

*Full Length Research Paper*

# Citation analysis of doctoral theses on psychology submitted to Kurukshetra University, Kurukshetra

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Accepted 29 November, 2013

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**The analyzed 4037 citations are cited in 12 doctoral theses of Psychology awarded to Kurukshetra University, Kurukshetra from the period 2008-2012. The bibliographic form wise distribution of citations shows that are 3416 (84.62%) journals, followed by 262 books (6.98%). There are two major forms of literature, which comprise 91.6% of total citations.**

**Key words:** Citation, metrics, collaboration, scientometrics, measurement, psychology, bibliographical coupling, obsolescence.

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## INTRODUCTION

Bibliometric is a type of research method used in library and information science. It utilizes quantitative analysis and statistics to describe pattern of publication within a given field or body of literature. The researcher may use bibliometric method of evaluation to determine the influence of a single author or to describe the relationship between two or more authors or workers. Bibliometric studies are used to identify the pattern of publication authorship citations or secondary journal coverage with the hope that, such studies can give an insight into the dynamics of the area under consideration. This consequently leads to better organization of information resources, which is essential for their effective and efficient use. Authorship of a paper has become important for scientists and researchers and understandably, this topic has become an important area for study (VijayaKumar, 2002). Bibliometrics is defined as the organization, classification and quantitative evaluation of publication pattern of all macro and micro communications along with their authorship by mathematical and statistical conclusions. The study throws light on the different aspects of publication such as nature of communication, geographical distribution, authorship pattern and

citations. Quantitative output in the different areas of research pertaining to plantation crops has been projected (Thaoudin, 1998). Citation analysis is an important tool used by the librarian, teachers and Information scientist to represent the relationship which exists between cited and citing document; the technique of citation analysis involves the process of collection, counting and analysis given in various types of literature. This is the direct method for analyzing the library record to determine the actual use of the documents. These types of information can provide useful idea for acquisition of selection of important of documents. This can help libraries; it also helps the information system designers to plan their products and services (Trayambakrao, 2012).

### Statement of the problem

The University Library of Kurukshetra primarily caters to requirements for the researchers besides the teaching faculty.

The user community of a university library has a homogeneity in its literature use pattern for preparation of

research work. The present study is an effort to identify the primary information use pattern of researchers in the recent year in the field of psychology in Kurukshetra University, Kurukshetra. There are a number of methods that can be used in studying the use of information: 1. by asking people about it; 2. by observing its occurrence; 3. by examining the resultant products.

## Objectives

The objectives of the study are to do:

1. Year-wise distribution of the papers;
2. Bibliographic form wise distribution;
3. Ranking of cited journals;
4. Subject-wise analysis of the papers;
5. Authorship pattern in subject wise;
6. Degree of collaboration in literature

## Hypotheses

Journals are the mostly cited sources by researchers in the field of Psychology.

Researchers of Psychology prefer foreign journals to Indian journals. The half-life of book citations is high compared to journal citations in Psychology. Collaborative authorship is high compared to single authorship in the period of this study.

## REVIEW OF LITERATURE

Zafrunnisha (2012) investigated 22565 citations cited in 141 doctoral theses in Psychology submitted to Universities of SV University, Tirupati, Osminia University, Hyderabad, and Andhra University, Visakhapattanam. The journals were most preferred source of information compared to books. 99.60 percent citations were in English language. The most cited journal citations (70.6 percent) were in Psychology. The highest number of 48.13 percent citations belongs to single author papers.

Kumar and Chauhan (2012) found in their study, 3442 citations in 18 theses of psychology submitted to H. N. B. Garhwal Central University Srinagar, Uttarakhand during the period 1991-2000. Distribution of citations by forms of documents, core journals, distribution of journals by frequency of citations, year wise and country wise distribution of journal articles cited were analyzed. The results reveal that journals are the most preferred sources of information used by researchers in the field of Psychology accounting for 42.71% of total citations. Most of the citations from journals are from USA, accounting for 40.18%.

