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# "You don't immediately stick a label on them": Influences on general practitioners' recording of anxiety disorders.



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| | |

# *"You don't immediately stick a label on them": Influences on general practitioners' recording of anxiety disorders.*

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**Abstract**

**Objectives:** Anxiety is a common condition usually managed in general practice (GP) in the UK. GP patient records can be used for epidemiological studies of anxiety as well as clinical audit and service planning. However it is not clear how General Practitioners (GPs) conceptualise, diagnose and document anxiety in these records. We sought to understand these factors through an interview study with GPs.

**Setting:** United Kingdom (UK) NHS General Practice (England and Wales)

**Participants:** 17 UK GPs

**Primary and Secondary Outcome Measures:** Semi-structured interviews used case studies to explore the process of diagnosing anxiety in primary care and investigate influences on recording. Interviews were transcribed verbatim and analysed using thematic analysis.

**Results:** GPs chose 12 different codes to record anxiety in the case studies, and reported that information from the consultation would be in the free text. GPs reported on five themes representing influences on recording of anxiety: conceptualisation of anxiety, giving patients a "label", coding confidence, perceptions about usefulness of coding, and practice specific pressures. GPs reported using only a regular selection of codes in patient records to help standardise records within the practice and as a time saving measure.

**Conclusions:** GPs feel confident in recognising symptoms of anxiety in their patients, however they are uncomfortable differentiating between anxiety disorders and reluctant to code firm diagnoses made in primary care. Researchers using GP patient records should be aware that GPs may prefer free text, symptom codes and other general codes rather than firm diagnostic codes for anxiety.

**Strengths and Limitations of This Study**

- An in-depth qualitative study reporting on how GPs record anxiety and what influences this.
- This is the first study to investigate these issues in anxiety disorders.
- A convenience sample of 17 GPs means that findings cannot be generalised.
- Researchers and policy makers using GP patient records for epidemiological studies should be aware that GPs may prefer descriptive rather than diagnostic codes for anxiety.

## Introduction

Mental health problems represent a large proportion of the disease burden in UK and are an important cause of long-term disability and dependency. Mental and substance use disorders are the leading cause of "years lived with disability" (YLDs) worldwide, accounting for 31.7% of all YLDs [1]. Anxiety disorders are an important part of this burden, accounting for 14.6% of disease burden measured in disability adjusted life years [2]. Anxiety disorders, such as generalised anxiety disorder (GAD), panic disorder, phobias, obsessive compulsive disorder (OCD) and posttraumatic stress disorder (PTSD), are common, with a global lifetime prevalence of around 17% [3]. In the UK, the point prevalence of anxiety has been reported as follows: mixed anxiety and depressive disorder 9.0%; GAD 4.4%, panic, phobias and OCD 1-1.5% [4].

Health services are not provided equitably to people with mental disorders [1]. The World Health Organisation calculated the global treatment gap (that is, the percentage of patients who remain untreated although effective treatments exist) for panic disorder is 55.9%; for GAD is 57.5%; and for OCD is 57.3% [5]. In the UK, anxiety of all types is under treated with 57% of adults with phobia in receipt of treatment, around 35% of those with GAD, and only 15% of those with mixed anxiety and depressive disorder [4]. Depression is also under recognised and under diagnosed in general practice with approximately half of patients receiving a diagnosis [6-8]

In the UK, GP patient records have been used to understand prevalence and treatment of common mental health problems [9-11]. Ninety percent of mental health problems are identified and managed in general practice, particularly depression and anxiety [12]. The monitoring and management of depression is now financially incentivised in UK general practice through the quality and outcomes framework (QOF) [13]. The way GPs record depression and its treatment has become more standardised, and has been investigated in previous studies [14-17].

