



The workload of general practitioners does not affect their awareness of patients' psychological problems

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Abstract

Objective: To investigate if general practitioners (GPs) with a higher workload are less inclined to encourage their patients to disclose psychological problems, and are less aware of their patients' psychological problems.

Methods: Data from 2095 videotaped consultations from a representative selection of 142 Dutch GPs were used. Multilevel regression analyses were performed with the GPs' awareness of the patient's psychological problems and their communication as outcome measures, the GPs' workload as a predictor, and GP and patient characteristics as confounders.

Results: GPs' workload is not related to their awareness of psychological problems and hardly related to their communication, except for the finding that a GP with a subjective experience of a lack of time is less patient-centred. Showing eye contact or empathy and asking questions about psychological or social topics are associated with more awareness of patients' psychological problems.

Conclusion: Patients' feelings of distress are more important for GPs' communication and their awareness of patients' psychological problems than a long patient list or busy moment of the day. GPs who encourage the patient to disclose their psychological problems are more aware of psychological problems.

Practice implications: We recommend that attention is given to all the communication skills required to discuss psychological problems, both in the consulting room and in GPs' training. Additionally, attention for gender differences and stress management is recommended in GPs' training.

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1. Introduction

Recognition of a patient's psychological problems by a general practitioner (GP) is important because it is the first critical step towards finding the appropriate care for the patient. The GP is the person assigned to provide integrated care for both patients' somatic problems and their psychological complaints, or psychological aspects of their somatic complaints. However, a lack of available time has been reported by GPs as an important barrier against involvement in patients' psychological problems [1,2]. It has been shown that patients with mental health problems contact their general practice more

often than patients with physical problems [3]. Moreover, it has been demonstrated that consultations with patients who suffer from mental health problems take more time [4–9] and leave the GPs more often with the subjective experience of a lack of time [7].

Investing extra time in a patient's psychological problems can be a problem, because GPs already complain about their increasing workload [10–12]. One of the reasons for the GP's investing extra time is the entanglement of mental health problems with somatic problems [6,13] resulting in longer consultations covering more than one topic. Additionally, discussing a patient's mental health problems requires specific communication skills that encourage the patients to disclose their psychological problems [14,15]. This also requires extra time in the consultation.

Patients with psychological problems often offer cues that are indicative of their distress [15,16]. GPs can use their

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communication techniques to influence the rate at which their patients offer cues [15,17]. The more cues the patient offers, the greater the chance that the GP identifies the patient's psychological problems. It is demonstrated that if a GP adopts a more patient-centred style of consulting this will lead to the patient offering more cues [17] and in turn a greater tendency by the GP to identify the patient's problems as psychological [14,18].

A patient-centred consulting style is characterised by a GP paying attention to patients' problems, ideas, concerns and preferences. Other aspects of GPs' verbal communication that might contribute to patients offering more cues, and in turn more psychological evaluations by GPs are showing empathy [17,18], and asking questions about psychological issues [15,17,18]. Eye contact is an important non-verbal communication skill that is associated with GPs' identification of psychological problems [19,20].

Investing extra time in a patient's psychological problems will be a problem especially at moments when the GP's workload is high. We expect that in order to gain time, busy GPs will be less inclined to encourage their patients to disclose their psychological problems. This can result in GPs being less aware of psychological aspects in their patients' complaints.

Our assumption is that a GP's workload is not constant over time. Workload can fluctuate during working days, but also within the working day. We differentiate therefore between 'overall' and 'situational' workload, following a study of Hutten [21]. The GPs' overall workload indicates how busy the GPs are in general, because of their practice size. Whereas the situational workload is the GPs' workload at a specific moment. We expect that GPs with a higher overall or situational workload will adapt their communication to elicit less patient disclosure regarding their psychological distress. These GPs will be less aware of their patients' psychological problems. It is further expected that the characteristics of both the GP and the patient can affect the GP's awareness of the patient's psychological problems, and the GP's communication. It is demonstrated that female [22,23] and younger GPs [5,24] are more inclined toward psychological assessment of patients' health problems. Additionally, it is known that women and older patients more often have psychological problems [5,24]. Communication patterns may also differ according to the age and the gender of GPs and their patients [25–28], suggesting more affective GP communication in female and younger GPs and female and older patients. Therefore the GP's and the patient's age and sex are included in this study.