Hamilton and Rhodes (2007) prepared ranked list of

Australian Political Science Journals and publishers for the Australian Political Studies Association. The source of data was collected from Australian Political Science Departments journals listed by ISI, Ulrich's Periodicals Directory and DESTs list of accredited publishers. The ranking shows that the A\* (top 5% journals) included only the American and British Universities publications. Almost all of the A\* and A categories journals have impact factor.

Sharif and Mahmood (2004) analyzed citations appended in two journals/ Pakistan Development Review and Pakistan Economic and Social Review. 4113 citations were from 230 articles in Pakistan Development Review (eight volumes). The Pakistan Economic and Social Review (eight volumes) received 1298 citations in 73 articles. The bibliographic form-wise distribution of citations shows that the highest number of 1845 books (44.85 percent), followed by 1586 journals (38.55 percent) were cited in Pakistan Development Review. The study shows that 2323 maximum citations (56.33 percent) were by single author from the Pakistan Development Review. The Pakistan Development Review cited most 1291 books (69.97 percent) from U.S. origin.

## METHODOLOGY

Kurukshetra University, being a major centre of education research, provides opportunity for conducting a large number of doctoral theses studies every year and houses their products in the form of 12 Doctoral Theses in the Jawaharlal Nehru Library of the University. The theses format is ¼ size paper for 250-500 pages in Jawahar Lal Nehru Library, Kurukshetra University. The present study aims to estimate the extent of use of various documentary sources of information in the process of identification, selection, designing, execution and presentation of doctoral during 2008-2012. The instrument used for data collection was MS Excel format.

## Analysis of data

This article includes analysis of primary data of the study. Data collected from Doctoral theses in the discipline of Psychology (2008-2012) have been classified, tabulated and analyzed in accordance with the set objectives of the study. Only data belonging to the periodicals have been analyzed in depth. The present study includes analysis of 4037 citations from 12 Doctoral theses in the discipline of Psychology.

Table 1 shows that there is no significant change in the number of citations over the different years. The average number of citations per theses submitted in the year 2010 was lowest (11.15) in the five years period for which data were analyzed. One thesis submitted in 1170 contained the highest number of 28.98 citations. The average number of citations per thesis for the whole study was 92.28, which is relatively low when compared to average 11.15 citations per thesis of the previous study.

Table 2 presents the different form of literature used by research scholars of Psychology. Out of 4037 citations, 3416 (84.62%) are from journals followed by books, 262 (6.98%). There are the two major forms of literature, which comprise 91.6% of total citations. The rest are reports 123 (3.51%), conference papers/ proceedings 133(3.4%), newspapers 26(0.65%), dissertations 27 (0.67%), theses 12 (0.30%) and 9 (0.23%) belong to other forms of literature.

**Table 1.** Year- wise distribution of citations.

Year	Number of theses	Citations	Average Citation/ per Theses
2008	2	864	21.41
2009	3	1170	28.98
2010	1	450	11.15
2011	3	623	15.43
2012	3	930	23.03
Total	12	4037	92.28

**Table 2.** Bibliographic form of cited literature.

Sr. No.	Bibliographic Form	Citations	%age
1.	Journals	3416	84.62
2.	Books	262	6.98
3.	Reports	123	3.15
4.	Conference Paper/ Proceedings	133	3.4
5.	News papers	26	0.65
6	Dissertations	27	0.67
7.	Theses	12	0.30
8.	Others	9	0.23
	Total	4037	100.00

Table 3 shows that a total number of 25 print and non print journals were cited in Jawahar Lal Nehru Library Kurukshetra University with their 23 position ranked in journal/citation percentages. In Psychology, 25 journals have been cited at least 10 times or more. These 25 journals account for 1248 Citations (%) out of 3416 and the remaining 216 journals have been cited less than 10 times account for 63.47% citations. The first 10 periodicals, which have been cited at least 20 times or more contribute to 22.95% of total periodical citations. These may be considered as the most useful and core journals. Indian Journal of Applied Psychology is at the top of the rank list with the highest citations (2.87%). It is followed by Journal of Applied Psychology (2.70%).

