

## Influence of social problems on management in general practice: multipractice questionnaire survey

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### Abstract

**Objectives:** To find how often social problems influence clinical management in general practice, how management is changed, and how the characteristics of patients, doctors, and the doctor-patient relationship influence this management.

**Design:** Multipractice survey of patients consulting general practitioners. Doctors completed a questionnaire for each patient.

**Setting:** General practices in Buskerud county, Norway.

**Subjects:** 1401 consecutive adult patients attending 89 general practitioners.

**Main outcome measures:** How often management of patients was influenced by different types of social problem and main reasons for consultation; frequency and intercorrelation of different types of management applied; odds ratios for social problems' influence on management, controlled for by characteristics of doctors, patients, and their relationship.

**Results:** In 17% of all consultations the doctors' knowledge of patients' social problems influenced their management, stressful working conditions being the most frequent influencing type of problem. Knowledge of social problems influenced management more often when the doctor knew a patient well, but less often the longer a doctor had worked in a practice. When social problems influenced management, the commonest types of management offered were extra time for consultation (51%), advice (42%), authorisation of sick leave (28%), and prescription of a psychotropic drug (20%), while referral to community services was used in 2.6% of these consultations. Prescription of a psychotropic drug was positively correlated with use of extra time, and was made more often by female doctors.

**Conclusions:** Patients' social problems influenced choice of management in at least a sixth of consultations. Prior knowledge of the patient, the doctor's time in present practice, age and sex of the patient, and sex of the doctor significantly influenced management of patients.

### Introduction

Disease and illness cannot be viewed in isolation. Personal care includes understanding the person and

the world in which he or she lives.<sup>1</sup> Information about a patient's environment is necessary, not only for establishing the correct diagnosis, but in order to choose the right management.<sup>2-3</sup> More than a decade ago, Brooke and Sheldon pointed out that, although the prominence of psychosocial problems is one of the distinguishing features of general practice, we do not know much about what influence such problems have on general practitioners' decisions.<sup>4</sup> In an extensive study of more than 7000 patient contacts from his own practice, Essex identified 93 different factors affecting decisions in general practice.<sup>5</sup> Reviewing his list of factors, we found that 16 could be classified as related to the patient's social situation, but the study did not quantify these factors. Verhaak and Wennink showed that, even if they were recognised, 40% of psychosocial problems did not lead to treatment.<sup>6</sup> One study used videotapes to analyse the impact of non-medical problems on patient consultations, but the study was restricted to 149 patients with chronic diseases.<sup>7</sup> We have found no study that evaluates how often patients' social circumstances influence their management in general practice.

One problem a doctor may face when taking a patient's social circumstances into account is the limitations of his or her therapeutic armamentarium. Nevertheless, two studies indicate that general practitioners seldom refer patients with social problems to other community services.<sup>8-9</sup> Recently, Howie et al reported that longer consultations are enabling for patients with a combination of psychological and social problems.<sup>10</sup> The aims of this study were to estimate how often social problems influence management in general practice, to describe what kind of management this leads to, and to examine how management is affected by the characteristics of patients, doctors, and their relationship.

### Subjects and methods

#### Subjects

Our study was approved by the regional ethics committee for medical research. We conducted the study in Buskerud county in March 1995 after a pilot study in western Norway. This county has been shown to be representative of Norway with respect to population density, distribution of employees by branch of industry, and number of residents per general practitioner.<sup>11</sup> All the 144 doctors in Buskerud working

### Questions to doctors

(1) Did any of the facts you thought you had about the patient's life situation\* influence your choice of management in today's consultation?  
Yes/No

(2) If yes, what kind of problem? Tick box(es) below:

- Economy
- Housing
- Lack of or low education
- Burdening sorrow
- Demanding task of care giving
- Violence or threats from person well known to patient
- Close person subject to substance misuse
- Difficult conflict with close person
- Loneliness
- Family splitting
- Unemployment
- Mental or physical stress at work

(3) In today's consultation, did you take any of the below mentioned actions because of the patient's life situation?

