Rev Saúde Pública 2006;40(N Esp):50-6

Miquel Porta[I]

Esteve Fernandez[II]

Elisa Puigdomènech[I]

Book citations: influence of epidemiologic thought in the academic community

Citações de livros: influência do pensamento epidemiológico na comunidade acadêmica

ABSTRACT

Whilst their 'death' has often been certified, books remain highly important to most professions and academic disciplines. Analyses of citations received by epidemiologic texts may complement other views on epidemiology. The objective was to assess the number of citations received by some books of epidemiology and public health, as a first step towards studying the influence of epidemiological thought and thinking in academia. For this purpose, Institute for Scientific Information/ Thomson Scientific - Web of Science/ Web of Knowledgedatabase was consulted, in May 2006. The book by Rothman & Greenland appeared to have received the highest number of citations overall (over 8,000) and per year. The books by Kleinbaum et al, and by Breslow & Day received around 5,000 citations. In terms of citations per year the book by Sackett et al ranks 3rd, and the one by Rose, 4th of those included in this preliminary study. Other books which were influential in the classrooms collected comparatively less citations. Results offer a rich picture of the academic influences and trends of epidemiologic methods and reasoning on public health, clinical medicine and the other health, life and social sciences. They may contribute to assess epidemiologists' efforts to demarcate epidemiology and to assert epistemic authority, and to analyze some historical influences of economic, social and political forces on epidemiological research.

KEYWORDS: Textbooks. Reference books. Epidemiology. Bibliometrics.

RESUMO

Ainda que sua 'morte' tenha sido freqüentemente certificada, os livros continuam sendo relevantes para muitas profissões e disciplinas acadêmicas. Análises de citações recebidas por textos epidemiológicos podem complementar outras visões em epidemiologia. O objetivo do estudo foi avaliar o número de citações recebidas por alguns livros de epidemiologia e saúde pública, como um primeiro passo para estudar a influência do pensamento epidemiológico e o pensar da academia. Para este propósito, a base de dados do *Institute for Scientific Information/ Thomson Scientific - Web of Science/ Web of Knowledge* foi consultada em maio de 2006. O livro de Rothman & Greenland recebeu o maior número de citações no total (mais de 8.000) e por ano. Os livros de Kleinbaum et al, e de Breslow & Day tiveram em torno de 5.000 citações. Em termos de citações por ano, o livro de Sackett et al ocupou o terceiro lugar, e o de Rose, o quarto entre os incluídos no estudo. Outros livros que tiveram influência em salas de aula, comparativamente, tiveram menos citações. Os achados oferecem um rico retrato das influências acadêmicas e tendências de métodos epidemiológicos e

[I] Institut Municipal d'Investigació Mèdica. Barcelona, Spain

[II] Institut Català d'Oncologia, L'Hospitalet de Llobregat. Barcelona, Spain

Correspondence:
Miquel Porta
Clinical & Molecular Epidemiology of Cancer Unit
Institut Municipal d'Investigació Mèdica (IMIM)
Universitat Autònoma de Barcelona
Carrer del Dr. Aiguader 80
E-08003 Barcelona, Catalonia, Spain
E-mail: mporta@imim.es

Received: 5/29/2006

interpretação em saúde pública, medicina clínica e outras ciências da saúde, da vida, e sociais. Eles podem contribuir para avaliar os esforços dos epidemiologistas para demarcar a epidemiologia e afirmar sua autoridade epistemológica, e para analisar algumas influências históricas de forças econômicas, sociais e políticas sobre as pesquisas epidemiológicas.

DESCRITORES: Livros de texto. Obras de referência. Epidemiologia. Bibliometria.