Conversely, anxiety disorders are not covered by the financial incentives of QOF and there is no standardised way of recording a suspicion or diagnosis of anxiety [11]. With multiple causes and

manifestations, anxiety is often diagnosed after excluding physical causes of the symptoms. GPs report that although they recognise behavioural disturbances and distress, common presentations of symptom patterns and morbidity do not fit readily within the discrete diagnostic categories of anxiety disorders [7]. GPs' recording of patients' anxiety may be influenced by many factors, such as their own understanding or beliefs about anxiety, their (un)certainty of diagnosis, their ability to offer help or treatment, or the patient's own barriers or beliefs about anxiety as a disorder [11]. Some GPs also report that they feel they have few treatment options to offer patients with anxiety, which may dis-incentivise recording a diagnosis. Currently, using GP patient records to understand prevalence and treatment of anxiety is very problematic, especially as there has been a trend over the last decade towards GPs using symptom codes (e.g. anxiousness – symptom; panic attack) and generic codes (e.g. anxiety states) instead of specific diagnostic codes [11].

Barriers and facilitators to GPs' recognition and diagnosis of anxiety are not well explored in the literature. As a foundation for the use of GP patient records in epidemiological studies of anxiety, we interviewed GPs directly with the aim of describing: 1) GPs' coding and recording of anxiety, and 2) the influences on their recording behaviours. We conducted a qualitative interview study asking GPs about their conceptualisation of anxiety, their approach to diagnosis, and how and why they record consultations with regard to anxiety.

## Methods

### Ethical approval

Ethics approval was granted by the Brighton and Sussex Medical School Research Governance & Ethics Committee, and research and development approval given by Sussex NHS Research Consortium.

### Study design and procedure

Semi-structured interviews were conducted with GPs by two female medical students (AC and DAC) between December 2013 and March 2014, either at the GP's surgery or in the medical school. Interviews were conducted in a closed room with no one else present. The interview started with reading two fictional case studies (Box 1), and questions expanded from discussion of these cases. Case studies were developed from text books [18] and online material, and were piloted with two practising GPs. The questions initially focussed on how participants would talk to and diagnose the patients in the case studies, GPs' own perceptions of anxiety disorders, and how they would manage and record consultations with similar patients (Box 2).

Interviewers received training to ensure uniformity of interview styles, and used a standardised interview schedule with a mixture of open and closed questions to elicit both specific answers and encourage free-flowing conversation. Interviews were on average between 30 and 40 minutes long and were audio-recorded, no notes were made.

-Boxes 1 and 2 about here-

**Participant recruitment**

A convenience sample of currently practising general practitioners was recruited both face to face, and through email adverts, through networks of contacts in a medical school in the South East of England. GPs expressing an interest were sent information leaflets about the study and gave written consent when they agreed to participate. As the study was advertised widely it was not possible to calculate refusal rates. Recruitment ceased when there was consensus that data saturation had occurred.

**Analysis**

The interview transcripts were transcribed verbatim, anonymised and analysed thematically [19], using an inductive approach which focussed on creating themes directed by the content of the data. This approach was advantageous because of its flexibility in methods of interpretation, but limited in

the sense that it only allowed for a largely descriptive summary of themes [20]. We were guided by a subtle realist – interpretivist position, striving to be as neutral and objective as possible in the collection, interpretation and presentation of the data [21]. Initial identification of themes across the transcripts was carried out, followed by the generation of codes that captured overarching features of the interviews, using NVivo software (by HHB, MC, EF). Each theme is presented using key illustrative quotations. A summary of findings was sent to all participants.

**Results**

Seventeen GPs were recruited and participated in this study (Table 1).

