

Bibliometric Profile of Dr. NSK Harsh Research Contribution

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Abstract: *This is a bibliometric study of the research contribution of Dr. NSK Harsh, Scientist forest research Institute Dehradun. This institute is one of the Institutes under Indian Council of forestry Research & Education which is an autonomous council of government of India, Ministry of Environment, and Forest & Climate Change. During the study period NSK Harsh published total 297 research publication. He published most of the papers from 2005 to 2009 and meantime total 72 research publication published by him. After that 60 research publications published in 2010 to 2014. Dr. NSK Harsh Most of the research publications are in the form of journal articles and conference papers. Dr NSK Harsh preferred Indian forester and journal of Tropical forestry to publish his articles. He publishes total 138 research publication as first author and 119 as 2 authors. K. Subramanyam formula used for Degree of collaboration.*

Keywords: research productivity, forest, Authorship pattern

1. Introduction

Dr. N.S.K.Harsh scientist –G in Forest research Institute Dehradun, completed his schooling from Ramsay Inter College, Almora, Uttarakhand. He has done his Master degree (M.Sc.) in 1978 and Ph.D. in botany (1982) from Kumaun University Nainital. He joined FRI Dehradun in 1984 and retired in 2017 from Forest Research Institute Dehradun after giving a successful service of 33 years and 4 month. Dr. Harsh has almost 33 years research experience on fungi. He has more than 297 research papers, technical reports, conference papers, Books and chapters in books in his account. His major research field is forest pathology, wood-decay, plantations and forests, control of forestry diseases including their fungi, Taxonomy of higher fungi etc. Under his guidance more than 27 students have done their Ph.D. and approx 70 students from different Universities done M.Sc. dissertation work. Dr. N.S.K.Harsh was also gives advisory services for tree health to New Delhi Municipal Council, DDA, Central Public works Departments, Archaeological Survey of India and many others different departments. Nowadays, uses of bibliometric techniques are increasing day by day and it is an essential tool to evaluate research publications. “Bibliometrics is a set of methods used to study or measure texts and information. Similarly; the term Citation and content analysis are commonly used in bibliometric methods. These days’ bibliometric methods are not only used in the field of library and information science but bibliometric have wide applications in other areas also. In fact, many research fields are using bibliometric methods to explore the impact of their field, or the impact of a particular paper.

2. Literature Review

1) **Sinha.S.C.and Furqan Ullah M (1993):** - This is a bibliometric study of the research papers of scientists of central building research institute Roorki, situated at Uttarakhad. The SCI index was used by the author to collected data. In this study only articles published in national & international journals and conference

proceedings are analyzed during the period of 1980 to 1990.

- 2) **Vishnay and Deo (1993)-** This bibliometric study was about the computerized information retrieval. For this study LISA database was analyzed and found about the subject wise growth, authorship pattern, journal literature & distribution, application of Bradford’s law and publishing pattern.
- 3) **Bhattacharya, Patra, and Verma (2006)** -This paper is a bibliometric study of bibliometric literature using data from LISA. Bradford’s and Lotka’s law have been used in this study. It is clear that authors’ distribution do not follow original law of Lotka’s.
- 4) **Dhawan, S.M. And Gupta, B.M. (2007)** - This study finds that India's physics related contribution is significantly high (86 per cent) in Science Citation Index (SCI)-covered journals, of which 26.4 per cent was in high-impact journals (IF = 1.5). Its contributions in condensed matter physics and materials science are significantly strong and have technological orientation.
- 5) **Sevukan,R. and Sharma, Jaideep (2008)** analyzed the research performance of biotechnology faculties in central universities of India during 1997 to 2006. For this study total 20 universities has been taken for the study and bibliometric techniques have been applied to conduct research.
- 6) **Thanuskodi, S. (2010)** -Main purpose of this study is to analyze the research production performance of social scientists.
- 7) **Maharana, Rabindra K. & Sethi, Bipin Bihari (2013)** -This article is a bibliometric analysis of scientific research productivity of Sambalpur University during the 2007-2011.
- 8) **Pillai Sudhier K.G. (2013)** - The main objective of this paper to analyze authorship pattern is physics literature and to examine the validity of lotka’s law of scientific productivity. It was found that using term complete count, a total of 3367 author identified and 1667 personal authors indentified using straight count. This study shows that lotka’ generalized law is not applicable to physics literature. Chi-squire test and K-s Test are applied to verify the applicability of lotka’s law of scientific productivity.

