

Information-seeking behavior of medical residents in clinical practice in Bahia, Brazil

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APPENDIX



Questionnaire (translated from the original Portuguese instrument), Federal University of Bahia, Brazil, Institute of Information Science, master in information science

Research about the information behavior of the medical resident.

Instructions:

- Answer the questions referring your patient care activities
 - You can mark more than one option in each question (except when specified)
1. Years old? _____
 2. Sex F M
 3. Residency in: _____
 R1 R2 R3
 4. Undergraduate institution: _____
 5. Post-graduate experience: Specialization Other residency finished NA
 6. How many hours a day do you spend in patient care? _____ hours a day
 7. How many patients do you assist in a typical day? _____ patients
 8. Several studies published about information needs of physicians have shown that during patient care, several doubts and questions appear for which it is necessary to consult sources of scientific information (books, journals, databases, etc.). In the last 30 days, did you use some of the resources below to look for information related to your clinical practice (patient care)?
 - Library/librarian
 - Physician supervisor or expert
 - A colleague or other health professional
 - Databases (ex. MEDLINE, Lilacs, Embase)
 - Medical websites (e.g., Bireme, Scielo, MD-Consult, Bibliomed, etc.)
 - Capes portal
 - Your own collection
 - Search engines (e.g., Google, Yahoo, Cadê, etc.)
 - Others (specify): _____
 - Did not
 9. They are many factors that can hinder information searches. Taking into account those factors, which of the situations below motivate you more to seek for information to answer questions appearing during patient care? (If you never encounter questions that require looking for information, skip to the 11th question.)
 - Patient questions that await an answer

- Special interest in this patient
 - Evidence of an unusual or less known case
 - Curiosity
 - Doubts or insecurity
 - Fear of medical error
 - Interest in researching or publishing about the case
 - Must present the case to the supervisor or in a meeting, etc.
 - Other (specify): _____
10. When you decide to consult the literature, what would prevent you from concluding that consultation? (If no obstacles or difficulties prevent you from concluding a consultation, skip to the following question.)
- No library available or library without appropriate collection or services
 - Difficulties in finding relevant documents
 - No computer
 - No personal collection
 - Language barriers
 - Do not know how to deal with electronic information resources (Internet, databases, etc.)
 - Lack of time
 - Cost of documents
 - Other barrier (specify): _____
11. Is it part of your professional routine to visit medical libraries?
- Yes Which one? _____
 - No
 - Seldom
- Why? (Select the option that best applies to your case)
- Because you do not know of an available library or you do not have access to a medical library with a good collection.
 - Because medical libraries' collections are outdated
 - Because medical libraries do not have the bibliographical material that you need
 - Because medical libraries do not have a librarian available to consult
 - Because you think that medical librarians are not well prepared to consult
 - Because it is difficult for you to seek information in the catalog or on the library shelves
 - Because the libraries' working hours are not convenient
 - Because the libraries do not have appropriate places to study or conduct research
 - Because the libraries do not make personalized bibliographic search services available
 - Because the libraries do not have enough computers for research purposes
 - Because you think that you do not need libraries and using the Internet is enough
 - Another reason (specify) _____
12. When you seek information, what media you prefer?
- Electronic or digital
 - Printed

13. Indicate in order (1st, 2nd, 3rd,...) which of the resources below you prefer to use when you seek for information

- Library or librarian
- Supervisor physician or more experienced physician
- A colleague or other health professional
- Bibliographic databases (i.e., MEDLINE, Lilacs, Embase, etc.)
- Capes Portal
- Resources of your own collection
- Medical websites (i.e., Bireme, Scielo, MD Consult, Bibliomed)
- Internet search engines (e.g., Google, Yahoo, etc.)
- Other (specify): _____

14. Which of these bibliographical resources below do you have in your private collection?

Indicate the approximate amounts. (If you do not have a private collection, skip to the following question).