The general question of this study is: how does the GPs' workload influence the GPs' awareness of a patient's mental distress? We will answer the following questions in more detail:

- Do GPs' workload and their communication style affect their awareness of patients' psychological problems?
- Does GPs' workload influence the GPs' communication that is visible in the medical consultation?

2. Method

2.1. Design

Secondary analyses were performed from data from the second Dutch National Survey of General Practice, a cross-sectional study conducted in The Netherlands in 2000–2002 [29]. To this National Survey participated 195 GPs in 104 general practices. Data are derived from a video registration that was part of the National Survey of General Practice. A sample of 142 of the 195 GPs gave permission to videotape consultations during one or more days. These 142 GPs were representative of the Dutch population of GPs with regard to their age, sex, education, length of residence, degree of urbanisation and number of working hours [27]. Informed consent to participate in the video recording was given by 88.1% of the visiting patients, while 11.9% of the patients refused to participate. Consultations of 2784 patients were recorded (20 per GP). Roughly 15 consultations per GP, in total 2095 consultations, were observed by trained observers. The first videotaped consultations of every GP were excluded, to avoid bias because of the camera. After each consultation the GP completed a registration form about the consultation. The patient completed a questionnaire about the consultation before and after the consultation.

GP characteristics were derived from two written questionnaires covering a wide range of topics that were sent to the GPs, with response rates of 96% and 87%, respectively. Patient characteristics as age and sex were gathered from the practice administration.

2.2. Measures

In Table 1 an overview of variables used in the analyses is given, including descriptive statistics. The variation between consultations and between GPs is expressed in coefficients of variation ((standard deviation/mean) × 100).

In Table 1 is shown that more variation is found between consultations than between GPs.

Seventy seven percent of the GP's were male, and 40% of the patients were men (not in table). We distinguish two levels in our data: individual data from every GP, and data about the consultations, including patient information. Because each patient is only represented once in the videotaped consultations, the patient level corresponds to the consultation level.

2.2.1. Dependent variable

The GPs registered after each consultation whether psychological aspects played a part in the patient's complaints. These were measured on a five point scale ranging from 1, 'psychological aspects play no part at all', to 5, 'psychological background'. This assessment is interpreted as the GP's awareness of psychological problems.

2.2.2. Independent variables

2.2.2.1. *Workload.* Two types of workload are distinguished: busy practices and busy moments. The GP's personal list size,

Table 1
Descriptive statistics of dependent and independent variables

	Level of measurement	N	Mean (S.D.) consultations	Coefficient of variation consultations (N = 1160–2095)	Coefficient of variation GPs (N = 140–142)
Dependent					
Awareness of psychological problems	Consultation	2059	2.48 (1.41)	56.85	22.18
Independent					
Busy practice	GP	2095	2456 (401)	16.33	16.38
Busy moment	Consultation	2080	.91 (1.39)	152.75	126.37
% eye contact	Consultation	2088	41% (19.87)	48.46	23.77
Expressions of empathy	Consultation	2095	1.58 (2.44)	154.43	60.76
Psychological/social questions	Consultation	2095	3.13 (3.81)	121.73	46.33
Patient-centeredness	Consultation	2072	3.81 (.65)	17.06	7.37
GP and patient characteristics					
Age GP	GP	2066	46 (6.22)	13.52	13.45
Age patient	Consultation	2095	43 (21.95)	51.05	16.72
Patient's feelings of distress	Consultation	1660	2.21 (1.24)	56.11	18.55

expressed in 1000 patients, was used as a measure for a *busy practice* based on the overall workload. The GP's list size is calculated by distributing the total number of patients on the list of the practice over the GPs being employed according to their full time equivalents (FTEs) worked.