INTRODUCTION

Books, and among them textbooks, are of a too obvious importance to any profession and academic discipline. 'Obvious' to the extent that systematic, comprehensive and contemporary analyses of their contents are often lacking. This seems largely the case of books in epidemiology and public health – itself a uniquely polyedric set of disciplines and professions, with a rich tradition of self-reflection into epistemological, ontological and other philosophical issues.[1,2,12,49,67]

It is owed to professor Raj Bhopal, currently at the University of Edinburgh Medical School, the only comprehensive and critical analysis of contemporary epidemiology textbooks.[10,11] Of course, book reviews do provide the occasion or the excuse for the informal side comment on the state of the discipline.[29]

Potentially related, but often at unconnected level, simple quantitative compilations of bibliometric data have quite been considered as lacking meaning precisely or mainly because of their theoretical vacuum, or their ignorance of the institutional and intellectual contexts in which the discipline is practised.[2]

During a sketchy reflection on the oeuvre of Susser,[57] one of the most influential epidemiologists of the 20th century, a first approach was undertaken at the number of times his main text in epidemiology. *Causal thinking in the health sciences*[66] had been cited, as recorded in the Institute for Scientific Information – ISI/Thomson Scientific database.[55,56,58,59] It hence became more apparent that citation analyses of epidemiologic texts might help complement other analyses and reflections on epidemiology. Thus, the objective of this essay was to assess the number of citations received by selected epidemiologic/public health books, as a first step towards studying the influence of epidemiological thought and thinking within academic communities.

METHODS

In late May, 2006 we accessed online the ISI/Thomson Scientific - Web of Science/ Web of Knowledge.* This includes: a) the well-known Science Citation Index Expanded (SCI-Expanded), from 1945 to present;[55,56] b) the Social Sciences Citation Index (SSCI), from 1956 to present; and c) the Arts & Humanities Citation Index (A&HCI), from 1975 to the present.

Based on Bhopal's list[10,11] and own teaching references, it was first searched for the number of times several important books in epidemiology had been cited. Since this is an exploratory exercise, we limited the analysis to about a dozen books that in the authors' view, offer the possibility to contrast several approaches, subspecialties and schools of thought. Specifically, the following books were first included (in chronological order of the first edition):

- Morris' *Uses of epidemiology*[50-52] (1957, 1964, 1975);
- MacMahon et al *Principles and methods*[42,43] (1960, 1996);
- Susser's *Causal thinking in the health sciences*[66] (1973);
- Barker & Rose *Epidemiology in medical practice*[3-7] (1976, 1979, 1984, 1990, 1998);
- Lilienfeld et al *Foundations of epidemiology*[39-41] (1976, 1980, 1994);
- Fletcher's *Clinical epidemiology*[22-25] (1982, 1988, 1996, 2005);
- Kleinbaum et al *Principles and quantitative methods*[34] (1982);
- Miettinen's *Theoretical epidemiology*[48] (1985);
- Feinstein's *Architecture of clinical research*[19] (1985);
- Rothman & Greenland's *Modern epidemiology*[61,62] (1986, 1998);
- Sackett et al. *Clinical epidemiology*[63,64] (1985, 1991);
- Hennekens et al *Epidemiology in medicine*[30] (1987);
- Rose's *Strategy of preventive medicine*[60] (1992);
- Gordis' *Epidemiology*[26-28] (1996, 2000, 2004).

On a second stage, other books were included, generally more specialised and which allowed to explore the relationship between citations and other characteristics of epidemiology books.

For each book many possible citations were searched, to allow not only for citation mistakes (e.g., in the authors' initials or surname, in the title of the book),

*The access should be made through: http://www.isiwebofknowledge.com and http://scientific.thomson.com/knowledgelink/

Table 1 - Total number of citations received by a selection of books of epidemiology, based on ISI/Thomson's Scientific - Web of Science/Web of Knowledge.

