CHAPTER-4

Statement of Problem, Review of Literature And Research Gap

4.1 – Introduction- In research process, the first and foremost step happens to be that of selecting and properly defining a research problem. A researcher must find the problem and formulate it, so that it becomes susceptible to research. Like a medical doctor, a researcher must examine all the symptoms (presented to him or observed by him) concerning a problem before he can diagnose correctly. To define a problem correctly, a researcher must know: what a problem is?

4.2 - Statement of the Problem


4.3 - Review of Related Literature

For a sound study/research, it is essential to review the existing published or unpublished literature on the topic of research work because past knowledge is considered to be the prerequisite for the present knowledge. A review of literature gives to investigator, valuable opinions, experiences and theories of peers. After going through literature, researcher becomes able to decide upon the specific work to be done. The review also helps about the data gathering approaches, methods and techniques of data analysis. The main objective of this method is to apply mind in the matter of various problems by discovering the past trend regarding facts and by demarcating the lines of
development of thought and action. **W.R. Baorg** asserts “the literature of any field forms the foundation upon which all future work will be built. If we fail to build the foundation of knowledge provided by the review of related literature, our work is likely to be shallow and naive and will often duplicate work that has already been done better by someone else.”

Review of literature not only helps in the discovery of important variables, locating of comparative data and findings useful in the interpretation and discussion of results but, provides insight regarding strong points and limitations of the previous studies. Thus, it helps in improvement of the investigation and to bring about a more rational plan for drawing out generalization. Importance of review of related literature can be visualized by the figure-3.

**Figure -3**

**Importance of Review of Related Literature**
It promotes greater understanding of the problem and its crucial aspects and ensures the avoidance of unnecessary duplication; it provides comparative data on the basis of which one can evaluate and interpret the significance of one’s findings. To complete this study descriptive method of research was used. In the beginning a detailed study has been made to review the published literature on the topic. A detailed search has been made in library journals, conference proceedings, on Internet and volumes etc. to review the literature on this topic. Some reviews of related literature are as follow:

4.31 - *International Studies*

**Bottle, R.T. (1973)** made an attempt to transfer Information among scientists can be regarded as analogous to a complex rate process highly dependent on the characteristics of the information forms. A general model is presented and an attempt made to quantify certain pathways. Time values are presented for the major stages and certain transmission losses, arising from the condensation of information as it passes from primary to secondary sources, have been calculated. In particular the roles of theses, alerting services and reviews are discussed. A significant fraction of chemical information appears in a thesis before it is republished in a journal paper.

**Drott, M. Carl; Bearman, Toni Carbo; and Griffith, Belver C. (1975)** made a study of 266 little-known technical house journals in the US, UK and France. Methods of journal selection, location, and bibliographic control are discussed. A sample of technical articles from the journals was searched in abstracting and indexing services to determine their coverage and the extent to which such materials are pre-published or republished in standard periodicals. Authors found that, although there are a significant number of technical articles published in
house journals, the coverage of this literature in secondary sources is very low, and the literature is rarely included in standard periodicals.

**Hoover, Ryan E. (1980)**\(^{(26)}\) examines in his study (1) subject content, (2) file size, (3) types of documents indexed, (4) range of years spanned, and (5) level of indexing and abstracting in five databases which collectively provide extensive coverage of the forestry and forest products industries: AGRICOLA, CAB ABSTRACTS, FOREST PRODUCTS (AIDS), PAPERCHEM, and PIRA. The extent to which these databases overlap and complement each other and the ways in which their characteristics affect database acquisition by a commercial online vendor are explored. (FM).

**Moore, Nicholas L. (1981)**\(^{(36)}\) reported a preliminary investigation into the coverage of library and Information science periodicals, from developing countries, by five major abstracting/indexing services. Periodicals identified in the study are listed together with their coverage by Bulletin Signalétique, Information Science Abstracts, Library and Information Science Abstracts, Library Literature, Referativnyi Zhurnal and Informatics Abstracts. The study was commissioned by the IFLA Round Table of Editors of Library Journals and presented at the 46th IFLA General Conference in 1980.