Secondly, a situational measure, which we call *busy moments*, was constructed by considering the number of preceding consultations in which the GP experienced a lack of time. After each consultation, the GP registered if the consultation time was sufficient. The total number of preceding consultations, assessed as insufficient with respect to the available time, is a measure of the GP's subjective workload on a specific moment of the day.

2.2.2.2. Communication. Aspects of GP communication were rated by trained observers. We focused on verbal and non-verbal communication that is assumed to encourage the patient to offer cues about their mental health problems and discuss their mental health problems. The GP's eye contact is expressed in the percentage of total consultation time the GP shows eye contact with the patient. Verbal communication was rated by observers according to the Roter Interaction Analysis System (RIAS), a widely used and validated observation instrument for coding verbal communication in medical interactions [30–32]. The system is developed to code both doctor and patient communication. The unit of analysis is the smallest meaningful group of words. The RIAS that is used for the DNSG-2 distinguishes 8 categories of affective or social-emotional behaviour and 18 categories of instrumental or task-oriented behaviour. All categories are mutually exclusive. From the group 'affective communication' we selected all the GP's utterances with respect to empathy, showing partnership and support, and legitimising, grouped together under the term 'empathy'. From the group entitled 'instrumental communication' we selected the variables 'asking psychological questions' and 'asking social questions'. Psychological questions include questions pertaining to the patient's psychological or emotional state. Social questions refer to the family and home situation,

work or employment. Per consultation the total number of the GP's utterances in these categories are counted.

The degree to which the GP is *patient-centred* was determined by observers by three rating scales:

- (1) To what extent does the GP give room to the patient and encourages him or her to explain the reason for the visit in their own words?
- (2) To what extent does the GP give room to the patient and encourages him or her to decide together with the GP about the treatment, discussing preferences and concerns.
- (3) To what extent does the GP show openness toward the patient, for example listening to the patient and giving answers, adapted to the context.

These three items are integrated into an average score for the degree of being patient-centred ranging from 1, not at all to 5, to a large degree, with Cronbach's α .74. The interrater reliability for GP communication expressed in Pearson's correlation coefficients varied between .72 and .95 [27].

2.2.3. GP and patient characteristics

The GP's age and sex are derived from the GP questionnaire. The patient's age and sex were registered in the practice administration.

The patient's feelings of distress were indicated by one of the COOP/WONCA charts [33], which measures the patient's feelings during the last 2 weeks. Before the consultation, patients completed six 5-point scales, supported with illustrations, to measure functional health status. Patients registered on the chart 'feelings' to what extent they were bothered by emotional problems such as feeling anxious, depressed, irritable or downhearted and sad. These were rated from 1, not at all, to 5, extremely.

2.3. Analyses

The level of analysis in this study is the consultation. Descriptive statistics of all measures were calculated using

SPSS 11.5 software. Several multilevel regression analyses were conducted using MIWin 2.0 software. Multilevel analysis was necessary due to the two-level frame of the data with level 1 being the consultation and level 2, the GP. These give rise to cluster effects within GPs. Firstly, multilevel regression analysis was performed with the GP's awareness of the patient's psychological problems as an outcome measure, using a normal distribution model. In step 1, the GP's workload was included as a predictor in the regression model, followed by step 2, the GP and patient characteristics, and step 3, the GP's communication. GP and patient characteristics were added as potential confounders, and the GP's communication aspects were added finally to analyse if these predictors could explain the relationship between the GP's workload and the GP's awareness. For each step, explained variance was calculated on GP and consultation level. Secondly, we performed multilevel regression analyses with aspects of the GP's communication as outcome measures. The GP's workload and GP and patient characteristics were added as predictors. A normal distribution model was used for the outcome measures 'percentage of eye contact', and 'patient centeredness'. The GP's number of empathy utterances and psychological/social questions were analysed using a Poisson regression model with extra Poisson variation to account for overdispersion. The Poisson models were fitted using second order Penalized Quasi-Likelihood (PQL) estimation. The Poisson model is adequate for estimating skewed outcome measures, such as count data. We adjusted in all models for clustering at the GP level by using a random intercept. Inter-class correlations (ICC's) were calculated for all outcome measures. ICC's in the Poisson models were estimated from the ICC's of the normal distribution model. Pearson's correlations between the predictors of the regression models were maxim .33; therefore it was possible to include all predictors in the regression models.

