A body-mind map

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Beyond dualism: A qualitative analysis of how patients describe the relation between persistent physical symptoms and negative emotions in extended primary care consultations

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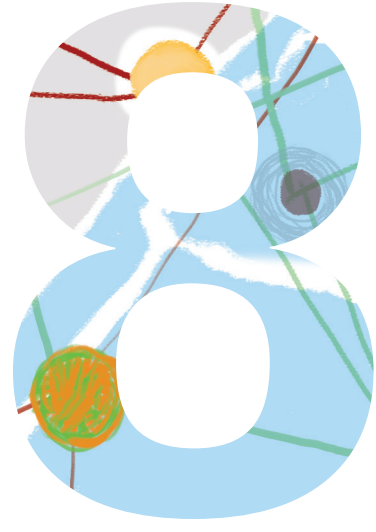

ABSTRACT

Background: Guidelines for the management of persistent, often "medically unexplained", physical symptoms encourage GPs to discuss the relation of these symptoms with negative emotions with patients. However, many GPs experience difficulties in reaching a shared understanding with patients.

Aim: To explore how patients with persistent symptoms describe negative emotions in relation to physical symptoms in primary care consultations, in order to help GPs recognize the patient's starting points in such discussions.

Design and setting: A qualitative analysis of 47 audio-recorded extended primary care consultations with 15 patients with persistent physical symptoms.

Methods: The types of relationships patients described between physical symptoms and negative emotions were categorized using content analysis. In a secondary analysis, we explored whether patients showed transitions between the types of relations they described through the course of the consultations.

Results: All patients talked spontaneously about negative emotions. We identified three main categories of relations between these emotions and physical symptoms: separated (negation of a link between the two); connected (symptom and emotion are distinct entities that are connected); and inseparable (symptom and emotion are combined within a single entity). Some patients showed a transition between categories of relations during the intervention.

Conclusion: Patients describe different types of relations between physical symptoms and negative emotions in consultations. Awareness of the ways patients talk of these relations could help GPs to better understand the view of the patient and, in this way, collaboratively move towards constructive explanations and symptom management strategies.

INTRODUCTION

Persistent physical symptoms are prevalent in the general population and associated with reduced quality of life [31,47,317]. Although these symptoms are often referred to as medically unexplained, they are increasingly recognized as representing complex interactions between peripheral and central processes [34,36]. The management of the symptoms includes a combination of physical and psychological elements [318] and is often perceived as challenging by both patients and GPs [319,320]. Patients highly value care that addresses the breadth of biopsychosocial aspects provided by GPs [321,322]. One element of the management of persistent physical symptoms focuses on negative emotions [317,323]. These emotions have the potential to play a part in worsening or maintaining physical symptoms, in addition to being a response to the symptoms [34,37]. Furthermore, patients with physical symptoms as well as negative emotions report more functional and social limitations than patients without these emotions [47]. Therefore, primary care guidelines recommend GPs to address the relation of these negative emotions with symptoms [323-325]. Nevertheless, many GPs experience difficulties in arriving at a shared understanding with patients about this relation [326-328]. In particular, when GPs introduce inappropriate or premature psychosocial links, these are typically rejected by patients [326,327,329,330]. It has been suggested that this tension is related to the embedding of “medically unexplained symptoms” in psychiatric rather than somatic classification systems, which dualism leads patients to feel that the legitimacy of their symptoms is under threat [328].

Several authors have proposed that a shared understanding about the relation between symptoms and emotions should be formed while using the patients’ starting point as a basis [324,331-333]. In a process of constantly seeking agreement and adjusting explanations, the GP and patient can collaboratively broaden the conversation to other types of relations and, as such, formulate rich explanatory models [324,331,333]. However, despite the existence of theoretical models that refer to thought patterns of patients regarding the relation between physical symptoms and emotions [331], we were unable to find a classification of how patients describe it in consultations.

In this study, we aimed to systematically classify the types of relations between physical symptoms and emotions patients describe in primary care consultations. A secondary aim was to examine if patients moved between types of relations over time, to examine if the classification can be used to monitor a change in their presentation during interventions. We conducted a qualitative analysis of a series of extended consultations with specially trained general practitioners for patients with multiple persistent physical symptoms [325].

