

Authorship Pattern in a University Environment: A Study of University of Agriculture Science, Dharwad, Karnataka

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Abstract

Based on the analysis of 358 articles published by 491 researchers of University of Agricultural Sciences, Dharwad for the year 2017, the study identifies authorship pattern. The study finds that solo research is no more there in the UASD during the specified period. Further, co-authorship is tending towards team research. A small number of researchers are continuously engaged in research. It is recommended that the University should develop institution's 'Publications Encouragement Policy' for the potential authors providing guidelines on giving authorship, authorship coupling, and indicating statement of responsibility.

Keywords: Publication pattern, authorship pattern, university of agricultural sciences, Dharwad, teaching fraternity

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INTRODUCTION

Investigating authorship pattern or publication pattern still holds the most prolific area of research in scientometrics. Many studies world over have produced huge amount of literature worldwide. A study reported by Kumar and Kumar finds multi-authorship pattern among 743 research papers published in the Journal of Oilseeds Research between 1993 and 2001 [1]. Trend towards multiple authorship was also noticed by Hasan and Singh, in their assessment of Himachal Pradesh's contributions to agriculture and allied fields [2]. Arya and Sharma's study revealed that collaborative research has been preferred by researchers in veterinary sciences in India [3]. Analysis of Indian Journal of Animal Sciences done by Shukla *et al.* finds trend towards collaborative research [4]. Dominance of collaborated authorship is also noticed by Ramesh and Nagaraju in International Journal of Tropical Agriculture for the period 1991-2000 [5]. Study of 'Oryza' for the period 1986-1995 by Ramesh *et al.* also observes multiple authorship [6]. Analysis of research contributions of CCS Haryana Agricultural University, Hisar from 2001 to 2015 finds that

the researchers have collaborated with authors belonging to national and international institutions [7]. Tripathi and Garg's study of cereal crop science research in India from 1965 to 2010 reveals that co-authored papers account for 94% of total output [8].

Hence the following study has been made to prove whether the same trend is applicable to one-year research productivity of University of Agricultural Sciences, Dharwad, the second oldest agricultural university in the state of Karnataka which has five constituent colleges and 30 research work stations.

METHODOLOGY

The scientific publications of the researchers, teaching fraternity and scientists who were on roll on 31.12.2017 in the University of Agricultural Sciences (UASD) were identified from the list of teachers, scientists and research scholars for the year 2017. Google Scholar and CABI abstracts were searched to obtain the relevant data. The bibliographical details and citations appended to the scientific publications were noted down against parameters fixed for the study. They were

entered on MS-Excel and later transferred to SPSS 20th version. In all, 358 research publications of 491 researchers/faculty who published their articles during the year were analysed for their publication patterns.

RESULTS AND DISCUSSION

It can be found from Table 1 that only one article was published by single author while the remaining were collaborative. A large number of articles were published by two authors (43.02%). While more than one fourth of articles were written by three authors (26.54%), a significant number of articles were published by four authors (14.80%). More than 15% of articles (N=55) were published by more than four authors. Surprisingly, three articles were published by 12 authors. From Table 2, it can be interpreted that a majority of articles (56.86%) were the result of team research.

Table 3 provides quantitative analysis of publications of research community of UASD including its constituent colleges. 491 authors have contributed 358 articles together. More than half of the contributors (N=271, 55.19%) have only one publication to their credit. More than one fifth of contributors claim two publications each to their credit. More than 10% of contributors claim three publications each. 5.92% of contributors have four publications each to their credit. The number goes on decreasing as the number of publications increases. There are only two contributors who claim more than 10 publications during one year period.

Table 1: Authorship Pattern.

Authorship	Number	Percentage
Single author	1	0.28
2 authors	154	43.02
3	95	26.54
4	53	14.80
5	30	8.38
6	12	3.35
7	4	1.12
8	4	1.12
10	1	0.28
11	1	0.28
12	3	0.83
Total	358	100.00%

320 articles were written by 229 authors who claim first authorship belonging to UASD. Bontha Rajsekar, Harsha BR. and Patil HY. with five publications were at the top as first authors. Chandra Shekhar B., Divya Jagana and Gundlur SS. with four publications each were the second prolific authors among first authors (Table 4).

Mallapur CP. with 10 publications was the most prolific second author. Yashoda R. Hegde with 8 publications was the second most prolific among second authors. Shreepad Kulkarni and DI. Jirali with 6 publications were the third most prolific among second authors. List of top 5 most prolific authors among second authorship is provided in Table 5.

Table 2: Nature of Collaborative Research.

