The biopsychosocial model of general practice: rhetoric or reality?

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SUMMARY

Background. *For more than 20 years, general practitioners have been encouraged to adopt a 'biopsychosocial' model of health care, that is, encompassing physical, psychological and social aspects.*

Aim. *A study was undertaken to explore the extent to which general practitioners' views about the acceptable boundaries of their work are consistent with a biopsychosocial model.*

Method. *A semi-structured postal questionnaire was sent to all 494 members of the Royal College of General Practitioners in Mersey Region who were general practitioner principals. The general practitioners were asked to list up to three topics presented by patients that they considered to be appropriate, and up to three topics that they considered to be inappropriate, to a general practitioner's knowledge and skills. The general practitioners were asked to rate, on a five-point scale of appropriateness, each of a list of 12 topics about which patients might have problems and present. Responses were analysed by sex and age of respondents.*

Results. *The response rate was 42%. Acute physical problems were most often listed appropriate by respondents, followed by chronic physical and psychological problems. The topics most often considered inappropriate were bureaucracy and social issues. Among the list of 12 specified topics, respondents considered terminal care and hypertension to be more appropriate than housing issues, spiritual worries, welfare rights or political issues. The sex of respondents did not relate to differences in results. Respondents aged 35 years and over generally considered topics presented by their patients to be more appropriate than did their younger colleagues.*

Conclusion. *The general practitioner respondents in this study appeared to hold the view that general practitioners should work to a bio(psycho) rather than a biopsychosocial model of health care.*

Keywords: general practitioner role; general practitioner services; health care models; biological models; psychological models; doctors' attitudes.

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Introduction

GENERAL practitioners have, at least in theory, a broad concept of illness. Since 1972 the Royal College of General Practitioners has encouraged general practitioners to adopt a 'biopsychosocial' approach to their work, assuming that 'diagnoses will be composed in physical, psychological and social terms'.[1] This biopsychosocial model of general practice allows a range of problems to be considered relevant for medical attention, limited only by the views of patients and doctors about what is a legitimate subject for consultation.[2-4] A study was undertaken to explore the extent to which the rhetoric on a biopsychosocial approach corresponds to the reality of general practitioners' views on the acceptable boundaries of their clinical practice.

Method

During May and June 1994, a semi-structured questionnaire was sent to all 494 members of the Royal College of General Practitioners in Mersey Region who were aged under 65 years and registered as current principals in general practice. One reminder was sent to all subjects. Reply-paid envelopes were provided on both occasions. Anonymity was guaranteed, although respondents could identify themselves if they wished to do so. The questionnaire sought information on the general practitioner's sex and age (under 35 years, 35 to 50 years or over 50 years).

The general practitioners were invited in the questionnaire to consider patients seen in their most recent surgery, and to list up to three 'topics' presented by these patients which the general practitioners considered to be appropriate or relevant to a general practitioner's knowledge and skills, that is, appropriate for presentation to and management by a general practitioner in general practice. Similarly, general practitioners were asked to list up to three topics presented by patients which they considered inappropriate or not relevant to a general practitioner's knowledge and skills.

The questionnaire also contained a list of 12 topics — back pain, depression, housing, hypertension, marital difficulties, opiate withdrawal, political issues, sexual abuse, spiritual worries, terminal care, upper respiratory tract infection and welfare rights — about which patients might have problems and present during a consultation. General practitioners were invited to rate these on a five-point Likert scale with options from 'most appropriate' (scoring five points) to 'least appropriate' (scoring one point) for a general practitioner to manage.

Information from the two sets of lists was sorted into emergent categories, using the system proposed by Wilms and colleagues.[5] These categories and the Likert scores were then entered into the database of *Arcus Pro-stat 2.3*.[6] Responses were analysed and compared by sex and age group of respondents. On the assumption of non-normal distribution of Likert scores, mean scores and standard deviations were compared using the Mann Whitney *U*-test, and correlations were calculated using Kendall's tau with normalizing statistic.[7]

Results

A total of 207 of the 494 questionnaires (41.9%) were returned and could be analysed. Of the 207 respondents, 62.8% were men;

43.0% of respondents were aged under 35 years, 44.9% were aged 35 to 50 years and 12.1% were aged over 50 years. This reflected the sex and age profile of the original study group of 494 general practitioners.