METHOD

Data source

We used data from the Multiple symptoms study 1 and 2 (for details see [325,334]), focusing on the effects of a consultation intervention in primary care for patients with multiple persistent physical symptoms. This intervention, consisting of three to four consultations of 20-40 minutes with trained GPs, is aimed at reducing the intensity and impact of symptoms [325,334]. GPs were instructed to explore emotions when openings were presented by the patient using a Socratic questioning technique. Furthermore, they were encouraged to consider emotions as parallel processes that can be connected to physical symptoms, rather than presenting them as the sole cause or label of symptoms. In both studies, patients were identified through a clinical database search in their usual GP practice and the completion of the Patient Health Questionnaire-15 (PHQ-15; or its shortened 14-item version) to assess the severity of physical symptoms [335]. Patients were eligible for inclusion if they had a diagnostic code in the clinical database for one or more functional somatic syndromes, had been referred to specialists at least two times in the preceding three years, and had a PHQ-15 score of ≥10. At study entry, patients filled in the Patient Health Questionnaire-9 (PHQ-9) and the Generalized Anxiety Disorder-7 (GAD-7) to assess depressive and anxiety symptoms, respectively [335,336].

Ethical approval

Multiple symptoms study 1 and 2 were approved by the Lothian Research Ethics Committee (reference 09/S1102/34) and the North East Scotland Ethics Committee (reference 14/NS/1014) [325,334], which approvals also included a detailed analysis of the consultations as conducted in the current study. All participants signed informed consent.

Data analysis

Selection of consultations

All 112 consultations with 39 patients in which the intervention was delivered were audiotaped and transcribed verbatim. We purposively sampled patients based on key variables (i.e. age, sex, baseline scores on the PHQ-15, PHQ-9 and GAD-7 and the treating GP) to maximize variation. As one aspect of the study was the transition between different types of relations through the course of the consultations, we focused in particular on patients who completed at least three consultations. We started our analyses on a subset of 12 patients and aimed for saturation defined as that no new insights about types and characteristics of categories were gained in three sequentially analyzed patients. As the inclusion of three additional cases did not provide additional insights, our final sample constituted 15 patients (see **Table 1** for their characteristics).

Table 1. Sample characteristics.

Patient number	Age in category (years)	Sex	Main physical symptoms	PHQ-15 score	PHQ-9 score	GAD-7 score	Number of consultations	GP number
Multiple symptoms study 1								
1	35-49	F	Fatigue, musculoskeletal pain	13	6	2	4	1 (male, >15 years of experience)
2	50-64	M	Musculoskeletal pain, fatigue, headache	15	10	6	4	1
3	35-49	F	Fatigue	16	12	20	4	1
4	50-64	F	Musculoskeletal pain and weakness	13	21	18	1	1
Multiple symptoms study 2								
5	20-34	F	Gastrointestinal symptoms, fatigue, headache	12	11	14	4	2 (female, >15 years of experience)
6	35-49	F	Musculoskeletal pain, gastrointestinal symptoms	11	2	1	2	2
7	50-64	F	Gastro-intestinal symptoms, musculoskeletal pain, excessive perspiration	16	4	1	4	2
8	35-49	F	Gastrointestinal symptoms, musculoskeletal pain	13	4	3	3	3 (female, >15 years of experience)
9	35-49	F	Musculoskeletal pain, balance problems, headache	28	20	19	4	3
10	65+	F	Fatigue, headache	10	3	2	4	3
11	35-49	F	Palpitations, gastro-intestinal symptoms	19	3	8	1	4 (male, <5 years of experience)
12	20-34	F	Musculoskeletal pain and weakness	15	12	5	3	4
13	50-64	M	Musculoskeletal pain, “heart trouble” (breathlessness, lump in throat)	18	16	12	3	4
14	50-64	M	Musculoskeletal pain, gastrointestinal symptoms	12	13	9	3	5 (female, >15 years of experience)
15	35-49	F	Musculoskeletal pain, headache, tinnitus	15	5	0	3	5

Analysis method

First, patients' accounts of negative emotions were coded based on methods used in previous studies [337,338]. We defined these accounts as explicit and verbal expressions of a negative emotional state. Implicit accounts of emotions (e.g., a situational description of a distressing event such as a conflict without explicitly describing an emotion) were excluded to avoid imputation of the patient's narrative by the researchers. Descriptions were interpreted in the context of the conversation and while listening to the intonation of the patient. Specific attention was paid to words or phrases with multiple definitions; for example, "stress" can refer to external stressors as well as an internal state characterized by worry or agitation, and "I was like: oh my God!" may refer to a positive and negative emotion. Such quotations were included only when it could be inferred with confidence that the patient referred to a negative emotion. Accounts were categorized based on the type of emotion they concerned with open coding, and names of the categories were formulated while staying close to the words most often used by patients.