Nature	Number	Percentage
Joint	154	43.14
Team	203	56.86
Total	357	100%

Table 3: Publications of UAS Research Community.

Number of Publications	Number	Percentage
1	271	55.19
2	107	21.79
3	51	10.39
4	29	5.92
5	15	3.05
6-10	16	3.25
11-15	2	0.41
Total	491	100.00

Table 4: Top Three Authors of UASD among First Authorship.

No.	Author	Number of Papers
1	Bontha Rajsekar	5
2	Harsha BR.	5
3	Patil HY.	5
4	Chandra Shekhar B.	4
5	Divya Jagana	4
6	Gundlur SS.	4
7	Aigal SS.	3
8	Ambarish S.	3
9	Chogatapura Shilpa V.	3
10	Hadimani Basamma	3
11	Hake AA.	3
12	Harijan Yallappa	3
13	Itagi Chaitanya	3
14	Jyothi TV.	3
15	Kambrekar DN.	3
16	Komala NT.	3
17	Lamani Koteshi	3
18	Shreedhara G.	3

Table 5: List of Top Five Authors among Second Authorship.

No.	Author	Second
1	Mallapur CP.	10
2	Hegde Yashoda R.	8
3	Jirali DI.	6
4	Kulkarni Shreepad	6
5	Jagadeesh BR.	5
6	Katageri IS.	5
7	Angadi SS.	4
8	Dasog GS.	4
9	Gurumurthy R.	4
10	Hiremath SM.	4
11	Itagi Sunanda	4
12	Kuligod VB.	4
13	Mutanal SM.	4
14	Natkar PK.	4
15	Patil RS.	4
16	Pushpa Bharati	4
17	Radder BM.	4
18	Shekharappa	4
19	Vastrad AS.	4

Table 6: List of Top Five Authors' Third Authorship.

No.	Author	Number
1	Balikai RA.	7
2	Katageri IS.	6
3	Lella Rajasekhar	5
4	Nargund VB.	5
5	Jadhav MP.	4
6	Nadagouda BT.	4
7	Vijaykumar AG.	4
8	Babalad HB.	3
9	Biradar Suma S.	3
10	Desai Shrinivas	3
11	Jagginavar SB.	3
12	Kuligod VB.	3
13	Mokashi MV.	3
14	Nawalagatti CM.	3
15	Sheikh Peer P.	3
16	Surendra P.	3

Table 7: List of Top Two Authors among Fourth Authorship.

No.	Author	Number
1	Biradar Suma S.	4
2	Patil PL.	4
3	Rudra Naik V.	4
4	Satisha TN.	4
5	Aladakatti YR.	3
6	Balikai RA.	3
7	Khadi BM.	3
8	Patel Bhumika N.	3
9	Patil PV.	3
10	Suresh SMS.	3

RA. Balikai with 7 publications was the most prolific among third authors. IS. Katageri with 6 publications was the second most prolific among third authors. VB. Nargund and Rajasekhar Lella with 5 publications were the third most prolific among third authors (Table 6).

Suma S. Biradar, V. Rudra Naik, P. L. Patil and T. N. Satisha with 4 publications each were the most prolific among fourth and above authorship. List of top two authors among fourth authorship is provided in Table 7.

CP. Mallapur with 14 publications was the most prolific author during the year with 1 first authorship, ten second authorship, 1 third authorship and 2 fourth authorship. RA. Balikai with 12 publications (2 second authorship, 7 third authorship and 3 fourth authorship) was the second most prolific author. Suma S. Biradar (2 second authorship, 3 third authorship and 4 fourth authorship) and VB. Nargund (2 second authorship, 5 third authorship and 2 fourth authorship) were the third most prolific authors. List of top five authors with highest number of publications is provided in Table 8.

Certain weightage points were assigned to first (4 points), second (3 points), third (2 points) and fourth and above authorship (1 point). Weightage points were added together to rank the authors. It is found that CP. Mallapur is the most prolific author with 38 weightage points for 1 first authorship, 10 second authorship, 1 third authorship, and 2 fourth and above authorship. Rajsekhar Bontha is the second most prolific author with 26 weightage points

Table 8: List of Top Five Prolific Authors with Highest Number of Publications.

No.	Author	Total
1	Mallapur CP.	14
2	Balikai RA.	12
3	Biradar Suma S.	9
4	Nargund VB.	9
5	Hegde Yashoda R.	8
6	Natkar PK.	8
7	Bontha Rajsekar	7
8	Jirali DI.	7
9	Kuligod VB.	7
10	Kulkarni Shreepad	7

for 5 first authorship and 2 second authorship. Yashoda R. Hegde is the third most prolific author with 24 weightage points for, 8 second authorship. List of top ten authors is provided as under (Table 9).

