
Images of health and medical science conveyed by television

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SUMMARY. Content analysis was carried out on medical programmes on BBC television over a three-month period. Television medical programmes were shown to concentrate on hospital-based, technological and expert-dependent issues at the expense of primary care and community health. Images of technology, the hospital and the hospital specialist were found to predominate. Issues such as the family, preventive care, housing and the environment were rarely raised. Doctors appeared and spoke in 94 per cent of programmes, whereas nurses were seen (although not necessarily heard) in 30 per cent. Of 70 doctors interviewed on television, nearly three quarters were hospital doctors or scientists. Only one doctor was explicitly referred to as a general practitioner.

Introduction

CRITICISM of media medicine is easy to find but facts are harder to come by. It is clear, however, that television has become the major mass medium of today. In 1982, a typical British person watched an average of 19 hours and 10 minutes of television per week, compared with 8 hours and 20 minutes spent listening to the radio.¹ Television has become the prime source of information about news and current affairs for 53 per cent of adults.² There is also evidence to suggest that many people rely on the mass media to obtain information about diseases, treatments and the effects of drugs.³ Television programmes about medicine have been criticized for simplifying complex issues⁴ and for adopting an approach that sanctifies the specialist⁵ and emphasizes the curative, scientific, technological and hospital-based aspects of medicine—the ‘hidden agenda’.^{2,6,7} The commonest criticism of the broadcasting media made by doctors is their alleged obsession with sensation at the expense of ‘bread and butter’ medicine—general practice and ordinary patients.^{8,9} Is it fair to say that the concerns of general practice and general practitioners are under-represented on television? So far, there has been little systematic analysis of the content of medical output.

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Medicine and the BBC

As a public service, the British Broadcasting Corporation (BBC) is strongly committed both to minority interest programming¹⁰ and to its traditional educative role in society.⁵ In 1980-81, serious programmes such as current affairs, features and documentaries, made up the largest single group on BBC television: 17.7 per cent of broadcasting time on both BBC1 and 2 compared with 14.8 per cent for sport and 6.3 per cent for light entertainment.¹¹ In its report for 1975, the BBC's General Advisory Committee stated that ‘education in public health is generally regarded as an important and even necessary function’ and emphasized the need for the BBC to keep abreast of medical innovation, including ‘prevention and questions of social and ethical origin’.¹² The BBC has clearly accepted its responsibility as an educator in the field of health. To what extent does the BBC's medical coverage reflect the realities and complexities of public health and medical provision?

Method

The main focus of this study was a systematic content analysis of the television programmes themselves, backed up by data from audience research. All programmes covering health and medical topics which appeared during the sample period of 12 weeks between 1 May and 23 July 1982 (BBC weeks 18-29 inclusive) were videotaped. The sample period conveniently fell between television's peak viewing quarter, January/February/March and its bleakest, July/August/September.¹³

A total of 46 relevant programmes were selected in advance from the *Radio Times*, although technical failures meant that the loss of 10 programmes. The sample included drama or general entertainment programmes with medically relevant settings or content, such as the *British greats* programme about actor and throat cancer victim Jack Hawkins, as well as medical documentaries and health education programmes. The 10 lost programmes were biased towards general entertainment rather than documentary topics.

The final content analysis included 18 programmes, once all but one representative of each of the seven series appearing during the sample period had been excluded on the grounds that programmes in a series are relatively uniform. This decision was reached after all the programmes in the various series had been viewed at least once and found to be remarkably uniform: 11 of the 18 series programmes excluded from the content analysis were from two series, *Human brain* and *Your mind in their hands*, both of which were particularly uniform in presentation style, subject matter and sources used. The results were later readjusted to take account of the

seven series, bringing the total number of programmes appearing in the results up to 36 (78 per cent) of the original sample.

Each programme was viewed three times, and analysed using a corresponding two-page schedule designed by the author. Each programme was assigned to a slot category—off-peak, mid-peak or peak—according to the time and day on which the programme was screened¹³ and to a programme category such as health educational, documentary, magazine or entertainment.

The first page of the schedule corresponded to the first viewing and consisted of 33 attributes, listed on Table 1, roughly corresponding to four models that appear in the literature; the medical, social, patient-centred and journalism/entertainment models.^{5,7,14} When any attribute appeared on screen, a mark was placed against the appropriate place in the schedule.

The second page of the schedule attempted to answer the questions:

‘Who conveys information about health and medical science on television?’

‘Who appears most often as a presenter or a commentator—experts, celebrities, journalists or consumers?’

‘How wide a range of expert knowledge is being utilized by medical programmes?’

‘How significant is the doctor, and specifically the hospital doctor, as an information provider?’

Table 1. The schedule used for scoring different attributes in the content analysis.