**Table 1: Participant information**

| *Participant information* | |
|---|---|
| Gender | **9 Female, 8 Male** |
| Part or full time work | **9 part time, 8 full time** |
| Age range | **31-40y 4 GPs**<br>**41-50y 6 GPs**<br>**51-60y 7 GPs** |
| Average number years in practice | **14 (range 1-30)** |
| Location of practice | **11 South East England**<br>**3 North Wales**<br>**3 West Midlands** |
| Average practice size | **9250 patients (range 5350-16000)** |

**1) Choice of codes**

In relation to documenting the two case studies, GPs were asked "which codes would you be likely to use?" The range of Read codes stated by the GPs are summarised for each case study in Table 2. GPs chose a range of Read codes some of which were only loosely related to anxiety, while others were quite specific. Six GPs described how they would use free text to document aspects of the consultation including: *"history and assessment" (2B)* and *"symptoms and management" (10A).* One GP suggested they would use free text in the first presentation, with a stress related code: *"In the free text I'd say things like 'there are many features typical of anxiety' and a list of symptoms" (2A).*

**Table 2: Read codes chosen by GPs for each case study**

| **Read Term** | **Case Study: Sally** | **Case Study: Andrew** |
|---|---|---|

| | (N GPs giving code) | (N GPs giving code) |
|---|---|---|
| Anxiety | 7 | 5 |
| Anxiety states | 0 | 3 |
| Anxiety attacks | 2 | 1 |
| Anxiousness symptom | 1 | 1 |
| Generalized anxiety | 3 | 1 |
| Anxiety and/with depression | 7 | 2 |
| Depression | 2 | 1 |
| Stress related problem | 2 | 0 |
| Stress | 1 | 0 |
| Panic attack | 0 | 5 |
| Panic disorder | 0 | 1 |
| Agoraphobia | 0 | 1 |

NB: Participants could respond with more than one code per case study.

**2) Influences on choice of codes**

GPs reported on five main themes that influenced their recording of anxiety disorders. They described the influence of their conceptualisation of anxiety, giving patients a "label", their perceptions of competence with codes and the usefulness of coding, and system and time pressures on their ability to code.

*2.1) Conceptualisation of anxiety disorders*

Almost all participants responded that they felt confident in recognising symptoms of anxiety, particularly physical ones. However many clinicians noted that it was difficult with some patients to distinguish anxiety that was a 'normal' response to stress from more serious or chronic presentations that interfered with everyday life and required more detailed documentation and management. In response to the former, participants either avoided applying an anxiety code or resorted to using broad Read codes such as 'stress at home'. Behind this was a widespread desire to avoid medicalising anxiety that was just a 'natural' response to stressful life events:

*"I don't want to sort of start "medicalising" her because as far as I'm concerned there's a lot of life events, this is life - we have to deal with it!" (5A).*

Many GPs questioned the diagnostic validity of working with such a wide selection of available Read codes for anxiety. This was because of "grey areas" (3B) that could result where symptoms overlapped, fluctuated or a patient had co-existing conditions such as anxiety and depression.

They also considered that anxiety was a normal part of individual's lives and would only choose to diagnose it when it is "debilitating" (2A).

*"It's a spectrum, it's a degree so it often is a kind of decision as to how much it's affecting that person's life which then determines whether you call it anxiety.(2A)*

Visual cues from the patient – in contrast to a case vignette – were considered important to reaching a mental health diagnosis, sometimes from multiple consultations.

*"Central to this what you don't really get with this case studies is that you can't just look at the patient and I think with depression you often do get clues as to whether it is." (1B)*

A further challenge was differentiating between different types of anxiety such as "*depression with anxiety, GAD, anxious symptoms, panic attacks"* (3B). When asked how confident they felt in diagnosing a specific anxiety disorder such as OCD or PTSD, many GPs expressed confidence in making a diagnosis, but reluctance to code it as such:

*"Whether I would be happy, have the balls, to write, code it as obsessive compulsive disorder or whether I would fob it off as depression, I'm not sure…"(3B)*

Some attributed this to a lack of awareness and training in diagnosing mental health conditions. This concern was part of a wider lack of confidence in management conditions such as anxiety and depression in primary care:

