Chapter 3

Research Methodology
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3.1 Why this study?

When we took our vows as library professionals, we were taught to place the information-seekers to the priority position. In fact, users are like our god whom we should serve ethically, religiously, meticulously, and efficiently. Let there be papyrus or paper, printing or electronic technology, our first and foremost priority always remains the same—the users. The jargons taken apart, our basic premise is very simple:

1. To know our users’ personality and needs
2. To know the strength and weakness of our library & information resources available
3. To design suitable systems and services matching the two
4. Offering the services with friendliness and promptitude
5. Taking comments and criticisms of users’ as feedback
6. Redesign the system accordingly
And
7. The whole process rolls again.

This is the reason behind our taking up user study as a subject even though it is a bit un-fashionable nowadays when most everyone
finds favour to take up some aspect concerned with information technology and digital library as their thesis topic. On the other hand, as a student of two-year-long Digital Library Management course under Jadavpur University, I was overjoyed to find that ‘Usability studies’ - which is nothing but a kind of ‘user study’ with users using web interfaces while our non-digital users use card catalogue and such-like mechanisms - find a place of honour even there.

Being a mental health activist since my teen-age, I was already interested in medical informatics even as a student of library & information science. Many mental health professionals used to bombard me questions regarding the state of availability of different information and services thereof and I always tried to answer to the best of my knowledge. It was at that time that I developed an inquisitiveness to assess the scenario of what information the psychiatrists want and what do they do with that information. This early inquest later bloomed into a full-fledged topic where these basic questions were placed against the backdrop of present days’ IT (Information Technology) scenario and the availability of infrastructure facilities and how these changes have affected our protagonists.

3.2 Scope & Coverage:

Two hundred and twenty four psychiatrists working and/or residing in West Bengal having the membership of Indian
Psychiatric Society came under the periphery of this study. Membership Directory\textsuperscript{1} of Indian Psychiatric Society was used to draw this database. Along with them, post graduate trainees doing DPM or MD under the government medical colleges also have been included.

3.3 \textit{Time}:

The survey included the psychiatrists who were studying D.P.M. or M.D. or doing practice or in service during 2002 to 2005: the period when the data was collected.

3.4 \textit{Quantity}:

Using the methods described in 3.7, we have collected 100 questionnaires from the respondents. So our total population is 100.

3.5 \textit{Objective}:

The main objectives of this study are:

I. To survey the nature of information seeking of the psychiatrists in West Bengal

II. To assess the information utilisation pattern of psychiatrists in West Bengal

III. To examine the extent of use of print and electronic resources by the mental health professionals

\textsuperscript{1} Membership Directory. Pune: Indian Psychiatric Society, 2001; 1-100.
IV. To identify problem areas (if any) encountered by our protagonists

V. To recommend the possible and probable new initiatives needed to bridge the gap between the demand and supply of the mental healthcare information.

3.6 About collection and analysis of data:

There are Two hundred and twenty four psychiatrists in West Bengal according to IPS Directory 2001. The number goes up to around 250 when the PGTs are included. They each were contacted with the questionnaire at the beginning of the investigation. Among them, about one-fourth responded mailing back the fielding questionnaire. So in actuality, we have studied about 100 doctors. The rest were as much as available in different conferences. Here the number 100 is a coincidence and was not pre-assigned. It is as according the data were available.

To analysis the data, we made a moderate assumption beforehand that the parameters under the study do not have bias about the non-respondents or non-available doctors. Those who find the assumption unrealistic may take our study restricted on a sizable section of doctors that is 40% of them.
The context of t-tests and chi-square tests were under the assumption of independent and identical distribution of the units from an ideal population.

These psychiatrists were asked to fill up the questionnaire schedule with 49 items relevant to our topic of research. Though most of the items were on their professional attachment and information services used by them or available to them, it is found that a few of the items were unanswered by a very small group of respondents. Hence the total frequencies in the respective cases differ from 100 (the total number of respondents).

3.7 Methodology used:

We have used questionnaire method as related in Section 3.6 above. Initially a pilot study was done on about 10 psychiatrists personally known to us. Based on the outcome of the pilot study, an unstructured questionnaire was designed. The questionnaire includes a few open-ended questions to get their conceptions on some relevant topics but mostly it includes questions that require very short answers and sometimes even just tick marking. This is to suit the respondents’ busy schedules and also to keep the orientation precise and succinct so that objectivity of the results can
be easily derived. Also this preciseness makes data more amenable towards mathematical and statistical manipulation.