3. Results

In Table 2 the results of multilevel regression analyses are presented with the GP's awareness of the patient's psychological problems as an outcome measure.

Table 2 shows that the GP's workload does not affect the GP's awareness of psychological problems (steps 1–3). On the other hand, it is demonstrated that the GP's awareness of psychological problems is in particular predicted by the patient's feelings of distress. Subsequently it is shown that female GPs are more aware of psychological problems, but this effect disappeared when communication aspects are added to the regression model. The GP is more often aware of psychological problems in women than in male patients. Three of four communication aspects contribute significantly to the regression model. The percentage of eye contact, showing empathy and asking psychological or social questions correspond with more awareness of psychological aspects by the GP. From all aspects of communication, eye contact is the strongest predictor for a GP's awareness of psychological problems. Being patient-centred is not significantly related to the GP's awareness of psychological aspects.

The inter-class correlation in Table 2 shows that 9% of the variance in the GP's awareness of psychological aspects in patients' problems is explained by differences between GPs. Explained variances on both consultation as GP level increase when GP and patient characteristics, and communication aspects are added to the regression model.

To answer our second research question, we investigated if the GP's workload is related to the GP's communication during the consultation. In Table 3, results of multilevel regression analyses are presented, with four aspects of GPs' communication as outcome measures.

Results in Table 3 show that the number of patients on the GP's patient list is not related to their communication. The only

Table 2
Results of multilevel regression analysis on the GP's awareness of psychological problems (B-coefficients and standard error)

	Step 1 (N = 2059)	Step 2 (N = 1606)	Step 3 (N = 1581)
Workload			
Busy practice	-.17 (.11)	-.11 (.12)	-.13 (.12)
Busy moment	-.05 (.03)	-.03 (.03)	-.02 (.03)
Communication			
% eye contact	–	–	.02 (.00)**
Empathy	–	–	.05 (.01)**
Psychological/social questions	–	–	.08 (.01)**
Patient-centeredness	–	–	.07 (.05)
GP and patient characteristics			
Age GP	–	-.00 (.01)	.01 (.01)
Male GP	–	-.27 (.12)*	-.16 (.11)
Age patient	–	-.00 (.00)	.00 (.00)
Male patient	–	-.14 (.07)*	-.15 (.06)*
Patient's feelings of distress	–	.41 (.03)**	.27 (.03)**
Inter-class correlation 0-model	.09		
Explained variance consultation level	.00	.12	.28
Explained variance GP level	.03	.05	.15

* $p < .05$.

** $p < .01$.

Table 3
Results of multilevel regression analysis on the GP's communication (*B*-coefficients and standard error)

	% eye contact (<i>N</i> = 1618)	Empathy (<i>N</i> = 1624)	Psychol./social questions (<i>N</i> = 1624)	Patient-centeredness (<i>N</i> = 1604)
Workload				
Busy practice	.19 (2.11)	.10 (.13)	.02 (.10)	−.00 (.06)
Busy moment	−.27 (.47)	.02 (.03)	−.04 (.02)	−.05 (.02)**
GP and patient characteristics				
Age GP	−.45 (.14)**	−.01 (.01)	.00 (.01)	−.01 (.00)*
Male GP	−2.16 (2.06)	−.49 (.12)**	−.05 (.09)	−.09 (.06)
Age patient	.01 (.03)*	.01 (.00)**	−.01 (.00)**	−.00 (.00)
Male patient	.58 (.94)	−.28 (.07)**	.07 (.05)	−.01 (.03)
Patient's feelings of distress	3.74 (.37)**	.22 (.02)	.22 (.02)**	.04 (.01)**
Inter-class correlation 0-model	.19	.09	.08	.13

* $p < .05$.