*"Crikey, I feel quite out my depth! But patients clearly like what I'm telling them cause they're coming back and seeing me and they've got trust in me, but I feel quite uncomfortable with the fact that I'm just sort of following my nose… I'm not really sure I have confidence in what I'm doing" (3B)*

In such instances, GPs could turn to a number of strategies. First was to use a formal screening tool (such as GAD 7) as "evidence" and "as the main factor in determining what to code" (7B). Second, was simply to look at "what did the doctor before you used and copy that" [3B]. Finally GPs could defer to mental health professionals by *"wait(ing) for the psychs or psychologists to give… the proper Read codes" (2B).*

*2.2) Giving patients a "label"*

The majority of GPs stated they would be reluctant to code a patient with an anxiety disorder at their first consultation. This was from a desire to avoid prematurely coding anxiety, partly because of diagnostic uncertainty, but also due to the perception that such a code would be "stigmatising" (4B).

*"You don't immediately stick a label on them as being anxious" (4B)*

Practitioners also expressed concern about the permanence of patients' medical records and urged caution about making an entry in haste:

*"GPs can get a little bit ahead of themselves and start labelling patients with something… it's very difficult to get rid of that label." (3B)*

Other participants were concerned with the permanence of such a Read code for specific practical considerations, for example the implications for insurance:

*"That (coding) I might be a bit more canny about… because I think there are potential implications when someone's applying for a mortgage or insurance, to have a hard Read coded diagnosis" (2B)*

Some clinicians would avoid formally recording an anxiety disorder due to pressure from patients, who did not accept their diagnosis or questioned its validity:

*"Sometimes the patient is uneasy with certain diagnoses and sometimes they tell you that. That can be an external factor… (to coding)" (1B)*

Clinicians reported using Read codes that were generic or non-specific or having a fixed selection of codes for standardisation: *"I often put "seen in GP's surgery" if I'm going to do a generic code" (6B).* Coding was described by some as being a fluid process, evolving and developing over a number of consultations as the diagnosis was refined. This was also perceived to reflect the sometimes ambiguous nature of psychiatric diagnoses, due to fluctuating or overlapping symptoms, or uncertainty at what was 'pathological' verses 'normal' worry.

*"I'd probably just put down at this stage as a stress related problem… the diagnosis of anxiety would come not with just one interview but with a series of interviews"* (*2A).*

*2.3) Coding competence*

A number of practitioners expressed doubts about their Read-coding abilities: "*I'm not good in coding" (1A)*. Some lacked confidence generally in being able to translate a diagnosis to a Read code, whilst others experienced difficulty because of the perception that there were too many codes to choose from.

*"But I don't know how you do it (coding) well… you know, how do you choose that code?" (2B)*

This led to some participants either not coding at all, and only using free text to document consultations and diagnoses; or re-using codes from previous clinicians. GPs tried to standardise coding between doctors in their surgeries in the anticipation that other clinicians would also be using more generic Read codes.

*"we tend to keep it general, quite general because then we've got more chance [that] most people in surgery will code it similar and you'll find if you need to search for it..."* (5A)

Many practitioners believed that external factors such as time pressure and lack of training heavily impacted on their ability to code effectively. However for the majority of participants, choosing accurate Read codes was not a priority in day-to day practice.

*2.4) Perceptions about usefulness of coding*

There were differences of opinion about the usefulness of coding in contributing to patient care. Some clinicians questioned the necessity of having a Read code system as they believed it did not affect patient management:

*"But I'm not sure it (coding) particularly brings anything more to the party…I'm not sure how useful it is to have a strict coding system" (1B)*

*"(coding) on a practical basis it's irrelevant really…" (3B)*

Whereas others believed that in certain cases, for example where there was a clear treatment protocol for a diagnosis, it could be beneficial. A number of participants believed coding was useful for "statistical purposes" (7B) and resource allocation both at a national level, and in terms of service provision for individual surgeries.