- 9) Ghosh, Mahua Kar and Mondal, Tarun Kumar (2014) -This paper presents results of a bibliometric study of research publications of UGC-DAE Consortium for Scientific Research, Kolkata Centre for the period of 2006-2010. The Centre has published 265 research publications of which there are 145 journal publications and the remaining 120 are published in proceedings of Conference/ workshop/ Seminar/ Symposia (C/W/S/S). Only the journal publications are considered for bibliometric analysis due to lack of direct impact factor.
- 10) Rao, K. Nageswara et. Al. (2014) -The present bibliometric analysis is based on 4047 articles published from 1985 to 2013. The highest numbers (194) of articles were published in year 1992 and lowest (81) in 1987.

Objectives

Following are main objective of the present study-

- 1) To find out the type of research publication
- 2) Chronological distribution of research productivity.
- 3) To find out Authorship pattern in research publication.
- 4) Most preferred journal to publish the research contribution.

Data collection & Methodology

The main purpose of this study is to find out research output of Dr. N.S.K.Harsh scientist G of Forest Research Institute, Dehradun, Uttarakhand during 1984 to 2014. Data will be collected from FRI databases, print materials published by them and email also used as an instrument for data collection. In this study only articles published in journal, technical reports, conference/seminar/workshops papers, and book & research paper in a chapter taken for consideration

3. Data analysis and findings

Table 1: Chronological distribution of publication

| Year | Publication | Percentage | Cumulative Growth | Cumulative Percentage |
|-----------|-------------|------------|-------------------|-----------------------|
| 80-84 | 26 | 8.75% | 26 | 8.75% |
| 85-89 | 28 | 9.42% | 54 | 18.18% |
| 90-94 | 43 | 14.47% | 97 | 32.65% |
| 95-99 | 37 | 12.45% | 134 | 45.11% |
| 2000-2004 | 31 | 10.43% | 165 | 55.55% |
| 2005-2009 | 72 | 24.24% | 237 | 79.79% |
| 2010-2014 | 60 | 20.20% | 297 | 100% |
| Total | 297 | 100% | 297 | 100 |

It is clear from the above table that as the Dr.NSK harsh experience grows their research output also grew. Where he published 26 research publications in the first five years, this number was increased in next every five year's except in 1995 to 2004. The most productive years is 2005-2009 where total 72 (24.24) research publications published followed by 2010-14 with 60 publications, 90-94 is in 3 position with 43 research publication. During the starting of

the service the research productive is low then the later years there is 26 research publications in between 80 to 84.

Table 2: Type of the publication

| Type of Document | No. of Publication | Percentage of the 297 research contribution |
|-------------------|--------------------|---|
| Journal Articles | 147 | 49.49 |
| Technical Reports | 29 | 9.76 |
| Conference papers | 90 | 30.30 |
| Books | 6 | 2.02 |
| Chapters in books | 25 | 8.41 |
| Total | 297 | 100 |

It is evident from above table no. 1 and below graph no. 1 that out of 297 research publication 49.49 % are in the form of journal articles, 9.76% are technical reports, 30.30% papers present in conference proceeding, 2.02 % are as a books and 8.41 % research publication published as a chapter in books. It is found that author preferred to publish his publication as journal articles.