The questionnaires were sent by Post, by Email, or by hand through the colleagues of those doctors or other persons. We also have used non-participation observation method.

Wherever possible we tried to interview them- either for filling up of the questionnaire or for completion or clarification of a questionnaire filled up earlier- at the professional conferences that they have attended and also in the Continuing Medical Education (CME) programs arranged by their professional bodies.

3.8 Questionnaire Formulation:

A questionnaire has been designed to gather information from the psychiatrists about their information-seeking behaviour and their information use patterns. Main headings in this questionnaire are:

I. Personal Information
II. Newspaper Reading Habits
III. Use of Local Library
IV. Personal or Home Library
V. Information on Complicated Cases
VI. Latest Professional Information
VII. Research Information

VIII. Internet Use

IX. Information for Publication

X. Conference Attendance

XI. Use of Thesis Information

XII. Use of Patent Information

XIII. Information for Indoor Patients

XIV. Location Information of a Rare Drug

XV. Information for Lecture Preparation

XVI. Experiences of Libraries of Other Countries

XVII. Information from his/her Institute

XVIII. Time Spent in Information Search 

    manual/computerised/internet

XIX. Special Libraries Used

XX. Information from Colleagues

XXI. Information from Trade Catalogues

XXII. Information from Medical Representatives

XXIII. Types of Library Services Received

XXIV. Suggestions, etc.

3.9 **Data Tabulation**:

In the previous phase I have done data collection from psychiatrists through different modes. So at the start of this phase of
my research work I have considerable amount of data in my hand gathered at first hand source.

With this data in my hand, I had to find ways and means to interpret this data in various means. So, this phase called for the necessity of tabulation of this data in a suitable way so as to enable it to subjugate to different layers of mathematical calculation and formula application. This will finally lead to interpretation of this data and testing of the hypothesis. This necessitates a very patient and cautious way of breaking up the questionnaire items into elements and sub elements and fixing up the modalities of filling it up in a way so as to make them tenable towards mathematical and statistical calculation.

3.9.1 Method used:

Among other things, I used two main ways of assigning values to these elements and sub elements:

1. Dichotomous method or Binary Method has been used in most cases taking presence or absence of a parameter in a respondent. This is represented by 1 or 0 which symbolises ‘Yes’ or ‘No’ as the case may require.

2. In some cases, however, exact or approximation of a value is of more help. As for example, ‘Age’ or ‘Number of publication’ needs exactitude as far as possible. So, instead of dichotomous
values, numeric values have been used for this type of parameters.

3.9.2 **Main Elements and sub elements:**

1. Questionnaire Number
2. District
3. Qualification
4. Age in years
5. Gender
6. Professional Attachment
7. Institutional Attachment
8. Membership
9. No. of Publications
10. Year of Passing DPM/MD
11. No. of Journals Subscribed
12. No. of Journals got from Medical Representatives
13. How frequently do you consult these journals
14. Subscription of Indexing/Abstracting/Review Journals
15. Keep Trade Literature coming with newly introduced Medicine?
16. Keep CIMS/MIMS/IDR?
17. Books in Personal Collection
18. Journals in Personal Collection
19. Source of Inf. For Complicated Cases
20. Up-to-date Professional Information
21. Researcher:
   a. Exhaustive search
22. Information source for writing books & articles
23. Source of Information needed for Indoor Patients
24. Source of Information about Rare or New Medicine
25. Source of Information for Popular Lecture
26. Source of Information for Learned Lecture
27. Time Spent in Information Search (hours per week)
28. Time Spent in Library (hours per week)
29. Frequency of getting Info from colleagues
30. Type of info from colleagues
31. Mode of Communication
32. Types of services from the Hospital/nursing Home/Health Centre Library
33. Have you used Libraries of other Countries
34. Search of Patent Information
35. Study of Related Subjects

