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Growth of literature in the field of Hepatitis-C

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ABSTRACT

This paper presents a bibliometric analysis of the literature output in the field of Hepatitis C covered in the Journal Viz., Gastroenterology. The literature covered in the Journal for the period 2006-2010 was considered. Citation Analysis was used for this study. Records covered in the citation from the year 1908 to 2010 were found. This study was aimed to examine quantitatively the growth of literature in the field of 'Hepatitis C'. There were 137 articles from the source journal during the study period and these articles had a total of 5132 cited items. 97.97 % of the citations were publications from journals; 0.7% of the cited items were books, including proceedings; and 1.33 % cited items were miscellaneous formats. The year wise calculation of RGR for output has shown decreasing trends up to 2009 and increasing trend in 2010. The DT increased from 2.23 in 2007 to 2.66 in 2009 and it has gone down to 1.69 in 2010. The year wise analysis of RGR for Citations in Hepatitis C Research is in fluctuation trend throughout the study period. The DT increased from 2.77 in 2007 and decreased in 2008 (1.99) and then increased in 2009 (3.32) and decreased in 2010 (1.86). So it also clearly shows the fluctuation trend. RGR of journal articles covered in citations in the field of Hepatitis C research output from 1908 to 2010. The RGR is in fluctuation trend through out the study period. Similarly the DT for journal articles covered in citations has shown fluctuation trend through out the study period. RGR for journal article pages covered in citation in the field of Hepatitis C Research in the study period is in fluctuation trends through out the study period. Similarly the DT also shows fluctuation trends through out the study period.

1. INTRODUCTION

This study was aimed to examine quantitatively the growth of literature in the field of 'Hepatitis C' with the help of the source Journal namely Gastroenterology**;** published monthly (semi-monthly in February) in two indexed volumes per year by W.B. Saunders. One of the most obvious features of science in recent years has been its rate of growth. Scientific growth has involved not only increase in manpower and finance[1]. The flood of papers represents one aspect of the general growth of scientific communication. Wooster (1970)[2] has estimated the number of journals that existed in the world at any one

time, where as some estimates of the number of papers published annually at various times was done by Vickery (1968)[3] and Martyn (1973)[4]. Gottschalk and Desmond (1963)[5] have also estimated the number of scientific and technical journals existed in the World. Growth studies in other scientific areas also studies by different authors in different subjects.[6-12].

2. LITERATURE REVIEW

The growth of literature and its doubling time results in the field of Science and Technology[13] and Biological science literature in India during the period 1965-1989[14] has been analysed by Maheswarppa and Ningoji (1992 and 1993). Aleixandre et al. (1995)[15] have conducted a study of the Spanish publications on AIDS, covering 2013 items, of which 1821 journal papers and 192 books. Ramesh Babu and Nandini Muthusamy (1998)[16] has conducted a bibliometric study of the articles published in the "International Library Review" during 1987-1991. Narendra Kumar and Ramesh Babu (1999)[17] analysed the literature published in ILA bulletin during the year 1986-1996 discussing authorship pattern, citation pattern, subject covered, ranking of the contributors, nature of contributions, bibliographic forms, of cited documents etc. Bhagavathi Sudha and Ramesh Babu (2000)[18] analysed the Indian contributions on 'Information Technology' covered in the (Indian Library and Information Science Literature) during the period 1990-1993, with respect to degree of collaboration, bibliographic forms, sub-fields of information technology etc. Karki, Garg, and Sharma (2000)[19] examined the research productivity on Indian Organic Chemistry during the period 1971-1989 using *Chemical Abstracts*. An attempt was made by Macias-Chapula (2000)[20] to identify the patterns of the growth in AIDS literature, as well as the types of documents published, authorship pattern, institutional affiliations of authors, and subject content. The Indian output on Air Pollution research covered in E-CD was analysed quantitatively by Parameswaran, Ramesh Babu and Gopalakrishnan (2003)[21].

Ramakrishnan and Rajendran (2004)[22] analysed the literature on Hepatitis B. For this purpose, three journals (*Journal of Virology, Journal of Medical Virology and Gastroenterology*) for a period of five years (1997-2001) have been considered, with citation counting and compared the coverage in three databases viz. MEDLINE, CINAHL and IPA. Rajendran, Ramesh Babu and Gopalakrishnan (2005)[23] analysed the global output of "fiber optics" research. Ramesh Babu, B and Ramakrishnan, J (2007)[24] studies the Growth of Literature on Hepatitis (1984-2003)[25], a study based on bibliographic databases and also in (2008)[25] studies the Growth of Indian Literature on Hepatitis (1984-2003).

3. HEPATITIS C

According to Stedman's medical *dictionary* "Hepatitis is an inflammation of liver, due usually to viral infection but sometimes to toxic agents. Previously endemic throughout much of the developing world, viral Hepatitis now ranks as a major public health problem in industrialized nations. The 3 most common type of viral Hepatitis (A, B, and C) affects millions worldwide" [26]. Hepatitis C virus (HCV) was identified in the year 1989, it has been shown to be the major cause of parenterally transmitted non-A, non-B (PT-NANB) hepatitis[27]. WHO estimates that 3 per cent of the world population is infected with HCV and around 170 million individuals are chronic carriers at risk of developing liver cirrhosis and liver cancer. In many countries, particular population subgroups, such as voluntary blood donors have a very high prevalence of HCV infection specially in the developing world. In the USA, an estimated 4 million people have contracted the disease, 4 times more than HIV infection. Approximately 3-4 million new acute infections and about 54000 deaths occur each year. It has also become a leading reason for liver transplantation[28&29]

Worldwide clinician, epidemiologists, microbiologists, pathologists, molecular biologist and other basic scientists have contributed immensely to the knowledge on hepatitis C. A review of the literature showed that no study in the Growth of literature on Hepatitis-C have been conducted for the field of Hepatitis C. So, this present study.