- I used extra time
- I deliberately changed my behaviour towards the patient
- I gave the patient advice
- I gave the patient a new appointment, which I normally would not have done
- I prescribed nerve or sleep medication
- I certified a sick leave or prolonged a sick leave
- I recommended application for medical rehabilitation money or disability pension
- I asked if the patient could afford the medication
- I asked if the patient could afford physiotherapy
- I allowed extension of payment or let the patient off
- I referred or admitted patient to (write what kind of service, specialist, or institution)
- Other (write freely)

\*Life situation was defined as social situation, life problems, lasting work disability, or circumstances related to work or lack of work.

at least half time in general practice were invited to participate in the study. Of these, 100 agreed to participate and 89 (62%) eventually did so. We recorded the doctors' age, sex, time in present practice, specialist status, type of reimbursement, and average number of patients seen each day, as well as their practice's location and type (solo or group).

### Survey of consultations

The doctors were prompted to include all patients aged 16 years or over who consulted during one normal workday chosen by the doctor within a two week period. Patients in need of urgent admittance to hospital were excluded. Before their patients left the surgery, the doctors recorded their age, sex, and main reason for consulting in a separate questionnaire for each patient. The doctors had been informed of the definitions of reasons for consulting in the *International Classification of Primary Care*<sup>12</sup> and instructed that the main reason should be understood and accepted by each patient as an acceptable description of his or her most important reason for contacting the doctor.

At the end of the day the doctors completed the questionnaires by assessing their previous general knowledge of the patients on a four point scale (none, some, good, very good) and answering the other ques-

tions (see box). The management options listed resembled the list composed by Verhaak and Wennink,<sup>6</sup> and the pilot study did not reveal a need for further alternatives.

We contacted a random sample of 13 (15%) of the participating doctors to check if the instruction procedures had been followed. These doctors reported that two eligible patients had not been included because of lack of time. The number of children they had seen approximately accounted for the discrepancy between the number of questionnaires returned and the average number of patients seen per day that had been estimated in advance.

### Statistical analysis

We compared independent variables in bivariate analyses and included those with P values <0.25 in backward stepwise multiple logistic regression analyses, in which the outcome measures were whether doctors' knowledge of social problems influenced management and what types of management were chosen. We developed a two level model (level 1 = patients, level 2 = doctors) using the SAS macro Glimmix (generalised linear mixed model), with "doctor" as a random effect variable. We used Spearman's rank correlation coefficient to check correlations between independent variables included in the regression analyses. Interactions between the main independent variables were tested. The regression analyses were run separately with the main reason for encounter included as an independent variable. We used Spearman's rank correlation coefficient to calculate correlations between the six most common types of management.

### Results

Of a total of 1407 possible consultations, four patients did not give their consent and two questionnaires lacked information about the patient's sex, leaving 1401 consultations for the analysis—an average of 15.7 (range 4-32, SD 5.1, median 16) per general practitioner. Of the consultations, 876 (63%) were with female patients, and the mean age of the adult patients was 50.8 years (range 16-97, SD 18.9, median 50).

**Table 1** General practitioners' assessment of how often knowledge of 1401 patients' social problems influenced their management. Values are numbers (percentages) of patients

Type of problem	Influence on management
Stressful working conditions	99 (7.1)
Difficult conflict	40 (2.9)
Care giving task	39 (2.8)
Loneliness	38 (2.7)
Sorrow	31 (2.2)
Economy	29 (2.1)
Family splitting	22 (1.6)
Unemployment >6 months	16 (1.1)
Lacking or low education	9 (0.6)
Violence or threats	7 (0.5)
Housing	7 (0.5)
Substance misuse in close friend or relative	6 (0.4)
Any of above*	233 (16.6)

\*Does not equal sum of rows because, for some patients, the doctors' knowledge of two or more problems influenced management.