From Table 10, it can be analysed that 51 teams comprising of two to five researchers) have collaborated among themselves for more than article leading to 126 publications, which means 35.2% of articles are produced by 51 research teams. Divya Jagana, Yashoda Hegde and Rajsekhar Lella top the list with 5 publications. Rajsekhar Bontha with CP. Mallapur and few others have also produced five publications. In the same way, BR. Harsha and BR. Jagadeesha with others have brought out five papers. HY. Patil and SM. Mutanal with others are also responsible for five publications. B. Chandrashekhar, BM. Radder and VB. Kuligod with many other different authors have brought out 4 papers. G. Anilkumar, RR. Hanchinal, Shrinivas Desai and Suma Biradar; TV. Jyothi and NS.

Hebsur; NT. Komala, R. Gurumurthy, and P. Surendra; Koteshi Lamani and VK. Deshapande; MK. Meena, MB. Chetti and CM. Nawalagatti; Sunilkumar Sirasangi, MP. Basavarajappa and VB. Naragund together have published three papers as a team of researchers. However, S. Ambarish, AP. Biradar, SB. Jagginavar; Shilpa V. Chigatapur, HT. Chandranath; Yallappa Harijan, GK. Nishanth, IS. Katageri; G. Shreedhara, CP. Mallapur with different collaborators have also produced three papers each as a team. SS. Gundlur with a combination of different researchers has produced 4 articles. In all 50 cases, it is observed that first author remains unaltered, while in few cases, second author is changed. But it is clearly observed that there is a toggling of authorship among third and fourth authorships. It raises a question that whether this phenomenon is due to ‘providing authorship for various reasons’. This requires to be clearly investigated further to know is ‘Give and take’ policy of the authors.

Table 9: List of Top Authors.

No.	Author	First	Second	Third	Fourth and above	Total	Points
1	Mallapur CP.	1	10	1	2	14	38
2	Bontha Rajsekhar	5	2	-	-	7	26
3	Hegde Yashoda R.	-	8	-	-	8	24
4	Balikai RA.	-	2	7	3	12	23
5	Patil HY.	5	1	-	-	6	23
6	Kulkarni Shreepad	1	6	-	-	7	22
7	Natkar PK.	2	4	-	2	8	22
8	Harsha BR.	5	-	-	-	5	20
9	Jirali DI.	-	6	1	-	7	20
10	Gundlur SS.	4	-	1	-	5	18

Table 10: Authorship Coupling.

No.	First	Second	Third	Fourth and above	Total	Rank
1	Divya Jagana	Hegde, Yashoda	Lella, Rajasekhar		5	1
2	Bontha Rajsekhar	Salavuddin Mohammad (1 paper only)	Mallapur CP. (4 papers as second author)		5	1
3	Harsha BR.	Jagadeesh BR.	Sanadi, Ummesalma (2)	Pradeep R. (2)	5	1
4	Patil HY.	Mutanal SM. (4 as 2 nd and 1 as 3 rd) Kirankumar, G. Karatangi (1)	Mokashi MV. (3 papers)	Ghatanatti SM. (1)	5	1
5	Chandra Sheker B.	Radder BM.	Kuligod VB.	Aladakatti YR. (3 papers) Kiran Arigela (2 paper) Didal Vijay kumar (1 paper as third author) Badaka Amruth (2 papers) Badavath Shrinivas	4	5