4. OBJECTIVES OF THE STUDY

1. To examine the year wise growth of literature on Hepatitis C.
2. To quantify the Research output in Journal Articles in terms of total pages.

5. LIMITATION

This study is confined to the literature output in the field of Hepatitis C covered in the Journal Viz., Gastroenterology for the period 2006-2010.

6. METHODOLOGY

The journal was selected as source journal in this study is Gastroenterology; published monthly (semi-monthly in February) in two indexed volumes per year by W.B. Saunders, since this problem related to gastroenterology also. All cited references appearing in the source article published in the five years period of 2006 to 2010 were recorded in the separate white sheet and results were entered in the Excel. SPSS is used for the analysis purpose. Citation Analysis is used for this study. The format type and publication year of each cited reference were noted. Citations have been categorized as journal articles, books (includes monographs and conference proceedings) and miscellaneous (dissertations, theses, technical manuals, abstracts, patents and personal communication etc.). The source journal was identified with the help of the standard bibliographies (such as the Brandon/Hill list) [30] and Journals Citation Index[31]. The article in each issue of the source journal is called the “source” article. Citation used by the authors in this study to examine the year wise growth of literature on Hepatitis C.

Journal Articles covered in the citation are used to quantify the Research output in Journal Articles in terms of total pages. The data thus collected from the citation on the literary production of 'Hepatitis C' has been analysed by using bibliometric indicators such as Relative Growth Rate (RGR) and Doubling Time (DT).

7. CONCEPT OF RELATIVE GROWTH RATE (RGR) AND DOUBLING TIME (DT)

7.1 RELATIVE GROWTH RATE (RGR)

The Relative Growth Rate (RGR) is the increase in number of articles/pages per unit of time. This definition is derived from the definition of relative growth rates in the study of growth analysis of individual plants and effectively applied in the field of Botany[32], which in turn, had its origin from the study of the rate of interest in the financial investment[33]. The mean Relative Growth Rate (R) over the specific period of interval can be calculated from the following equation:

$$1\text{-}2\ R = \frac{Log_e\ {}_2W - log_e\ {}_1W}{{}_2T - {}_1T}$$

whereas

$1\text{-}2\ \bar{R}$ = mean relative growth rate over the specific period of interval

$log_e\ {}_1W$ = log of initial number of articles/pages

$log_e\ {}_2W$ = log of final number of articles/pages after a specific period of interval

${}_2T - 1T$ = the unit difference between the initial time and the final time

The year can be taken here as the unit of time. The RGR for both articles and pages can be calculated separately.

Therefore

$1 - 2\bar{R}$ (aa −1 year −1) can represent the mean relative growth rate per unit of articles per unit of year over a specific period of interval.

and

$1 - 2^{\bar{R}}$ (pp −1 year −1) can represent the mean relative growth rate per unit of pages per unit of year over a specific period of interval.

7.2 DOUBLING TIME (DT)

There exists a direct equivalence between the relative growth rate and the doubling time[34]. If the number of articles/pages of a subject doubles during a given period then the difference between the logarithms of numbers at the beginning and end of this period must be logarithms of number 2. If natural logarithm is used this difference has a value of 0.693. Thus the corresponding doubling time for each specific period of interval and for both articles and pages can be calculated by the formula:

$$\text{Doubling time (DT)} = \frac{0.693}{\bar{R}}$$

Therefore,

$$\text{Doubling time for articles DT (a)} = \frac{0.693}{1 - 2^{\bar{R}} \text{ (aa-1 year-1)}}$$

and

$$\text{Doubling time for pages DT (p)} = \frac{0.693}{1 - 2^{\bar{R}} \text{ (pp-1 year-1)}}$$

8. ANALYSIS AND DISCUSSION

Table – 1 Quantum of Records in Literature on Hepatitis C

S. No.	Year	No. of Article	No. of Reference	Percentage
1	2006	38	1570	30.59
2	2007	14	449	08.75
3	2008	18	841	16.39
4	2009	21	669	13.04
5	2010	46	1603	31.24
	Total	**137**	**5132**	**100.00**

Table-1 shows that there were 137 articles from the source journal during the five-year from 2006 to 2010. These articles had a total of 5132 cited items covered from the year 1908 to 2010. (Fig.1)

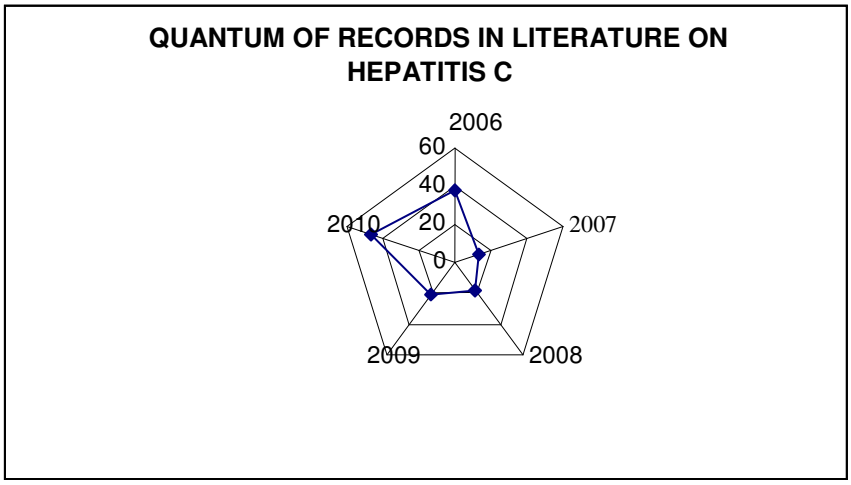

Figure 1 Quantum of Records in Literature on Hepatitis C

Table – 2 Cited Format Types by Source Journal and Frequency of Citations

S. No.	Cited Format Type	Total No.	Total (%)
01.	Journal Articles	5028	97.97
02.	Books	36	0.70
03.	Miscellaneous	68	1.33
Total		**5132**	**100.00**

Table-2 shows that 5028 (97.97%) of the citations were publications from journals; 36 (0.7%) of the cited items were books, including proceedings; and 68 (1.33%) were miscellaneous formats were covered in the source journal viz., Gastroenterology.