Appropriate topics

A total of 594 items were listed as being appropriate to a general practitioner's knowledge and skills, giving a mean of 2.87 items (standard deviation (SD) 0.26 items) per respondent.

Analysis of the responses produced five main categories of topics: physical (acute), including items such as duodenal ulceration, menorrhagia or breast lump; physical (chronic), for example asthma or hypertension; psychological, for example depression, anxiety or alcoholism; health promotion, for example advice on contraception; and social, for example dysfunctional relationships. These five categories accounted for all but four of the 594 items listed by respondents: 50.3% of items were in the physical (acute) category, 25.8% in the physical (chronic) category, 14.0% in the psychological category, 7.2% in the health promotion category and 2.0% in the social category. Table 1 shows the mean number of mentions by respondents of items falling into each of these 'appropriate' topic categories. Acute physical problems were rated as appropriate twice as often as were chronic physical problems and more than three times as often as were psychological problems.

Inappropriate topics

A total of 405 items were listed by the 207 respondents as being inappropriate to a general practitioner's knowledge and skills, giving a mean of 1.96 items (SD 1.14 items) per respondent. This mean was significantly lower than that for the 'appropriate' topic responses (Mann Whitney *U*-test, two-tailed, $P < 0.001$).

Analyses of the responses produced the same five categories as the 'appropriate' topic categories. The acute physical problems tended to be minor or self-limiting conditions such as viral infections or minor burns. Examples of items in the other categories were: back pain (chronic physical); cardiac neurosis (psychological); dietary advice (health promotion); and problem neighbours (social). Two other categories emerged: bureaucracy (usually referring to requests for sick notes or disability forms) and housing problems. The proportions of items falling into the categories were: bureaucracy, 24.4%; social, 22.5%; physical (acute), 17.8%; housing, 8.1%; psychological, 4.5%; physical (chronic), 3.5%; and health promotion, 3.5%. Of the 405 items, 15.6% were not definable within these seven categories. Table 1 shows the mean number of mentions by respondents of items falling into each of these 'inappropriate' topic categories.

Comparing the appropriate and inappropriate topics, chronic physical problems were over 10 times more likely to be considered appropriate than inappropriate; acute physical problems and psychological problems were over four times more likely to be so considered. Conversely, social problems were over seven times more likely to be considered inappropriate than appropriate.

Appropriateness of specified topics

The mean scores of the ratings of appropriateness of the 12 specified topics are shown in Table 2. Respondents considered problems relating to terminal care and hypertension to be highly appropriate for a general practitioner to manage. Depression and back pain and, to a lesser extent, upper respiratory tract infection, were also considered appropriate. Respondents were ambivalent about the appropriateness of managing sexual abuse, opiate withdrawal and marital problems. The other four topics on this list (housing, spiritual issues, welfare rights and political issues) were considered to be highly inappropriate for a general practitioner to manage.

Analysis of responses by respondents' sex and age

There were no clear differences in responses by men and women.

Respondents aged 35 years and over generally considered topics presented by their patients to be more appropriate than did their younger colleagues. This was so in all five emergent 'appropriate' categories except health promotion, which was more likely to be rated as being appropriate by respondents aged less than 35 years than by those aged 35 years or over. Respondents aged under 35 years were more likely than older respondents to rate bureaucratic activity as inappropriate, but they were less critical than older respondents of chronic physical presentations.

On the specified topic list, respondents aged 35 years and over rated all problems except hypertension and opiate withdrawal as more appropriate than did respondents aged less than 35 years. Spiritual worries were statistically significantly more likely to be rated appropriate by respondents aged 35 years or over than by respondents aged less than 35 years: Kendall's tau (τ) = 0.10, normalizing statistic (z) = 2.0, $P<0.05$. Compared with younger respondents older respondents considered a patient's marital

Table 1. Categories of topics presented by patients during consultations, considered to be appropriate or inappropriate by 207 general practitioners.