**Blick, A.R.; Gaworska, S. J. and Magrill, D.S. (1982)**\(^{(5)}\) compare two approaches to a current awareness service. It reports on the results of running computer SDI profiles on commercial on-line databases and comparing the relevant items retrieved with relevant items retrieved by manual scanning of journal sources and disseminated via an information bulletin. Neither computer SDI nor manual scanning retrieved all relevant references. Computer SDI retrieved 43% of relevant items found by manual scanning whereas manual scanning retrieved 61%
of relevant items found by computer SDI. The reasons for lack of retrieval by both selection methods are discussed. Total costs of both current awareness methods are of the same order although a considerable saving could be made in both information scientist and clerical staff time by replacing manual scanning with computer SDI. Because of its greater relevance and timeliness, manual scanning is the better alternative as a stand-alone current awareness service.

**Derksen, Charlotte R.M. (1984)**(12) Searchers on widely varied topics, including dinoflagellata and paleomagnetism, were performed on all 4 data bases.

**Konings, C.A.G (1985)**(33) analyzed seven biographies/bibliographic databases as regards their subject area, list of scanned periodicals, article coverage and overlap. These bibliographies are: A. Computer and information systems abstracts. B. Computer abstracts. C. ICP software directory. D. Computing reviews. E. Computer and control abstracts. F. Computer program abstracts. G. Bulletin signaletique, section 110. Only five bibliographies cover the whole of the subject area examined. A great difference exists between the numbers of periodicals scanned (73 to 2771) and between the percentages of articles included from six carefully selected periodicals (27% in D to 83% in G).

This results in a small overlap between the examined bibliographies. Bibliography B selects most precisely, and in spite of the low number of periodicals scanned, B includes the highest number of unique references. E and G are the largest bibliographies, containing the whole subject area, and moreover they are the only ones searchable online. These are therefore compared with two other databases that contain at least a part of the examined subject area: H. Mathematical reviews. J. Zentralblatt fur die Mathematik. The article coverage of H and
J (resp. 41% and 48%) remains far below the article coverage of E and G (resp. 74% and 85%). From a small examination of the allocated indexing terms it appears that not one article has been assigned similar index words in the various bibliographies. Hence, for a reliable literature study the bibliographies/databases A, B, E, G, H and J all have to be searched, whilst the search profile has to be adapted for each bibliography.

**Price, Clive** and **Burley, Rosemary A. (1986)**\(^{39}\) made an evaluative study by selection of primary and secondary information sources of potential use for current awareness in the field of occupational diseases are presented. In this study they identify the more important English language primary sources of occupational diseases research information. Research studies in the field of occupational diseases, however, are scattered widely in the medical literature. They compare the usefulness of a variety of secondary sources as current awareness tools for bringing together this widely scattered information. Scanning of a number of primary sources together with several secondary sources is recommended as the best means of keeping abreast of the latest research information in this subject area.

**Price, Clive** and **Burley, Rosemary A. (1986)**\(^{40}\) made an evaluation of the usefulness of a number of secondary information sources for retrospective literature searching in the occupational diseases subject area is presented. Several secondary sources were found to be of value but no single source provided comprehensive retrieval of relevant information. Thus, despite considerable overlap between sources, several must always be searched if all information pertinent to a query is required. At the last, some recommendations are made as to when particular secondary sources should be used.
Sekerak, Robert J. (1986) performed an overlap study to identify important psychology journals that are also of interest to biomedical scientists and healthcare practitioners.

Cairns, Paul M. (1986) estimated the number of volumes and titles at Crerar and estimated the duplication between the crerar collection and science collection at Chicago.

Bildfell, Laurie (1986) discussed the background to the dispute between the National library and Public Archives of Canada the source of which was the Nielson Report’s recommendation that original manuscript and papers held by the library, be turned over to the archives and that future library acquisitions be concentrated on published materials to avoid costly duplication of efforts.

White, Howard D. (1987) comparative study by coverage, overlaps, gaps and unique holdings in library collections can be readily created with programs in the widely available statistical package for the social science.

Rochester, Maxine K. (1987) explored the potential of 3 approaches to sampling the ABN database files for determining collection overlap among Australian libraries.

Gluck, Myke (1990) explain the research into journal coverage overlap of the secondary literature indicating the uneven development in this research during the past 30 years and introduces a prototype extension to the traditional definition of overlap.