Some practitioners were of the view that the coding process was useful in "putting a name" (5A) to what patients' were experiencing, and that it could "empower" (5A) patients, such that they could start to take their problem forward:

*"I guess to the patient it might be quite useful to have it kind of categorised" (8A)*

Free text was important for documenting anxiety. Most clinicians reported using a combination of a Read code and free text to document consultations.

*"I'd probably free text it… usually patients who come with anxiety and depression I exactly write what they say in direct speech type things". (4A)*

*2.5) Practice specific pressures*

A factor identified by a number of clinicians that influenced coding behaviour was time pressure. Many participants felt that they did not have enough time to find the most appropriate Read code and that "*it could take you 10 minutes to find the right code" (6B).* For that reason, some believed it was more important to dedicate all the available consultation time to the patient.

*"I'm probably more guilty of putting more time into the discussion than the recording of the discussion." (1B)*

Some practices had tried to address this problem by employing non-medical staff to code, with differing opinions as to the effectiveness of this with some finding it useful: *"…and she'll pick up the right code which is lovely" (2B),* while others expressed concern about non clinical staff interpreting and transcribing data from consultations.

Another factor identified by a minority of clinicians was the influence of coding software on inputting Read codes, with codes that were selected most frequently being more prominent and more likely to be used.

*"Only I suppose it's governed by what codes are prominent on our IT system." (10A)*

Finally, the exclusion of anxiety from the Quality and Outcomes Framework meant that some practitioners felt they experienced less pressure in diagnosing anxiety than other mental health conditions like depression.

*"If you diagnose someone as being depressed you know you've got a hell of a lot of boxes to tick on a regular basis… so there's actually less pressure on anxiety… so we've got some benefit to diagnose someone as anxious rather than depressed". (5A)*

**Discussion**

A variety of factors were identified as having the potential to influence the coding behaviour of GPs for presentations of anxiety. Clinicians reported that their understanding of the nature of anxiety disorders and diagnostic confidence were a significant factor in being able to choose appropriate Read codes. Concern about 'labelling' patients with a Read code that may potentially be stigmatising and permanent also influenced coding behaviour, leading some GPs to use generic Read codes or avoid using them all together. A number of practitioners also reported that they did not feel confident coding generally, partly due to a lack of training and particularly in an environment where

time pressure was an issue. Amongst these clinicians, some believed this was not problematic as they did not view coding as useful in general, or with regards to patient management. Others were more ambivalent and saw coding as being useful particularly in terms of resource allocation, standardising records and ensuring continuity of care for patients.

GPs reported using a selection of broad or vague codes but that coding may evolve to become more specific over time. Some GPs favoured recording with free text, and most used a combination of codes and free text. In relation to the case studies, the 17 participants chose 12 different codes ranging from the vague "stress" to the more specific "agoraphobia". These findings are consistent with Walters et al., [11] who found that the recording of anxiety symptoms rather than firmer diagnoses was increasing in recent years. They speculate that this might be because of an increasing debate over the meaning and usefulness of discrete psychiatric categories, in particular for patients with milder presentations. They also conjecture that GPs may be uncertain of or lack training in the criteria needed for firm diagnoses, that they may believe that distinctions are not meaningful in primary care practice and that they are reluctant to stigmatise patients [11]. We have been able to show that labels are a real concern for GPs, and that they are unwilling to firmly code anxiety disorders without being certain of the diagnosis. This may be from fear of later repercussions, in particular those arising from insurance claims. GPs in this study also discussed their uncertainty in giving a diagnosis of a discrete disorder when they perceived anxiety to be on a spectrum of distress, and talked of waiting for the "psychs" to give the "proper" codes.

**Implications for future research**

With the numerous influences reported on recording practices, it remains a difficult task to predict how anxiety cases may best be ascertained from patient records for research and audit purposes. Researchers should be aware that GPs use symptom and other non-specific codes in their records and that making and coding a firm psychiatric diagnosis may be less of a priority than formulating an appropriate management plan. It is clear that both high order diagnostic codes and symptom codes

should be included in case ascertainment strategies and that to increase sensitivity, free text should also be considered. Due to codes evolving from more vague to more precise within the patient record, case ascertainment could also usefully have a time element incorporated.

