

Predictors of differences in symptom perception of older patients and their doctors

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Background. Doctors and their older patients do not necessarily agree on what health problem ought to be treated. Discordance influences diagnostic procedures, patient satisfaction and treatment outcome negatively.

Objective. The purpose of the present study was to determine the psychosocial factors influencing differences in symptom reports of patients and physicians.

Methods. A cohort study was carried out in a medical out-patient clinic. A total 141 women and 213 men agreed to give symptom reports while waiting for their doctor's appointment and allowed their treating physician to evaluate symptoms afterwards.

Results. Disagreement between patients and physicians on which symptoms triggered the visit appeared in one-third of the cases. This was more likely the longer symptoms existed, the less intensely patients experienced their symptom and the more restricted they felt because of the symptom. Psychosocial factors did not have a significant influence.

Conclusions. Independently of psychosocial variables, the different illness concepts of patients and their treating physician influence the subject of the consultation. Doctors and patients were most likely to agree when patients reported their symptoms as being of recent onset and being intense. Symptom intensity and the associated degree of restriction seem to reflect two different conceptual dimensions of symptom evaluation.

Keywords. Disagreement, elderly, general practice, psychosocial factors, symptom perception.

Introduction

Although the health problems of older patients in general practice and medical out-patient clinics have been variously described,^{1–3} little is known about the factors influencing agreement between doctors and patients regarding which symptom is the prime focus of the consultation independently of psychosocial variables. It has been reported that between patients and their doctors there is often disagreement on which symptoms have triggered a consultation.^{4,5} Concordance on this issue is important as it will improve the outcome for the patient.^{6–10} The problem is particularly acute for older patients as they are the most frequent users of health care.

It has been shown that one reason for such misunderstanding is the under-recognition of emotional and social

agendas in the consultation.¹¹ Affective disorders might influence a physician's assessment of the medical status.¹² Patients who are elderly often present complex problems; therefore, doctors may have problems identifying symptoms and in particular clarifying which are the most pertinent during the consultation.^{13–16} The influence of the symptom, as it is perceived by the patient, on concordance has not been clarified.

We investigated whether psychosocial factors and symptom perceptions caused problems in communication between doctors and their older patients by examining whether they influenced the rate of agreement between patient and doctor regarding the principal reason for the consultation.

Methods

Population and procedure

Patients attending the medical out-patient clinic at Zurich University Hospital were asked by a study doctor to identify symptoms that triggered their visit and also to provide data on psychosocial variables prior to being seen by a doctor. Following the consultation, the clinician

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was also asked to identify what symptoms he or she felt had triggered the consultation. Consultations lasted for 45 min and patients were recruited if they had sufficient knowledge of the German language and were aged 55 or older. Patients with a history of cerebrovascular incidence or myocardial infarction within the previous 6 months or those currently undergoing radio- or chemotherapy or showing signs of dementia were excluded.

As knowledge of the study might motivate doctors to enhance their communication with patients and produce an active intervention, we regarded the study duration as an independent variable in the analysis of predictors of the agreement rate between doctors and their patient.

Measures

All patient information was assessed in a brief semi-structured interview by one of the study doctors prior to the consultation, whereas the treating physicians entered their ratings into a questionnaire after the patient left the office.

An open description of the two main symptoms was requested both from the patients and from the treating physicians. In addition, they evaluated symptom intensity and the associated degree of restriction in everyday life on a 5-point-Likert scale (*none* to *very strong*). This was done in a similar way to the Measure Yourself Medical Outcome Profile¹⁷ where symptoms are collected and rated according to their severity. In addition, patients were asked to rate in a single item on a 5-point-Likert scale (*not at all* to *very much*) how anxious and depressed they felt at the moment, and to what extent their ailment had physical and psychological causes. The treating physician evaluated the patient and symptoms on the same dimensions.