The products of abstracting or indexing services are referred to as secondary sources. Journal coverage overlap (traditional overlap) has been classically defined as the ratio of the number of either journal titles or articles in the intersection of two secondary sources to the number in
their union. The extension to the classical definition proposed begins with the traditional definition and proceeds to incorporate the relative sizes of the sources into a matrix of dissimilarity values. Matrices for both the traditional definition and its extension are computed for two universes of secondary source ensembles. These matrices are formed by comparing all possible unions of sources in a universe of secondary sources. Multidimensional scaling analysis is applied to graphically demonstrate this modified concept of coverage overlap and a secondary tool selection algorithm is presented.

Yonker, V.A.; Young, K.P.; Beecham, S.K.; Horwitz & Cousin and K. Desi (1990)\(^{(51)}\) was found between designed to make a comparative evaluation of the performance of MEDLINE in covering serial literature. Forensic medicine was chosen because it is an interdisciplinary subject area that would test MEDLARS at the periphery of the system. The evaluation of database coverage was based upon articles included in the bibliographies of scholars in the field of forensic medicine. This method was considered appropriate for characterising work used by researchers in this field. The result for comparing MEDLINE to other databases evoked some concerns about the selective indexing policy of MEDLINE in serving the interest of those working in forensic medicine.

Gillaspy, M.L. (1996)\(^{(19)}\) reports result of a bibliometric study involving Bradford’s law of scatter, to identify the pattern of publication about women scientific journals little overlap was found in the information covered the 6 data bases.

Nardini, R.F. (1996)\(^{(37)}\) compares a vendor’s approval plan shipments for one year to two pairs of similar libraries to determine the degree of little overlap.
Eyer, John E (1998) says that the ability to search bibliographic databases effectively is now an essential skill for anyone undertaking research in health. Author discussed in this article the way in which databases are constructed and some of the important step in planning and carrying out a search. Consideration is given to some of the advantages and limitations of searching using both thesaurus and natural language (text word) terms. A selected list of databases in health and medicine is included.

Robertson, Mark (2001) says E-psyche is a new periodical index for psychology produced by the Database Access Group. This article compares the content and coverage of this new product to the well-established PsycINFO. An analysis of data from periodical coverage lists and test searches allows us to examine the overlap of periodicals to be indexed by these databases, the format and language of these periodicals, and the subject coverage of each product. Several key differences between e-psyche and PsycINFO emerge. A discussion explores some of the implications of these differences for academic libraries.

Narvaez-Berthelemot; Nora & Russell and Jane M. (2001) made an analysis carried out on the 4,326 periodicals in the social sciences included in the most recent 1991 printed edition of the UNESCO DARE database showed that 64% of the world’s production is published by High Income Economy countries (IEC).

Only 0.7% of Low IEC journals in the UNESCO database were also present in the Social Sciences Citation Index (SSCI) for the same year while corresponding figures for the Middle and High IEC were 2.3%, and 97.0%, respectively. With the notable exception of the United States, all countries had fewer journals in SSCI than in UNESCO database.
Chen, Xiaotian (2002)\(^{(10)}\) shows that full-text titles in a subject database are considerably (sometimes nearly 100\%) overlapped with those on the general database of the same vendors, and that there are huge differences between vendors in handling full-text embargo. Librarians should be well aware of these "secrets" to make informed decisions in both licensing databases and helping users. Databases of 3 vendors were analyzed for the overlap issue: EBSCO, Gale, and H.W. Wilson. Wilson has highest overlap percentage: nearly 100\%; Gale and EBSCO have the average around 50\%, ranging from about 25\% to about 80\%, depending on databases.

Hood, William W. and Wilson, Concepcions (2003)\(^{(25)}\) says that databases overlap in their coverage of the literature to a greater or lesser extent. The topic of fuzzy set theory is examined to determine the overlap of coverage in the databases that index this topic. Author found that about 63\% of record in the database are unique to only one database, and the remaining 37\% are duplicated in from two to twelve different databases. The overlap distribution is found to confirm to a Lotka – type plot. The records with maximum overlap are identified; however further work is needed to determine the significance of the high level of overlap in these records. The unique records are plotted using a Bradford type form of data presentation and are found to confirm to a hyperbolic distribution. The extent and causes of intra database duplication are also examined. Finally, the overlap in the top databases in the dataset were examined, and a high correlation was found between overlapping records, and overlapping DIALOGUE one search categories.