**Implications for Practitioners**

GPs in this study expressed uncertainty about how to differentiate between anxiety disorders and a reluctance to apply labels where there exists diagnostic uncertainty. This is consistent with the challenges facing generalists consulted by patients with early or mild symptoms. It may also reveal GPs' desire to establish trust with their patients, specifically prior to documenting a "hard" code that could be stigmatising or compromise future prospects, such as life insurance. Behind this was ambivalence around the fundamental value of clinical coding, and individualised or practice level approaches to coding, meaning that codes for anxiety are not standardised. That may be because of the challenges above, be a product of lack of training or, an implicit acknowledgement of the importance of QOF in guiding what merits coding.

**Strengths and Limitations**

This is the first UK study looking at influences on GPs' coding behaviour with regard to anxiety. This is an important condition and one that GPs may approach differently from other common mental health problems due to its overlap with somatic symptoms, and the lack of financial incentive for its diagnosis and management. However, this is a small qualitative study and therefore it is not known if the results can be generalised across the UK population of GPs. Certainly results are unlikely to generalise to other countries' primary care systems, which do not use Read Codes, or where mental health is often managed in specialist settings. A further potential weakness was that this study was undertaken by a team of researchers rather than in depth by one researcher. On the other hand this approach offers insight into diverse representations of the phenomenon under study, thus potentially strengthening the findings of the study [22].

**Conclusions**

GPs feel confident in recognising symptoms of anxiety in their patients but not in differentiating between anxiety disorders. They are uncomfortable coding firm diagnoses when uncertain. They are ambivalent about the usefulness of coded diagnoses that do not impact on their management of the patient, especially where such codes could be stigmatising for the patient. Researchers and policy makers using GP patient records for epidemiological studies should be aware that GPs prefer descriptive rather than diagnostic codes and that lower than expected rates of anxiety ascertained from these databases may be due to information being recorded in free text and in symptom and other general codes.

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**Author Contributions:** Conceived and designed the study: EF. Data collection: AC and DAC. Data Analysis: HHB, MC, EF. Writing the manuscript: EF, MC, HHB. Read and approved the final version: All authors.

**Data Sharing Statement:** Please contact the corresponding author for research access to the interview transcripts.

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**Box 1: Case Studies**

**Case studies**

**Sally** is a 39 year old divorced mother of two children. She was divorced a year ago after her husband, who had had a string of extra-marital affairs, decided to leave her for another woman he had met at work. Soon after the divorce Sally took a job in a call centre in order to make ends meet. She has started having a lot of headaches. She has been having difficulty getting off to sleep for the last six months, is irritable, on edge, and finds herself shouting at the children frequently. She has recently started experiencing palpitations and a tingling sensation in her hands. She spends most of the day worrying about various things, such as whether she is bringing up her children well, whether she will find another partner, and whether she will get "the sack".

**Andrew,** a 26 year old, is unemployed and afraid to leave his house. His fear of leaving the house started about a year ago when he was in the supermarket and suddenly experienced a feeling of sheer terror. His heart pounded he trembled; his mouth got dry and it felt as if the walls were caving in. He felt like he was totally out of control and might die. He had two subsequent attacks, both when he was out of his house, and since then he has been afraid to go out. On the occasions when he leaves his house, he insists that a friend accompany him and stay by his side until he returns home.