Author(s)	Brief title & refs.	Edition, year[a]	Years[b]	Citations	Citations per year	Notes
Morris	Uses of epidemiology[50-52]	1st., 1957 2nd., 1964 3rd., 1975	49	525	10.7	c
MacMahon, Pugh, Trichopoulos	Principles and methods[42,43]	1st., 1960 2nd., 1996	46	1,604	34.9	
Susser	Causal thinking[66]	1st., 1973	33	424	12.8	
Barker, Rose	Epidemiology in medical practice[3-7]	1st., 1976 2nd., 1979 3rd., 1984 4th., 1990 5th., 1998	30	116	3.9	
Lilienfeld, Lilienfeld, Stolley	Foundations of epidemiology[39-41]	1st., 1976 2nd., 1980 3rd., 1994	30	1,373	45.8	
Fletcher, Fletcher, Wagner	Clinical epidemiology[22-25]	1st., 1982 2nd., 1988 3rd., 1996 4th., 2005	24	1,336	55.7	
Kleinbaum, Kupper, Morgenstern	Principles and quantitative methods[34]	1st., 1982	24	4,657	194.0	
Miettinen	Theoretical epidemiology[48]	1st., 1985	21	613	29.2	
Feinstein	Clinical epidemiology[19]	1st., 1985	21	1,081	51.5	d
Rothman, Greenland	Modern epidemiology[61,62]	1st., 1986 2nd., 1998	21	7,591	361.5	e
Sackett, Haynes, Tugwell	Clinical epidemiology[63,64]	1st., 1985 2nd., 1991	21	3,214	153.0	
Hennekens, Buring	Epidemiology in medicine[30]	1st., 1987	19	581	30.6	
Rose	Strategy of preventive medicine[60]	1st., 1992	14	691	49.3	
Gordis	Epidemiology[26-28]	1st., 1996 2nd., 2000 3rd., 2004	10	295	29.5	

[a]Any edition of the books shown in the table may have been reprinted several times, and citations to subsequent printings are included.
[b]Years elapsed since first edition (citations are up to 27 May 2006).
[c]For all books with more than one edition, the number of citations includes citations to any and all editions.
[d]Other important books by Feinstein would need to be considered in future analyses.[17,18,20,21]
[e]The number of citations does not include citations recorded with the name of the individual author of chapters not authored by Rothman & Greenland. For multi-author textbooks the characteristics of the ISI/Thomson database require to search individually for citations to each chapter (possible only by name of first author of the chapter), and then add-up the citations received by all chapters. This applies to all books with chapters that were not written by the main authors or editors. This fact may be particularly relevant for some important books, such as Schottenfeld and Fraumeni's huge text on cancer epidemiology and prevention.[65]

but also to capture all citations to individual chapters or sections of the book (e.g., citations to specific pages). The search was not restricted to any period and hence, books published long ago had more time to accumulate citations. As further specified ahead, all directly related editions for a given book were included (see footnotes to Table 1).

RESULTS

Table 1 shows books included in this essay along with their main editions, the years elapsed from the first edition until 2006, the number of citations registered by ISI/Thomson, and the simple average of citations received per year.

Some books that appear to have been or to be widely influential in the classrooms and beyond may have collected relatively few citations. This first observation is perhaps partly subjective, but nonetheless sounds true. Particularly, but not only, books primarily intended for the undergraduate audiences, such as those by Barker & Rose,[3-7] or Gordis.[26-28] This is not a rare phenomenon and it is not exclusive of "teaching books", but also of good review papers used as teaching materials (mentioned by teachers, reprinted in course materials, read by students). For example, Bhopal's useful paper,[11] already mentioned, has received just three citations (one by a paper in the field of academic medicine, and two by Bhopal himself – one in a review of the Oxford Textbook of Public Health and one in a related journal paper[10]). The identification and citation analysis of "key teaching papers" would be a fascinating topic of importance in itself, and also to further characterize how epidemiological thinking flows.

Rothman's[61,62] is the epidemiologic book that has received the highest number of citations (Table 1). The number shown in the table is certainly an underestimate, since a number of additional citations have been 'given' to chapters not authored by the editors (about one third of the book chapters and pages). The book may hence have received over 8,000 citations. The book by Kleinbaum et al,[34] also devoted to epidemiologic methods, ranks second in

number of citations. This leading positions are also apparent when the time since publication is taken into account; i.e., when considering the average number of citations per year (c/y). Although the ranking does not change substantially, it is noticeable that c/y make the book by Rose[60] climb to the fourth place, after Rothman & Greenland's[62] (first), Kleinbaum and colleagues'[34] (second), and Sackett and colleagues'[63,64] (third). The data in Table 1 is not surprising (which speaks well of the data source); and quite a photograph of academic influences – and trends – in the past quarter century.