** $p < .01$.

relationship between workload and communication we found is that GPs are less patient-centred in consultations during busy moments. On the other hand, the GP's communication is related to GP and patient characteristics. The strongest relationship was found between the patient's feelings of distress and the GP's communication:

In consultations with patients who feel distressed, GPs show more eye contact and empathy, GPs are more patient-centred, and ask more questions about psychological or social topics. Younger GPs are more patient-centred and have more eye contact with their patients. Female GPs show more empathy toward their patients. GPs have more eye contact and are more empathic to older patients, but they ask less questions about psychological or social subjects to older patients. And, finally, GPs are more empathic toward women compared to male patients.

Inter-class correlations in Table 3 show that the use of the selected aspects of communication differs between GPs. Especially the percentage of eye contact differs strongly between GPs.

4. Discussion and conclusions

4.1. Discussion

Against our expectation, the GPs' workload is not related to their awareness of psychological aspects in the patient's complaints. GPs with a high workload, indicated by having a large list size or a subjective feeling of a lack of time at the moment of the consultation, are not less aware of psychological aspects in the patient's problems, compared to GPs with a lower workload. The presence and severity of a patient's mental distress are more important reasons for a GP to take psychological aspects into consideration.

The GP's workload is also not correlated to the amount of eye contact, empathy, and questioning about psychological or social topics, aspects of communication that can encourage the patients to talk about their psychological problems. However, a GP who has a subjective experience of a shortage of time at the moment of the consultation, is less patient-centred in the

consultation than a GP without such feelings. But the presence of feelings of distress in the patient is most strongly related to the GP's use of these communication techniques.

The GPs' awareness of their patients' psychological problems is, apart from the influence of the patient's feelings of distress, clearly related to the GP's communication. Showing eye contact or empathy and asking questions about psychological or social topics increase the GP's awareness of psychological problems. Being patient-centred alone is not enough for a GP to be aware of the patient's psychological problems. The association between the GP's communication and the awareness of the patient's psychological problems is also supported by other literature [14,15,18,19].

There are several possible explanations for the unexpected finding that the GPs' workload is not related to their awareness of psychological problems, and to all aspects of communication.

Firstly, GPs may have other ways to deal with workload than reducing their involvement in patients' psychological problems. For example, they spend less time in other aspects of their job, delegate tasks, or make follow-up appointments with patients when their workload is high, making it possible to pay attention to patients' mental health problems.

Another explanation for our findings is that we measured two aspects of the GPs' workload, list size – the overall measure of objective workload – and the subjective experience of a lack of time at the moment of the consultation or 'situational' workload, that presumably do not cover all aspects of the GPs' workload. Maybe when other aspects of the GP's workload are taken into account, like the GP's overall subjective workload, or objective workload at the moment of the consultation, relationships between workload and the GP's awareness of psychological problems and their communication will be found.

The lack of relationship between the GP's workload and their awareness of the patient's psychological problems can also be attributed to our outcome measure. It may be that a GP is aware of a patient's psychological problems without spending time on them, because this awareness is not automatically translated into a psychological diagnosis or

treatment. On the other hand, even though the GP's awareness of the presence of psychological problems may not automatically lead to a better recognition of mental health problems, and better outcomes for the patient, some relationships can be expected. Roter [34] demonstrated that patients who were recognised by their GP as having psychological problems show a reduction in mental distress over time [34]. In other studies the beneficial effects of more frequent psychological evaluations or better recognition of mental health problems, in terms of treatment or a patient's recovery, are not or not unequivocally found [18,35]. Of course, a GP being aware of psychological problems alone is not enough. But the GP's awareness is certainly the first critical step in finding appropriate care for the patient.