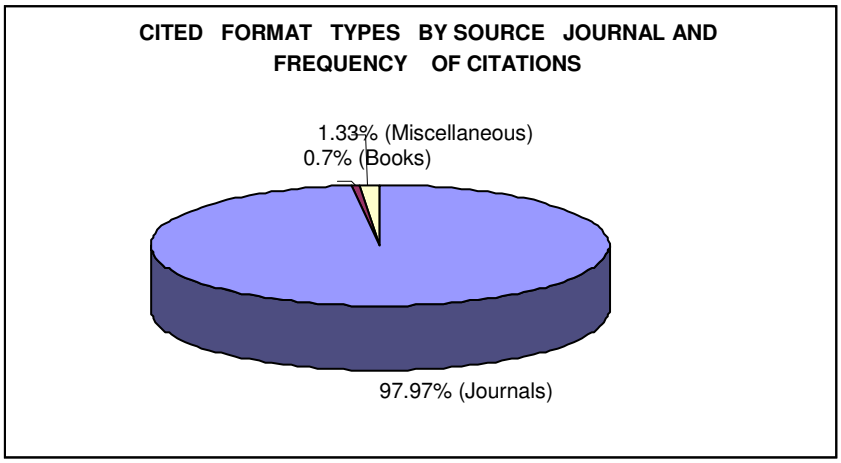

Figure 2 Cited Format Types by Source Journal and Frequency of Citations

8.3 Growth of Journal Articles Vs Journal Article Pages covered in the Citations

Since 97.97% of the research outputs in Hepatitis C are journal articles (Table 2), it was thought necessary to analyse the growth of journal articles and journal article pages in the citations by year wise. The respective data is presented in table 3. It is obvious that there is an increasing and decreasing rate of growth in the quantum of journal articles from one to another as noticed from Table-3. The average number of pages per journal article is 6.25 in the year 1908, whereas it was 12.57 in the year 2010. Total output percentage of Journal Articles Vs Journal Article Pages is 12.43.

Table – 3 Growth of Journal Articles Vs Journal Article Pages covered in the Citation

Sl. No.	Year	Total output pages	Total No. of articles	% of Journal Articles pages to Total output pages
1.	1908	16	1	6.25
2.	1924	4	1	25.00
3.	1931	8	1	12.50
4.	1938	10	2	20.00
5.	1951	11	1	9.09
6.	1954	1	1	100.00
7.	1956	10	1	10.00
8.	1959	7	1	14.29

9.	1966	23	2	8.70
10.	1968	14	2	14.29
11.	1969	9	2	22.22
12.	1971	5	1	20.00
13.	1972	2	1	50.00
14.	1973	31	3	9.68
15.	1974	14	1	7.14
16.	1975	19	2	10.53
17.	1977	31	2	6.45
18.	1978	10	2	20.00
19.	1979	11	3	27.27
20.	1980	24	1	4.17
21.	1981	27	5	18.52
22.	1982	22	5	22.73
23.	1983	148	11	7.43
24.	1984	57	7	12.28
25.	1985	34	5	14.71
26.	1986	45	5	11.11
27.	1987	68	8	11.76
28.	1988	66	9	13.64
29.	1989	91	16	17.58
30.	1990	84	14	16.67
31.	1991	213	31	14.55
32.	1992	333	53	15.92
33.	1993	272	40	14.71
34.	1994	496	74	14.92
35.	1995	579	87	15.03
36.	1996	863	124	14.37
37.	1997	1084	146	13.47
38.	1998	1495	200	13.38
39.	1999	1675	231	13.79
40.	2000	2200	274	12.45
41.	2001	2600	315	12.12
42.	2002	3395	454	13.37
43.	2003	3569	437	12.24

44.	2004	4644	550	11.84
45.	2005	4311	539	12.50
46.	2006	3737	427	11.43
47.	2007	3134	334	10.66
48.	2008	2602	310	11.91
49.	2009	1995	241	12.08
50.	2010	358	45	12.57
Total		**40457**	**5028**	**12.43**

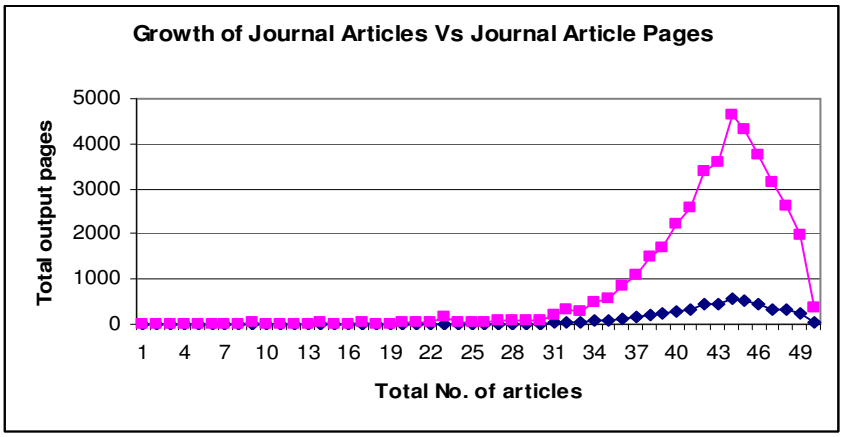

Figure 3 Growth of Journal Articles Vs Journal Article Pages covered in the Citation

8.4 Growth Block Year wise Journal Articles Vs. Journal Article pages covered in the Citation

It was thought necessary to analyse the growth of journal articles and journal article pages covered in the citations according to block year wise. The respective data is presented in table 4. It is obvious that there is an increasing rate of growth in the quantum of journal articles from one block year to another except first block period as noticed from Table 4. The average number of pages per journal article is 10 in the block year 1900 to 1925, whereas it was 6 in the block year 1926 to 1950. Subsequently there is an increasing and decreasing trend in the other two blocks year periods.

