

# How doctors recognise that their patients are worried

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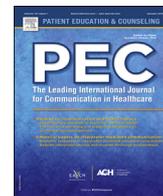
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## How doctors recognise that their patients are worried: A qualitative study of patient cues

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## ABSTRACT

**Objectives:** Recognising patient cues indicating worry is essential for successful reassurance. To obtain more insight into the variety and nature of patient cues that may arise in practice, this study explores doctors' reflections on patient cues they recognise during consultations.

**Methods:** We performed a qualitative study during which GPs participated in stimulated recall interviews, using their own video-recorded consultations to enhance reflection. First, we reanalysed an existing dataset of 15 interviews during which GPs elaborated on the doctor-patient interaction. Additionally, 12 GPs were interviewed specifically about recognising patients' cues.

**Results:** GPs described four categories of patient cues that indicate worry. GPs recognised worry based on non-verbal cues such as visible bodily reactions, and verbal cues that can be further categorised by type of worry (e.g. about serious disease). Moreover, GPs described behavioural cues, e.g. the patient bringing a list of symptoms. Lastly, GPs recognise worry based on prior knowledge about the patient.

**Conclusions:** GPs reflections have given insight into a wide variety of non-verbal -, verbal -, behavioural- and foreknowledge-based cues.

**Practice implications:** The identified cues can guide other clinicians in recognising worries and inform medical communication training and future research on the effectiveness of recognising cues and patient reassurance.

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### 1. Introduction

Many patients who visit their doctor are anxious and have concerns about their health [1–4]. Health anxiety is not only prevalent in specific patient groups such as patients with medically unexplained symptoms (MUS), hypochondriacal patients and cancer survivors [5–7], yet is a common phenomenon in the general patient population [2,8]. Effectively reassuring worried patients is an essential medical task since health anxiety negatively impacts patients' health status and well-being; hampers understanding of information; limits the effectiveness of treatment and can lead to

over-utilization of health care due to unwarranted consultations and treatments [9–11]. Key for effective and tailored reassurance, i.e. in response to the patient's specific worries, is noticing that the patient is worried. Recognising worries, however, can be challenging for doctors for several reasons [12–14].

First, the way worries are presented during consultations varies considerably across patients. Although patients express at least one worry in approximately 90% of the consultations, most patients express these worries in an implicit manner by giving cues [15–17]. Cues have been defined as verbal or non-verbal hints which suggest an underlying unpleasant emotion, such as vague words, metaphors, repetitions and unusual descriptions of symptoms [18]. Next, literature has also shown that patients can have different types of worries, such as worries about having a serious illness or about the impact of the symptoms on their daily life [8,19]. In addition, a variety of specific cognitions underlie these worries [8]. Thus, in order to reassure patients successfully, doctors have to be able to recognise a wide range of cues that may indicate different types of worries and adapt their approach to reassurance accordingly [14].

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The importance of picking up cues in the doctor-patient interaction has been described extensively [16,20,21]. There is also a rich evidence-base of studies using coding schemes such as VR-CoDES and RIAS to describe patient cues and concerns and the health-care providers' responses. [16,17,22,23]. The VR-CoDES system has also been combined with qualitative analysis in specific groups such as elderly patients [24], fibromyalgia patients [25] and cancer survivors [26]. Less is known however about cue-recognition within the process of reassurance specifically, providing a more in-depth understanding of the variety and the nature of cues that may indicate worry. In particular, the doctors' interpretations in relation to cue-recognition have received little attention until now.

In order to support doctors and other clinicians in recognising patient cues, this qualitative study explores which patient cues doctors pick up during their own consultations. Given that general practitioners (GPs) see a wide variety of patients and try to reassure patients in approximately 70% of their consultations [27], we expected GPs to have developed expertise in recognising a variety of patient cues indicating potential worries. The long-term relationship that GPs have with many of their patients also enables them to receive feedback on how well they have recognised and addressed patients' worries, contributing to their professional expertise in this area.