The following socio-demographic variables were asked from the patients: age, gender, educational level, marital status, work status, number of children and number of visits to doctors and other health care providers during the last 6 months. Patients could report up to four critical life events they had experienced during the last 2 years and rate how stressed they felt by each one of them. The ratings were summed into a stress severity score and events categorized according to the Munich Event List.¹⁸

Analysis

The three study doctors individually assessed whether the symptoms reported by the patient were congruent with those identified by the physician. The reports of all three doctors had to be uniform before agreement between physician and patient was decided. In subsequent analysis, ratings and symptoms refer only to the first and most important symptom. In order to identify whether the physician and clinician attributed the symptom independently to a psychological or physical cause, the rating for physical cause was subtracted from that for psychological cause; a positive value therefore implied

that the patient or doctor attributed the symptom more to a psychological aetiology; a negative value represented attribution to a physical aetiology. Logistic regression analysis was utilized to evaluate psychosocial factors and patients' symptom evaluation as predictors of congruency, taking their contribution into account simultaneously. Analysis of variance was performed in order to compare differences in symptom evaluation between doctors and patients.

Results

We recruited 354 patients between October 1996 and December 1997. Those recruited were aged from 55 to 94 years, with an average age of 69.6 years [95% confidence interval (CI) = 68.6–70.5], and 141 of them were women (39.8%). Of those recruited, 23.4% were employed at least part-time, 60% were married and living with their spouse, 72.4% had completed professional job training and/or obligatory school (before age 20), 13.6% had a university degree and 27.2% had no children. At least one critical life event in the previous 2 years was experienced by 54% of the participants. Table 1 reveals that the most common were events concerning their own health, the death or health problems of someone close to them and employment issues. Categorization of the life events was made according to the Munich Event List.¹⁸

The most common diagnoses found in this population of older patients are listed in Table 2 and seem to reflect the normal health problems associated with ageing. Symptom duration was 1–60 days for 36.2% of the participants, 3–6 months for 7.6%, 7–12 months for 7.1% and >1 year for 47.5%. In 236 cases (66.7%), patients and their physicians did and in 118 cases (33.3%) they

TABLE 1 Frequency of critical life events categorized according to the Munich Event List; multiple responses were possible (n = 354)

Critical life events	Frequency
None	163
Health (personal)	97
Bereavement	61
Employment	58
Health (others)	25
Housing	19
Family (children, relatives)	11
Close relationship	7
Finances	3
Social activity	2
Legal matters	2
Other	3

TABLE 2 Frequency of symptoms classified according to ICD-10; only symptoms with a prevalence >5% are reported (n = 354)

ICD-10 diagnostic groups	Percentage
Cardiovascular problems	27.3
Muscle-skeletal problems	12.2
Symptoms not otherwise classifiable	10.8
Endocrinological problems	10.2
Gastrointestinal problems	8.2
Respiratory problems	7.7

TABLE 3 Simultaneous logistic regression analysis of the model for disagreement between patients and physicians on which symptoms triggered the patient's visit to the medical out-patient clinic

Independent variable	B	SE	OR	95% CI
Age	0.02	0.02	1.02	0.98–1.05
Sex	0.18	0.28	1.20	0.69–2.08
Marital status	–0.05	0.14	0.95	0.72–1.26
Education	–0.10	0.09	0.90	0.75–1.08
Work status	0.62	0.37	1.85	0.90–3.85
Number of children	0.10	0.10	1.10	0.91–1.34
Stress due to life events	0.03	0.05	1.03	0.93–1.13
Number of health care providers	0.02	0.02	1.01	0.98–1.05
Study duration	0.00	0.00	1.00	1.00–1.00
Symptom duration	0.20	0.09	1.22*	1.02–1.47
Intensity	–0.50	0.16	0.61**	0.44–0.83
Restriction	0.37	0.16	1.45*	1.06–1.99
Depression	–0.18	0.17	0.84	0.60–1.17
Anxiety	0.10	0.15	1.10	0.81–1.49
Cause of symptom	0.04	0.08	1.04	0.89–1.23

$R^2 = 0.11$; * $P < 0.05$, ** $P < 0.005$.

did not agree on which symptoms led to the visit to the medical out-patient clinic.

Logistic regression analysis did not identify psychosocial variables as significant factors prompting discordance, nor was there evidence that the study design had an effect on doctors' behaviour. Symptom-related factors did predict a difference in agreement between doctors and clinicians. Disagreement was most likely when symptoms had been present for some time, when patients rated their symptoms as being less intense and when patients felt they were more restricted as a result of their symptoms (see Table 3). The overall model had an adjusted $R^2 = 0.11$, $P < 0.01$.