Walters, William H. and Wilder, Esther I. (2003)\(^{(49)}\) examine the literature of a multidisciplinary field, later-life migration, and evaluate the effectiveness of 12 bibliographic databases in indexing that literature.
Five journals--three in social gerontology, one in rural sociology, and one in regional science--account for 40% of the papers published in this area. The disciplines that publish the most work on later-life migration are not necessarily those that provide the best index coverage, however. Moreover, four multidisciplinary databases each provide better index coverage than any single-subject index. The relatively low degree of overlap among the 12 databases suggests that scholars working on topics such as later-life migration must continue to rely on a wide range of bibliographic tools, both disciplinary and multidisciplinary.

Banks, Ronald A. (2006)\(^{(1)}\) Analysis strategies used to decide whether the University of Illinois at Urbana-Champaign (UIUC) Library should maintain a subscription to the electronic database Wilson Social Sciences Abstracts (Wilson SSA) are described.

A variety of analyses were conducted: comparison of journal title coverage with four other multi-subject databases available at UIUC (Social Sciences Citation Index, EBSCO Academic Search Elite, Current Contents, and Infotrac); usage statistics; comparison of actual journal year coverage between SSA and the database that offered the highest percentage of title coverage (Infotrac); search retrieval analysis for a small number of subjects; and comparison of journal coverage between Wilson SSA and a multi-social science database search across nine Cambridge Scientific Abstracts social sciences databases. Results showed a high degree of overlap in title, as well as year coverage between SSA and the targeted comparison databases, and low usage/high costs for the SSA product at UIUC. Despite some strong support for maintaining the subscription to SSA from a small number of UIUC faculty, students, and librarians, the decision was made to cancel Wilson Social Sciences Abstracts.
Chen, Xiaotian (2006)\(^9\) studied the overlap between the traditional periodical indexes and the newer mega indexes or databases. Some traditional general indexes have 100\% overlap with the mega index from the same vendor and about 90\% overlap with mega indexes from other vendors. Other traditional and more specialized subject indexes have considerable uniqueness when compared with the newer mega databases.

Egghe, L.A. (2007)\(^{16}\) measures the overlap between two sets A and B (e.g. libraries, databases) one is obliged to calculate the overlap O(A/B) of A with respect to B (i.e. the fraction of elements of B that are also in A) and of O(B/A) of B with respect to A (i.e. the fraction of elements in A that are also in B). Theoretically this requires two samples. In this paper we explain that one sample can suffice to determine confidence intervals for both O(A/B) and O(B/A). The paper closes with the example of measuring the overlap between the secondary sources in mathematics Mathscinet and Zentralblatt MATH and with a remark on the estimation of the Jaccard index.

Leydesdorff, Loet (2007)\(^{35}\) studies two Journal Citation the Science Citation Index 2004 and the Social Science Citation Index 2004 and combined them in order to analyze and map journals and specialties at the edges and in the overlap between the two databases. For journals which belong to the overlap (e.g., Scientometrics), the merger mainly enriches our insight into the structure which can be obtained from the two databases separately; but in the case of scientific journals which are more marginal in either database, the combination can provide a new perspective on the position and function of these journals (e.g., Environment and Planning B — Planning and Design). The combined database additionally enables us to map citation environments in terms of
the various specialties comprehensively. Using the vector-space model, visualizations are provided for specialties that are parts of the overlap (information science, science & technology studies). On the basis of the resulting visualizations, “betweenness” — a measure from social network analysis — is suggested as an indicator for measuring the interdisciplinary of journals.

Kretschmer, Hildrun and Kretschmer, Theo (2007)\(^{(34)}\) says that a fairly large number of Publications in sociology, in computer science or in information sciences, as well as in studies of collaboration in science deal with the studies of social networks with un-weighted ties because measures involving un-weighted ties are easier to calculate. A few studies on networks with weighted ties have been conducted. Such studies not only need more complex formulas but also a process of quantification especially when quantitative empirical data are not directly available. The later are, however, directly available under the condition of using bibliometric or webometric data. Consequently, new complex measures of the degree centrality are introduced including weighed ties possible for use of the analysis of co-authorship or citation networks. Both co-authorship relations and citations are well-quantified data (weighted ties).