In a second step, all quotes in which patients described a relation between a negative emotion and physical symptom were selected. To stay closely to the message of the patient, we considered only relations that were semantically specified (e.g., "I feel down *because of* the pain"). In addition, it had to be clear that the relations included a negative emotion as well as a physical symptom; terms at the interface (e.g., "feeling tense") were excluded if their meaning could not be inferred from the conversation. The quotes were analyzed with conventional content analysis [339,340]. Using a one-sheet-of-paper (OSOP) method, quotes were written on one document and rearranged by looking at similarities and differences to form categories inductively [341]. To explore whether patients showed a transition in their presentation of categories through the course of the consultations, we performed a secondary analysis. For each patient, we analyzed his or her pattern of category use over time and searched for switches from one category to another while describing a specific situation.

Coding was done in Atlas-ti 8 and first performed independently and then compared by EB (last year medical and PhD student) and JG (psychiatrist and PhD student). The analysis was done by these researchers together and differences were discussed until agreement was reached. In order to ensure intersubjective reproducibility and comprehensibility, the analysis was regularly referred to senior researchers specialized in persistent physical symptoms CB (a GP) and JR (a medical biologist and psychologist).

RESULTS

All patients described some negative emotions, but the number of instances differed considerably across patients (ranging from 3-21). We identified five specific types of emotions: anxiety, frustration, low mood, embarrassment and guilt (**Table 2**). Patients who disclosed fewer emotions were generally less talkative and more focused on physical aspects of their symptoms. Typically, patients presented the first emotion within five minutes of the start of the first consultation, and the frequency of occurrence decreased as the intervention progressed. In most quotations, patients related the emotion to physical symptoms (1-16 accounts per patient). Patients initiated most descriptions of relations themselves, with the remainder in response to questioning by the GP. Spontaneous descriptions were more detailed than those occurring after a question from the GP. Some patients, particularly those going through major life events, tended to describe emotions without referring to their relation with physical symptoms. They elaborated on emotions in the context of external stressors or questioned if the emotion was part of an affective disorder. The pattern in which patients presented emotions or their relation with physical symptoms (i.e., number of times, types of categories, at which stage of the intervention) was not clearly related to the patients' sex or age nor the severity of somatic, depressive and anxiety symptoms.

Table 2. Categories of emotions.

Category	Examples of emotions within category	Number of occurrences
Anxiety	Anxiety Worry Panic Nervousness	69
Frustration	Frustration Annoyance Anger Irritation	49
Low mood	Depression Sadness Weariness Feeling down	47
Embarrassment	Embarrassment Shame Feeling humiliated Feeling mortified	19
Guilt	Guilt	1
Emotions that could not be fitted into specific category	Emotional crisis Feeling overwhelmed Feeling stressed out	64

Categories of relations between negative emotions and physical symptoms

We identified three main categories of relations between negative emotions and physical symptoms: separated, in which a link between the symptom and emotion was negated; connected, in which the symptom and emotion were presented as related but distinct entities; and inseparable, in which the symptom and emotion were combined within a single entity (**Table 3**).

Separated

In the separated category, patients explicitly negated a link between a symptom and an emotion. Characteristic for this category was that the negation concerned a relation in which the physical symptom was fully caused by or attributed to an emotion (see Quote 1 and Dialogue 1), and emotional labels like 'depression' or 'anxiety disorder' were used (see Quote 1). Patients used the category during various stages of the intervention and frequently indicated that they believed the relation to be true in general, but that they had not experienced it themselves (Dialogue 1). Some negated in a tense or angry way a relation suggested by a physician (Dialogue 1).

Quote 1:

Setting: At the start of the first consultation, patient 1 explains to GP 1 the potential causes that have been considered and ruled out for her fatigue.

