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GENERAL PRACTITIONERS' ATTRIBUTIONS OF FATIGUE

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Abstract—In this paper general practitioners' (GPs') somatic–psychosocial attributions of fatigue are examined. The attribution process during medical consultations was studied by relating the GPs' judgements of the somatic–psychosocial character of their patients' fatigue to patient-related characteristics, on the one hand, and medical-consultation characteristics on the other hand. The study was based on 2097 contact registrations from the Dutch National Study of Morbidity and Intervention in General Practice by the NIVEL (Netherlands Institute of Primary Health Care). In order to explain the GPs' attributions, patient-related characteristics were added stepwise in a multiple regression analysis. Sociodemographic characteristics explained only 1.8% of the variance. Other complaints explained an additional 14.3% with psychosocial complaints being most influential. Knowledge of an underlying disease/problem explained an additional 9.9% of the variance. All of the characteristics together explained 26.0% of the attributions by the GPs. More psychosocially-attributed fatigue was found to correlate with consultations characterized by less physical examination, more diagnostic procedures to reassure, fewer diagnostic procedures to discover underlying pathology, more counselling, less medical treatment, less prescription and a longer duration than consultations with more somatically attributed fatigue. It is concluded that GPs do not discriminate between social groups when attributing fatigue to either somatic or psychosocial causes. The presence and character of other complaints and underlying diseases/problems, rather, relate to the GPs' somatic–psychosocial attributions, which are then associated with particular aspects of the consultation. © 1998 Elsevier Science Ltd. All rights reserved

Key words—general practitioner, fatigue, attribution, somatisation, psychologisation

INTRODUCTION

Fatigue is a common phenomenon. In a study by Bensing and Schreurs (1995), a quarter of the sampled Dutch population admitted to having been troubled by fatigue during the previous 2 weeks. In a large-scale British study, 18.3% of the sample reported substantial fatigue lasting 6 months or longer (Pawlikowska *et al.*, 1994). In a study representative for U.S. adults, 14.3% of the sampled men and 20.4% of the sampled women reported suffering from fatigue (Chen, 1986). When these people decide to go to a general practitioner (GP) because they feel tired, their fatigue turns into a medical problem. In a Canadian study among primary-care patients, 13.6% of the sample appeared with fatigue as the complaint (Cathébras *et al.*, 1992); in a French study, 7.6% of a representative sample of primary-care patients did so (Fuhrer and Wessely, 1995). From a primary-care perspective, fatigue has a relatively high prevalence: it is the third most common reason for encounter in Dutch family medicine (Lamberts *et al.*, 1993). In the present study, what happens during such a medical consultation in the Netherlands is further examined with special attention to the GP's attribution process.

ATTRIBUTION OF FATIGUE IN GENERAL PRACTICE

General practitioners (GPs) are often puzzled by complaints of fatigue. As Zola (in Radley, 1994) has observed, they generally regard complaints about being tired as vague because they do not clearly relate to an underlying disease. Studies have revealed a variety of causes for fatigue: psychological (e.g. depression) or physical diseases (e.g. virus infections or anaemia); aspects of the patient's life (e.g. overwork, insufficient sleep or too little activity); external factors such as drugs (i.e. iatrogenic fatigue); or a combination of these (Sugerman and Berg, 1984; Valdini *et al.*, 1988; McWhinney, 1989). Fatigue is also comorbid with most physical illnesses and many psychiatric disorders (David *et al.*, 1990). As Solberg (1984) concluded, the wide range of possible contributing factors and the multiplicity of contributing factors makes fatigue a diagnostic challenge for GPs.