Graph Number 2

Table 3: Top 10 most preferred journals to publish research publication

| Journal Name | No. of papers published (out of 147) | % of the publication (out of 147) | Rank |
|--|--------------------------------------|-----------------------------------|------|
| Indian Forester | 40 | 27% | 1 |
| Indian Phytopathology | 11 | 7.48% | 3 |
| Journal of Tropical Forestry | 14 | 9.52% | 2 |
| Indian Journal of Forestry | 8 | 5.44% | 4 |
| Forest Pathology | 5 | 3.40% | 5 |
| Himalayan Research and Development | 3 | 2.04% | 6 |
| Current Science | 3 | 2.04% | 6 |
| Indian Journal of Tropical Biodiversity | 3 | 2.04% | 6 |
| Journal of Timber Development association XLXIII | 3 | 2.04% | 6 |
| Current Research in Environmental & Applied Mycology | 3 | 2.04% | 6 |
| Total | | | |

In this table articles mostly published in top 10 journals taken for analysis. Above table shows that out of 147 articles 40 (27%) are published in Indian forester and received 1 rank in the table followed by Journal of Tropical Forestry with 14 (9.52%) articles and on 2 rank, Indian Phytopathology with 3 rank author published 11(7.48%) articles in this journal, 4 rank got by Indian Journal of Forestry with 8 (5.44%) articles, journal of Forest Pathology occupied 5 rank with 5 (3.40%) articles rest 5 journals are in same (6) rank with 3 (2.04%)articles.

Table 4: Authorship Pattern

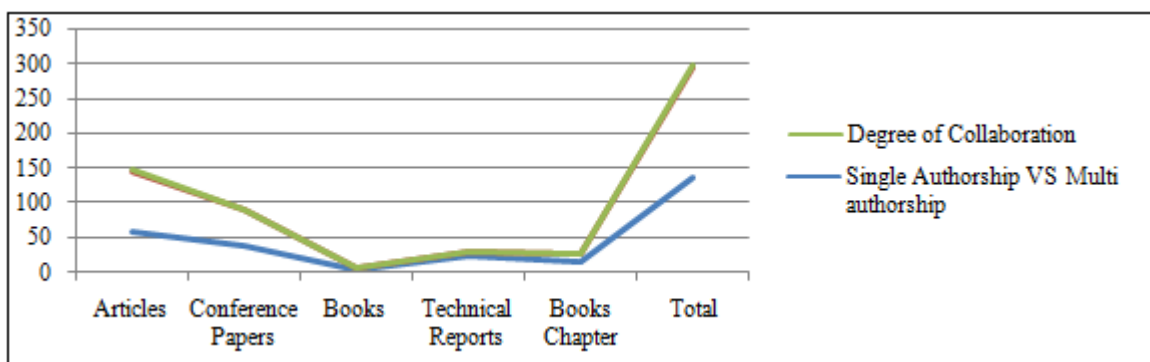
| No. of Author | Articles | Conference Papers | Books | Technical Reports | Books Chapter | Cumulative authorship Percentage |
|-----------------|----------|-------------------|-------|-------------------|---------------|----------------------------------|
| 1 Single Author | 58 | 38 | 3 | 24 | 15 | 46.46 |
| 2 Double Author | 71 | 36 | 3 | 1 | 8 | 86.53 |
| 3 Three Author | 15 | 15 | | 3 | 2 | 98.31 |
| 4 Four Author | 2 | 1 | | | | 99.32 |
| 5 Five Author | 1 | | | | | 99.66 |
| More than 5 | 1 | | | | | 100 |