Table – 4 Block year wise Journal Articles Vs. Journal Article pages covered in the Citation

S. No.	Block Year	Quantum of Journal Articles	Quantum of Journal Articles Pages	Average No. of pages per Journal Article
1	1900 - 1925	2	20	10.00
2	1926 – 1950	3	18	6.00
3	1951 – 1975	18	146	8.11
4	1976 - 2010	5005	40273	8.05
	Total	5028	40457	8.05

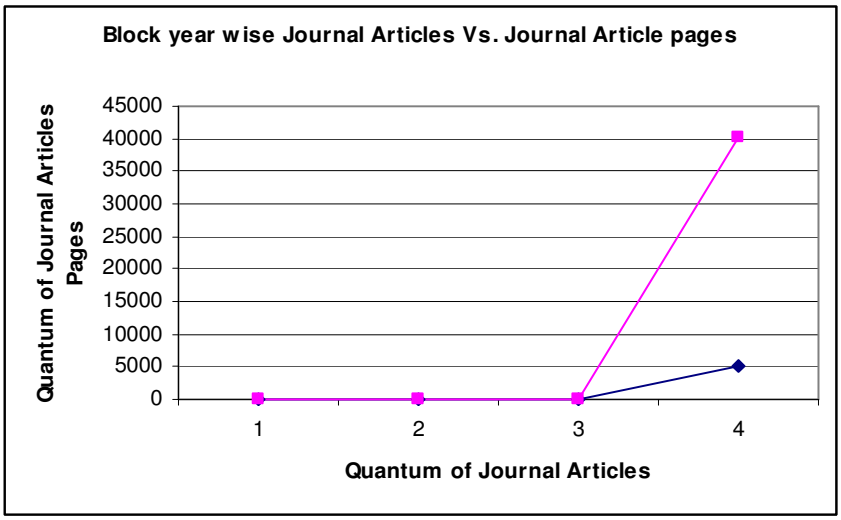

Figure 4 Block Year wise Journal Articles Vs. Journal Article pages covered in the Citation

8.5 RELATIVE GROWTH RATE (RGR) AND DOUBLING TIME (DT)

The analysis of data on the literary output in Hepatitis C has been done with parameters such as Relative Growth Rate (RGR) and Doubling Time (DT).

8.51 RGR and DT for Hepatitis C Research Output by Year Wise

It was thought appropriate to calculate and analyse the RGR and DT for output on Hepatitis C research. Accordingly the data has been analysed and presented in Table 5. It is found from Table 5 that the year wise calculation of RGR for output has shown decreasing trends up to 2009 and increasing trend in 2010. (Figure 5).

The DT increased from 2.23 in 2007 to 2.66 in 2009 and it has gone down to 1.69 in 2010. (Figure 6).

Table – 5 RGR and DT for Hepatitis C Research Output

Year	Quantum of Output	Cumulative Total of Output	W_1	W_2	$1 - 2^{\overline{R}(aa^{-1}\,year^{-1})}$ RGR	Dt(a)
2006	38			3.64		
2007	14	52	3.64	3.95	0.31	2.23
2008	18	70	3.95	4.25	0.30	2.32
2009	21	91	4.25	4.51	0.26	2.66
2010	46	137	4.51	4.92	0.41	1.69