Table 4 shows that out of the first 10 journals of both studies, five journals are common; however, their ranking (position) citations frequency has changed. In previous study, the journal (9th place in previous study), which was at the top of the rank list, is in the present study at 12th place. The Journal of Psychology which is at 18th place in present study was at 6th place in previous study.

While among the 9 most cited periodicals, only 3 are currently being subscribed to by the University Library. This finding greatly differs from the previous study, where 8 out of the first 9 journals were available in the University Library (Table 5).

Table 6 indicates that the research scholars of Psychology have cited the periodicals from 13 countries. Majority of the cited periodicals belong to two countries and USA is at the top with 92 (31.72%) periodicals, followed by India 68 (23.44%) and Netherlands 46 (15.86%). This shows that researchers of Psychology in Kurukshetra University do not use only Indian periodicals but foreign periodicals to a great extent.

Table 7 shows that 142 (48.97%) periodicals cited by the research scholars are from their own filed Psychology, followed by Education with 68(23.45%) scholars. Periodicals were cited from

generally 32 (11.03%) and the remaining 28 (9.65%) periodicals were cited from other subjects. Subjects of 20 periodicals were not unidentified, as they were not expressed from their titles.

Table 8 shows the authorship pattern reflected in periodical articles. Single author articles contributed 1536 (44.97%) to citations, followed by two authors contributions 1206 (35.30%) and three authors contributions 436 (12.76%). The remaining articles are contributed by four or more authors.

Table 9 shows that 1710 (50.05%) periodicals articles were in the range of 0-2 years old, 890 (26.06%) articles were in the range of 3-4 years old and 810 (23.72%) articles were the range of 5-10 years old. The highest numbers of articles were in the range of 5 years old. It shows that researchers in psychology cite old literature more than current literature.

## FINDINGS OF THE STUDY

The present study was an effort to identify the information sources of the researchers in the Department of Psychology, Kurukshetra University, Kurukshetra on the basis of citations of 12 doctoral theses submitted during 2008-2012. The following were some important findings of the study:

1. Journals were the major source of information used by the researchers. Almost half of the total citations were from journals followed by books (6.98%).
2. 25 journals accounted for more than half (60%) of total periodical citations and two foreign journals titled, Journal

**Table 3.** Rank list of periodicals.

Sr. No	Periodical title	No. of Citations	Cumulative Citations	%age	Cumulative %age	Country	Rank No.
1.	Indian Journal of Applied Psychology	98	98	2.87	2.87	India	1
2.	Journal of Applied Psychology	92	190	2.70	5.57	USA	2
3.	Journal of Educational Psychology	90	280	2.64	8.21	USA	3
4.	Indian Psychological Review	85	365	2.48	10.69	India	4
5.	British Journal of Education Psychology	80	445	2.34	13.03	UK	5
6.	Journal of the Indian Academy of Applied Psychology	76	521	2.23	15.26	India	6
7.	Journal of Personality and Social Psychology	70	591	2.05	17.31	USA	7
8.	SIS Journal of Protective Psychology and Mental Health	68	659	1.99	19.30	India	7
9.	Personality and Individual Differences	65	724	1.90	21.20	Netherlands	8
10.	Journal of Creative Behavior	60	784	1.75	22.95	England	9
11.	Indian Journal of Clinical Psychology	56	840	1.63	24.58	India	10
12.	Journal of learning Disabilities	54	894	1.58	26.17	USA	12
13.	Journal of Psychological Research	50	944	1.46	27.63	USA	12
14.	Psychological Bulletin	45	989	1.31	28.95	USA	13
15.	Journal of Family Welfare	40	1029	1.17	30.12	India	13
16.	Social Welfare	38	1067	1.11	31.23	USA	14
17.	American Psychologist	35	1102	1.02	32.25	USA	15
18.	Studies in Family Planning	30	1132	0.87	33.13	USA	16
19.	Journal of Psychometric Research	26	1158	0.76	33.89	Netherland	17
20.	The Journal of Psychology	20	1178	0.58	34.48	USA	18
21.	Indian Journal of Psychological Medicine	18	1196	0.52	35.01	India	19
22.	American Journal of Psychiatry	16	1212	0.46	35.48	USA	20
23.	Journal of Indian Health & Psychology	14	1226	0.40	35.88	India	21
24.	Journal of Personality & Clinical Studies	12	1238	0.36	36.24	India	22
25.	Journal of Personality	10	1248	0.29	36.53	USA	23
	Remaining 216 titles cited less than 10 times	2168	3416	63.47	100.00	-----	

of Applied Psychology, and Journal of Educational Psychology were the most used periodicals.