Category	Mean no. (SD) of mentions, per respondent, of category in list	
	Appropriate topics	Inappropriate topics
Physical (acute) (n = 299/72)	1.44 (0.91)	0.35 (0.65)
Physical (chronic) (n = 153/14)	0.74 (0.75)	0.07 (0.28)
Psychological (n = 83/19)	0.40 (0.51)	0.09 (0.33)
Health promotion (n = 43/14)	0.21 (0.41)	0.07 (0.27)
Social (n = 12/91)	0.06 (0.25)	0.44 (0.71)
Bureaucracy (n = 0/99)	—	0.48 (0.76)
Housing (n = 0/33)	—	0.16 (0.38)
Others (n = 4/63)	0.02 (0.24)	0.30 (0.70)

n = number of mentions of items considered appropriate/inappropriate topics. SD = standard deviation.

Table 2. Appropriateness of 12 problems that patients might present for a general practitioner to manage, rated by 207 general practitioners.

Problem relating to	Mean score[a] (SD)
Terminal care	4.8 (0.6)
Hypertension	4.8 (0.5)
Depression	4.6 (0.3)
Back pain	4.2 (0.8)
Upper respiratory tract infection	3.7 (1.2)
Sexual abuse	2.9 (1.1)
Opiate withdrawal	2.8 (1.2)
Marital difficulties	2.7 (1.1)
Housing	1.7 (0.9)
Spiritual worries	1.6 (0.9)
Welfare rights	1.5 (0.8)
Political issues	1.3 (0.8)

SD = standard deviation. [a]Respondents were asked to rate the 12 problems on a five-point Likert scale from 'most appropriate' (scoring five points) to 'least appropriate' (scoring one point).

problems to be more appropriate for a general practitioner to manage; this difference did not quite reach significance (τ = 0.09, z = 1.94, P = 0.052).

Discussion

The study was limited in its aims and in the size of study population. Only members of the RCGP in Mersey Region were sent questionnaires and the low response rate may have biased the findings. The format of the questionnaire was original, and has not been validated elsewhere.

Nevertheless, a picture emerged of a homogeneous group of general practitioners with clear ideas about the boundaries of their work. They considered appropriate the presentation and management of a variety of physical problems, from acute conditions through chronic diseases to terminal care, although minor or self-limiting complaints were not considered appropriate. Respondents were ambivalent about psychological topics; although depression was rated highly on the specified topic list, psychological topics were infrequently cited in general practitioners' 'appropriate' topic lists. Social problems, housing difficulties and welfare rights were all deemed inappropriate for presentation to and management by a general practitioner in general practice.

Older respondents gave higher appropriateness ratings than their younger colleagues, except in the area of health promotion. The reasons for this have been explored elsewhere.[8]

It would appear to be incorrect to assume that the general practitioners in this study were working to a biopsychosocial model of health care. Their focus was strongly towards acute physical illness, with some interest in psychological problems. This could more accurately be categorized as a bio(psycho) model of health care. It would be interesting to investigate whether rhetoric and reality diverge to such an extent nationally and internationally. An understanding of general practitioners' views of the limits of their work may also be germane to the debate about the future direction of primary care.[9,10]

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Doctors as patients

Lisinopril and garlic

A 53-year-old man had a persistently elevated blood pressure of 160/105 mmHg reduced to 135/90 mmHg on 15 mg lisinopril daily. Despite knowing that his serum lipoproteins were within normal limits he started taking garlic in the form of odourless garlic oil capsules (Boots), 4 mg daily, at the same time as the lisinopril. After three days he became faint on standing, when his blood pressure was 90/60 mmHg. A week after stopping taking the garlic capsules his blood pressure reverted to 135/90 mmHg. A subsequent challenge with the same garlic oil preparation taken alone did not lower his blood pressure.

Although the patient — me — knew of the effects of garlic on blood lipids and coagulation, he had discounted reports of vasodilatation and blood pressure reduction.[1,2] He will in future try to remember to ask his patients who develop drug side effects if they are self medicating with garlic preparations.

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