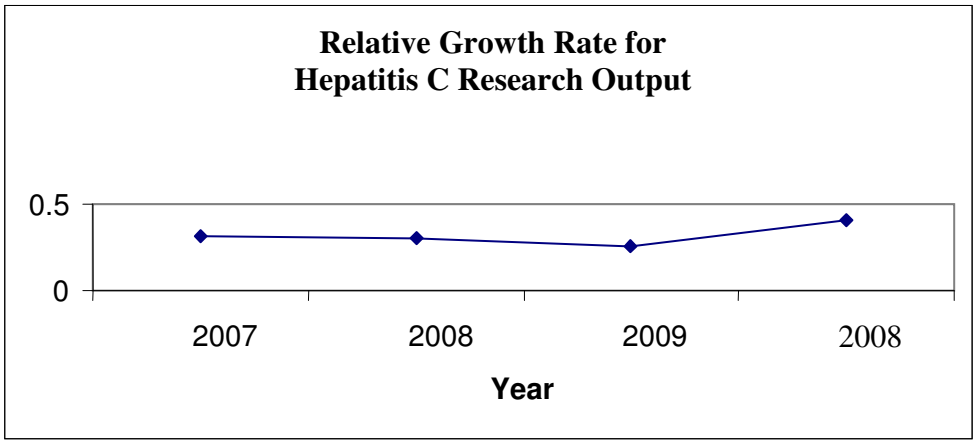

Figure 5 Relative Growth Rate for Hepatitis C Research Output

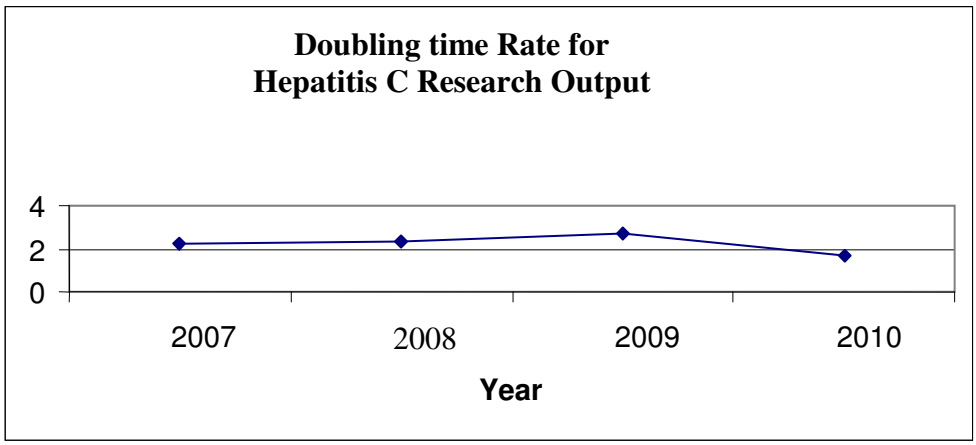

Figure 6 Doubling time for Hepatitis C Research Output

8.52 RGR and DT for Citations in Hepatitis C Research by Year Wise

The year wise analysis of RGR and DT for Citations in Hepatitis C Research is shown in Table 6. A fluctuation trend has been noticed for RGR throughout the study period. (Figure 7).

The DT increased from 2.77 in 2007 and decreased in 2008 (1.99) and then increased in 2009 (3.32) and decreased in 2010 (1.86). So it also clearly shows the fluctuation trend (Figure 8).

Table – 6 RGR and DT for Citations in Hepatitis C Research

Year	Quantum of Output	Cumulative Total of Output	W_1	W_2	$1 - 2^{\overline{R}(aa^{-1}\,year^{-1})}$ RGR	Dt(a)
2006	1570			7.36		
2007	449	2019	7.36	7.61	0.25	2.77
2008	841	2860	7.61	7.96	0.35	1.99
2009	669	3529	7.96	8.17	0.21	3.32
2010	1603	5132	8.17	8.54	0.37	1.86

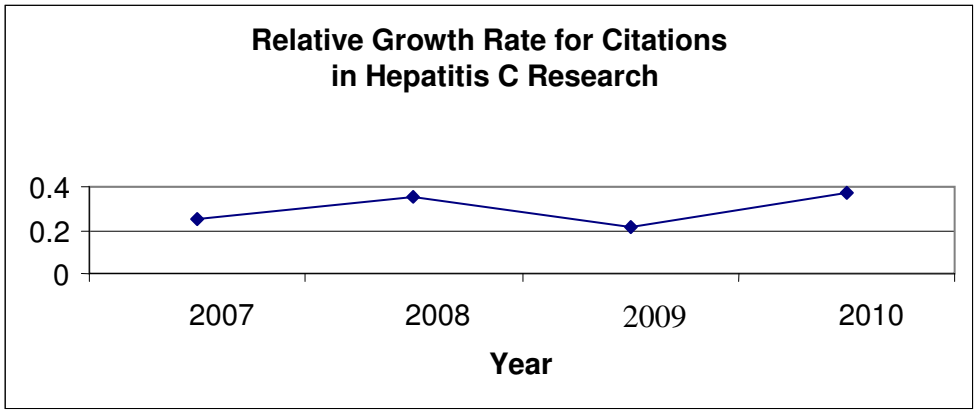

Figure 7 Relative Growth Rate for Citations in Hepatitis C Research

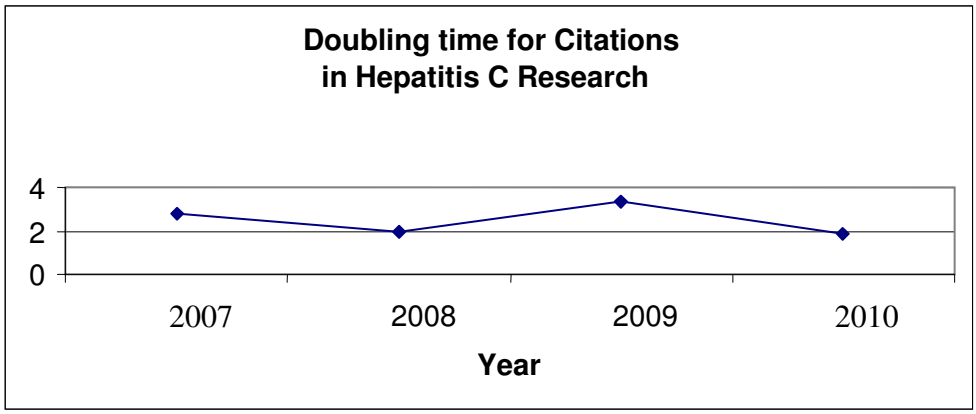

Figure 8 Doubling time for Citations in Hepatitis C Research

8.53 RGR and DT for Hepatitis C Research Output in Journal Articles covered in Citations by Year Wise

The year wise RGR and DT for journal articles covered in citations are presented in Table 7. It is noticed that there is a decreasing and increasing trend in the year wise RGR of journal articles covered in citations in the field of Hepatitis C research output from 1908 to 2010. The RGR is in fluctuation trend through out the study period. (Figure 9).

Similarly the DT for journal articles covered in citations has shown fluctuation trend through out the study period. (Figure 10).