## 2. Methods

### 2.1. General design

In this qualitative study we conducted stimulated recall interviews [28] during which GPs' own videotaped consultations were used as a stimulus. We initiated the study with a secondary analysis of an existing set of interviews (Dataset A) that aimed to explore GPs' thoughts, beliefs and behaviours regarding doctor-patient communication in general [29]. Since it is known that GPs try to reassure patients in 70% of visits [27], we expected a secondary analysis of dataset A [29] to reveal initial insights relevant to the current study's aim. In order to deepen and broaden the findings of dataset A, we then performed interviews specifically for this study (Dataset B), during which we asked a new sample of GPs to reflect on how they recognise worry and reassure their patients. How these GPs reassure their patients has been reported elsewhere [14]. We performed a thematic network analysis during an iterative process of data collection and analysis. [30,31].

### 2.2. Study context

The study was conducted in general practice in the Netherlands. General practices have enlisted patients, with each patient allowed to register in and attend one practice only. Thus, as a general rule, GPs have a continuous and long-standing relationship with many of their patients. In the visited practices, patients' appointments are booked in advance.

### 2.3. Selection procedures

#### 2.3.1. Dataset A

The GPs in the existing dataset were purposively sampled in order to obtain a variety in age, gender, number of working years and practice settings [29]. Each GP was interviewed about two videotaped consultations that were selected by the researcher to achieve a maximum variation sample regarding the patients' age, gender, complaint/symptoms, type of consultation and GPs' communication techniques as assessed by the communication assessment instrument MAAS-Global [32].

#### 2.3.2. Dataset B

We approached eighty GPs in the two southern provinces of the Netherlands with at least five years of working experience in general practice and who were not recently approached for other studies by our university. If the GP worked in a group practice, his/her colleagues were approached as well.

During a morning clinic of the GP, the researcher observed and videotaped all consultations. In line with previous research, patients rated their level of worry on a scale ranging from 0 to 10 before their consultation [33]. After each consultation, GPs rated the importance of reassurance in that particular consultation on a scale ranging from 0 to 10. For the stimulated recall interviews, the researcher used the GP and patient rating to select two consultations of each GP in which the GP aimed to give reassurance because the patient was worried. In cases where we could not identify two consultations, we prioritised the GPs' rating for selecting consultations since we were primarily interested in the GPs' reflections on patients' worries.

### 2.4. Data collection

Trained interviewers (Dataset A: WV), (Dataset B: EG, DW, CL) conducted the interviews shortly after the consultations. The data collection of dataset A has been described in detail in the original study [29] but will be briefly summarised below. To ensure consistency in approach of the three interviewers for dataset B, they thoroughly discussed the interview procedure before and during the period of data collection. Moreover, rehearsal sessions were organised to practice, discuss and receive feedback on the stimulated recall procedure.

At the start of the interview, the GPs were asked to watch two videotaped consultations and to stop the tape whenever they wished to reflect upon their thoughts and behaviour regarding the doctor-patient interaction (dataset A) or recognising patients' cues and worries (dataset B). Once the video was stopped, they were prompted further to clarify these, e.g. can you elaborate on what is happening at this moment, what were you thinking, what did you want to achieve etc. Probing questions were formulated to be as open as possible and depended on the GPs' previous account of that particular situation. Therefore, we did not use an interview guide with predefined topics and questions. When the GPs did not stop the tape at a moment the researcher considered important, the researcher could do so and then invite them to reflect upon their thoughts and behaviour.

### 2.5. Data analysis

All the interviews were audiotaped and transcribed verbatim and analysed using software for qualitative analysis (Atlas-ti). We first inductively analysed the existing dataset A by selecting and coding fragments about recognising patients' worries and identifying themes. We constructed networks to structure and visualise relationships between these themes [30]. The networks helped us to obtain first insights into relevant cues GPs' reported and findings that required further exploration in subsequent interviews belonging to dataset B. During the thematic analysis of the interviews of dataset B, each emerging theme was compared with the existing themes and the networks were revised and expanded, alternating between data collection and analysis. The networks were eventually used to develop a schematic table presenting patient cues and type of worry.

All the transcripts were analysed independently by at least two researchers with different backgrounds: health sciences and medical education (EG) or medicine (WV/CL/DW). The researchers reached consensus on the coding through discussion. The schematic table was validated on content through in-depth discussions between all the co-authors.