Gavel, Ylva and Iselid, Lars (2008)\(^{(18)}\) are to provide the scientific community with some quantitative data of relevance to the evaluation of two major citation databases. In addition, various aspects of the methodology of database coverage comparisons are discussed. Calculations of the overlaps between the journal lists of Web of Science and Scopus and some other major scientific databases are presented. The results provide some measures of the overall title coverage as well as the amount of unique material in the sources studied.
Jean-Pierre and Herubel, V.M. (2008)\(^{(27)}\) made attempt to situate French doctoral dissertations within a historical and contextual framework for librarians and researchers who require a working knowledge of French doctoral grey literature. As French doctoral research for this historical period presents a terra-incognita, a cursory exploration of this research offers the uninitiated an instructive example of how French doctoral production produced uneven distribution among three disciplines in the humanities and social sciences. Examining general contours of French dissertation production in information and Communication Sciences (SIC), Philosophy, and art and archaeology, an evolution of what is available in French dissertation research reveals the nature of this grey literature.

Reports Research has shown that use of electronic resources, such as that provided by the data sets of the ICPSR, leads to an increase in publications by scholars.

Johnson, Wendell G. (2008)\(^{(28)}\) says that the Inter-university Consortium for Political and Social Research (ICPSR), a unit within the Institute for Social Research at the University of Michigan, is the world’s largest social science data archive. The data sets in the ICPSR database give the social sciences librarian/subject specialist an opportunity of providing value-added bibliographic information. Access to the data sets is by membership in the consortium. This article gives an overview of the ICPSR database and of other services provided by the ICPSR, including sample usage statistics and reports. Research has shown that use of electronic resources, such as that provided by the data sets of the ICPSR, leads to an increase in publications by scholars. Librarians from a variety of disciplines—economics, political science, education, sociology, criminal
justice, and social work can help their researchers use the ICPSR’s data sets to help further the goals of social science.

**Burrel, Quentin L. (2009)** gives the definitions of h-type indexes, seeking to give a single-number measure of an author’s impact, usually involve both the author’s productivity in terms of the number of papers published and of the number of citations subsequently received. Author considers the career (so far) of a single scientist so far as his publication and citation records are concerned using data gathered from the Web of Science (WOS). Author find that the development of the citation process as a whole conforms well to the form speculated by Hirsch [1, 2] as well as Burrell’s stochastic model. However, the citation process at level of individual papers shows discrepancies from the model assumptions and we suggest some possible reasons for this.

### 4.32 - NATIONAL STUDIES

**Bharat, K. (1998)** presents result from experiments showing size and overlap estimates for Hot Bot, Altavista, Excite and Infoseek as percentages of their total joint coverage in mid 1997 and in Nov. 1997.

**Birader, B.S. and Premalatha R. (1998)** collected bibliographic items from 14 M.D Psychiatric (Alcoholism) dissertation submitted to the department of Psychiatry, NIMHANS, Bangalore during 1974-95. Authors identifies in this study the forms, authorship pattern, and language wise periodical & periodical articles. Result indicate that major forms of reading material in periodical articles (73.222%) predominant journals language (97.619%) and language of the journal articles (99.310%) are in English. Literature published during the last 20 years contributes almost 64% of the total literature.
Tankar, Amit S; Dharmapurikar and Mete, M.V.(2002)\(^{(47)}\)

analysis of 1040 articles appeared in 52 issue of EPW (Economic and Political weekly) published during the Jan 1999 to Dec 1999 show that EPW give more emphasis on economic development and political affairs. EPW significance publishes review of political economy, women studies, labour, agriculture, management and industry. EPW is an indispensable tool for researcher in economics and political science.