Patient: "They looked at all the obvious signs because, I mean, they tested me physically, but they also looked at me emotionally as well, which is understandable. But I wasn't going through any great emotional crisis and I wasn't depressed and I wasn't stressed and I have… I don't know how most people work, but I'm a very strong faith so it keeps me sane, so I wasn't… I would've told them if I was depressed and I wasn't, so ***there wasn't an emotional trigger****".*

Dialogue 1:

Setting: At the end of the first consultations with patient 12, GP 4 introduces a relation between symptoms and negative emotions. The patient confirms it in general, but firmly rejects that the emotions are the cause of her symptoms.

GP: "They [pain and fatigue] are closely linked in with emotions and how all of that works, so being upset, being stressed, being angry."

Patient: "Yeah, correlation between sad feelings and pain. I get it."

GP: "So it starts to hold you back and you can get into a little bit of a cycle here."

Patient [starts crying and says angrily]: "A rut, yeah, I appreciate that. But then if you couldn't do half the things you wanted to do, you would feel overwhelmed and stressed out. ***But that's not why I'm sore.****"*

Table 3. Categories of relations between physical symptoms and emotions.

Category	Type of relation	Number of occurrences	Characteristics				
			Content	Form	Initiation	Category of emotions	Stage of intervention
Separated Physical symptoms and emotion are distinct entities that are unrelated.	**Negated relation**	12	Physical symptom is not caused by or attributable to emotion	Negation of (a previous) physician's suggestion, sometimes while expressing anger	Introduced by patient, either spontaneously or in response to GP's suggested relation	Anxiety Low mood	Any
Connected Physical symptom and emotion are distinct entities that are related.	**a) Isolated connection**	87	Regular experience of cause-effect relation	Short statements that are frequently repeated throughout the consultation	Spontaneously introduced by patient	Frustration Embarrassment Anxiety	Any
	b) Vicious circle	11	Complex vicious circle underlying symptom	Brief confirmation of GP's suggested relation	Introduced by GP, adopted by patient	Anxiety	Middle
Inseparable Physical symptom and emotion are combined within a single entity.	**a) Integrated whole**	11	Attribution of physical symptom to affective disorder	Exploratory narrative	Spontaneously introduced by patient	Anxiety Low mood	Start
	b) Fragments of a whole	8	Distressing state with physical and emotional aspects	Chaotic narrative	Spontaneously introduced by patient	Anxiety	Start

Connected

The connected category included descriptions of a symptom and an emotion as distinct, yet related entities. This category included confidently presented statements that could lead to the identification of targets for management strategies. It was found during all stages of the intervention with all patients. Connections were subdivided into two types: a) isolated connection and b) vicious circle.

In isolated connections, the symptom and the emotion either unidirectionally influenced each other or were linked in time. Typically, patients briefly described a regular experience in which the emotion was a consequence of the symptom, and in this way seemed to wish to underline the impact of the symptom on their daily life: *"I still have this massive sweating, it's a current one, it's just very, very annoying, embarrassing, frustrating, depressing"* (patient 7). A few patients described the emotion as a clear cause or a trigger of the symptom (Quote 2).

Quote 2:

Setting: During the third consultation, patient 4 describes the physical effects about worry about her ill sister in a conversation with GP 2. Following this quote, a management strategy is co-created by the two.

Patient: *"**Me stressing about her makes me not well**. So I kind of have to go - well, not I don't care - but if **it is making me ill to stress about her**, then I have to say: I'm just not going to."*

A vicious circle referred to a sequence of reciprocal cause and effect in which a symptom and an emotion intensified each other. Most patients adopted vicious circles after they had been introduced by the GP by briefly confirming the suggested relation (Dialogue 2). However, a few patients, particularly those who described complex biopsychosocial explanations for their symptoms, spontaneously introduced vicious circles (Quote 3).

Dialogue 2:

Setting: By the end of the first consultation, GP 4 suggests a vicious circle, which patient 13 briefly confirms. After this, they switch to the creation of management strategies.

GP: "The pain, the heart things that you're describing, and the shortness of breath, there's no doubt to my mind that those are complicated processes at play. And everything that's bad and making you feel depressed and making you feel down, that's going to be filtering down, and making things worse. So that's a vicious circle really, isn't it?"