**Box 2: Examples of interview questions**

**Question 1)** *What is your understanding of anxiety?*

**Question 2)** In relation to the case studies: *"What would you document as your initial impression?"*

**Question 3)** *"If you would use a code, which codes would you be likely to use?"*

**Question 4)** *"How would you record different diagnoses of anxiety disorders? What would you code/write in the notes?"*

**Question 5)** *"Would you use a code relating to anxiety or a generic code plus free text? What would you write in the notes?"*

**Question 6)** *"What external influences are there on your choices of codes/text to record?"*

COREQ Checklist

| No | Item | Guide Questions | Page number where information is found in manuscript |
|---|---|---|---|
| **Domain 1: Research team and reflexivity** | | | |
| Personal Characteristics | | | |
| 1. | Interviewer/ facilitator | Which author/s conducted the interview or focus group? | Page 6 line 1 |
| 2. | Credentials | What were the researcher's credentials? *E.g.PhD, MD* | Page 6 line 1: medical students |
| 3. | Occupation | What was their occupation at the time of the study? | Page 6 line 1: medical students |
| 4. | Gender | Was the researcher male or female? | Page 6 line 1 |
| 5 | Experience and training | What experience or training did the researcher have? | Page 6 line 9 |
| Relationship with participants | | | |
| 6. | Relationship established | Was a relationship established prior to study commencement? | The majority of GPs were unknown to the researchers before study, two GPs were providing GP placements to students during the study. |
| 7. | Participant knowledge of the interviewer | What did the participants know about the researcher? | They knew they were medical students doing a dissertation project. |
| 8. | Interviewer characteristics | What characteristics were reported about the interviewer/facilitator? | That they were medical students doing a dissertation project. |
| **Domain 2: study design** | | | |
| Theoretical framework | | | |
| 9. | Methodological orientation and Theory | What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis* | Page 6 line 23 |
| Participant selection | | | |
| 10. | Sampling | How were participants selected? *e.g. purposive, convenience, consecutive, snowball* | Page 6 line 15 |
| 11. | Method of approach | How were participants approached? e.*g. face-to-face, telephone, mail, email* | Page 6 line 15 |
| 12. | Sample size | How many participants were in the study? | Page 7 line 8 |
| 13. | Non-participation | How many people refused to participate or dropped out? Reasons? | Page 7 line 18 |
| Setting | | | |

| | | | |
|---|---|---|---|
| 14. | Setting of data collection | Where was the data collected? e.*g. home, clinic, workplace* | Page 6 line 2 |
| 15. | Presence of nonparticipants | Was anyone else present besides the participants and researchers? | Page 6 line 3 |
| 16. | Description of sample | What are the important characteristics of the sample? *e.g. demographic data, date* | Page 7 Table 1 |
| Data collection | | | |
| 17. | Interview guide | Were questions, prompts, guides provided by the authors? Was it pilot tested? | Page 6 line 9 |
| 18 | Repeat interviews | Were repeat interviews carried out? If yes, how many? | No a single interview was carried out with each participant |
| 19. | Audio/visual recording | Did the research use audio or visual recording to collect the data? | Page 6 line 12 |
| 20. | Field notes | Were field notes made during and/or after the interview or focus group? | Page 6 line 12 |
| 21. | Duration | What was the duration of the interviews or focus group? | Page 6 line 11 |
| 22. | Data saturation | Was data saturation discussed? | Yes. Page 6 line 19 |
| 23. | Transcripts returned | Were transcripts returned to participants for comment and/or correction? | No |
| **Domain 3: analysis and findings** | | | |
| Data analysis | | | |
| 24 | Number of data coders | How many data coders coded the data? | Mainly HHB, with regular feedback and discussion with MC and EF (page 7 line 5) |
| 25. | Description of the coding tree | Did authors provide a description of the coding tree? | No |
| 26 | Derivation of themes | Were themes identified in advance or derived from the data? | Page 6 line 23 |
| 27. | Software | What software, if applicable, was used to manage the data? | Page 6 line 5 |
| 28. | Participant checking | Did participants provide feedback on the findings? | No although a summary was sent (Page 7 line 6) |
| Reporting | | | |
| 29. | Quotations presented | Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number* | Yes Pages 8-13 |
| 30. | Data and findings consistent | Was there consistency between the data presented and the findings? | Yes Pages 8-13 |
| 31. | Clarity of major themes | Were major themes clearly presented in the findings? | Yes Pages 8-13 |
| 32. | Clarity of minor themes | Is there a description of diverse cases or discussion of minor themes? | No – we searched for minor themes and dissenting views but did not find any. |

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# "You don't immediately stick a label on them": A qualitative study of influences on general practitioners' recording of anxiety disorders.