In 233 (17%) of the consultations, the doctors considered that knowledge of a patient's social problems had influenced their clinical management of the patient (table 1). The factor cited most often as influencing management was stressful working conditions (7%), followed by a difficult conflict with a person close to the patient (3%). Table 2 shows how often social problems influenced management in relation to the main reason for the patients' consultation. After exclusion of psycho-

**Table 2** General practitioners' assessment of how often knowledge of 1359 patients' social problems influenced their management in relation to the main reason for each consultation.\* Values are numbers (percentages) of patients

Main reason for consultation	Influence on management
Psychological	54/81 (67)
Social	6/11 (55)
General	23/115 (20)
Digestive	10/54 (19)
Neurological	9/51 (18)
Musculoskeletal	50/284 (18)
Female genital	9/62 (15)
Urological	4/28 (14)
Pregnancy	15/116 (13)
Endocrine	8/64 (13)
Circulatory	24/208 (12)
Blood	3/26 (12)
Eye	2/19 (11)
Ear	1/19 (5)
Skin	3/67 (4)
Respiratory	3/142 (2)
Male genital	0/12

\*Main reason for consultation based on definitions in *International Classification of Primary Care*.<sup>12</sup> Data for 1359 consultations, 42 missing due to lack of one or more variables.

**Table 3** Odds ratios of general practitioners' knowledge of patients' social problems influencing management according to characteristics of patients, doctors, and their relationship\*

Variable	No of patients	Odds ratio (95% CI)	P value
Prior general knowledge of patient:			
Scant	488	1.0	
Good	865	1.85 (1.25 to 2.74)	<0.001
Doctor's time in present practice:			
<1 year	124	1.0	
1-10 years	562	0.58 (0.33 to 1.03)	0.082
>10 years	667	0.36 (0.19 to 0.68)	<0.001
Age of patient:			
16-39 years	434	1.0	
40-59 years	441	1.29 (0.91 to 1.84)	0.135
≥60 years	478	0.64 (0.44 to 0.94)	0.024

\*Data for 1353 consultations, 48 missing due to lack of one or more variables.

**Table 4** Six most common types of management applied by doctor in 233 cases when patients' social problems influenced management, and correlation coefficients between these types of management

Type of management	No (%) of patients	Spearman's rank correlation coefficients				
		Advice	Sick leave	Psychotropic drug	New appointment	Change of behaviour
Extra time	118 (51)	0.30***	-0.16*	0.21**	0.02	0.18**
Advice	98 (42)	—	-0.12	0.08	-0.00	0.13
Sick leave	64 (27)	—	—	-0.28***	-0.08	-0.02
Psychotropic drug	46 (20)	—	—	—	0.04	0.03
New appointment	24 (10)	—	—	—	—	0.18
Change of behaviour	17 (7)	—	—	—	—	—

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001.

**Table 5** Odds ratios for use of the four main types of management of social problems according to characteristics of doctors, patients, and their relationship\*

Variable	No of patients	Odds ratio (95% CI)	P value
Extra time in the consultation (allowed in 115 consultations, not in 113)			
Sex of patient:			
Male	75	1.0	
Female	153	2.04 (1.16 to 3.58)	0.014
Advice about life situation (given in 93 consultations, not in 135)			
Prior knowledge of patient:			
Scant	67	1.0	
Good	161	2.43 (1.06 to 5.57)	0.042
Psychotropic drug (prescribed in 44 consultations, not in 184)			
Sex of doctor:			
Male	182	1.0	
Female	46	2.89 (1.09 to 7.66)	0.037
Sick leave (certified in 63 consultations, not in 165)			
Age of patient:			
16-39 years	73	1.0	
40-59 years	97	1.37 (0.72 to 2.61)	0.343
≥60 years	58	0.22 (0.08 to 0.62)	0.004

\*Data for 228 consultations, five missing due to lack of information on one of the variables.

logical and social reasons for consulting, social problems influenced management most often among patients with general symptoms or disorders.

The doctors' age, sex, and time spent in their present practice were the only variables related to doctor or practice that correlated with the influence of social problems on management. They were thus included in the further analyses, along with the patients' age and sex and the doctors' prior general knowledge of their patient. We dichotomised prior general knowledge of a patient as scant or good and made the time spent in the present practice a three category variable (< 1 year, 1-10 years, > 10 years).