*Patient: "**That's right, one that needs to be broken**. How I don't know, I really don't know."*

GP: "I think that naturally leads us on to thinking about how we can make things a little bit better."

Quote 3:
Setting: During the first consultation, patient 1 describes complex processes underlying her symptoms to GP 1, including a loop between symptoms and emotions.
*Patient: "**The headache adds to making me also tired because it wears you down**. It's not a - you know when you've got really bad headache that you go away and you get a paracetamol because it's an ache - it's not a throb. It's just a continuous there dullness that **wears you down**, and when I get really tired, it **starts to get quite bad**. That's more of a stabbing pain."*

Inseparable

Patients described a symptom and an emotion as combined within one entity in the inseparable category. This category was typically exploratory, included metaphors, and was introduced by patients at the beginning of the intervention. The symptom and emotion could be presented in two ways: a) an integrated whole or b) fragments of a whole.
In descriptions of an integrated whole, the symptom and emotion were presented as one entity (i.e., the symptom was part of the emotion or vice versa) (Quote 4). This category concerned an exploration of the source of the symptom, which was typically an affective disorder: *"I've been on a heart monitor and everything, but they haven't come up with anything, so whether it's a psychological thing or just some kind of panic attack?"* (patient 11). Most patients referred to their previous experiences with affective disorders: *"At one stage I just thought: is it depression again? Because I've been through it before."* (patient 3).

Quote 4:
Setting: Patient 11 introduces her headache to GP 3 during the first consultation, and presents it as an expression of worry (metaphor: "pain of the brain").
*Patient: "One night towards the end I woke up at 2.15 with this problem that's been harassing me for the last two years with my sister. And because of the meditation it was bringing it up. I had such a pain in my head with it, **the worry was very painful**. And so I sat on the end of the bed and started to do the 'scanning of the body'-meditation, and eventually overcame **the pain of the brain**."*

In fragments of a whole, patients described the symptom and the emotion as inseparable features of an experience. The quotations included a chaotic narrative of a distressing state and patients were searching for the right words to describe it (Quote 5). The quotations were part of an active process of trying to understand the nature of the experience (Quote 5).

Quote 5:
Setting: During a process of symptom exploration in the first consultation, patient 1 describes to GP 1 the moment-to-moment experience of a distressing state (metaphor: "the wall hit me").
Patient: "*The bit I can't work out is that I can just physically function all day and at some point it's like I just… It's like a wall hits me and it's… And you can physically, I've been told you can physically… And I know that it's hit me. I've been fine or I've been a bit tired all week, but Sunday night it was... I wasn't doing anything and the wall hit me and I just… it's like I just…* ***I can't cope with it. I can't cope with anything*** *and I have… it just… it's like a… it's like the…* ***just the fatigue engulfs me****."*

Transitions between categories
In a secondary analysis, we explored if patients could show a transition from one category to another through the course of the consultations. We found that three patients presented one category, eleven described two or three categories, and one patient described five categories of relations. However, most patients who described multiple categories referred to varying symptom-emotion combinations or contexts and therefore did not necessarily show a change in their presentation during the intervention. We identified four instances in which a patient showed a clear transition in the presentation of a specific situation. This number was not sufficient to describe transitional patterns in detail. However, in general these transitions occurred in a dialogue in which the patient and GP negotiated novel types of relations. Two patterns of category switches were encountered: 1) from separated to isolated connection, and 2) from isolated connection to vicious circle (Dialogue 3).

Dialogue 3:
Setting: GP 4 and patient 13 explore links between symptoms and emotions by the end of the first consultation. The patient first describes an isolated connection, and later expands this, encouraged by the GP, to a vicious circle.
GP: "And how are you feeling about all this [the pains], just as you are just now?"
Patient: "Well ***depressed****. What else can I say. I don't know, just depressed, just feel like I'm getting nowhere."*
[..]
GP: "And can you see that they [these feelings] might be ***feeding back*** *and, and making the symptoms worse as well?*
Patient: "Possible, yes, very possible. That's what I'm saying, my head's maybe playing with my mind. My mind's probably playing with me, making things worse. ***I work myself up, I get worse****."*

DISCUSSION AND CONCLUSION

Summary

This study showed that patients with persistent physical symptoms describe different types of relations between symptoms and emotions. Relationships constituted three main categories: separated (negation of a link), connected (physical symptom and emotion are two linked entities) and inseparable (physical symptom and emotion are combined within one entity). Some patients moved from one category to another through the course of the consultations.