Table – 7 RGR and DT for Journal Articles Covered in Citations in Hepatitis C Research

Year	Quantum of Output	Cumulative Total of Output	W_1	W_2	$1 - 2^{\overline{R}^{(aa^{-1}\,year^{-1})}}$ RGR	DT(a)
1908	1			0.00		
1924	1	2	0.00	0.69	0.69	1.00
1931	1	3	0.69	1.10	0.41	1.70
1938	2	5	1.10	1.61	0.51	1.36
1951	1	6	1.61	1.79	0.18	3.81
1954	1	7	1.79	1.95	0.16	4.44
1956	1	8	1.95	2.08	0.13	5.35
1959	1	9	2.08	2.20	0.12	5.91
1966	2	11	2.20	2.40	0.20	3.50
1968	2	13	2.40	2.56	0.16	4.20

1969	2	15	2.56	2.71	0.15	4.68
1971	1	16	2.71	2.77	0.06	11.07
1972	1	17	2.77	2.83	0.06	10.96
1973	3	20	2.83	3.00	0.17	4.18
1974	1	21	3.00	3.04	0.04	15.57
1975	2	23	3.04	3.14	0.10	7.26
1977	2	25	3.14	3.22	0.08	8.79
1978	2	27	3.22	3.30	0.08	9.14
1979	3	30	3.30	3.40	0.10	6.85
1980	1	31	3.40	3.43	0.03	20.39
1981	5	36	3.43	3.58	0.15	4.51
1982	5	41	3.58	3.71	0.13	5.19
1983	11	52	3.71	3.95	0.24	2.87
1984	7	59	3.95	4.08	0.13	5.43
1985	5	64	4.08	4.16	0.08	8.79
1986	5	69	4.16	4.23	0.07	9.35
1987	8	77	4.23	4.34	0.11	6.09
1988	9	86	4.34	4.45	0.11	6.06
1989	16	102	4.45	4.62	0.17	3.96
1990	14	116	4.62	4.75	0.13	5.19
1991	31	147	4.75	4.99	0.24	2.88
1992	53	200	4.99	5.30	0.31	2.25
1993	40	240	5.30	5.48	0.18	3.84
1994	74	314	5.48	5.75	0.27	2.57
1995	87	401	5.75	5.99	0.24	2.84
1996	124	525	5.99	6.26	0.27	2.53
1997	146	671	6.26	6.51	0.25	2.79
1998	200	871	6.51	6.77	0.26	2.67
1999	231	1102	6.77	7.00	0.23	2.95
2000	274	1376	7.00	7.23	0.23	3.05
2001	315	1691	7.23	7.43	0.20	3.41
2002	454	2145	7.43	7.67	0.24	2.88
2003	437	2582	7.67	7.86	0.19	3.72
2004	550	3132	7.86	8.05	0.19	3.66
2005	539	3671	8.05	8.21	0.16	4.38
2006	427	4098	8.21	8.32	0.11	6.40
2007	334	4432	8.32	8.40	0.08	9.05
2008	310	4742	8.40	8.46	0.06	10.79
2009	241	4983	8.46	8.51	0.05	12.88
2010	45	5028	8.51	8.52	0.01	54.24