During the analysis we found there to be an overlap in patient cues between the two datasets, although dataset B resulted in a large number of additional cues due to the purposeful selection of recordings with worried patients. As the analysis of the last two interviews did not yield any new themes and confirmed the results, saturation was reached.

### 2.6. Ethical approval and informed consent

The Medical Ethical Commission of Maastricht University Medical Centre granted ethical approval for the study protocol. All participating GPs and their patients were informed about the study verbally and in writing and gave written informed consent.

## 3. Results

### 3.1. Data characteristics

In total, 27 GPs participated in the study, *i.e.* fifteen GPs in dataset A and twelve GPs in dataset B. Table 1 presents an overview of the GPs' characteristics and the consultations discussed during the interviews.

### 3.2. The interviews

Interview time ranged from 60 to 90 min. The overall atmosphere during the interviews was pleasant. Most GPs explicitly stated that they enjoyed taking part in the interview since watching the recording was a powerful feedback opportunity that they would not have received otherwise. Watching the video and asking probing questions helped them to make their communication behaviours and underlying thought processes more explicit. A few GPs also mentioned that some patient cues became even more obvious when watching the video.

*"He is worried and he is steering towards this. Now I am watching the recording I am seeing it even more clearly, how he is giving all of these signs."*

*Dataset B. Male GP, 48 years old. Male patient, 74 years old, shingles.*

### 3.3. The role of patient cues in the reassuring process

During the interviews, most GPs stressed the importance of adequately picking up cues to be able to reassure patients effectively. They elaborated on two main pathways when using cues in this reassurance process. First, GPs explained that detecting cues is often the starting point in exploring and ultimately understanding patient worries. This enables them adequately to address the patients' specific worries and underlying cognitions,

and thus tailor their reassurance approach. Secondly, GPs reflected that adequately responding to patient cues enhances the doctor-patient relationship. The presence of a trusting relationship was considered a pre-condition for patients to accept or believe reassuring information, and was viewed as being reassuring in itself.

### 3.4. The variety of patient cues

During the analysis of GPs' reflections on the consultations, we identified four overarching categories of patient cues that in their experience indicate patient worry: 'non-verbal cues'; 'verbal cues'; 'behavioural cues'; and 'cues based on foreknowledge'. Table 2 lists these four categories, together with specific examples of cues that were mentioned by at least one GP.

GPs mentioned cues that occurred throughout the whole consultation. However, approximately 75% of cues were mentioned while watching the initiation of the session and the phase of information gathering. Notably less cues (+/- 25%) were mentioned while watching the explanation and planning phase and the closing of the session

#### 3.4.1. Non-verbal cues

GPs said that patients often find it difficult to tell the doctor that they are worried and to explicate their worries. It was therefore considered important to pay close attention to non-verbal signs such as visible bodily reactions, posture and facial expressions, as well as paralinguistic indicators such as the tone of voice. Some GPs explained that mentioning such visible cues to the patient was a way to explore and obtain an understanding of the patient's specific worries.

*"She doesn't really says it, but here, I noticed it because of her posture and also her tone of voice. (. . .). Therefore, I say 'I see you are a bit upset'. You have to understand the bottlenecks. No one benefits when someone leaves in an emotional state with unexpressed and perhaps even unnecessary worries."*

*Dataset B, female GP, 47 years old. Female patient, 36 years old, weight gain and hypertension.*

#### 3.4.2. Verbal cues

GPs mentioned a wide variety of verbal cues that in their experience indicated patient worry. These verbal cues were associated with different types of worry. For example, when patients say that their symptoms cause a lot of trouble or hindrance, this may indicate worry about the impact of their symptoms on their daily lives and how well they are able to function. In contrast, GPs were also triggered in case patients do not experience any hindrance at all, since it is less likely that these patients visit the doctor because of a request for treatment of the symptoms. In their experience, the absence of hindrance often

**Table 1**  
Characteristics of the GPs and the selected consultations.

	Dataset A	Dataset B
GPs (N)	15	12
Practices (N)	12	10
Practice settings	Mixture of solo, duo, group, urban, rural	Mixture of solo, duo, group, urban, rural
GPs' age (mean)	47.8	49.3
GPs' sex (% male)	53.3	66.7
GPs' years of working experience (mean)	15.7	19.2
Patients (N)	30	24
Patients' sex (% male)	33.3	58.3
Number of complaints (range)	1 – 4	1 – 3
Patients' age (range)	2 <sup>a</sup> – 86	19 – 89
Patients' level of concern pre-consultation 0–10 (mean)	–	4.9
GPs' rating on importance of reassurance 0–10 (mean)	–	7.9

<sup>a</sup> One consultation with a 2-year old patient was included, yet the interview solely focused on the mother's cues.