3.10 **Hypotheses made:**

Some working hypotheses were made at the start of the research work:
a. Heavy dependence on the literature provided by the medical representatives.
b. Gradual shift towards use of Internet and other electronic resources, especially among the junior members of the community.
c. With age, time spent on information-seeking decreases.
d. With age, reliance on experience and intuitive judgment increases.
e. Dependence on scholarly communication among peers is very high.
f. Many have faith in their scholars/seniors judgment and consult them from time to time, especially about critical cases.
g. Hospital library service does not attract most of the psychiatrists, especially in government hospital libraries.
h. Big private hospitals or Hospitals of the Non-Government Organisations may have some sort of libraries and psychiatrists are relying a little upon them.
i. Is there any effect of graduation from institutions like NIMHANS or CIP on information seeking and utilization? Or Is there any effect of studying abroad in reputed organizations (Royal College of Psychiatry, London, U.K. for instance) on information seeking and utilization?
j. Does the institutional attachment have any effect on research/publication and also on information seeking and utilization?
k. Does the membership to professional institutions have any effect on information-seeking and utilization?
I. Does the higher qualification have any bearing on information seeking and utilization?

m. Year of passing MD?

n. Relationship between Time Spent and publication/lecture

o. Relationship between Internet use and publication/lecture (popular/learned), etc.

Direct or Indirect Relevance of these hypotheses with Questionnaire Items is sought out.

3.11 **Relationship Formulation:**

Depending upon this **Direct or Indirect** Relevance, some relationship patterns evolved. Then we constructed tables to match the patterns with different statistical formula.

3.12 **Data Interpretation:**

The title of the Questionnaire is Information seeking behaviour and information utilisation pattern of Psychiatrists in West Bengal: a questionnaire

The Questionnaire used has two different parts:

A. Personal Information and
B. Information need and use

The first part (i.e. Personal Information) is for getting information related to personal antecedents, either for identification in case of future necessity for clarification/addition/modification of any points, or
for gathering relevant data that will be pertinent in understanding the Information seeking behaviour and information utilisation pattern of Psychiatrists in West Bengal. These personal attributes are either identifiers so as to relate with the concerned person or indirect modifiers to set out the different parameter in the information seeking and use process.

**Name:** The first information sought is **Name** (A1) which is an identifier; to be used in case of future need of contact points with the respondent of the questionnaire. For the same reason, Address/phone/email (A2) field is also been added. This Address portion of A2 field is also utilized for other crucial purposes of setting up parameters like any probable influence of Kolkata/non-Kolkata residence or work-place in the determination of their Information seeking and use pattern.

Qualification: Qualification (A3) field is used for setting up parameters like comparative relationship of higher degrees like M.D., M.R.C.P., D.N.B., Ph.D., etc. and degrees like M.B.B.S., D.P.M., DCPM (Doctoral Certificate in Psychiatric Medicine) on the information usage characteristics. In this context, special care has been taken to build up relationship between studying in renowned academic institutes of psychiatry with very good library facility; both within the country like
NIMHANS, Bangalore; CIP, Ranchi; PGI, Chandigarh and also outside the country like The Royal College of Psychiatry in London, U.K. The intention is to recognize any probable pattern paradigms evolving from this factor.

Job Category and Institutional attachment:

Has been evaluated so as to find links

- whether doing governmental service leaves any trace on reading habits
- whether doing governmental service leaves any trace on publication patterns
- whether doing governmental service leaves any trace on the information use pattern
- whether teaching psychiatry makes any difference on the information use pattern
- whether psychiatrists belonging to the non-government sectors conform to any different patterns in this regard
- whether working in NGOs has any effect on determination of information-related patterns in the case of psychiatrist-cum-activists

Memberships:
Membership data is an important tool to know how active a psychiatrist is and it has been critically assessed against the backdrop of publication and other items to see how much influence it carries over the overall pattern of information seeking and use.

The names frequently came out in this field are:

- Indian Psychiatric Society
- Fellow of Royal College of Psychiatry
- Indian Association of Private Psychiatrists
- Social Psychiatry Association

**Publications:**

How many articles are produced by every psychiatrist is a way to judge his/her creative contribution as well as an output measure to understand the information use. Important sub-parameters are articles in national subject journals, in newspapers and popular magazines, in foreign journals, complete books or chapters thereof and any other publication that may come under miscellaneous group.

**Year of passing DPM or MD:**

This is considered important to judge the role of the currency of passing out vis-à-vis the seeking and use of information.

The second part is of crucial importance as it directly relates to the information need and use of Psychiatrists.
In the second part, there are questions that directly relate to information seeking and information use.