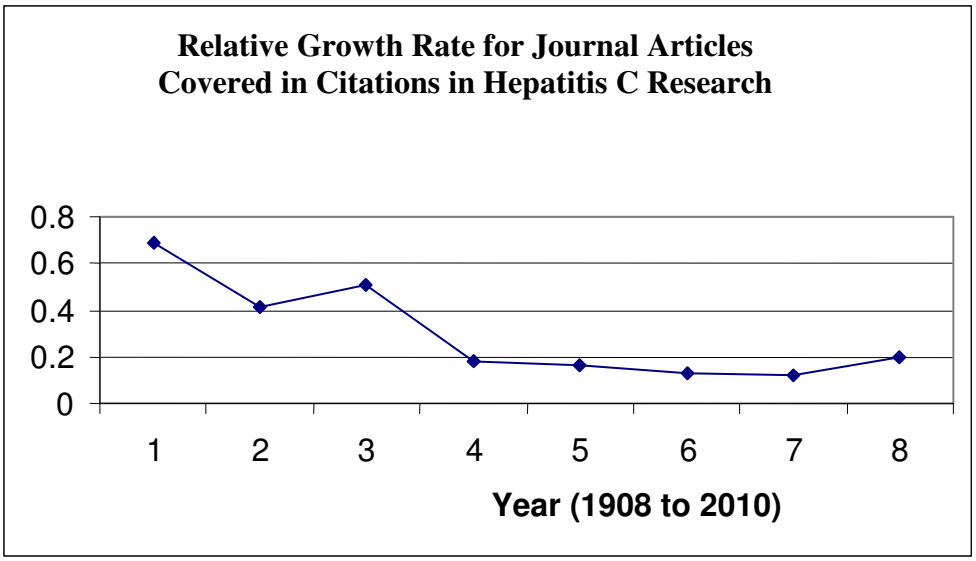

Figure 9 RGR for Journal Articles Covered in Citations in Hepatitis C Research

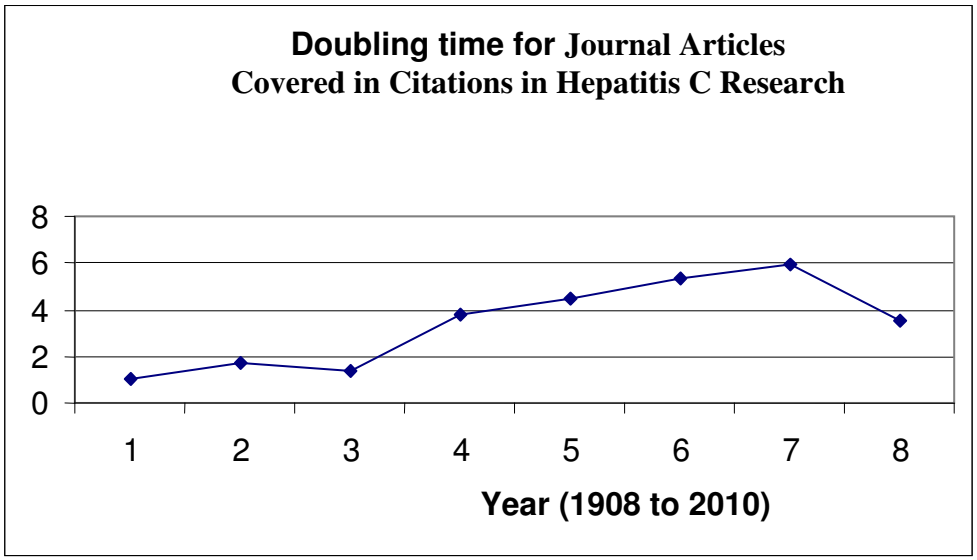

Figure 10 DT for Journal Articles Covered in Citations in Hepatitis C Research

8.54 RGR and DT for Journal article pages Covered in Citations in Hepatitis C Research

It was observed from the Table 8 that year wise calculation of RGR for journal article pages covered in Hepatitis C Research in the study period is in fluctuation trends through out the study period. (Figure 11).

Similarly the DT also shows fluctuation trends through out the study period (Figure 12).

Table - 8 RGR and DT for Journal Articles pages Covered in Citations in Hepatitis C Research

Year	Quantum of Output	Cumulative Total of Output	W_1	W_2	$1 - 2^{\overline{R}(aa^{-1}\,year^{-1})}$ RGR	DT(a)
1908	16			2.77		
1924	4	20	2.77	3.00	0.23	3.07
1931	8	28	3	3.33	0.33	2.09
1938	10	38	3.33	3.64	0.31	2.25
1951	11	49	3.64	3.89	0.25	2.75
1954	1	50	3.89	3.91	0.02	31.47
1956	10	60	3.91	4.09	0.18	3.76
1959	7	67	4.09	4.20	0.11	6.04
1966	23	90	4.2	4.50	0.30	2.31
1968	14	104	4.5	4.64	0.14	4.80
1969	9	113	4.64	4.73	0.09	7.93
1971	5	118	4.73	4.77	0.04	17.03
1972	2	120	4.77	4.79	0.02	39.62
1973	31	151	4.79	5.02	0.23	3.05
1974	14	165	5.02	5.11	0.09	8.06
1975	19	184	5.11	5.21	0.10	6.60
1977	31	215	5.21	5.37	0.16	4.31
1978	10	225	5.37	5.42	0.05	15.03
1979	11	236	5.42	5.46	0.04	15.81
1980	24	260	5.46	5.56	0.10	6.88
1981	27	287	5.56	5.66	0.10	6.97
1982	22	309	5.66	5.73	0.07	9.45
1983	148	457	5.73	6.12	0.39	1.76
1984	57	514	6.12	6.24	0.12	5.67
1985	34	548	6.24	6.31	0.07	10.46
1986	45	593	6.31	6.39	0.08	9.22
1987	68	661	6.39	6.49	0.10	6.68
1988	66	727	6.49	6.59	0.10	7.01
1989	91	818	6.59	6.71	0.12	5.93
1990	84	902	6.71	6.80	0.09	7.32
1991	213	1115	6.8	7.02	0.22	3.20
1992	333	1448	7.02	7.28	0.26	2.69
1993	272	1720	7.28	7.45	0.17	4.07
1994	496	2216	7.45	7.70	0.25	2.73
1995	579	2795	7.7	7.94	0.24	2.94
1996	863	3658	7.94	8.20	0.26	2.62
1997	1084	4742	8.2	8.46	0.26	2.62
1998	1495	6237	8.46	8.74	0.28	2.49
1999	1675	7912	8.74	8.98	0.24	2.93
2000	2200	10112	8.98	9.22	0.24	2.87

2001	2600	12712	9.22	9.45	0.23	3.01
2002	3395	16107	9.45	9.69	0.24	2.92
2003	3569	19676	9.69	9.89	0.20	3.52
2004	4644	24320	9.89	10.10	0.21	3.31
2005	4311	28631	10.1	10.26	0.16	4.27
2006	3737	32368	10.26	10.38	0.12	5.55
2007	3134	35502	10.38	10.48	0.10	7.12
2008	2602	38104	10.48	10.55	0.07	10.18
2009	1995	40099	10.55	10.60	0.05	14.11
2010	358	40457	10.6	10.61	0.01	86.68

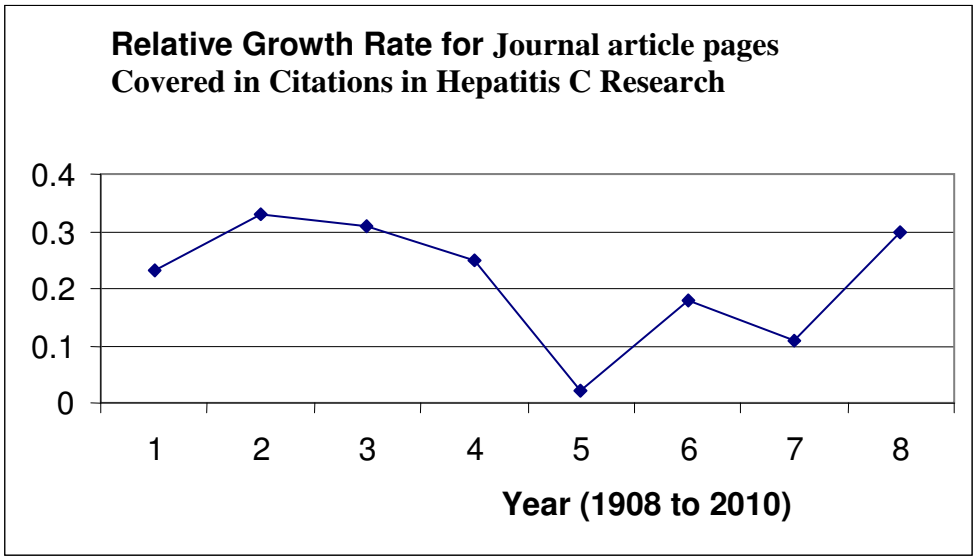

Figure 11 Relative Growth Rate for Journal article pages Covered in Citations in hepatitis C Research