- Books Yes No
How many? 1 to 10 11 to 20 more than 21
- Printed journals subscription Yes No
How many national? How many foreign?
- Electronic journal subscription Yes No
How many national? How many foreign?
- Scientific CD-ROMs Yes No
How many? 1 to 10 11 to 20 more than 21
- Scientific videos Yes No
How many? 1 to 10 11 to 20 more than 21
- Conference proceedings, etc. Yes No
How many? 1 to 10 11 to 20 more than 21
- Subscription to portals or other online resources Yes No Which?
1. _____
2. _____
- Other resources (specify) _____
- Do you have a computer with an Internet connection at home? Yes No
 Dial-up connection
 Broadband connection

15. Indicate in order (1st, 2nd, 3rd,...) which of the bibliographic resources below you use more often

- Books
- Printed journal articles
- Electronic journal articles
- Communication or presentation of congress, meetings, etc.
- Scientific CD-ROM
- Scientific videos
- Other online resources (website information, images, etc.)

Other (please specify): _____

16. Nowadays, scientific information can be found in diverse formats. Indicate in order (1st, 2nd, 3rd,...) which of the modalities below you prefer to use:
- Original articles
 - Narrative reviews
 - Systematic reviews or meta-analysis
 - Conference proceedings
 - Research reports
 - Guidelines
 - Others (specify) _____
17. Through which of the resources below it is more frequent that you receive information on innovations or recent discoveries in your professional area?
- Library or librarians
 - Colleagues, professors, or other health care professionals
 - Printed or electronic journals
 - Pharmacy industry advertisement
 - Mailing discussion lists
 - Medical websites
 - Informal events (discussion, meeting, etc.)
 - Formal events (congress, symposium, etc.)
 - Other (specify): _____
18. Which of the resources below do you believe to be indispensable for better professional practice?
- Hospital library with an up to date collection
 - Clinical librarian
 - Computer with Internet access in clinical setting
 - Electronic or printed journal in clinical setting
 - Books available in clinical setting
 - Congress annals available in clinical setting
 - Medical website subscription available in clinical setting
 - Other (specify): _____
19. Do you complete bibliographic searches or do you ask for assistance?
- You search
 - You ask someone to search (Go to 28th question)
 - Both
 - You do not search (Go to 28th question)
20. How did you learn techniques of database searching?
- You received orientation or training from a librarian
 - You received orientation or training from a professor during an undergraduate or graduate course
 - You took a class that covered this subject
 - You learned in tutorials or using the "Help" button in databases
 - You learned by practicing on your own
 - You read a book, articles, or website about searching

- You took an online course offered by a medical institution website (i.e., Bireme, EPM, etc.)
 - You are not sure if you use techniques correctly
 - In another way (specify): _____
21. The sentences below describe different approaches for searching electronic databases. Choose what best represents your current skill. (Choose only *one* option)
- Write keywords in the dialog box.
 - Select the “advanced search” option
 - Combine different keywords with Boolean operators (“AND,” “OR,” “NOT”)
 - Combine different results in the “search history”
 - Use other database tools (i.e., “limits,” “fields search” or “index”)
 - Use medical headings (MeSH or DeCS+++) and subheadings and combine descriptors
 - Develop search strategies with filters that recover the best evidence studies
22. How do you evaluate the results that you most often obtain in your bibliographic searches?
- Always find quickly what you need
 - Retrieve enough and reasonable number of references (less than 100)
 - In spite of the large amount of retrieved references, you find what you need
 - Results are very broad and most are not relevant to the theme
 - You don't know if the search was exhaustive and often you don't have time to broaden the results
 - You notice that you need to learn more about search strategies
 - You never find what you need
 - Other (specify): _____
23. How often do you search in the databases below?
- | Databases | Often | Seldom | Never | Don't know this
database |
|----------------------|-------|--------|-------|-----------------------------|
| MEDLINE | | | | |
| LILACS | | | | |
| PsycINFO | | | | |
| CINAHL | | | | |
| Web of Science | | | | |
| EMBASE | | | | |
| The Cochrane Library | | | | |
| Other: _____ | | | | |
24. In relation to your scientific literature research in electronic resources (databases and Internet), what are the problems you more frequently found?
- Difficulty handling resources
 - Difficulty selecting among the large amount of documents returned by the searches
 - Connection cost
 - Document cost
 - Lack of time to search
 - Finding specific websites in your area of interest and/or specialization
 - Finding keyword(s) for a good search strategy
 - Other (specify): _____