To what does the GP attribute the fatigue and how? Because of the vagueness of fatigue we may assume that GPs take refuge in simple decision-

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making strategies such as pattern recognition (cf. Brooke and Sheldon, 1983). Pattern recognition implies that GPs generate hypotheses within the first few minutes of a consultation on the basis of easily recognized patient characteristics, such as age, sex and main complaint. The physician will often draw up a list of possible diagnoses based solely on these characteristics and an assessment of the most probable diagnosis will be strongly influenced by the probability of a particular disease occurring in someone of that age and sex (Bradley, 1993). Epidemiological studies have shown differences in GPs' somatic–psychosocial attributions of fatigue depending on sociodemographic patient characteristics. David *et al*. (1990) concluded that a somatic diagnosis was more frequently assigned to fatigue in men than in women. Fuhrer and Wessely (1995) found more women presenting a complaint of fatigue to end up with a diagnosis of depression than men. In a study by Knottnerus *et al*. (1987), age was found to be positively related to a somatic diagnosis. Also marital status seems to be associated with the somatic–psychosocial attribution of fatigue (Morrison, 1980; Katerndahl in Valdini *et al*., 1988). Morrison (1980) found unmarried women to have physical diagnoses associated with their fatigue while women who were members of family units more often had psychological diagnoses associated with their fatigue. Fatigue in working people may be more frequently attributed to such psychosocial causes as burnout or overstrain (cf. Terluin *et al*., 1992; Maslach, 1993) than fatigue in people not working. In addition to sex, age, marital status and employment status, the sociodemographic factors of education and socio-economic status (SES) were examined in the present study for a possible association with GPs' judgements of the somatic–psychosocial character of fatigue.

In addition to these sociodemographic factors, the attribution of fatigue may be influenced by the presence and character of *other complaints*. The absence of other complaints may indicate a different kind of fatigue, for there appears to be a difference between comorbid fatigue and fatigue as an isolated complaint (cf. David *et al*., 1990). The presence of psychosocial complaints appears to be of particular discriminative value for the GPs' diagnoses (Bensing, 1991). Consideration of *underlying diseases or problems* implies an extensive decision-making strategy, and we therefore wondered if this third factor also played a role in the GP's attribution of fatigue in daily medical practice or not. GPs are in a particularly good position to detect a relation between an underlying chronic problem and fatigue (Morrison, 1980). In the Netherlands, all inhabitants must register with one general practitioner, which means that Dutch primary-care patients are always seen by the same GP. Moreover, Dutch patients cannot use specialized medical care without referral by their GP, which means that GPs have access to the individual's psycho-social background (e.g. emotional problems) and medical background.

In addition to an examination of GPs' somatic–psychosocial attributions depending on patient factors, their attributions were also examined as an independent variable possibly influencing the consultation itself. This is important because the GPs' attributions can influence the illness beliefs of patients not only via direct verbal information but also via what the GP does during the medical consultation, such as prescribing certain medicines (Valdini *et al*., 1988) or providing particular advice with regard to illness (Nichter and Vuckovic, 1994). The illness beliefs of patients are assumed to be related to their coping style (Cameron *et al*., 1993; Cathébras *et al*., 1995), medical consumption (Cameron *et al*., 1993), compliance with treatment, the emotional state and most likely the general course of their illness (Cathébras *et al*., 1995).

RESEARCH QUESTIONS

In order to study the attribution processes during medical consultations for fatigue, the following two research questions were formulated;

(1) How do the sociodemographic characteristics of patients, their other complaints and any underlying diseases/problems relate to the GPs' somatic–psychosocial attributions?

(2) What relations appear to exist between the GPs' somatic–psychosocial attributions and the characteristics of the medical consultation?

METHODS

Procedure

The data used in this study come from The Dutch National Study of Morbidity and Intervention in General Practice conducted during 1986–1987 by the NIVEL (Netherlands Institute of Primary Health Care). The data encompass three levels (Foets and van der Velden, 1990): (1) the general-practitioner level with a survey among all 161 affiliated GPs; (2) the medical-consultation level with continuous registration of all health problems presented and related data in all affiliated Dutch general practices during 3 months and (3) the population level with a survey of a sample of the patients from the affiliated general practices. The data can be regarded as representative of Dutch GPs and their patients (Foets and van der Velden, 1990). For the present study, only the data from the second medical-consultation level were used. For this, the GPs registered the presented health problems, somatic–psychosocial attributions, underlying diseases/problems and consultation characteristics during or after the consultation on a special form. With regard to the complaints, the GPs were instructed to stay as close to the descriptions the