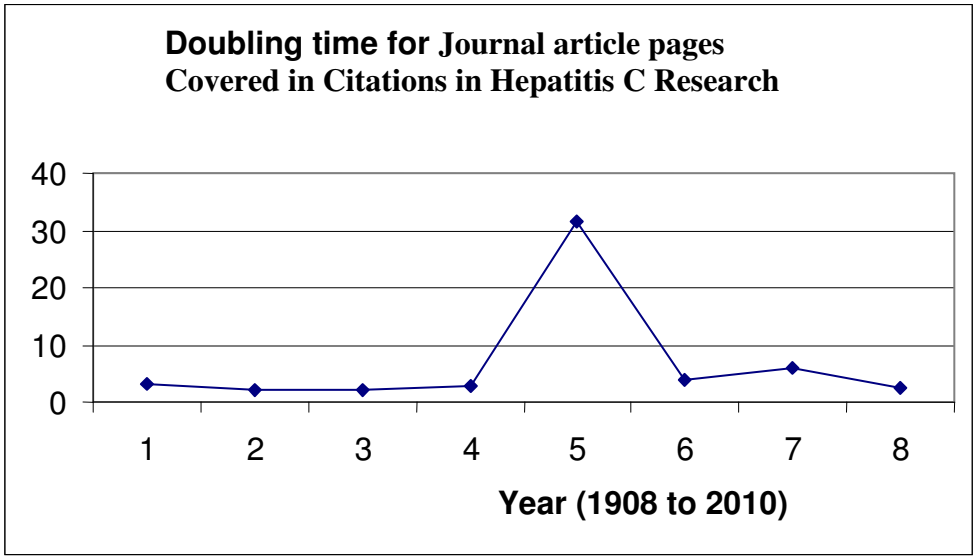

Figure 12 Doubling time for Journal article pages Covered in Citations in Hepatitis C Research

9. CONCLUSION

There exist fluctuations in Relative Growth Rate and Doubling Time for research productivity from year after year in the study period. The year wise calculation of RGR for output has shown decreasing trends up to 2009 and increasing trend in 2010. The DT increased from 2.23 in 2007 to 2.66 in 2009 and it has gone down to 1.69 in 2010. The year wise analysis of RGR for Citations in Hepatitis C Research is in fluctuation trend throughout the study period. The DT increased from 2.77 in 2007 and decreased in 2008 (1.99) and then increased in 2009 (3.32) and decreased in 2010 (1.86). So it also clearly shows the fluctuation trend. RGR of journal articles covered in citations in the field of Hepatitis C research output from 1908 to 2010. The RGR is in fluctuation trend through out the study period. Similarly the DT for journal articles covered in citations has shown fluctuation trend through out the study period. RGR for journal article pages covered in citations in Hepatitis C Research in the study period is in fluctuation trends through out the study period. Similarly the DT also shows fluctuation trends through out the study period. It was found throughout the study period that Relative Growth Rate and Doubling Time is in fluctuation trends.

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The literature covered in three databases for the period 1984-2003 was considered. We have already discussed the Trends in the Growth of Literature on Hepatitis in our previous paper. Therefore in this paper only sub-fields analysis is presented. It has been found that the Hepatitis literature output has been grouped in 23 major sub-fields based on databases covered. It was found that there were high priorities for some of the sub-fields of Hepatitis research during 1984-1993. It was found that the research priority profile was more or less homogenous since majority of the sub-fields are showi Hepatitis B and C in the EU neighbourhood: Prevalence, burden of disease and screening policies. TECHNICAL REPORT. Hepatitis B and C in the EU neighbourhood: prevalence, burden of disease and. screening policies. September 2010. www.ecdc.europa.eu. Ecdc technical report.Â Suggested citation: European Centre for Disease Prevention and Control. Hepatitis B and C in the EU neighbourhood: prevalence, burden of disease and screening policies. Stockholm: ECDC; 2010. Stockholm, September 2010 ISBN 978-92-9193-213-9 doi 10.2900/30933 Â© European Centre for Disease Prevention and Control, 2010 Reproduction is authorised, provided the source is acknowledged. TECHNICAL REPORT. Hepatitis B and C in the EU neighbourhood. Contents. hepatitis B (HBV) logical evidence suggests a vegetarian diet can is common in HCV carriers. Immunity to HBV reduce iron stores,14 but short-term prospec- can be established by the presence of hepatitis tive trials have not confirmed this.15 Regular B surface antibody in a hepatitis screening tea drinking with meals can significantly re- panel. Although the mechanism is not clear, duce iron absorption over one year.16 Use of the prognosis is reported to be worse in patients supplemental iron in patients with HCV ap- infected with both viruses. Acute hepatitis C in a contemporary US cohort: modes of acquisition and factors influencing viral clearance. J Infect Dis. 2007;196:1474-82.Â The influence of human immunodeficiency virus coinfection on chronic hepatitis C in injection drug users: a long-term retrospective cohort study. Hepatology. 2001;34:1193-9.