library and Information Studies ;Vol 60 No 4, Dec 2013 ; PP: 276-283
[14] Kiran Dhaliwal; and Deepika Tandon Citation Analysis of Theses Submitted at the Gastroenterology Department of the Postgraduate Institute of Medical Education and Research, India PEARL - A Journal of Library and Information Science ;Vol 8 No 1, Mar 2014
[15] A Thirumagal and R Nehru Mapping of Dengue Fever Literature Growth and Development SRELS Journal of Information Management ;Vol 52 No 4, Aug 2015; PP: 269-274