patients had given as possible. The complaints were then grouped according to the reason for encounter identified by the GP (with two reasons per consultation at most). And each of the reasons for encounter could cover three complaints at most. The somatic–psychosocial attribution and underlying disease/problem were recorded per reason for encounter, while the consultation characteristics were recorded for the entire consultation. The patients who visited the general practice during the three-month period were asked to complete a brief questionnaire pertaining to sociodemographic characteristics, which were then matched to the data collected by the GPs. This project resulted in registration of 387,250 consultations with regard to 418,750 problems (van der Velden *et al*., 1992).

Sample

From the above database, all of the consultations initiated with the complaint of fatigue for people 18 years and older were selected. Only the first consultations were selected in order to make comparison as valid as possible and because the initial consultation sets the scene for the attribution process (cf. Ruffin and Cohen, 1994). A number of cases had to be removed because of missing values for the variables marital status (N missing = 324) and employment status (N missing = 391). When compared to the initial selection of subjects, the final sample (N = 2097, 80.3%) contained somewhat fewer unemployed and retired patients.

Measures

Complaint. When fatigue was recorded by the GP as the patient complaint, this was coded by fieldworkers according to the ICPC [International Classification for Primary Care (cf. Lamberts and Wood, 1987)] as code A040. The reliability of the coding was found to be satisfactory (van der Velden *et al*., 1992).

Somatic–psychosocial attribution. The somatic vs psychosocial character of the GP's attribution with regard to the reason for encounter was operationalized using a 5-point scale with the following distinctions:

1. Purely somatic complaint.
2. Somatic problem which entails psychosocial problems.
3. Somatic complaint with suspected psychosocial problems behind it, or psychosocial complaint with suspected somatic problems behind it.
4. Psychosocial complaint which entails somatic problems.
5. Purely psychosocial complaint.

Patient-related characteristics

Sociodemographic characteristics. The following sociodemographic characteristics were used: age, sex, marital status (unmarried, married, divorced, widowed), insurance (public or private), education, employment status (student/military duty, housewife/househusband, unemployed, unfit for work, retired, working) and socio-economic status (SES). As already mentioned, the information for these variables was collected by questionnaire.

With regard to insurance, some explanation of the Dutch system may be useful. During the period of data collection, all families with incomes below a particular level were publicly insured for all health care expenditures (the Dutch health-insurance system has recently changed). About 70% of the population was insured in this manner at that time. Patients with incomes above this level are covered by private insurance (Gijsbers van Wijk *et al*., 1995).

The variables education and SES were re-coded using PRINCALS (cf. van de Geer, 1993) into ordinal variables with Insurance and Age as comparative variables. This method made it possible to compute a value for all cases including the ones with missing values. This resulted in a 5-point scale for education [ranging from low to high education: −1.95 = primary school; −0.97 = not finished (yet); 0.26 = secondary school and vocational training; 0.50 = missing; 1.55 = polytechnics and university graduation] and a 11-point scale for SES (ranging from low to high SES: −1.02 = agricultural labourer, −0.87 = missing; −0.87 = skilled blue-collar worker; −0.78 = unskilled blue-collar worker; 0.20 = routine white-collar worker; 0.26 = small tradesman without employees; 0.28 = foreman; 0.52 = no category; 1.29 = independent farmer; 1.44 = small tradesman with employees; 1.60 = medium level white-collar worker; 2.19 = higher level white-collar worker). Principal-components analysis on education, SES, insurance and age showed re-coding of the two variables education and SES to improve the amount of explained variance by them from 64 to 75%.

The remaining nominal sociodemographic variables marital status and employment status were recoded into dummy variables for use in multiple regression analysis.

Other complaints. On the basis of the information with regard to the complaints other than fatigue, three variables were formed:

(1) Other complaints.

(2) Other complaints all somatic: one or more other complaint(s) but all of a somatic character [ICPC chapter A–N or R–Y (cf. Lamberts and Wood, 1987; van der Velden *et al*., 1992)].