**Table 2**  
The variety of patient cues described by GPs.

Type of cue	The patient:
Non-verbal	<ul style="list-style-type: none"> <li>• has a tense demeanour/posture</li> <li>• has a tense facial expression</li> <li>• perspires</li> <li>• breathes superficially</li> <li>• has a shaky voice</li> <li>• speaks rapidly</li> <li>• speaks in short sentences</li> <li>• is verbose</li> </ul>
Verbal	<p><i>Type of worry: Serious illness</i></p> <ul style="list-style-type: none"> <li>• associates symptoms with something serious</li> <li>• refers to serious disease in (family) history / social environment</li> <li>• requests further investigations (a.s.a.p.)</li> <li>• asks whether the symptoms are normal</li> <li>• mentions not being burdened/troubled by the complaint</li> <li>• tries to reassure him/herself</li> <li>• seeks confirmation from the GP</li> <li>• mentions fear of death</li> <li>• keeps mentioning (new) symptoms</li> <li>• trivialises the symptoms</li> <li>• refers to concerns of family members</li> </ul> <p><i>Type of worry: Treatment</i></p> <ul style="list-style-type: none"> <li>• asks questions about the treatment</li> <li>• questions diagnosis and treatment plan of other professionals</li> </ul> <p><i>Type of worry: Impact on daily life</i></p> <ul style="list-style-type: none"> <li>• mentions being burdened/troubled by the complaint</li> <li>• expresses uncertainties about the future</li> </ul>
Behavioural	<ul style="list-style-type: none"> <li>• brings a list of symptoms/questions</li> <li>• visits the GP with innocent symptoms</li> <li>• visits the GP despite having taken therapeutic measures</li> <li>• visits the GP immediately after experiencing symptoms</li> <li>• visits the GP despite improvement of the symptoms</li> </ul>
Foreknowledge	<ul style="list-style-type: none"> <li>• usually never visits the GP with such a (innocent) complaint</li> <li>• has previously visited the GP because of worry</li> <li>• is known to visit the GP frequently</li> <li>• is known to have an anxious personality</li> <li>• is known to be a hypochondriac</li> <li>• has a history of medically unexplained symptoms</li> <li>• has a history of serious illness in personal /family history</li> <li>• experiences symptoms typically associated with a specific disease</li> </ul>

pointed towards concerns about the presence of a serious condition.

*“She is worried (. . .). Despite the symptoms, she sleeps well, she can exercise. Basically, she can do everything she wants to do. It is bothersome, but she can still do everything. Therefore, I think it is more likely that she is worried than that she experiences hindrance, at least that is my interpretation.”*

Dataset A, female GP, 49 years old. Female patient, 42 years old, respiratory problems.

Almost all GPs mentioned cues they associated with worrying about serious illness and the bother caused by the symptoms, while only two GP described cues that specifically pointed towards worries about the treatment.

GPs mentioned that some patients give contradicting verbal cues, or that patients' verbal cues are not congruent with their non-verbal behaviour or with the GP's own pre-assumptions. In the following quote, the GP eventually prioritises the patients' verbal cues, which she decides to explore further.

*“She mentioned it herself, right? That she was scared that it might be the sugar. That is what she said literally. Not that she shows this non-verbally. A very strong woman, Yes. (. . .) But because she*

*stated this, I asked if she is worried that it might be the sugar, to touch upon a deeper layer.”*

Dataset B. Female GP, 57 years old. Female patient, 57 years old, painful wrist

While continuously attending to cues, GPs adjust their thinking and their interpretations of the nature of patients' concerns during the course of the visit.