Other specialised books of epidemiology are listed in Table 2. The two books by Breslow & Day[13,14] on cohort and case-control studies are highly cited; again a not surprising fact. Particularly in light of their well-known quality and innovative contents, and of their methodological focus, as previously observed with the books from Rothman & Greenland.[62]

DISCUSSION

Clearly, all books are not 'on the same ground'. For instance, Rothman's, Kleinbaum's and others have more on *technique* than, say, Susser's, Roses' or Morris' and may hence be more *quotable* by (the vast majority of) empirical papers. Other books are primarily meant for students and may hence be less cited by professional researchers; this may be the case of the books by MacMahon et al, Gordis, or the Lilienfelds.

The caveats of ISI's database are also relatively well-known,[55,56,58,59] though not always kept in mind. Special attention must be paid to the source of citations: so-called 'source' journals chosen by ISI/Thomson; not always a comprehensive or obvious choice.[56] Hence, the truly determinant source of the number of citations are, generally speaking, research-oriented, academic, largely Anglo-Saxon journals. This fact greatly influences – again, not so obviously – the chances that different types of books have of acquiring citations. Methodological, highly-technical books of direct use for research in the biomedical sciences are prime candidates to being cited.

The choice of texts included here is no doubt personal and purposely limited. In the future, it will need to be expanded to include more books on the social sciences and public health, biostatistics as applied to epidemiology and health research, as well as the subspecialties (e.g., social epidemiology, nutritional epidemiology, molecular and genetic epidemiology, disease- and exposure-oriented approaches). The authors definitely did not wish to limit the analysis to textbooks. Rather, it is needed to aim at capturing texts that express epidemiologic thought and thinking. There are several other obvious limitations of this exploratory essay that will not be discussed herein due to space factors.

A good number of epidemiologists have written more than one or two books. When this happened, it would clearly be a mistake to focus on just one text to judge the influence of the scholar. In the case of Susser, for instance, his *Sociology in medicine*[68] has accumulated over 300 additional citations. Kleinbaum,[34] Last,[35-38] Friedman or Abramson are other examples of authors with several influential textbooks.

Table 2 - Total number of citations received by other, generally more specialised books of epidemiology, based on ISI/Thomson's Scientific - Web of Science/Web of Knowledge.

Author(s)	Brief title & refs.	Edition, year[a]	Years[b]	Citations	Citations per year
Last	A dictionary of epidemiology[35-38]	1st., 1983 2nd., 1988 3rd., 1995 4th., 2001	23	1,410	61.3
Breslow, Day	Statistical methods[13,14]	1st., 1980 1st., 1987	26	5,582	214.7[c]
Morrison	Screening[53,54]	1st., 1985 2nd., 1992	21	307	14.6
Meinert	Clinical trials[46]	1st., 1986	20	516	25.8
Checkoway, Pearce, Kriebel	Methods in occupational epidemiology[15,16]	1st., 1989 2nd., 2004	17	447	26.3
Beaglehole, Bonita, Kjellström	Basic epidemiology[8]	1st., 1993	13	118	9.1
Holland	Screening[31]	1st., 1990	16	74	4.6
Hulley, Cummings	Designing clinical research[32,33]	1st., 1988 2nd., 2001	18	561	31.2
Marmot, Wilkinson	Social determinants of health[44,45]	1st., 1999 2nd., 2006	7	319	45.6
Berkman, Kawachi	Social epidemiology[9]	1st., 2000	6	315	52.5
Szklo, Nieto	Epidemiology. Beyond the basics[69]	1st., 2000	6	202	33.4

[a]Any edition of the books shown in the table may have been reprinted several times, and citations to subsequent printings are included.
[b]Years elapsed since first edition (citations are up to 27 May 2006).
[c]The ISI/Thomson data actually do not allow to distinguish citations to each of the two books.

Table 3 - Books of and on epidemiology: witnesses and actors of core intellectual and professional processes.

· How did the epidemiologists' ideas about what is science and what makes epidemiology distinct from other fields change over time?
· Why have epidemiologists worried so persistently about the scientific status of their field? What forms have these concerns taken?
· How did they go about trying to demarcate epidemiology?
· Why and how did epidemiologists' engage in boundary-making endeavours? How do these efforts reflect and respond to wider circumstances in which scientists engage in disciplinary demarcation?
· How do epidemiologists' attempts to demarcate epidemiology constitute interested strategic actions aiming to assert or to reclaim contested epistemic (disciplinary or professional) authority and to claim jurisdiction over disputed areas of public health, medicine and science?
· Who were these discussions directed to and what were they supposed to accomplish?
· What accounts for these persistent (intra)disciplinary discussions as to whether epidemiology is a science?
· What may be the relationship between these various attempts to articulate the scientificity and the specificity of epidemiology and the production of epidemiological knowledge?
· Why and how did these discussions change in the course of the 20th century as epidemiology developed as a field of practice and an academic discipline?