3. Only one out of three most cited periodicals (9 out of 25 periodicals) were available in the Kurukshetra University Library. This shows that availability of most used periodicals in the field of psychology is far from

satisfactory.

4. Largest number of total cited periodicals was of USA origin (31.72%) followed by the periodicals published from India (23.44%) and Netherland (15.86%).

5. More than two contributions (80.27%) were produced under single authorship. This is a common phenomenon

**Table 4.** Common Periodicals in the rank lists of the two studies.

Title of the periodicals	Rank in present study	Rank in previous study
Journal of Applied Psychology	2	8
Journal of Educational Psychology	3	2
Indian Psychology Review	4	1
British Journal of Education Psychology	5	10
Journal of the Indian Academy of Applied Psychology	6	12
Journal of Creative Behavior	9	13
Journal of learning Disabilities	12	9
Psychological Bulletin	13	4
The Journal of Psychology	18	6
Journal of Indian Health Psychology	21	14

**Table 5.** Availability of periodicals in Kurukshetra University Library.

Sr. No	Title of Periodicals	Rank
1.	Indian Journal of Applied Psychology	1
2.	Journal of Applied Psychology	2
3.	Indian Psychology Review	4
4.	Journal of Indian Health Psychology	21
5.	Journal of the Indian Academy of Applied Psychology	6
6.	SIS Journal of Protective Psychology and Mental Health	7
7.	Journal of Personality & Clinical Studies	22
8.	Journal of Creative Behavior	9
9.	Personality and Individual Differences	8

**Table 6.** Country- wise distribution of periodicals.

Country	Periodicals	%
USA	92	31.72
India	68	23.44
Netherlands	46	15.86
UK	32	11.04
Canada	8	2.75
Australia	6	2.07
Germany	3	1.04
Sri Lanka	2	0.68
Switzerland	1	0.35
Kenya	1	0.35
Iran	1	0.35
Pakistan	1	0.35
Romania	1	0.35
Unidentified	28	9.65
Total	290	100.00

**Table 7.** Subject- wise distribution of periodicals.

Sr. No.	Subject	Periodicals	%age
1.	Psychology	142	48.97
2.	Education	68	23.45
3.	Generalia	32	11.03
4.	Others	28	9.65
5.	Unidentified	20	6.90
	Total	290	100.00

while almost the same number of citations (23.72%) was more than 10 years old. It shows that research scholars in Psychology use relatively old literature.

### Conclusion

The study aims to ascertain the information sources used by the researchers of Psychology based on the citations provided in their doctoral theses. Citation studies have now become an established tool to aid and formulate various library policies and making decisions about

in social sciences.

6. Only one third of total citations were 5 years or less old

**Table 8.** Authorship pattern.

No. of authors	No. of citations	%	Cumulative %
One author	1536	44.97	44.97
Two author	1206	35.30	80.27
Three author	436	12.76	93.03
Four or more authors	238	6.97	100.00
Total	3416	100.00	-----

**Table 9.** Obsolescence of periodical literature.

Period Intervals (In years)	No. of citations	%	
0-2	1710	50.05	50.05
3-4	890	26.06	76.11
5-more than 10	810	23.72	99.83
Incomplete citations	6	0.17	100.00
Total	3416	100.00	

specific bibliographical forms and publications. The study was conducted by making use of available doctoral theses in the University as well as the departmental library of Psychology. The major sources of information were used from foreign journals. The findings based on the analyzed data revealed a number of significant aspects of the literature sources of the researchers. Findings of the study are likely to be of some help in formulating policies regarding interlay budget allocation for different categories of bibliographic forms and subscription of periodicals.

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