Where is smoking research published?

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Abstract

Objective – To identify journals that have a focus on human nicotine/smoking research and to investigate the coverage of smoking in “high-impact” journals.

Design – The MEDLINE computer database was searched for English-language articles on human studies published in 1988–1992 using “nicotine”, “smoking”, “smoking cessation”, “tobacco”, or “tobacco use disorder” as focus descriptors. This search was supplemented with a similar search of the PSYCLIT computer database. Fifty-eight journals containing at least 20 nicotine/smoking articles over the five years were analysed for impact factor (IF; citations per article).

Results – Among the journals with the highest percentage of nicotine- or smoking-focused articles (that is, 9–39% of their articles were on nicotine/smoking), *Addiction*, *American Journal of Public Health*, *Cancer Causes and Control*, *Health Psychology*, and *Preventive Medicine* had the greatest IF (range = 1.3–2.6). Among the journals highest in impact factor (IF > 3), only *American Journal of Epidemiology*, *American Review of Respiratory Disease*, *Journal of the National Cancer Institute*, and *Journal of the American Medical Association* published more than 10 nicotine/smoking articles per year (3–5% of all articles). Of these, only *Journal of the American Medical Association* published a large number of nicotine/smoking articles (32 per year).

Conclusions – Although smoking causes 20% of all mortality in developed countries, the topic is not adequately covered in high-impact journals. Most smoking research is published in low-impact journals.

(*Tobacco Control* 1996; 5: 37–38)

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Introduction

Although smoking causes 20% of all mortality in developed countries,¹ only four journals – *International Journal of Smoking Cessation*, *Journal of Smoking-related Disorders*, *Tobacco Control*, and *World Smoking and Health* –

focus on smoking. Except for *Tobacco Control*, these journals are published infrequently (quarterly or less) and publish few articles per issue (usually fewer than 10). None were listed in *Index Medicus* in 1995.

This article examines the incidence of publishing on nicotine and smoking among different journals. If a relatively high percentage of articles in a journal are focused on nicotine/smoking, one may infer that the journal's editors, reviewers, and readers have a high degree of interest in such research. We also examined the prestige of the journals that publish nicotine/smoking articles. We defined “prestige” in terms of the journal's impact factor (IF)² – that is, the average number of citations per published article. Finally, we examined how often nicotine/smoking articles appear in high-impact journals.

Methods

We searched the MEDLINE computer database for nicotine/smoking articles during the five-year period 1988 to 1992. Although the US Centers for Disease Control and Prevention's Smoking and Health Database might seem more appropriate, we chose MEDLINE because it limited our search to human-related studies, to more specific descriptors (see below), and to articles in which nicotine/smoking was the primary focus. MEDLINE also allowed us to exclude letters to the editor.

The search was limited to English-language references with human subjects and used the index terms “nicotine”, “smoking”, “smoking cessation”, “tobacco”, or “tobacco use disorder” as descriptors of the article's focus. For brevity, we will refer to all such articles as “smoking-focused”.

In an attempt to find behavioural/social science journals that publish smoking research but are not indexed in MEDLINE, we conducted a similar search of the American Psychological Association's PSYCLIT database using the focus descriptors “nicotine”, “smokeless tobacco”, “smoking cessation”, and “tobacco smoking”.

The MEDLINE search produced 4857 smoking-focused articles. The 56 journals containing at least 20 such articles represented 48% of all smoking-focused articles. We analysed journals containing at least 20 such citations (an average of four articles per year for the average number of smoking-focused references per year during the five-year period; average number of articles per year (as selected by MEDLINE), percentage of all articles that were focused on smoking, and average annual IF.^{3,4} *Journal Citation Reports* does not report IF for monographs, several annual publications, and recently created journals (for

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This paper was presented at the annual meeting of the American Psychological Association, New York, NY, in August 1995; and a few key findings were cited in the Summer/Fall 1995 issue of the *Society for Research on Nicotine and Tobacco Newsletter*.

Table 1 Journals in which more than 5% of articles were on nicotine/smoking, 1988–1992

Journal	Mean percentage of articles on smoking/year (smoking/total)	Mean impact factor
<i>Addict Behav</i>	39 (25/64)	0.9
<i>J Subst Abuse</i>	32 (8/25)	nc
<i>Prev Med</i>	25 (17/68)	1.4
<i>Addiction</i>	15 (27/176)	1.3
<i>Cancer Causes Control</i>	14 (4/31)	1.4
<i>Health Psychol</i>	14 (8/58)	1.8
<i>J Behav Med</i>	13 (6/42)	1.1
<i>Am J Prev Med</i>	13 (9/70)	0.7
<i>Monogr Natl Cancer Inst</i>	12 (5/42)	nc
<i>J Psychoactive Drugs</i>	10 (5/50)	0.6
<i>Am J Public Health</i>	9 (28/303)	2.6
<i>Epidemiology</i>	8 (4/52)	nc
<i>Int J Epidemiol</i>	7 (12/171)	1.3
<i>Int J Addict</i>	7 (7/98)	0.5
<i>Can J Public Health</i>	7 (7/110)	0.4
<i>J Sch Health</i>	6 (5/83)	0.6
<i>J Epidemiol Commun Health</i>	6 (5/77)	1.4
<i>J Consult Clin Psychol</i>	6 (7/122)	2.5

nc = Not covered by *Journal Citation Reports*.