(3) Other psychosocial complaints: at least one other complaint of a psychosocial character [ICPC chapter P (psychological or psychiatric) or Z (social) (cf. Lamberts and Wood, 1987; van der Velden *et al*., 1992)].

Underlying disease/problem. The GPs recorded the underlying disease/problem using a checklist. Originally, this checklist consisted of 20 items ran-

ging from chronic somatic disorders (diabetes, cara, hypertension, chronic heart problems, C.V.A., peripheral vascular disease, arthrosis deformans, rheumatoid arthritis, malignant neoplasm, pregnancy, hospital after-care, status after operation, adverse affect of medical agent in proper dose, dementia and other problems) to psycho-social problems (relationship/family problems, violence/maltreatment, work/study problems, depressive syndrome, addiction problems) and a category "no underlying disease/problem". We re-coded these scores into three dichotomous variables:

1. Presence of an underlying disease/problem.
2. Presence of a somatic underlying disease/problem.
3. Presence of a psychosocial underlying disease/problem.

Other problems were included in the category of somatic disease/problem in order to make the occurrence of a psychosocial underlying problem clear.

Consultation characteristics

The characteristics of the consultation were recorded by the GP and cover the entire consultation. The following dichotomous variables were measured: diagnostic procedures to be performed in one's own practice (physical examination, blood examination, urine examination); diagnostic procedures to be performed elsewhere; reasons for diagnostic procedures (discovery of pathology, check, screening of high-risk group, reassurance); treatment [counselling, information/education, advising wait and see, advising (bed) rest, medical treatment (i.e. injection, injury treatment, vaccination)]; prescription of medicine; consultation length (1–5 min, 5–10 min, 10 or more minutes).

ANALYSIS

In order to study the first research question, tests were conducted to determine which patient-related characteristics led to significant differences in the somatic–psychosocial attributions made by the GPs. In order to determine the strength of the relations for the nominal patient variables, separate ANOVAs were performed with each patient-related characteristic as the independent variable and the GPs' somatic–psychosocial attributions as the dependent variable. When a significant effect was found, Scheffé tests were performed to distinguish the effects of the different categories within a particular patient characteristic. For the ordinal patient variables, Pearson's correlations were computed. Multiple regression analysis was undertaken to determine the contributions of the patient-related variables to the observed variance in the GPs' somatic–psychosocial attributions; the variables were entered in six steps.

To investigate the second research question, biserial correlations (which are correlations between a dichotomous variable and a continuous variable, and can be interpreted as a Pearson's correlation) were computed for the GPs' somatic–psychosocial attributions and the recorded characteristics of the consultation.

RESULTS

GPs' somatic–psychosocial attributions

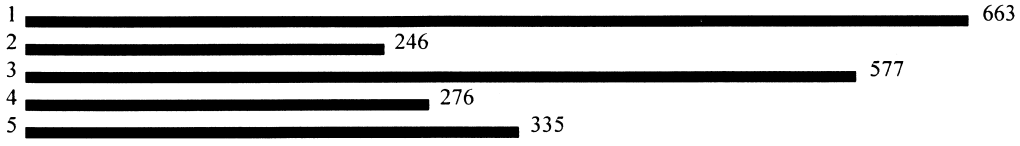
In Fig. 1, distribution of the GPs' somatic–psychosocial attributions is depicted. The mean was 2.70 (SD 1.44, range 1–5).

Descriptive statistics

In Table 1, the descriptive statistics for the patient characteristics are presented. For the ordinal variables re-coded using PRINCALS, both the means and percentages are given. The descriptive statistics for the consultation characteristics are presented in Table 2.

Relations between patient characteristics and GPs' somatic–psychosocial attributions

In Table 3, the results of one-way analyses of variance to determine the relations between the



1 = purely somatic complaint.
2 = somatic problem which entails psychosocial problems.
3 = somatic complaint with suspected psychosocial problems behind it, or psychosocial complaint with suspected somatic problems behind it.
4 = psychosocial complaint which entails somatic problems.
5 = purely psychosocial complaint.