Our results showed that GPs who experience a shortage of time at the moment of the consultation are less patient-centred than GPs without feelings of a lack of time. When a GP is less patient centred in the consultation, there will be less room for the patient to explain the reason of their visit in their own words, there will be less shared decision making, and the GP will be less open toward the patient. As we found that the GP's subjective experience of a lack time is related to this patient centred behaviour, it is useful to consider in future research if other aspects of the GP's subjective workload also affect their communication and possibly their awareness of psychological problems.

The GP's communication and awareness of psychological problems are related to GP and patient characteristics, according to previous studies. Our finding that female GPs are more aware of psychological aspects in their patients' problems, was also found in other studies [22,23]. We found that gender differences disappeared when communication aspects are taken into account, suggesting that gender differences are integrated in the GP's communication. Also the increase of psychological evaluations when patients are older or women is supported by other authors [5,24].

Our findings that younger and female GPs show more communication that may encourage the patient to talk about psychological problems is also demonstrated by other authors [25,26]. Findings from previous studies that GPs show more affective communication with female and older patients are consistent with our findings [26,28], except for the finding that GPs ask less questions about psychological or social subjects to older patients.

There are two possible limitations of this study to mention. Firstly, the participating GPs in the video registration may not be completely representative of all GPs with respect to their communication. Seventy-three percent of the GPs participated in the video registration. Perhaps the participating GPs represent a selection of GPs who have a higher than average interest in communication, showing 'better' communication and noticing more psychological problems than other GPs. However, this is contradicted by how representative the GPs were of all Dutch GPs in several respects, as mentioned in the method section [27]. Specifically the GPs were representative with respect to their age, sex and education thus making a strong selection bias less plausible. Additionally, there is little

evidence that video-recording influences the behaviour of either GPs or patients [36].

A second limitation of our study is that causal relationships could not be demonstrated, due to the cross-sectional design of the study. It remains unsure to what extent reverse causality plays a part. The GP's communication may affect the GPs' evaluation of psychological aspects in their patients' problems, as we suggested, but a GP's awareness of psychological aspects may also influence the communication used in the consultation. These circular processes can exist alongside.

4.2. Conclusion

Long patient lists or busy periods of the day are not related to less awareness of patients' psychological problems by a GP. Neither is the GPs' workload related to several aspects of their communication that are supposed to encourage patients to talk about their psychological problems, such as eye contact, showing empathy and asking questions about psychological or social topics. But a GP who experiences a lack of time is less patient-centred in the consultation than a GP without an experience of a shortage of time. On the other hand, the presence of a patient's feelings of distress trigger both the GP's awareness of the psychological character of the patient's problems as well as the GP's communication style. These findings are encouraging for the patient with mental distress and for the quality of care. Additionally, the GP's communication is shown to be an important skill for increasing awareness of the patient's psychological problems. This study stresses the importance of the GP's eye contact, empathy and asking psychological or social questions, in order to become aware of the patient's mental distress.

4.3. Practice implications

We recommend that attention is given to the communication skills required for discussing mental distress in the consulting room. These skills should also be covered in GPs' (vocational) training, and other learning opportunities for GPs. Additionally, gender differences should be considered in GPs' training. As a GP's experience of a shortage of time is related to less patient centred consultations, attention for stress management is also recommended. The fact that GPs differ in their use of communication skills and in their awareness of psychological aspects to the patients' complaints, makes it all the more important that all GPs should be competent to use the communication skills required to become aware of patients' mental distress. More awareness of psychological aspects to the patients' complaints increases the chance that a patient's mental distress is recognised by the GP. This is an essential first step in finding appropriate care for the patient.

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