Table 3 shows the results of the multivariate analysis. The doctors' age and sex were eliminated in the regression process, but the time spent in their present practice was more influential—doctors with > 10 years in the same practice were less likely to state that social problems influenced their management than doctors who were recently established. Good previous general knowledge of a patient increased the likelihood of letting social problems influence management, while a patient's age had substantial influence as well. Controlling for a patient's main reason for consulting did not change the odds ratios significantly.

Table 4 lists the six most common ways that the doctors' changed their management of patients with social problems, and shows how these were intercorrelated. Extra time was offered in half of the consultations and was positively correlated with giving advice, prescribing a psychotropic drug, and change of behaviour but was negatively correlated with certifying a sick leave.

Some of the management possibilities we listed were seldom used. Two patients were admitted to a health resort, and one was referred to a psychiatric hospital. Fourteen patients were referred to different specialists because of their life situation, six of these to a psychiatrist or a psychologist. Written referrals to community services were made in six (3%) of the consultations in which social problems influenced management, and patients were advised to make such

contact in another three consultations. Nine patients were allowed extension of payment and five were asked whether they could afford treatment.

Table 5 shows how the independent variables were correlated with the four most common types of management. Female patients were offered extra time in the consultation twice as often as male patients. Prior knowledge of the patient increased the odds for giving advice. Female doctors more often prescribed a psychotropic drug, and older patients were more seldom certified a sick leave.

## Discussion

The participating doctors were representative of Norwegian general practitioners,<sup>13</sup> and their average number of consultations with adult patients is normal in Norway.<sup>8, 14</sup> The distribution of the patients according to age, sex, and main reason for consulting their doctor, and the doctors' previous general knowledge of their patients, are similar to those reported in other major studies from Norwegian general practice.<sup>14</sup> Studies from Holland, Canada, and Norway indicate that general practitioners' awareness of psychosocial problems are similar in these countries.<sup>15-19</sup> In Buskerud in 1995, 81% of the population owned their own home, 3.6% received social care with economic assistance, 7.9% of those aged 16-67 years received a disability pension, and the long term unemployment rate was 5.9%; all of these figures are similar to those for Norway as a whole.<sup>20-22</sup> Accordingly, our results should be representative of Norway, but the relative affluence of our country could mean that general practitioners in other countries are influenced more often by social problems.

We instructed the doctors in this study to complete the questionnaires at the end of the day to ensure that the doctors' consultations were affected as little as possible by the study's objective and knowledge of the questionnaire. The doctors could have forgotten some aspects of their management decisions by that time, a possible source of bias in the results. The instructions accompanying the questionnaire were detailed and included examples to enhance reliability. Nevertheless, as the definitions of the words describing social circumstances are not rigorous, it is possible that the results were influenced by doctors' individual interpretations.

### Influence of social problems on consultations

The proportion of consultations influenced by knowledge of social problems should be interpreted as a minimum estimate of what really happened, as an exhaustive list of social problems could not possibly be composed. Advocates of the biopsychosocial model might consider this proportion, a sixth of the total number of consultations, as evidence of the substantial impact social problems have on decisions made in general practice. On the other hand, the result implies that doctors' decisions were not influenced by knowledge of social problems in more than 80% of consultations, underlining the dominance of biological science in primary medical care. Our results derive from the general practitioners' own assessments, and they might have underestimated or overestimated the influence that patients' social problems had on their decisions.

The relation between the main reasons for patients' consultations and the effect social problems have on management can be understood as a result of the doctors' or the patients' tendency to link social problems to certain symptom complexes. Verhaak and Wennink concluded that general practitioners tended not to treat psychosocial problems that were not presented directly.<sup>5</sup> Our study generally supports their findings but indicates that, when seeing patients with general complaints, the doctors' management was often influenced by social problems.