Fig. 1. Distribution of the GPs' somatic-psychosocial attributions.

Table 1. Patient characteristics ($n = 2097$)

Patient characteristics	Mean	Percentage (%)
Age (range 18–91)	44.11 (19.81)	
Sex (female)		66
Marital status		
Unmarried		27
Married		61
Divorced		5
Widowed		6
Insurance		
Public		71
Private		30
Education (range −1.95 to 1.55)	−0.064 (SD 1.06)	
Not finished yet		1
Missing		4
Primary school		21
Secondary school/vocational training		63
Polytechnics and university graduation		11
Employment status		
Student/military duty		6
Housewife		21
Unemployed		3
Unfit for work		4
Retired		13
Working		53
SES (range −1.02 to 2.19)	0.103 (SD 1.02)	
Agricultural labourer		1
Missing		15
Skilled blue-collar worker		8
Unskilled blue-collar worker		21
Routine white-collar worker		27
Small tradesman without employees		2
Foreman		2
No category		1
Independent farmer		2
Small tradesman with employees		1
Medium level white-collar worker		16
Higher level white-collar worker		6
Other complaints		
No other complaints		33
Somatic complaint(s)		54
Psycho-social complaint(s)		12
Underlying disease/problem		
No underlying disease/problem		66
Somatic disease/problem		14
Psychosocial disease/problem		20

Table 2. Consultation characteristics ($n \geq 1666$)

Characteristics	Frequency (%)
Diagnostic procedures ($N = 2097$)	
Diagnostic procedures in own practice	
Physical examination	68
Blood examination	20
Urine examination	7
Diagnostic procedures elsewhere	31
Reason for diagnostic procedure ($N = 1666$)	
Discovery of pathology	89
Check	6
Screening of high-risk group	0.3
Reassurance	5
Treatment ($N = 2097$)	
Counselling	36
Information/education	61
Wait and see	11
(Bed) rest	5
Medical treatment[a]	5
Prescription of medicine	38
Consultation length ($N = 2086$)	
0–5 min	8
5–10 min	56
> 10 min	36

[a]Medical treatment comprises: medication without prescription, discontinuing medication, diet, injection, syringing ear, wound care, minor surgery, bandaging/taping/resetting, catheteration, liquid nitrogen, IUD, other, vaccination.

nominal patient characteristics and the somatic–psychosocial attributions are presented. In Table 4, the correlations between the continuous variables and the attributions are presented. Of all the sociodemographic patient characteristics, only sex was significantly related to the GPs' somatic–psychosocial attributions. Other complaints and underlying disease/problem were also strongly related to the GPs' somatic–psychosocial attributions. Scheffé tests showed significant differences between the GPs' somatic–psychosocial attributions for the categories no other complaints ($M = 2.97$), somatic complaints ($M = 2.26$) and psychosocial complaints ($M = 3.91$) ($p < 0.001$). For the categories no underlying disease/problem ($M = 2.43$), somatic disease/problem ($M = 2.36$) and psychosocial disease/problem ($M = 3.88$), only the differences between the category psychosocial underlying disease/problem and the other two categories were significant ($p < 0.001$).

Age, education and SES were not significantly related to the GPs' scores on the somatic–psychosocial attribution scale.

Table 3. ANOVAs for the relationship between nominal patient characteristics and the GPs' somatic-psychosocial attributions ($n = 2097$)

Patient characteristics	*F*
Sex (female)	10.65**
Marital status	3.16
Unmarried	
Married	
Divorced	
Widowed	
Insurance	0.030
Public	
Private	
Employment status	2.17
Student	
Housewife	
Unemployed	
Unfit for work	
Retired	
Working	
Other complaints[a]	181.74***
No other complaints	
Somatic complaints	
Psycho-social complaints	
Underlying disease/problem[a]	182.00***
No underlying disease/problem	
Somatic disease/problem	
Psychosocial disease/problem	