<i>The medical model</i>	
Hospital setting	
Technology/drugs	
Technology/machines	
Curative/emergency care	
Doctor as communicator	
Nurse as communicator	
Scientific advance	
Passive patient	
<i>The social model</i>	
Social support	
Nonmedical expert	
Housing/poverty	
Family	
Social status	
Society	
Environment	
Safety at home	
Safety at work	
Politics/institutions	
Business	
Preventive care	
Control over the environment	
The social worker	
<i>The health education model</i>	
Advice to viewers	
Back-up materials supplied off-air	
Didactic approach	
Consumer as communicator	
Self-help, self-control	
<i>The journalism/entertainment model</i>	
Story or exclusive	
Current issue	
Celebrity as communicator	
News/current affairs	
Human interest focus	
Audience participation	

Table 2. Results of the content analysis: number of programmes referring to each attribute in the schedule.

	Number (%) of programmes referring to each attribute
Doctor as communicator	34 (94)
Hospital setting	27 (75)
Technology (drugs)	21 (58)
Technology (machines)	19 (53)
Scientific advance	18 (50)
Human interest	27 (75)
Consumer as communicator	24 (67)
Preventive care	14 (39)
Family	14 (39)
Housing/poverty	10 (28)
Environment	8 (22)
Social status	3 (8)
Nurse as communicator	11 (30)

Total number of programmes = 36.

Frequency of appearance and time spent on screen by ‘experts’, celebrities, consumers and journalists were recorded using a stopwatch.

Results

The original sample of 46 programmes was evenly distributed between the two BBC-television channels. BBC-television viewers were therefore subjected to just under four medical programmes per week during the sample period. This compared with an average of six medical programmes transmitted each week on BBC-radio over the same period. The most widely used format was the documentary, accounting for nearly 50 per cent of programmes, followed by magazines at just under 20 per cent and health education programmes at 14 per cent. BBC1 concentrated nearly all its medical documentaries and health education programmes in off-peak time, that is during the daytime and late evening, while magazine programmes were all allocated to peak viewing slots. BBC2’s output was mainly made up of documentaries screened during the peak period.

Content analysis

As predicted, technology, the hospital and the doctor, figured prominently in the programmes. The ‘doctor as communicator’ appeared in 94 per cent of programmes (Table 2) and occupied 14.2 per cent of all references recorded (Table 3). The top five attributes were, ‘doctors as communicator’, ‘consumer as communicator’, ‘technology (drugs)’, ‘technology (machines)’ and ‘hospital setting’ and they were markedly dominant, together accounting for nearly half of all references recorded (Table 3). Taken together, the two technology attributes occupied 16.5 per cent of all references, outstripping even the doctor. In contrast, the issues of ‘the environment’, ‘housing/poverty’, ‘social status’, ‘the family’ and ‘preventive care’ together occupied

little more than 8 per cent of all references recorded (Table 3).

'Experts' were by far the most prominent communicators on medical programmes: 34.5 per cent of the total amount of time spent on screen by different communicators was occupied by 'experts', with two thirds of this (20.5 per cent of the total) occupied by the doctor (Table 4). The remaining screen time was occupied by journalists, consumers, celebrities and nonmedical experts.

Altogether, 173 health care workers appeared in the sample programmes. Doctors in general, and hospital specialists in particular, dominated information-giving on medical programmes (Table 5). Of the experts communicating on screen 40.5 per cent were doctors. This compared with scientists at 11.6 per cent and nurses at 7.5 per cent.

Of this group of 70 doctors, 52 (74.3 per cent) were interviewed in their capacity as hospital doctors (including specialists and medical scientists). Of the 18 doctors remaining, only one was referred to as a general practitioner. This bears no relation to the actual proportions

Table 3. Results of the content analysis: references made to each attribute.

	Number (%) of references to each attribute
Doctor as communicator	192 (14.2)
Technology (drugs)	128 (9.5)
Technology (machines)	97 (7.2)
Hospital setting	88 (6.5)
Scientific advance	28 (2.1)
Total	533 (39.5)
Consumer as communicator	129 (9.6)
Human interest	58 (4.3)
Total	187 (13.9)
Environment	34 (2.5)
Housing/poverty	25 (1.8)
Preventive care	24 (1.8)
The family	17 (1.3)
Social status	11 (0.8)
Total	111 (8.2)
Nurse as communicator	26 (1.9)
Total number of references recorded = 1,349.	

Table 4. Time spent on television screen by different information providers.

	Time (min)	Percentage
Expert	456	(34.5)
Expert doctor	270	(20.5)
Journalist	259	(19.0)
Consumer	239	(17.6)
Celebrity	113	(8.4)
Total	1,337	(100.0)

Table 5. Numbers of health care workers appearing.