Table 2 Journals with an average annual impact factor of 2.7 or more, that published a mean of four or more articles per year on nicotine/smoking research, 1988–1992

Journal	Mean percentage of articles on smoking/year (smoking/total)	Mean impact factor
<i>N Engl J Med</i>	1 (5/574)	22.7
<i>Lancet</i>	1 (6/853)	15.2
<i>J Natl Cancer Inst</i>	3 (11/325)	5.3
<i>JAMA</i>	3 (32/997)	5.3
<i>Am Rev Respir Dis</i>	3 (17/547)	4.8
<i>Cancer Res</i>	1 (6/1183)	4.6
<i>MMWR</i>	5 (10/203)	4.6
<i>BMJ</i>	1 (10/917)	3.7
<i>Clin Pharmacol Ther</i>	3 (5/168)	3.2
<i>Am J Epidemiol</i>	5 (13/261)	3.2
<i>Int J Cancer</i>	2 (7/397)	3.0
<i>Arch Intern Med</i>	2 (6/338)	2.9
<i>Carcinogenesis</i>	1 (5/391)	2.8
<i>Psychopharmacology (Berl)</i>	5 (15/298)	2.7

example, *Advances in Experimental Medicine and Biology*, *Epidemiology*, *Journal of Substance Abuse*, *Monographs of the National Cancer Institute*, *NIDA Research Monograph*, *Nursing Times*, and *Progress in Clinical and Biological Research*). We designated journals in which more than 5% of the articles were smoking-focused as the “high-smoking-focus group”, and the 14 journals with the greatest mean impact factor as the “high-impact group”.

Results

The 18 high-smoking-focus journals (table 1) and the 14 high-impact journals (table 2) were mutually exclusive. Within the high-smoking-focus group, *American Journal of Public Health*, *Addiction*, and *Addictive Behaviours* contained the greatest number of smoking-focused articles (range = 25–28 articles per year). Among the 12 journals with the highest percentage of smoking-focused articles, *American Journal of Public Health*, *Health Psychology*, *Cancer Causes and Control*, *Preventive Medicine*, and *Addiction* had the greatest IF (range = 1.3–2.6). Only two high-smoking-focus journals, *American Journal of Public Health* and *Journal of Consulting and Clinical Psychology*, had an IF greater than 2.

Among high-impact journals, *Journal of the American Medical Association (JAMA)* (IF = 5.3) published the highest number of smoking-

focused articles (mean = 32 per year), and *American Journal of Epidemiology* (IF = 3.2), *MMWR Morbidity and Mortality Weekly Report* (IF = 4.6), and *Psychopharmacology* (IF = 2.7) published the highest percentage (5%) of smoking-focused articles. Other high-impact journals (*British Medical Journal*, *Cancer Research*, *Lancet*, *Clinical Pharmacology and Therapeutics*, and *New England Journal of Medicine*) published only 5–10 smoking-focused articles per year (1–3%).

The supplementary PSYCLIT search produced two journals not indexed by MEDLINE: *Health Education Research* and *American Journal of Health Promotion*. The former averaged eight smoking-focused articles out of 41 articles annually (22%) and the latter averaged six smoking-focused articles out of 25 articles annually (24%). *Journal Citation Reports* did not provide impact factors for either of these journals. Although these figures would suggest that these two journals would rank among the top five high-focus journals, the figures for total number of articles from MEDLINE and PSYCLIT are not comparable, that is, PSYCLIT typically selects fewer articles for coverage than MEDLINE does. Thus, the numerator and the denominator for “focus” percentages differ between MEDLINE and PSYCLIT.

Discussion

Although smoking causes 20% of all mortality in developed countries,¹ except for *JAMA*, smoking research is barely represented in high-impact general medical journals such as *Annals of Internal Medicine*, *British Medical Journal*, *Lancet*, or *New England Journal of Medicine*, or science journals such as *Nature* or *Science*. In fact, high smoking focus and high impact were mutually exclusive.

Several journals devoted a relatively high proportion of their space to smoking research but had low impact factors. The exceptions were *Addiction*, *American Journal of Public Health*, and *Preventive Medicine*, which had a high number and proportion of smoking articles and relatively high impact factors.

Conversely, other journals had high impact but devoted a very small proportion of space to smoking. The exceptions here were *JAMA* and, to a lesser degree, *American Journal of Epidemiology*, *American Review of Respiratory Disease*, and *Psychopharmacology*. These journals had high impact factors yet also published many smoking-focused articles.

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