**$p \leq 0.01$.
***$p \leq 0.001$.
[a]See text for Scheffé test for significant differences between the three groups.

Prediction of GPs' somatic–psychosocial attributions by patient characteristics

The results of the regression analyses are presented in Table 5, which shows the amount of variance in the GPs' somatic–psychosocial attributions to be explained by patient characteristics. All six steps lead to significant changes in the degree of variance explained. Sex and age explained 0.9% of the variance in the GPs' somatic–psychosocial attributions (step 1). All socio-demographic characteristics together explained 1.8% of the variance (steps 1 and 2). The mere existence of other complaints explained another 1.8% while the specific character of these complaints added 12.5% to the explained variance, so the variable Other complaints added a total of 14.3% (steps 3 and 4). The variable Underlying disease/problem explained an additional 9.9% of the variance in the GPs' somatic–psychosocial attributions with 4.4% explained by mere knowledge of the existence of an underlying disease/problem and 5.5% by the specific character of the underlying disease/problem (steps 5 and 6).

A total of 26.0% of the variance in the GPs' judgements regarding the somatic–psychosocial character of the fatigue complaint was explained by all of the preceding variables taken together.

Table 4. Correlations between ordinal patient characteristics and GPs' scores on the somatic-psychosocial attribution scale[a] ($N = 2097$)

Patient characteristic	Pearson's correlation
Age	–0.060
Education	0.061
SES	0.036

[a]A higher score on the attribution scale indicates a more psychosocial attribution.

Relations between GPs' somatic–psychosocial attributions and consultation characteristics

In Table 6, the correlations between the GPs' somatic–psychosocial attributions and the characteristics of the consultations are presented. A more psychosocial attribution of the fatigue by the GP tended to coincide with consultations which were characterized by less physical examination; fewer diagnostic procedures for discovery of pathology, more diagnostic procedures for reassurance; more counselling, less medical treatment; less prescription of medicine and a longer duration than consultations related to a more somatic attribution of the fatigue by the GP.

DISCUSSION

The purpose of this study was to investigate the relations between patient-related characteristics, GPs' somatic–psychosocial attributions and the consultation characteristics of the medical consultations prompted by a complaint of fatigue. About a quarter of the variability in the GPs' somatic–psychosocial attributions could be explained on the basis of the variables considered here. The GPs' attributions were also found to be related to specific characteristics of the consultation. With respect to the first research question, the nature of the other complaints accompanying the presentation of fatigue and the GP's knowledge of an underlying disease/problem bore the strongest relations to the GPs' somatic–psychosocial attributions. The complaint of fatigue itself thus had little diagnostic value. In the case of a single fatigue complaint alone, the attribution resulted in treatment similar to that for fatigue accompanied by somatic problems; the GPs ascertained a combination of somatic and psychosocial problems. Fatigue accompanied by psychosocial problems received a clear psychosocial attribution and was also treated differently than a complaint of fatigue alone or fatigue accompanied by somatic problems. The latter can be concluded from the significant and striking correlations between the GPs' attributions and the characteristics of the consultations. In the case of a more psychosocial attribution, the consultations tend to be, among other things, more affective or socio-emotional (cf. Bensing, 1991).

Almost two-thirds (66%) of the first consultations for fatigue studied here involved women, which fits with the findings of other studies of fatigue complaints in general practice (Saultz, 1988; Valdini *et al.*, 1988). In the NIVEL project, 56.5% of episodes involved female patients (see Groenewegen *et al.*, 1992, Table C16). This means that women presented with fatigue more often than men in our study and stands in contrast to a recent

Table 5. Multiple regression with patient characteristics as independent variables and GPs' somatic-psychosocial attributions[a] as the dependent variable