Type of worker	Number	Percentage
Doctor	70	(40.5)
Scientist	20	(11.5)
Nurse	13	(7.5)
Psychologist	12	(7.0)
Cook	6	(3.5)
Voluntary Worker	4	(2.3)
Social worker	4	(2.3)
Physiotherapist	4	(2.3)
Occupational therapist	3	(1.7)
Hypnotist	3	(1.7)
Other health workers	11	(6.4)
Other experts	23	(13.3)
Total	173	(100.0)

of general practitioners and hospital doctors in practice in the UK; in 1981 the percentages were comparable at 42 per cent and 58 per cent respectively.¹⁵

The attribute 'nurse as communicator' made a poor showing, nurses appearing (although not necessarily speaking) in only 30 per cent of programmes and accounting for less than 2 per cent of references recorded (Table 3). This low representation is surprising when one considers that nurses make up over 90 per cent of the total number of medical staff working in the hospitals in England and Wales.¹⁵ Some workers in the health field were unrepresented and many other groups such as home helps, health visitors, district nurses and meals-on-wheels providers did not figure at all.

Consumers were well represented, appearing as communicators in 67 per cent of programmes (Table 2). The overall approach to television medicine appears to be a human interest, consumer-orientated and interpersonal one, with a sprinkling of people with celebrity status and a heavy reliance on the doctor as an information provider and the hospital, and all that goes with it, as a background.

Popularity

The viewing preferences of television audiences come into conflict with the demands of the medical profession for a high level of information content in medical programmes. One review in the *British Medical Journal*, for example, criticized the series *Heart transplant* on the grounds that it lost a valuable opportunity to 'teach the layman something about the heart' by concentrating on human emotions.¹⁶ This may be why *Heart transplant* attracted up to six million viewers, more than any other BBC2 documentary in the sample, and caused an upsurge in the size of the evening's audience.

The magazine is the format most popular with the viewing public. Programmes such as *Medical express* and *Looking good, feeling fit* consistently attracted over five million viewers. Typically, a magazine programme appears during peak viewing time and succeeds in

holding the audience through to the following programme. Health education programmes on both channels and medical documentaries on BBC1 almost always appear during off-peak time and attract small audiences. BBC2's health educational series, *So you want to stop smoking?*, and the documentary series on BBC1, *Your mind in their hands*, attracted between one half to two million viewers.

Discussion

A study such as this, conducted over a short period and using crude techniques of content analysis, can be no more than a rough guide to images of health and medical science conveyed by television. Nevertheless, the dominance of the hospital doctor, rather than both the general practitioner and the nurse, is striking. The assertion that television medicine is expert-dependent, hospital-based and technological is supported here.

Despite the emphasis on high technology and hospital medicine, the programmes are presented in an emotive and human context. The archetypal medical television programme uses the often dramatic and heart-rending life stories of individuals as pegs upon which to hang factual information. Programmes which keep rigidly to this format, such as the *Heart transplant* and *Medical express* series, appeared to attract the largest audiences. This approach to programme-making may reflect a shortcut to an audience by producers. Human stories are inherently compelling, while hospital consultants, unlike nurses and junior doctors, are free to express authoritative opinions, and, unlike general practitioners, are easy to locate and pigeonhole.

Medicine is clearly an important part of the factual output of BBC television. Despite the BBC's own stated commitment to medical reporting as an extension of its existing journalistic responsibilities, it is arguable whether its television programmes about medicine adequately reflect the current realities and complexities of health and medical science.

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Levodopa and Parkinson's disease

To determine whether the oscillating clinical response to levodopa in Parkinson's disease (the 'on-off' phenomenon) reflects fluctuations in absorption and transport of the drug, the authors investigated this phenomenon in nine patients with an oscillating motor state. They studied the response to continuous infusion of levodopa and the effects of meals on the plasma levodopa concentrations and on the clinical response during oral and intravenous administration of the drug. Meals reduced peak plasma levodopa concentrations by 29 per cent and delayed absorption by 34 minutes. Bypassing absorption by constant infusion of the drug produced a stable clinical state lasting for 12 hours in all of six patients and for up to 36 hours in some. High-protein meals or oral phenylalanine, leucine or isoleucine (100 mg per kilogram of body weight) reversed the therapeutic effect of infused levodopa without reducing plasma levodopa concentrations. Glycine and lysine at identical doses had no effect.

The authors concluded that interference with absorption of levodopa by food and by competition between large neutral amino acids and levodopa for transport from plasma to the brain may be partly responsible for the fluctuating clinical response in patients with Parkinson's disease.

Source: Nutt JG, Woodward WR, Hammerstead JP, et al. The 'on-off' phenomenon in Parkinson's disease. Relation to levodopa absorption and transport. *N Engl J Med* 1984; 310: 433-438.