Hirwade, Mangala; Anil & Sanjay Kumar and Dankhade, Seema (2002)\(^{(24)}\) studied of twenty three doctoral theses in economics submitted to Nagpur University during the period 1996-99. A total of 1646 citations were analyzed for identifying their bibliographic form, authorship pattern, ranking of cited document, chronological distribution and obsolescence. The finding reveals that nearly 43% citations were from books and 33% from journals. The authorship pattern study reveals that highest numbers of citations are from single author, nearly 68% in journals, 75% in books and 70% in conference papers. The subject distribution of these reveals that industrials economics and agricultural economics from 57% more than half of the total these submitted during the period.

Vijaya Kumari; Shashikala C. and Rao; K Soma Sekhar (2002)\(^{(48)}\) presented various type of bibliographic services for the easy location retrieval of the mass of material, the producer of the bibliographical services have been covered further in their article. Some of the important bibliographical tool (print and digital form) of the bibliographical control of special material namely – periodical, theses and dissertation, government publications, audio-visual materials, report literature etc are discussed.
Hazarika, Tilak, Kusuma Goswami and Pritmoni Das (2003)\(^{(23)}\) made analysis of Indian forester for 1991-2000. Different parameters of the journals viz. Year wise distribution of papers, distribution of papers among different type of organization, institute wise distribution among the ICFRE (Indian Council of Forestry Research & Education) institutes, state wise distribution of papers in Indian territory and the foreign contributors, authorship pattern, number of citation and the length of the articles are studied. Inferences and finding are shown with relevant data analysis by the authors.

Dash, Jitendra Narayan (2003)\(^{(11)}\) compiled statistical citation data of disciplinary scientific journals. As the citation data varies from discipline to discipline, IF range of journals varies from discipline to discipline. Author observed high impact factor (HIF) scholarly communication journals are not available in all disciplines. HIF journals are concentrated in new biology and medicine fields such as Neuroscience, Molecular biology, Microbiology, Biochemistry, Cell Biology, Endocrinology, Immunology, biotechnology, medicine pharmacy, oncology etc.

Kherde, Mohan R. (2006)\(^{(32)}\) says that enormous literature is publishing at every moment from different corner of the world on various subjects. Library and Information science especially from Vidarbha region is not an exception to it. In the present study he made attempts to identify the literature published by the LIS professionals from Vidarbha region. Personal author, compiler, or editor name(s); click on any author to run a new search on that name. Literature published in the form of book, journal, conference proceeding, dissertation and thesis has been taken into consideration for this study and analyzed carefully on the
chronological distribution, subject wise distribution and authorship pattern.

**Doraswamy, M. (2006)** collected the data from PhD thesis of Botany submitted to Nagarjun University, Guntur during the year 2000-2004 for the study. An analysis of 4055 appended citation made of Botany thesis. Result shows that most of authors, botany, (54.68%) writing books individually without any collaboration. It is also resulted that researcher of botany heavily depend on the journals originated from USA (54.81%).

**Kanungo, Neena Talwar (2007)** analysed the citations pattern of the citations appended in article covered in volume numbers 59-63 of Journal of Asian Studies to determine the information use pattern of the social scientists. The study has covered 108 articles with total 9111 citations contributed by 114 authors. The result indicates that books are highly citated followed but the periodical literature, government publication, newspapers and conference proceedings etc. The less numbers of electronic citation suggest that print literatures are still the most proffered source of information for the social scientists. This study also covered book reviews which have outnumbered the articles many.

**Ramakrishnan, J. and Ramesh Babu, B. (2007)** present a bibliometric analysis of the literature output in the field of Hepatitis covered in three bibliographic databases namely MEDLINE, CINAHL and IPA. The literature covered in three databases for the period 1984-2003 was considered. MEDLINE covered the maximum of 75750 records during the study period, i.e., 1984 to 2003. This is followed by CINAHL and IPA databases. There are total numbers of 82617 records in three databases in the field of hepatitis during the study period. The total number of duplicate records among the three databases is 3305 (4%).
Chapter-4  Statement of Problem, Review of Literature & Research Gap

Total number of records after removing the duplicate records is 79312 (96%). One-third of the citations indexed with the term ‘hepatitis’ for the period of this study have more than five (32.91%) authors. 85.17% of the total contributions are tending to be collaborative research with different degrees of collaborations ranging from 0.82 to 0.86. The collaborative research tends to be more in the field of Hepatitis.