Patient characteristics entered in 6 steps	R^2 change	B
Step 1:		
Sex	0.009***	0.083***
Age		–0.914
Step 2:		
Marital status (reference category "married")	0.009***	
Unmarried		0.029
Divorced		0.014
Widowed		0.008
Employment status (reference category "working")		
student/military duty		–0.024
Housewife		–0.17
Unemployed		0.007
Unfit for work		0.027
Retired		–0.015
Education		0.018
SES		0.011
Step 3: Other complaints	0.018***	–0.197***
Step 4: Other psychosocial complaint(s) [reference category other complaint(s) all somatic]	0.125***	0.287***
Step 5: Underlying disease/problem	0.044***	0.388***
Step 6: Somatic disease/problem (reference category psychosocial disease/problem)	0.055***	–0.294***
R^2 Total	0.260***	

*$p \leq 0.05$.
**$p \leq 0.01$.
***$p \leq 0.001$.
[a]A higher score on the attribution scale indicates a more psychosocial attribution.

finding showing men and women do equally complain of fatigue in French general practice (Fuhrer and Wessely, 1995). The finding that sex explains very little of the variance in the GPs somatic–psychosocial attributions in the present study is in keeping with findings of Knottnerus *et al.* (1986) for fatigue and the findings for some other complaints using the same database (Verhaak and Wennink, 1990). The socio-demographic patient characteristics marital status, education, employment status and SES did not appear to influence the GPs' somatic–psychosocial attributions, which is rather surprising. For employment status, both an overloaded life (e.g. working) and an underloaded life (e.g. being unemployed, retired, unfit for work) may be related to psychosocial attribution (cf. Pennebaker, 1982). It can nevertheless be concluded that Dutch GPs do not judge complaints of fatigue differently for different socio-demographic patient groups. The lack of such sociodemographic influence also suggests that the GPs' decision-making may be based on more elaborate strategies than quick pattern recognition.

Table 6. Correlations between GPs' somatic psychosocial attributions[a] and characteristics of the consultation ($n \geq 1666$)

Consultation characteristics	r
Diagnostic procedures	
In own practice	
Physical examination	–0.210**
Blood examination	–0.005
Urine examination	–0.044
Elsewhere	–0.030
Reason for diagnostic procedure (N = 1733)	
Discovery of pathology	–0.137**
Check	–0.027
Screening of high-risk group	0.041
Reassurance	0.190**
Treatment	
Counselling	0.330**
Information/education	0.053
Wait and see	–0.005
(Bed) rest	–0.019
Medical treatment[b]	–0.049
Prescription of medicine	–0.195**
Consultation length (N = 2086)	
0–5 min	–0.121**
5–10 min	–0.130**
> 10 min	0.203**

*$p \leq 0.05$.
**$p \leq 0.01$.
***$p \leq 0.001$.
[a]A higher score on the attribution scale indicates a more psychosocial attribution.
[b]Medical treatment comprises: medication without prescription, discontinuing medication, diet, injection, syringing ear, wound care, minor surgery, bandaging/taping/resetting, catheteration, liquid nitrogen, IUD, other, vaccination.

Our findings show the identification of other psychosocial symptoms to clearly influence the course of the consultation. In fact, an awareness of underlying psychosocial problems appeared to determine the content of the consultation more than an awareness of underlying somatic disorders. Doctors are often criticized for their "either somatic or psychosocial" thinking (Tollefson *et al.* (1984) in Kirmayer, 1995). In our study, this is only practiced in case of apparent psychological misery. In other cases the complaint of fatigue is regarded as a multicausal problem, which should be the rule in medicine (Kirmayer, 1995). One might, at first glance,

conclude that patients largely determine the nature of the consultation with the selection of symptoms they present. However, GPs also interfere with this process by differences in degree to which they give room to the patient to tell what really worries him or her (Bensing, 1991).

Somatisation and psychologisation

It is frequently assumed that GPs favour somatic attributions for fatigue (Knottnerus *et al.*, 1986) because they fear the fatigue is the signal of a lethal disease such as cancer or because they feel uncomfortable with the treatment of psychological problems. Recent research has shown patients to want biomedical solutions while GPs do their utmost to consider psychosocial causes and solutions along with biomedical aetiologies and fight the popular belief that only illnesses with an organic basis are acceptable (Helman, 1985a; Ruffin and Cohen, 1994; Cathébras *et al.*, 1995). Our study does not support either of these assumptions and shows a more complicated picture. Although less often applied, our GPs were not afraid of psychological attributions and were even predisposed towards adverse psychologisation. Blood examinations or procedures outside the practice were frequently carried out, irrespective of the attribution. In the case of a psychosocial attribution, however, the GP also reported these tests being done to reassure the patient, which may have provided the patient with somatic ''counter-cues''.