Differences in the symptom evaluation of patients and doctors showed that doctors rated intensity and restriction higher on the Likert scales than did patients, but rated patients' levels of anxiety and depression as being of less importance. In an analysis of variance, significant rater differences (patients versus doctors) for intensity, restriction and anxiety were revealed (see Table 4). The rater effect for depression was only marginally significant ($P = 0.06$) but in the same direction. Doctors and patients were dissimilar in attributing symptoms to a physical or psychological aetiology, with doctors revealing a stronger somatic attribution than patients.

When cases were compared where there was an agreement versus disagreement between patient and doctor regarding which symptoms triggered the consultation, no significant group effect was found. However, the difference for symptom intensity was marginally significant ($P = 0.08$).

The rater \times group interaction for intensity was significant (see Table 4), because doctors rated intensity of symptoms higher than did patients, and patients' rating on intensity differed between the agreement and disagreement group. The interaction for depression was marginally significant ($P = 0.06$).

Discussion

The main diagnoses found in this population of older patients reflect the normal health problems associated

TABLE 4 Means ratings and F-values from analyses of variance of patients' and doctors' symptom evaluation

Rater group	Patient		Doctor		F-values		
	Agreement	Disagreement	Agreement	Disagreement	Rater	Group	Rater \times group
Intensity	1.96	1.50	2.83	2.83	194.64***	3.07	8.22**
Restriction	1.44	1.26	2.43	2.27	177.26***	1.71	0.01
Depressiveness	1.78	1.61	1.54	1.61	3.49	0.53	3.49
Anxiousness	1.84	1.76	1.68	1.61	5.54*	0.65	0.00
Cause of symptom	–1.07	–0.96	–1.85	–2.12	46.65***	0.27	1.73

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

with ageing, implying that the results of this study are not due to complex health problems specific to the patient population of the University Hospital Zurich. In the study population, men were slightly over-represented compared with general practice in Switzerland.¹⁹

In one-third of the consultations of older patients, their doctors did not recognize patients' complaints or gave other health problems a higher priority than the patient did. Our findings on the frequency of disagreement between doctors and their patients regarding their symptoms are congruent with those of Starfield *et al.*^{4,5} and demonstrate that it is a common problem in an older patient population. One possible explanation is that old age with its accompanying morbidity may complicate the identification of the most significant health problem by the doctor.¹²

Our hypothesis that psychosocial variables such as advanced age, levels of depression or anxiety might influence agreement regarding which symptoms triggered the consultation was not confirmed. If entered simultaneously into a logistic regression model with patients' information on their symptoms, probability levels for psychosocial variables ranged from 0.10 to 0.73. Nevertheless, patients' depression and anxiety were underestimated by the physicians. Moreover, patients attributed their symptoms more to psychological causes than the doctors did. These results may be interpreted as a disregard for patients' psychological agendas.

We were concerned that our study design, continuing as it did over 15 months, may produce a change in doctors' behaviour. We attempted to detect such an influence in the analysis but were unable to demonstrate any. As consultation time available to the clinicians was relatively constant, any possible effect of time pressure is not detectable in this study.

We can conclude that agreement between doctor and patient was more likely when symptoms were reported as being intense and of recent onset. When symptoms were chronic or caused restriction in activity, there was an increased likelihood of disagreement between the doctor and the patient regarding which symptom triggered that particular consultation. It seems important for clinicians to ask older patients not only about their most intense symptoms but also about the most restricting ones.

In order to address whether symptom intensity and the associated degree of restriction or handicap were in fact measuring the same variable, we found that although they were highly correlated ($P < 0.001$) these variables seemed to reflect two different conceptual dimensions of symptom evaluation. This conclusion is supported by the independent significant contribution of intensity and restriction in the logistic regression model predicting discordance.

The differing illness concepts of patients and their consulted physician may influence the subject of the consultation, resulting in discordance between the patient

and the doctor. Such discordance may determine subsequent diagnostic procedures, as well as the development of rapport, particularly in terms of patient satisfaction. In this study, we have shown that there can be considerable discordance between patients and doctors even when there is no significant time pressure. This may be more pertinent for elderly patients than for younger patients, although this study cannot answer that point. It would be interesting to repeat this study in a younger population and in an environment where the clinician also has to contend with the pressures of scarce time and resources.

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