*“Initially I had doubts because she described ‘pain, severe pain’. I thought: perhaps she has come here because of the burden (. . .). Now she describes it herself: she has been very worried all night, thought ‘oh, I’m going to die’, so then she has come here because she is worried and not so much about the problem itself.”*

Dataset B. Female GP, 36 years old. Female patient, 89 years old, chest pain.

### 3.4.3. Behavioural cues

GPs described recognising patients' worry due to certain notable behaviours. With the exception of the patient bringing a list of questions, these were not behaviours that patients presented during the consultation but behaviours related to the patient visiting the GP. For example, the following two quotes illustrate the GPs expecting the patient to be worried when he/she visits a doctor immediately on experiencing symptoms, or despite improvement in the patient's condition.

*“She is worried, otherwise she would not be here. What supports this conclusion is that, apparently, it was so bad that she considered calling her son and going to the night clinic.”*

Dataset A, Male GP, 43 years old. Female patient, 57 years old, chest pains.

*“So then I thought: pay attention! He’s doing better, yet he’s still coming to see me, so something’s up.”*

Dataset B. Male GP, 31 years old. Male patient, 19 years old, ankle pain

### 3.4.4. Foreknowledge

Given the long-term relationship they have with many patients, GPs are able to rely on previous experiences with these patients. For GPs, this foreknowledge is an important source of information when interpreting patients' worries. For example, when assessing whether the patient is worried in the current consultation, GPs also take into account the patients' previous reasons for visiting. During the interviews, GPs were often triggered to reflect on prior knowledge due to verbal and non-verbal cues that occurred during the encounter. In the following quote, the GP combines the patient's presentation of the symptoms with prior knowledge about the patient's preferences.

*I think that she is a little worried, yes. She describes what is going on, what her symptoms are, says that she has been experiencing them for several days. She is taking painkillers that don’t help; she has pain all over which is why she has come to see me. (. . .) She is generally very reluctant to take medication: this I know of her. Therefore I think that this [medication] is not her real question.*

Dataset A. Female GP, 49 years old. Female patient, 75 years old, abdominal pain

GPs explained that they perceived worry to be likely in specific groups of patients such as those known to have a history of unexplained symptoms, serious disease or health anxiety. GP regularly mentioned such foreknowledge-based cues while reflecting upon their general thought processes during the opening phase of the consultation, and therefore were not necessarily triggered by specific cues demonstrated during the encounter. In addition to foreknowledge about their own patients, GPs use their experiences with cognitions that patients in general have about

certain symptoms. For instance, in the experience of the GPs, chest pain is often associated with a heart condition and a mole is linked to skin cancer.

*“Having a mole, most people think it is cancer, especially when they are not young anymore. So this already triggers me.”*

Dataset B, female GP, 36 years old. Male patient, 73 years old, skin mark.

Although GPs considered the long-standing relationship with patients and previous experiences with common concerns as beneficial in the reassurance process, they also recognised that this might lead to the GP making incorrect assumptions and having tunnel vision. Several GPs therefore stressed the importance of verifying their interpretations by exploring patients' concerns. For example, in the following quote the GP checks her interpretation of concerns based on the type of symptoms by first letting the patient tell his story.

*“Here, I already thought that he might be worried, from the start, when he said, “I have chest pains.” Most patients who say, ‘I have chest pains’, have some sort of worry. That’s always at the back of my mind. Nevertheless, I thought: I will first let him tell his story. Based on the type of symptoms, I think there is possibly some worry contributing to the problem here.”*

Dataset B, female GP, 31 years old. Male patient, 40 years old, chest pain

## 4. Discussion

### 4.1. Main findings in relation to the literature

The GPs in our study underpinned the relevance of adequately recognising patients' concerns in the reassurance process. The participating GPs described a wide variety of patient cues that in their experience indicated patient worry, which can be categorised into four overarching types of cues: non-verbal -; verbal -; behavioural; foreknowledge.