Dhanavandan, Esmail; S. Mohamed and Ramesh, P. (2007)\(^{(13)}\) made a Bibliometric analysis of the journal “The Indian Journal of Agronomy” for the year 1996-2005 has been carried out. The trend of publication such as the year wise distribution of articles, bibliographical distribution citations, authorship pattern, citation pattern, average length of article, chronological distribution, geographical distribution of authors and subject analyses have been studied.

Gupta, B.M. and Dhawan, S.M. (2007)\(^{(22)}\) analysed the overall performance of four major performing sectors, namely universities & colleges, mission-oriented R&D, institutes of national importance, and industry, in physics research in India during 1993-01 in terms of publication growth and output and publication impact, using a number of quantitative indicators. The second part of the paper provides data on comparative analysis of the performance of various sectors participating in physics research in India.

Rao, L.K.; Ravichandra & Sahoo and Bibhuti Bhusan (2008)\(^{(42)}\) made a distribution of Data of multiple authors in two journals namely JASIST and Scientometrics were collected and analyzed. The number of authors per paper in both the journals is increasing; it therefore indicates the trend towards collaborating nature of research is gradually shifting from 2-authored papers to more than two authors per paper.
Sevukan, R. and Sharma, Jaideep (2008)\(^{(46)}\) presented a detailed analysis of research performance of biotechnology faculties in central universities of India from 1997-2006. They used data for the study were retrieved from two database sources, namely, PubMed, NCBI (National Centre for Biotechnology Information); and ISI Web of Science database-Science Citation Index Expanded (SCIE). The results indicate that the growth of literature in biotechnology has steadily increased from 15 articles in 1997 to 43 articles in 2006; two-authored publications predominate amongst the pattern of authorship; applicability of Lotka’s law is validated from the values \(n = 2.12, C = 0.669, \) and \(D = 0.027\) obtained using least square method. However, the application of Bradford’s law does not fit to the literature analysed.

Gupta, B.M.; Dhawan, S.M. and Singh, Ugrasen (2009)\(^{(21)}\) compared the status of social science research in India, China and Brazil using various indicators. They particularly focused on the analyses of annual average publication rate vis-à-vis global publication share; similarity in research profile of different countries; research priorities of countries as measured in terms of national publications output by sub-fields; relative share of international collaborative papers in the national output; distribution of research output by geographical regions within each country; and characteristics of high productivity institutions and highly cited papers computed on select measures.

Kaliyaperumal, K. and Natrajan, K. (2009)\(^{(29)}\) aim to focus on growth pattern as well as overall trend in literature output on retina during 2002-2007. Secondary data collection from a set of retrieved bibliographic records from the literature output in the field of retina from the CD-ROM sources of MEDLINE was studies. The results indicate
variability in the authorship pattern, and English language as the major medium in literature output for retina.

**Kaur, Har and Gupta, B.M. (2009)** examines India’s performance in pharmacology, toxicology & pharmaceutics during 1998-2007, based on several parameters, including the country annual average growth rate, global publication share & rank, institutional profile of select top institutions, international collaboration profile and major collaborative partners, patterns of communication in national and international journals and characteristics of its top high productive authors. The study uses 10 years (1998-2007) publications data in pharmacology, toxicology & pharmaceutics, drawn from Scopus international multidisciplinary bibliographical database.

The above review of existing literature shows that there is no specific study on the topic found although some related articles are found.

**4.4 - Research Gap -** Bibliographical database
From the foregoing comprehensive review of literature on the subject matter of Overlapping in Secondary Sources of Information in Social Sciences, it is inferred that very little work is done on the size and variety of literature available pertaining to the policy of overlapping.

The present study very specifically deals with the policy of aspects and dimensions of overlapping from the viewpoint of librarians as well as users. The study has been made meaningful by taking up the studies of secondary sources (Encyclopedias, Dictionaries, Yearbook, Abstracting Periodicals, and Indexing Periodicals) in Social Sciences.
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Chapter 4  Statement of Problem, Review of Literature & Research Gap


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CHAPTER – 4

Statement Of Problem, Review Of Literature And Research Gap

- 4.1 – Introduction
- 4.2 – Statement Of The Problem
- 4.3 – Review Of Related Literature
  - 4.31 International Studies
  - 4.32 National Studies
- 4.4 – Research Gap