Dr.NSK harsh published 38 articles as main author 71 articles as second author, 15 articles as third author, 2 articles as fourth author and 1 article as fifth author. He published 90 conference papers during the period out of which 38 papers were as first author, 36 papers as second author 15 papers as third author, 2 papers as fourth paper and 1 paper published as fifth author. He also published 6 books 3 as a primary author and three as second author. 29 technical reports are also in his account out of which 24 are as primary associates, 1 as a 2 contributor and 3 reports as a third author. Dr.NSK harsh also contribute in books chapters where he wrote 15 chapter as first author, 8 chapter as second author and 2 chapter as third author. Top 3 research output of Dr. NSK Harsh is 138 as primary author followed by 2 authors with 119 research publication, 35 as third author 3 as fourth author. The cumulative percentage during

single author is 46.46% followed by 2 author 86.53%, 98.31% in 3 author, in 4 author it was 99.32, 99.66 in fifth author and one research publication have more than 5 author and there cumulative authorship was 100%.

Table no. 5 Degree of collaboration

| Research Publication | Single Authorship | VS Multi authorship | Degree of Collaboration |
|----------------------|-------------------|---------------------|-------------------------|
| Articles | 58 | 89 | 0.605442 |
| Conference Papers | 38 | 52 | 0.577778 |
| Books | 3 | 3 | 0.5 |
| Technical Reports | 24 | 5 | 0.172414 |
| Books Chapter | 15 | 10 | 0.4 |
| Total | 138 | 159 | 0.535354 |



Graph 5: Degree of collaboration

Above graph shows degree of collaboration, to measure the DC of authorship pattern the below K. Subramanyam formula adopted-

$$C = \frac{Nm}{Nm + Ns}$$

Where C = Degree of collaboration

Nm = Number of publication as Multi authors

Ns = Number of publication as single author

In this bibliometric study C is - $C = \frac{159}{159+138} = 0.535354$

4. Conclusion

From the very beginning forest research institute, Dehradun has been making a significant contribution to forestry research. Dr.NSK harsh also made his very important contribution by giving his service here. He published many research papers, scientific reports and completed many research projects.

References

- [1] Dhawan, S., & Gupta, B. (2007). Physics Research in India: A study of institutional performance based on publication output. *DESIDOC bulletin of information Technology*, 27 (1), 55-67
- [2] Ghosh, M. K., & Mandal, T. K. (2014). Bibliometric Analysis of Research Publications of UGC-DAE Consortium for Scientific Research, Kolkata Centre. *IASLIC Bulletin*, 59 (2), 119-128.
- [3] <http://digitalcommons.unl.edu/libphilprac/926> retrieved on 15/5/2016
- [4] <http://dspace.cusat.ac.in/jspui/handle/123456789/8706>
- [5] <https://fri.academia.edu/NHarsh> retrieved on 01/5/2016
- [6] <https://www.slideshare.net/DevendraKushwah3/devendra-ppt-1>
- [7] Rao, N. K. (2014). Bibliometric Analysis of the Journal of Propulsion and Power (1985-2013). *DESIDOC Journal of Library & Information Technology*, 34 (3), 271-276.
- [8] Sevukan, R., & Sharma, J. (2008). Bibliometric analysis of research output of biotechnology faculties in some Indian central Universities. *DESIDOC Journal of library & Information Technology*, 28 (6), 11-20.
- [9] Sinha, S., & Ullah, F. M. (1993). Eleven years of CBRI Research output, 1980-90- A Bibliometric Study. *Annals of Library Science and Documentation*, 40 (3), 77-91.
- [10] Sudhier, P. K. (2013). Lotka's Law and Pattern of Author Productivity in the Area of Physics Research. *DESIDOC Journal of Library & Information Technology*, 33 (6), 457-464
- [11] Thanushkodi, S., & Vanktalaxmi, V. (2010). The Growth and Development of Research on Ecology in India: A Bibliometric Study. Retrieved 19, 2017, from <http://www.webpages.uidaho.edu/~mbolin/thanuskodivenkatalakshmi.html>
- [12] Vaishnav, A., & Deo, V. (1993). Literature of computerized library and information services: a bibliometric study. *library science with a slant of documentation*, 30 (2), 45-5

Author Profile



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