6	Gundlur SS.	Rajkumara S. Tolanur SI. (1 as 2 nd)	Neelakanth JK. (2 as third author, 1 as second author)	Halagalimath SP. (2 as fourth and 1 as third) Dasar GV. (1 as 4 th , 1 as 5 th and 1 as 2 nd)	4	5
7	Ambarish S.	Biradar AP.	Jagginavar SB.	Karabhantanal SS. (in 2 papers)	3	7
8	Anilkumar G.	Hanchinal RR.	Desai Shrinivas	Biradar Suma	3	7
9	Chogatapur, Shilpa V.	Chandranath HT.	Khandagave RB. (1 paper)		3	7
10	Harijan, Yallappa	Nishanth GK.	Katageri IS.	Khadi BM, Patil BR. (1)	3	7
11	Jyothi TV.	Hebsur NS.			3	7
12	Komala NT.	Gurumurthy R.	Surendra P.		3	7
13	Lamani, Koteshi	Deshpande VK.			3	7
14	Meena MK.	Chetti MB.	Nawalagatti CM.		3	7
15	Shirasangi, Sunilkumar	Basavarajappa MP.	Nargund VB.		3	7
16	Shreedhara G.	Mallapur CP.	Salakinakoppa SR. (1) Gundannavar KP. (1)	Balikai RA. (1, 4 th and 1 3 rd) Natikar PK. (2)	3	7
17	Abhilasha CR.	Shekharappa			2	8
18	Anil GH.	Ashtaputre SA.	Rao MSL.		2	8
19	Anusha BG.	Kulkarni Shripad	Harlapur SI. (in 1 paper)		2	8
20	Ashutosh Kumar	Biradar Suma S. ((1 paper as third author)	Yashavantha Kumar KJ. (1 paper as fourth author)	Desai SA. (1 paper as second author Patel Bhumika N, Deepak DA, Arpitha HR, Tigga Aman.	2	8
21	Attar Jameer R.	Aski SG.			2	8
22	Badanayak, Pratikhya	Kulloli, Sadhana D.			2	8
23	Basamma H.	Kulkarni, Shripad			2	8
24	Basha Jaffar S.	Basavarajappa R.	Babalad HB.		2	8
25	Chetan HT.	Potdar MP.	Nadagouda BT.	Patil PL. (1 paper) Patil CR. (1 paper) Balol GB. (1 paper)	2	8
26	Das Ripan Chandra	Somanagouda G.	Bheiru Singh		2	8
27	Deshetti, Mallu B.	Teggi MY.	Hosamani SV. (1 paper)		2	8
28	Deshmukh, Priyadarshini P.	Yenagi, Nirmala B.			2	8
29	Gadad, Hanamant	Vastrad AS.	Krishnaraj PS.		2	8
30	Gautam, Chirag	Virupaksha Prabhu H.	Nargund VB.		2	8
31	Hake AA.	Shirasawa K.	Yadawad A.	Sukruth Mondal, Patil M., (1) Nayak SN., Lingaraju S. (1) Patil PV. (1) Nadaf SL. Gowda MVC. Bhat RS. Badigannavar AM. (1 paper) Patil PV. (1)	2	8
32	Iliger MD.	Alagundagi SC.	Patil MB. (1)	Vijayakumar AG. (1)	2	8
33	Jamanal SK.	Sadaqath Syed			2	8
34	Lambani Kumar	Jahagirdar Shamrao			2	8

35	Matti PV.	Shekharappa	Balikai RA.	Naragund VB.	2	8
36	Mulla, Heenakousar R.	Jirali DI.			2	8
37	Nagaraju P.	Naik MK.			2	8
38	Naik Saida	Chetti MB.			2	8
39	Naveen Kumar BT.	Babalad HB.			2	8
40	Nayak Pooja M.	Angadi SS.			2	8
41	Onkari Daneshwari	Itagi Sunanda			2	8
42	Paul Pinku	Rafee CM.	Balikai RA. (1)		2	8
43	Phulse VB.	Udikeri SS.			2	8
44	Prabhavati K.	Dasog GS.	Sahrawat KL. Manjunath MV.	Patil PL. Wani SP. (1) Korade M. (1)	2	8
45	Radha PL.	Chattannavar SN.			2	8
46	Rajashree BB.	Jirali DI.			2	8
47	Rajimol RP.	Hebbara Manjunath	Dasog GS.	Manjunatha MV. Satyareddy SA. (1) Prasanna kumar (1)	2	8
48	Rani N.	Hegde Yashoda R.	Nargund VB. (1)	Hegde RV. (1) Sirmalli Geeta (1)	2	8
49	Tamgale Geeta S.	Badiger Chhaya			2	8
50	Mangaraj Satyabrata	Malligawad LH.	Paikaray RK. (1) Pradhan SR. (1)		2	8
51	Shirasangi Sunilkumar	Basavarajappa, MP.	Nargund VB.		2	8
	TOTAL				126	

CONCLUSIONS

It is found from the data that solo research is no more practiced in the UASD during the period, as only paper is the result of solo research. Further, co-authorship is tending towards team research. But authorship beyond third authorship is given on a 'give and take' authorship policy of the researchers to increase their number. Statement of responsibility of authorship is not clearly indicated in the title page. Though co-authorship is highly visible, a large majority of researchers have only one article to their credit. This indicates that a small number of researchers are continuously engaged in research. It is recommended that the University should develop institutions' 'Publications Encouragement Policy' for the potential authors, providing guidelines on giving authorship, authorship coupling, and indicating statement of responsibility.

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