25. What factors do you use to select the documents that you would like to read to try to answer the questions appearing during your clinical practice?
- Text in Portuguese
 - Brief articles rather than longer articles
 - Free full text
 - Easy access to full text
 - The currency and/or innovation of the information
 - Full text in PDF format
 - Other factors (specify): _____
26. How do you obtain the full text of the documents selected in the databases?
- You go to a library and ask if the documents are available
 - You go to a library and order the documents using their document delivery system
 - You order the document from an Internet document delivery system
 - You only obtain what it is freely available in the database
 - You search the Portal da Capes
 - You search websites (SciELO, Free Medical Journals, etc.)
 - Other (specify): _____
27. How do you like to read electronic documents?
- Read on the computer screen
 - Print the document to read
28. Which is the most frequent subject of your questions? (Choose only *one* option)
- Drug therapy
 - Other therapy (besides drug therapy)
 - Diagnosis or diagnostic test
 - Prognosis
 - Etiology
 - Epidemiology
 - Prevention
 - Other (specify): _____
 - I do not have questions.
29. Still thinking about the subjects of your questions, which of the options below would be the *second* more frequent? (Choose only *one* option)
- Drug therapy
 - Other therapy (besides drug therapy)
 - Diagnosis or diagnostic test
 - Prognosis
 - Etiology
 - Epidemiology
 - Prevention
 - Other (specify): _____
 - I do not have questions.

Critical incident

Think now about any specific occasion during the last month when you needed information related to a patient's health. Do not include information needs about your research, courses, academic works, or questions related to patient data (i.e., age, blood pressure, glucose level, etc.),

30. The information that you needed referred to which specific clinical subject? (Choose only *one* option)

- Drug therapy
- Other therapy (besides drug therapy)
- Diagnosis or diagnostic test
- Prognosis
- Etiology
- Epidemiology
- Prevention
- Other (specify): _____
- You did not need any information last month.

Why?

- No particular reason
- You were not in clinical service
- You did not work last month
- You do not remember if you needed information
- Other (specify) _____

31. Where did you try to find the information?

- Library/librarian
- Physician supervisor or expert
- A colleague or other health professional
- Databases (e.g., MEDLINE, Lilacs, Embase)
- Medical website (e.g., Bireme, Scielo, MD Consult, Bibliomed, etc.)
- Capes Portal
- Your own collection
- Search engines (e.g., Google, Yahoo, Cadê, etc.)
- Other (specify): _____
- Did not find information (End of the questionnaire)

32. What was the result of your research?

- Success (you found the information)
- Partial success (incomplete information; you found it later, or you did not have enough time or the appropriate resources)
- You did not find the information (end of the questionnaire)
- Other (specify): _____

33. If you found information, what was its immediate impact?

- It refreshed your memory of details or facts you may have forgotten

- It proved what you already knew or suspected
 - You could use at least some of the information immediately
 - You found new information
 - It stimulated your interest in further exploration of the theme
 - It did not have any impact
 - Other (specify): _____
34. Did the information you found contribute to modify or to explain a decision taken previously? If so, which one?
- Choice of drug therapy
 - Choice of other kind of therapy
 - Number of treatments proposed
 - Diagnostic test required
 - Choice of treatment strategy
 - Recommendations made to the patient
 - Nothing was modified or explained
 - Other (specify): _____
35. Did the information you found contribute to avoiding some of the following procedures?
- Patient hospitalization
 - Patient return for new consultations
 - Drug therapy
 - Surgery or other interventions
 - Inappropriate recommendations
 - No specific contribution
 - Other (specify): _____