Modified from Amsterdamska[2] (2005)

Citations to books are just a fraction – usually unknown – of citations received by epidemiologic writings of all sorts. Even books heavily or completely focused on methods, they are probably much less cited than methodological papers. Impressively, for instance, just one of Miettinen's papers[47] has accumulated over 1,500 citations in the ISI database. And at least a dozen of other papers – most methodological, usually authored by him alone – have accumulated over 100 citations each. Thus, a few papers by a leader like Miettinen may easily 'have' over 3,000 citations. Similarly, Feinstein had over 50 papers with more than 100 citations each, and several are very close to 1,000 citations each. The use of books and their 'impact' in research and professional practices are questions that often seem to escape analyses.[58] The future of books is an ever exciting issue.

An open question on citation analysis remains: what does it actually mean? In this sense, it is known that citation analyses (of journals, papers, books, persons, institutions…) are only part of a complex and value-oriented process – a process deeply embedded in socioeconomic and cultural realities.[57,58]

So what do ISI/Thomson citations tell about epidemiology books and epidemiology at large, other than that some books are more 'quotable' or 'citable' than others? The floor is yours, the debate is worthwhile. While shades and problems would need to be addressed openly, one positive feature stands out: the enormous and positive influence of epidemiologic methods and reasoning – beyond epidemiology and public health – into clinical medicine. In addition, to a lesser but noticeable extent, the microbiologic sciences.[12] One possible shortcoming: a limited influence on health and social policies?[1,9,44,45,50-52,57,67,68]

Books have been, are, and shall continue to be privileged witnesses – and main characters at once – of a number of fundamental scientific and professional processes concerning epidemiology and the other health, life and social sciences (Table 3). Amsterdamska[2] reminds that epidemiologists' ideas about what it means to be a science and how to 'demarcate' epidemiology changed several times during the 19th and 20th centuries. "These changes in the definitions of disciplinary identity of epidemiology went hand in hand with changes in the institutional location of epidemiology, its professional organization, and its practical engagement in public health policy and administration. Ideas about epidemiology's boundaries also structured the field's intellectual priorities shaping the questions that were asked, the methods used to address them, and the kinds of answers that were considered appropriate."[2] Each and all of these processes may be found and has to be explored in epidemiology books, too.

ACKNOWLEDGEMENTS

Supported in part by grants from 'Red temática de investigación cooperativa de centros en Cáncer' (C03/10) and 'Red temática de investigación cooperativa de centros en Epidemiología y salud pública' (C03/09), Instituto de Salud Carlos III.

REFERENCES

1. Almeida-Filho N. La ciencia tímida. Ensayos de deconstrucción de la epidemiología. Buenos Aires: Lugar; 2000.

2. Amsterdamska O. Demarcating epidemiology. *Sci Technol Human Values.* 2005;30:17-51.

3. Barker DJP, Cooper C, Rose GA. Epidemiology in medical practice. 5th ed. Edinburgh: Churchill Livingstone; 1998.

4. Barker DJP, Rose GA. Epidemiology in medical practice. Edinburgh: Churchill Livingstone; 1976.

5. Barker DJP, Rose GA. Epidemiology in medical practice. 2nd ed. Edinburgh: Churchill Livingstone; 1979.

6. Barker DJP, Rose GA. Epidemiology in medical practice. 3rd ed. Edinburgh: Churchill Livingstone; 1984.

7. Barker DJP, Rose GA. Epidemiology in medical practice. 4th ed. Edinburgh: Churchill Livingstone; 1990.

8. Beaglehole R, Bonita R, Kjellström T. Basic epidemiology. Geneva: World Health Organization; 1993.

9. Berkman LF, Kawachi I. Social epidemiology. New York: Oxford University Press; 2000.

10. Bhopal R. Paradigms in epidemiology textbooks: in the footsteps of Thomas Kuhn. *Am J Public Health*. 1999;89:1162-5.