Strengths and limitations

Strengths of this study are the dual independent coding and discussing of the analyses in a multidisciplinary team from general practice, psychiatry, and psychology [341]. Furthermore, we stayed closely to the message of the patient by focusing on explicit descriptions of emotions and their relation with physical symptoms. A limitation of this approach is that we may have missed accounts in which patients made implicit notice of emotions and/or relations, for example by using terms at the interface of the physical and emotional (e.g., “tense”) [338]. Furthermore, although we inferred if terms referred to physical or emotional aspects while staying as close to the description of the patient as possible, it should be noted that this distinction is a simplification of the complex biopsychosocial reality. Ambiguity with respect to the conceptual embedding of symptoms was extensively discussed in our team before quotes were subjected to further analysis. Thirdly, data were derived from extended primary care consultations with specially trained GPs and not typical short GP consultations. While these long consultations were more likely than short consultations to include discussions involving the relation of physical symptoms with negative emotions, the passages of discussions were brief and so compatible with “ordinary” consultations. Finally, as we identified only a few instances of clear transitions in patients’ use of categories over time, we were not able to study their pattern in detail. Still, that such transitions occurred confirms that our categories can be used in future studies, for example to identify interactional patterns related to transitions in patients’ presentations with conversation analysis [342].

Comparison with existing literature

Our finding that patients frequently present their emotions in primary care consultations is in line with previous studies [343-346]. Although this study was the first to systematically assess the types of relations patients present in primary care consultations, some other studies have indicated that many patients with persistent physical symptoms present their symptoms dualistically by negating a relation with emotions [329,330,347].

Interestingly, in these studies the GPs primarily used classic psychological reattribution techniques [329,347], which centralize the assignment of emotional causes or labels to symptoms [348]. We found that patients forcibly rejected this in the separated category [329,347], suggesting that patients may primarily use dualistic expressions in response to reattribution by the GP. It has been reported before that many patients find reattribution too simplistic and stigmatizing [321]. This could partly explain the limited efficacy of interventions based on reattribution for persistent physical symptoms [323,349,350]. Nevertheless, we found that other patients openly explored the possibility that their symptoms were part of an affective disorder in the inseparable category. This could indicate that patients can acknowledge emotional attribution or labels when they introduce them themselves, but tend to disagree when they are imposed upon them by the GP [331].

Implications for research and practice

The results of this study have several implications for care of patients with persistent physical symptoms. First, that patients spontaneously presented anxiety, frustration, low mood, embarrassment as well as guilt indicates the importance of considering a broad spectrum of emotions in consultations for persistent physical symptoms. However, clinical guidelines for the management of persistent physical symptoms encourage GPs mainly to concentrate on the narrow field of depressive and anxiety disorders [30,37,289], and a similar focus is adopted in screening instruments [174,335,336]. As all patients in this study, irrespective of the severity of depressive and anxiety symptoms, frequently presented emotions, our findings stress the importance of picking up on patients' emotional cues and encouraging patients to elaborate on them.

Interestingly, we found that patients tended to disclose fewer emotions as the intervention progressed. This might be related to the structure of the intervention, which gradually shifted the focus from symptom exploration to the creation of symptom management strategies. As the GP was increasingly in the lead in the follow-up consultations to create such strategies, the space for the patient was naturally reduced. This indicates that in ordinary consultations aimed at exploring the problem space, it is essential for GPs to create an open conversation in which they actively listen to and collaborate with the patient [351]. Allowing patients to arrive at explanations themselves rather than imposing it on them could also help to create richer explanatory models [331,352], as we found that relations that were spontaneously mentioned by patients were presented in more detail than those in response to directive questions of the GP.

CONCLUSION

Patients with persistent physical symptoms present a wide variety of negative emotions in extended primary care consultations. In contrast to previous reports suggesting that patients have dualistic presentations, we found that patients do not only separate emotions from physical symptoms, but also describe them as entities that are connected to or inseparable from these symptoms.