The important role of recognising, exploring and acknowledging patients' concerns within the reassurance process has also been recommended in previous studies [12,13]. Understanding concerns ensures that patients feel listened-to and understood which they experience as reassuring in itself. Yet it also gives doctors a focus for their efforts to reassure patients and enables them to challenge possible misconceptions [14]. Adequate cue-recognition has been shown to be particularly important because what is experienced as reassuring by patients largely depends on patients' specific worrying cognitions [8]. The wide variety of cues identified in this study has again confirmed the context-specific nature of medical communication in daily practice [34–36], as well as the need for doctors to be able to recognise and understand the specific context at hand and adjust their communication approach accordingly [37–40].

The broad distinction between verbal and non-verbal cues has also been described in previous literature [41]. However, to give a more specific overview, we have separated non-verbal cues (*i.e.* non-verbal communication) from behavioural cues (*i.e.* deliberate behaviours such as visiting the GP). This study adds specific examples of these types of cues. Less has been written about cues based on foreknowledge, which is most likely due the fact that these cues mainly occur outside the context of the consultation and are therefore difficult to observe. Yet these types of cues are mainly part of the doctors' analyses, which underpins the relevance of exploring their experiences in cue-recognition. Interestingly, in the process of understanding patients' worries, GPs often relied on the foreknowledge they had about their patients or beliefs patients commonly have about specific symptoms. Although the long-standing GP-patient relationship has been shown to enhance the effectiveness of reassurance, its presence could also lead to false

interpretations, for instance when the GPs expects the current concern to be similar to concerns shown in previous visits. It has therefore been recommended that patients' cues and the assumptions that are made about them always need to be checked with the patient [20,21].

GPs mentioned cues that occurred throughout the whole consultation although most cues were recognised during the initiation of the session and the information-gathering phase. New worries can arise during the visit; for example, when discussing treatment options, and it is also known that such worries are often not expressed explicitly by patients [8]. Patients may feel overwhelmed or may be uncomfortable disclosing concerns about the doctor's treatment plan. It is therefore important to pay close attention to patient cues during the entire consultation and keep explicating when they are potentially observed by the doctor.

### 4.2. Strengths and limitations

By using the video recordings of the consultation as a stimulus for discussion, we have enriched GPs' reflections on cues related to patient worry that they recognise during the clinical encounter. However, it must be noted that during some interviews we noticed that the act of watching the consultation video had a learning effect and thus GPs' reflections may include cues they noticed less evidently or did not recognise at all during the encounter itself. Moreover, this study only describes cues that GPs have openly expressed during the interview. There may have been cues that GP were not willing to articulate. The act of video-recording the consultation may have had an influence on patients' cue presentation, *e.g.* patients expressing fewer cues than usual, and thus on GPs' reflections.

As we did not compare GPs' reflections with the patients' experiences or with an objective assessment of patients' cues (*e.g.* by using an observation instrument), we cannot draw conclusions on the accuracy of the GPs' interpretations. All interviews were independently coded by researchers with an insider (GP) and outsider perspective (health scientist) to enhance the content validity of the results.

### 4.3. Conclusions

Identifying patients' worries by adequately picking up and exploring patient cues is crucial for effective reassurance. GPs recognise worry by detecting a variety of specific non-verbal -, verbal - and behavioural cues and cues based on foreknowledge. GPs' reflections have given insight into the variety and nature of patient cues and have highlighted that cues occur throughout the whole consultation. The accuracy of the interpretation that doctors attribute to the cue should always be verified with the patient.

### 4.4. Implications for practice and research

We believe that the description of patient cues indicating worry will offer guidance to doctors as well as to other health-care providers in exploring patients' worries and reassuring patients in a tailored manner. These findings may also be transferred to medical communication training, both in medical school as well as in post-graduate training. Using recently video-taped consultations as a stimulus appears to be an effective method of enhancing doctors' reflections on the encounters. Learners' reflections on the effectiveness of their cue-recognition can be enhanced in a similar fashion. This is in line with previous recommendations to use videos to stimulate awareness of and changes in communicative behaviours and attitudes [40,42].

Even though we believe our findings can guide other health-care providers outside the GP setting in cue-recognition, future

studies exploring patient cues in other clinical settings may potentially yield different findings. The findings form important input for research on the effectiveness of recognising cues within the process of effective reassurance. A dyadic analysis combining observations of encounters with a triangulation of both doctors' and patients' experiences may yield a strong evidence-base for insight into patient cues and effective responses within the reassuring process.

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