11. Bhopal R. Which book? A comparative review of 25 introductory epidemiology textbooks. *J Epidemiol Commun Health*. 1997;51:612-22.

12. Bolúmar F, Porta M. Epidemiologic methods: beyond clinical medicine, beyond epidemiology. *Eur J Epidemiol*. 2004;19:733-5.

13. Breslow NE, Day NE. Statistical methods in cancer research. Vol I: The analysis of case-control studies. Lyon: IARC Scientific Publications; 1980.

14. Breslow NE, Day NE. Statistical methods in cancer research. Vol II: The analysis of cohort studies. Lyon: IARC Scientific Publications; 1987.

15. Checkoway H, Pearce N, Crawford-Brown DJ. Research methods in occupational epidemiology. 1st ed. New York: Oxford University Press; 1989.

16. Checkoway H, Pearce NE, Kriebel D. Research methods in occupational epidemiology. 2nd ed. New York: Oxford University Press; 2004.

17. Feinstein AR. Clinical judgment. Baltimore: Williams & Wilkins; 1967.

18. Feinstein AR. Clinical biostatistics. Saint Louis: C. V. Mosby, 1977.

19. Feinstein AR. Clinical epidemiology. The architecture of clinical research. Philadelphia: WB Saunders; 1985.

20. Feinstein AR. Clinimetrics. New Haven: Yale University Press; 1987.

21. Feinstein AR. Principles of medical statistics. Boca Raton, FL: Chapman & Hall/CRC; 2002.

22. Fletcher RH, Fletcher SW. Clinical epidemiology. The essentials. 4th ed. Baltimore: Wolters, Kluwer, Lippincott, Williams & Wilkins; 2005.

23. Fletcher RH, Fletcher SW, Wagner EH. Clinical epidemiology. The essentials. 1st ed. Baltimore: Williams & Wilkins; 1982.

24. Fletcher RH, Fletcher SW, Wagner EH. Clinical epidemiology. The essentials. 2nd ed. Baltimore: Williams & Wilkins; 1988.

25. Fletcher RH, Fletcher SW, Wagner EH. Clinical epidemiology. The essentials. 3rd ed. Baltimore: Williams & Wilkins; 1996.

26. Gordis L. Epidemiology. Philadelphia: W.B. Saunders; 1996.

27. Gordis L. Epidemiology. 2nd ed. Philadelphia: W.B. Saunders; 2000.

28. Gordis L. Epidemiology. 3rd ed. Amsterdam & Philadelphia: Elsevier; 2004.

29. Greenland S. Book review: Theoretical epidemiology by Miettinen OS. *Epidemiol Monitor*. 1986;7(3):4-6.

30. Hennekens CH, Buring JE, Mayrent SL. Epidemiology in medicine. Boston: Little, Brown & Co.; 1987.

31. Holland WW. Screening in health care: benefit or bane? London: Nuffield Provincial Hospitals Trust; 1990.

32. Hulley SB, Cummings SR, Browner WS, Grady D, Hearst N, Newman TB, editors. Designing clinical research: an epidemiologic approach. 2nd ed. Philadelphia: Wolters, Kluwer, Lippincott, Williams & Wilkins; 2001.

33. Hulley SB, Cummings SR, editors. Designing clinical research: an epidemiologic approach. Baltimore: Williams & Wilkins; 1988.

34. Kleinbaum DG, Kupper LL, Morgenstern H. Epidemiologic research. Principles and quantitative methods. Belmont, CA: Lifetime Learning Publications; 1982.

