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November 2010

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Recommended Citation

Gatiti, P. (2010). A bibliometric analysis of publications by staff from Mid Yorkshire Hospitals NHS Trust, 2007 - 2009. *Mid Yorks Medical Journal*, 1(4), 14-17.

Available at: <http://ecommons.aku.edu/libraries/12>

**A bibliometric analysis of publications by staff from
Mid Yorkshire Hospitals NHS Trust, 2007 -2009**

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Introduction

Studies of publication patterns, also known as bibliometric studies are useful indicators of scientific productivity, trends and of researchers' preferences for publication outputs. Results of such studies may be very useful in decision making in research planning and in collection development. One of the ways to cover this is through regular bibliometric studies. Bibliometric studies enable investigators to study the quality and quantity of work done by scientists in the various fields¹.

This paper is a bibliometric study of the publication patterns of a selected group of staff from the Mid Yorkshire Hospitals NHS Trust for a period of three years, 2007-2009. The study collected two sets of data through a bibliometric analysis of science citation index and gathering data from the Health care databases.

Methodology

Health care databases and the Science Citation Index (SCI) online were used to collect the initial data. All the authors affiliated with the trust hospitals were chosen as the population of study.

This study examined research performance of staff at Mid Yorkshire Hospitals NHS Trust, using

the numbers of articles appearing in journals and the numbers of citations received by those articles covered by Science Citation Index (SCI), 2007 -2009. A total of 297 papers published by 198 authors from the Trust and indexed by the Healthcare databases during the last three years were considered.

Analysis of journals

In total 297 articles were published out of which 112 were published in 2007; 88 in 2008; and 97 in 2009. Table 1 lists the first 20 journals ranked by the number of articles authors from Mid Yorkshire have published.

Impact factor

The impact factor is a measure of the frequency with which the average article in a journal has been cited in a particular year or period². The impact factor helps evaluate a journal's relative importance, especially when compared to others in the same field. It is generally believed that journals with higher impact factors in a particular field publish on average more papers than journals with lower impact factors³.

Table 2 shows the impact factor of 20 major journals from ISI Web of Knowledge, Science

Citation Index where authors affiliated to Mid Yorkshire Hospitals NHS Trust have published between 2007 and 2009.

	Journal	No. of articles published
1	Emergency Medicine Journal	12
2	Synergy	12
3	Eye	10
4	Clinical and Experimental Dermatology	9
5	Emergency nurse	9
6	British Journal of Oral and Maxillofacial Surgery	8
7	Radiography	8
8	Burns	7
9	Diabetic Medicine	7
10	Journal of Plastic Reconstructive & Aesthetic Surgery	7
11	Age and ageing	6
12	British Journal of Dermatology	6
13	Heart	5
14	Plastic and reconstructive surgery	5
15	Annals of the rheumatic diseases	4
16	British Journal of Haematology	4
17	Clinical & Experimental Ophthalmology	4
18	European Urology	4
19	Journal of Hand Surgery: European Volume	4
20	Journal of human nutrition and dietetics	4

Table 1: Journals where majority of articles were published.

	Journal	Impact factor
1	New England journal of medicine	47.05
2	BMJ	13.66
3	Gut	9.357
4	Annals of the rheumatic diseases	8.111
5	European urology	7.667
6	Human molecular genetics	7.386
7	Arthritis and rheumatism	7.332
8	Thorax	7.041
9	Radiography	6.341
10	American journal of gastroenterology	6.012
11	Journal of medical genetics	5.751
12	Annals of oncology	5.647
13	Ophthalmology	5.491
14	Heart	5.385
15	British journal of haematology	4.597
16	Thrombosis and haemostasis	4.451
17	American heart journal	4.357
18	British journal of dermatology	4.26
19	The British journal of dermatology	4.26
20	Rheumatology	4.236

Table 2: Impact factor of 20 major journals where staff have published.

Of 297 papers, 204 articles (68.7%) appeared in journals whose impact factors are greater than one as seen from ISI Web of Knowledge, Journal Citation Reports. Three papers were published in New England Journal of Medicine and British Medical Journal, which are some of the highest impact journals from UK at 47.05 and 13.66 respectively⁴. Out of the 297 papers 120 articles (40%) were published in journals having an impact factor of two or more.

The institutional assignment of papers was based on the corporate address of the authors as given in the Science Citation Index and Healthcare Databases. In this analysis, publications were not fractioned across sites, which meant that one article co-authored by, for example, three different staff from the Trust hospitals would add one full article to the research productivity counts for the Trust.

Analysis of authorship

A total of 198 author names appeared on the articles in the Healthcare databases. Out of these, 70 authors (35%) published more than one article and 23 authors (12%) published more than 5 articles. The highest number of papers published by a single author between 2007 and 2009 were 15 articles. It was of interest to determine the number of articles with multiple authors. The ISA database records the names of up to four co-authors; the fifth and succeeding authors are indicated by "et al." In this study, 46 articles (15.5%) had a single author while 251 articles (84.5%) were published by multiple authors.

	2007	2008	2009	Total
1	9	5	1	15
2	6	1	5	12
3	11		1	12
4	6	2	3	11
5	6	3	1	10
6	4	4	1	9
7	8		1	9
8	1	1	6	8
9	5	2	1	8
10			7	7
11	5	1	1	7
12			7	7
13			7	7
14	3	3	1	7
15	2	2	3	7
16	6			6
17	4	1	1	6
18	2	3	1	6
19	4	1	1	6
20	1	2	2	5
21	1	2	2	5
22	1	2	2	5
23	1	2	2	5
24	1	1	3	5

Table 3: Distribution of authors 2007 - 2009.

As expected, the number of multiple-authored articles was more due to the ease of collaboration between the Trust staff. In an attempt to test this opinion, the publication dates of the single-authored and multiple- authored journal articles were compared, with the results as shown on table 4 below.

Publication Year	Multiple-Authored Articles 2007 - 2009		Single-Authored Articles 2007 - 2009	
	Number	% of Total	Number	% of Total
2007	99	88.0	13	12
2008	70	79.5	18	20.5
2009	82	84.5	15	15.5
TOTAL	251	100.0	46	100.0

Table 4: Multiple- vs. single-authored articles

Summary

Evaluation of research performance in terms of research publications and the citations' impact is considered an integral part of science and our researchers cannot avoid such scrutiny. This study has looked at patterns of authorship in articles published over a three -year period by the Trust staff and the findings can be summarised as follows:

A total of 297 papers by the Trust staff were published in 150 different scientific journals during the three years of study (2007 – 2009). Among the 198 authors affiliated to Mid Yorkshire Hospitals NHS Trust, the top 5 each published more than 10 papers each with the top one having published 15 papers. More than two thirds of the papers (69.1%) were published in journals having an impact factor of one or more.

This investigation has demonstrated the high level of authorship and research output by the Trust staff as the majority of the articles were published in highly regarded journals.

References

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About the author

Peter is the Specialist Librarian for the Trust and has also been in the editorial team for MY Medical Journal. He has contributed a number of articles in evidence-based practice and information science. Prior to joining the Trust, he worked at the University of Leeds - Skills Centre Library where he helped set up a research hub.

Peter is moving on to take up an exciting role as the Regional Librarian at the Aga Khan University, Nairobi. He will be responsible for managing the library services at four campuses in the East Africa region. In his words...

"I am grateful for the experience and exposure that I have gained while working at the Trust as this has prepared me to take my next role. I intend to carry on with research in evidence-based practice and I will regularly contribute to the MY Medical Journal."