We did not expect that doctors who had been in the same practice for longer periods would be less likely to be influenced by social problems in their management decisions. This finding could result from newly established doctors being more vigilant and interested in the social context of their practice population. Another reason may be that the newly established doctors were eager to please. Alternatively, the well established doctors might have been more biologically orientated or had more patients with clearly somatic problems. Possibly they knew their patients' problems all too well and had realised that there was little they could do about it.

### Doctors' responses to patients' social problems

The doctors often allowed extra time and gave advice in response to patients' social problems. It is possible that such direct help from the general practitioners was seen as sufficient, as only nine patients were referred to or advised to contact community services. This is not necessarily a local phenomenon, and an American study has described a similar situation.<sup>9</sup> The finding could reflect that the patients had already made such contacts themselves or intended to do so. On the other hand, the doctors could have considered cooperation with community services not to be worth while, or they could simply have been complacent. In 1980 Hookey described pervasive tensions between general practitioners and social workers stemming from differences in their treatment philosophies.<sup>23</sup> Writing about several countries, he expected better relationships in the future because of better structural integration of these services. Our finding suggests that community services and general practice are not yet well integrated in Norway.

Time is an enabling factor for patients with social or psychological problems,<sup>10</sup> and the doctors seemed to offer extra time immediately rather than making a new appointment. Evaluating consecutive general practice consultations, Andersson et al found that female patients had longer consultations than male patients.<sup>24</sup> Our finding could thus reflect a general difference in consultation length between men and women, and not necessarily be related to using more consultation time when dealing with the social problems of female patients.

In Norway the authorisation of a sick leave requires a doctor's approval, and more than 90% of patients asking for a sick leave actually receive it.<sup>25</sup> We found an association between the use of extra time in the consultation and the certification of a sick leave when a social problem influenced management. Most of the sick leaves were certified because of stressful working conditions; the doctors could have been saving time by not discussing the reality of these conditions with the patients. Among older patients, the doctors may have

## Key messages

- We studied how patients' social problems influenced their general practitioners' management decisions
- In a sixth of consultations the doctors' knowledge of social problems influenced management
- Extra time, advice, certifying a sick leave, and prescribing a psychotropic drug were the most common actions taken, while referral to other community services was seldom used
- Management was more often influenced by social problems if the doctor was recently established in the present practice or if the patient was well known to the doctor
- When influenced by social problems, female doctors prescribed a psychotropic drug three times as often as male doctors

reasoned that they would have certified a sick leave notwithstanding the presence of social problems.

Prescribing a psychotropic drug is often considered for patients with social problems. The positive correlation with use of extra time suggests that the doctors did not save time by making such prescriptions. Morabia et al reported an increased prescription rate of psychotropic drugs by female doctors to female patients.<sup>26</sup> That study included all general practice consultations with adult patients. In our study, however, the threefold higher prescribing rate by female doctors was not restricted to female patients. Controlling for the main reason for encounter did not reduce this odds ratio, and the female doctors were not different from the male doctors with respect to reimbursement system or number of questionnaires recorded. Thus, this finding is not likely to be explained by the female doctors being more busy or influenced by their form of income or by more social problems being presented to female physicians.<sup>27</sup> Female doctors could, however, simply be more willing to admit making such prescriptions.

Good previous general knowledge of a patient seems to increase the odds for giving advice for social problems, while no significant effect was found for the other most common types of management. This finding supplements a previous study on the use of resources in general practice consultations<sup>28</sup> and suggests that such knowledge facilitates communication without eliciting more expensive management decisions.

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## Endpiece

## Feet on the ground

I hear that you have a great opinion of Doctor Harvey. I think you do well to love and respect a person of his merite for I thinke he hath deserved extremely well of all learned men for what he hath found out . . . but in the practice of Physicke I conceive him to be much governed by his Phantasy . . . . To have a Physician abound in phantasie is a perilous thing.

Lord Conway writing in 1651 to his daughter, who was Harvey's patient

Submitted by Ann Dally, Wellcome Institute for the History of Medicine