35. Last JM, editor. A dictionary of epidemiology. New York: Oxford University Press; 1983.

36. Last JM, editor. A dictionary of epidemiology. 2nd ed. New York: Oxford University Press; 1988.

37. Last JM, editor. A dictionary of epidemiology. 3rd ed. New York: Oxford University Press; 1995.

38. Last JM, editor. A dictionary of epidemiology. 4th ed. New York: Oxford University Press; 2001.

39. Lilienfeld AM. Foundations of epidemiology. New York: Oxford University Press; 1976.

40. Lilienfeld AM, Lilienfeld DE. Foundations of epidemiology. 2nd ed. New York: Oxford University Press; 1980.

41. Lilienfeld DE, Stolley PD. Foundations of epidemiology. 3rd ed. Oxford: Oxford University Press; 1994.

42. MacMahon B, Pugh TF. Epidemiology. Principles and methods. Boston: Little, Brown & Co; 1960.

43. MacMahon B, Trichopoulos D. Epidemiology. Principles and methods. 2nd ed. Boston: Little, Brown & Co; 1996.

44. Marmot M, Wilkinson RG. Social determinants of health. New York: Oxford University Press; 1999.

45. Marmot M, Wilkinson RG. Social determinants of health. 2nd ed. New York: Oxford University Press; 2006.

46. Meinert C. Clinical trials. Design, conduct, analysis. New York: Oxford University Press; 1986.

47. Miettinen OS. Estimability and estimation in case-referent studies. *Am J Epidemiol*. 1976;103:226-35.

48. Miettinen OS. Theoretical epidemiology. New York: John Wiley & Sons; 1985.

49. Miettinen OS. Epidemiology: *quo vadis*? *Eur J Epidemiol*. 2004;19:713-8.

50. Morris JN. Uses of epidemiology. Edinburgh: E&S Livingstone; 1957.

51. Morris JN. Uses of epidemiology. 2nd ed. Edinburgh: E&S Livingstone; 1964.

52. Morris JN. Uses of epidemiology. 3rd ed. Edinburgh: Churchill Livingstone; 1975.

53. Morrison AS. Screening in chronic disease. 1st ed. New York: Oxford University Press; 1985.

54. Morrison AS. Screening in chronic disease. 2nd ed. New York: Oxford University Press; 1992.

55. Porta M. Factor de impacto bibliográfico (Science Citation Index y Social Sciences Citation Index) de las principales revistas de medicina preventiva, salud pública y biomedicina. Algunas cifras, algunas impresiones. *Revisiones Salud Pública*. 1993;3:313-47.

56. Porta M. The bibliographic 'impact factor' of ISI: how relevant is it really for public health journals? *J Epidemiol Commun Health*. 1996;50:606-10.

57. Porta M. Things that kept coming to mind while thinking through Susser's South African mémoir. *J Epidemiol Commun Health*. 2006;60:559-61.

58. Porta M, Copete JL, Fernandez E, Alguacil J, Murillo J. Mixing citations to journals, articles and authors, and other catches in the bibliographic 'impact factor'. *Cad Saúde Pública*. 2003;19:1847-62.

59. Porta M, Fernandez E, Murillo J, Alguacil J, Copete JL. The bibliographic 'impact factor', the total number of citations and related bibliometric indicators: the need to focus on journals of public health and preventive medicine. *Soz Präventivmed*. 2004;49:15-8.

60. Rose G. The strategy of preventive medicine. Oxford: Oxford University Press; 1992.

61. Rothman KJ. Modern epidemiology.. Boston: Little, Brown & Co.; 1986.

62. Rothman KJ, Greenland S, editors. Modern epidemiology. 2nd ed. Philadelphia: Lippincott-Raven; 1998.

63. Sackett DL, Haynes RB, Guyatt GH, Tugwell P. Clinical epidemiology: a basic science for clinical medicine. 2nd ed. Boston: Little, Brown and Co.; 1991.

64. Sackett DL, Haynes RB, Tugwell P. Clinical epidemiology: a basic science for clinical medicine. Boston: Little, Brown and Co.; 1985.

65. Schottenfeld D, Fraumeni FJ, editors. Cancer epidemiology and prevention. 2nd ed. New York: Oxford University Press; 1996.

66. Susser M. Causal thinking in the health sciences. New York: Oxford University Press; 1973.

67. Susser M. Epidemiology, health and society: selected papers. New York: Oxford University Press; 1987.

68. Susser M, Watson W, Hopper K, editors. Sociology in medicine. 3rd ed. New York: Oxford University Press; 1985.

69. Szklo M, Nieto JF. Epidemiology beyond the basics. Gaithersburg: Aspen Publications; 2000.