Methodological issues

It should be emphasised that the direction of causality cannot be determined on the basis of the present data. However, if the GPs only made their attributions after completing the consultation report of the study, our conclusions on relations are still valid.

Our data also do not necessarily reflect the other complaints and underlying diseases/problems related to the fatigue by patients themselves. Other complaints and underlying diseases/problems explained much of the variance in the GPs' attributions. This may in part be due to the dichotomization of these variables. The re-coding into dichotomous variables greatly simplified actual reality and the role of various psychosomatic problems including as back pain, headache, etc., was not identified because of the limitations of the data set. In addition, a conceptual overlap between the independent variable other complaints and the dependent variable somatic–psychosocial attribution can be supposed. The attribution was assigned to the combination of complaints constituting the reason for encounter. This combination consisted of three complaints at most, and included fatigue. As attribution was used to relate patient characteristics and consultation characteristics, our conclusion that the existence of Other complaints is related to the content of the consultation is not undermined. It is striking that the GPs' somatic–psychosocial attributions, operationalized with only one item, so significantly related to so many consultation factors, even though the absolute values of the correlations were rather low.

Finally, our data were collected 10 years ago which means that the percentages may have changed: GPs may give patients more room these days and stand more open to psychosocial attributions for fatigue. The patient group complaining of fatigue may also be somewhat different. According to the popular press today, for example, many people suffer from fatigue because of work or role overload. We have not, however, seen indications of the attribution itself changing.

Recommendations for further research

The results of the present study has left us with many interesting topics for further investigation. First, we should mention the fascinating but complicated issue of the interaction between the attributions of the GP and the patient (cf. Sheldon *et al.*, 1985; Ruffin and Cohen, 1994; Cathébras *et al.*, 1995). Doctors being aware of patient cognitions (Helman, 1985b) and in congruence with patient cognitions (Lacroix, 1991) predict better patient outcomes.

A second topic concerns the question of whether and how attributions of fatigue in the primary-care setting affect a patient's well-being. Cathébras *et al.* (1995) found no long-term effects of GPs' somatic attributions for fatigue. In fact, studies of chronic fatigue syndrome (CFS) have shown patients' somatic attributions to predict worse outcome (Sharpe *et al.*, 1992; Wilson *et al.*, 1994; Chalder *et al.*, 1996; Vercoulen *et al.*, 1996). Cope *et al.* (1996) found a ''psychologising'' attributional style on the parts of a patient to constitute a risk factor for CFS. Both psychologisation and somatisation thus foster inadequate patient cognitions at times, which may lead to unnecessary medical consumption and certainly will not foster the development of useful coping strategies (Cameron *et al.*, 1993; Leventhal *et al.*, 1993).

Practical recommendations

Our study showed positive results with regard to GPs managing fatigue: they do not base their attributions on stereotypes but on what individual patients tell. To improve the management of fatigue in general practice, we suggest that GPs should offer enough room for patients to report their problems and become aware of psychosocial problems sometimes distracting the attention from the complaint of fatigue. While fatigue itself seems to have no diagnostic value, it is unwise to ignore the complaint because it so obviously influences the patient's quality of life. GPs should be warned against ordering too many diagnostic procedures

and the danger of over-medication (Knottnerus *et al*., 1986; Ruffin and Cohen, 1994). Laboratory tests are not very helpful in the diagnosis of the causes of fatigue and may only enhance somatisation of the problem (Helman, 1985a; Knottnerus *et al*., 1986; Kroenke *et al*., 1988; Zaat *et al*., 1991; Ridsdale *et al*., 1993; Dinant *et al*., 1994).

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