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# *"You don't immediately stick a label on them": A qualitative study of influences on general practitioners' recording of anxiety disorders.*

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**Abstract**

**Objectives:** Anxiety is a common condition usually managed in general practice (GP) in the UK. GP patient records can be used for epidemiological studies of anxiety as well as clinical audit and service planning. However it is not clear how General Practitioners (GPs) conceptualise, diagnose and document anxiety in these records. We sought to understand these factors through an interview study with GPs.

**Setting:** United Kingdom (UK) NHS General Practice (England and Wales)

**Participants:** 17 UK GPs

**Primary and Secondary Outcome Measures:** Semi-structured interviews used vignettes to explore the process of diagnosing anxiety in primary care and investigate influences on recording. Interviews were transcribed verbatim and analysed using thematic analysis.

**Results:** GPs chose 12 different codes for recording anxiety in the two vignettes, and reported that history, symptoms and management would be recorded in free text. GPs reported on four themes representing influences on recording of anxiety: “anxiety or a normal response”, “granularity of diagnosis”, “giving patients a label”, and “time as a tool”; and three themes about recording in general: “justifying the choice of code”, “usefulness of coding” and “practice specific pressures”. GPs reported using only a regular selection of codes in patient records to help standardise records within the practice and as a time saving measure.

**Conclusions:** We have identified a coding culture where GPs feel confident recognising anxiety symptoms, however due to clinical uncertainty, a long term perspective and a focus on management they are reluctant to code firm diagnoses in the initial stages. Researchers using GP patient records should be aware that GPs may prefer free text, symptom codes and other general codes rather than firm diagnostic codes for anxiety.

**Strengths and Limitations of This Study**

- An in-depth qualitative study reporting on how GPs record anxiety and what influences this.
- This is the first study to investigate these issues in anxiety disorders.
- A convenience sample of 17 GPs means that findings cannot be generalised.
- Researchers and policy makers using GP patient records for epidemiological studies should be aware that GPs may prefer descriptive rather than diagnostic codes for anxiety.

## Introduction

Mental health problems represent a large proportion of the disease burden in UK and are an important cause of long-term disability and dependency. Mental and substance use disorders are the leading cause of "years lived with disability" (YLDs) worldwide, accounting for 31.7% of all YLDs [1]. Anxiety disorders are an important part of this burden, accounting for 14.6% of disease burden measured in disability adjusted life years [2]. Anxiety disorders, such as generalised anxiety disorder (GAD), panic disorder, phobias, obsessive compulsive disorder (OCD) and posttraumatic stress disorder (PTSD), are common, with a global lifetime prevalence of around 17% [3]. In the UK, the point prevalence of anxiety has been reported as follows: mixed anxiety and depressive disorder 9.0%; GAD 4.4%, panic, phobias and OCD 1-1.5% [4].

Health services are not provided equitably to people with mental disorders [1]. The World Health Organisation calculated the global treatment gap (that is, the percentage of patients who remain untreated although effective treatments exist) for panic disorder is 55.9%; for GAD is 57.5%; and for OCD is 57.3% [5]. In the UK, anxiety of all types is under treated with 57% of adults with phobia in receipt of treatment, around 35% of those with GAD, and only 15% of those with mixed anxiety and depressive disorder [4]. Depression is also under recognised and under diagnosed in general practice with approximately half of patients receiving a diagnosis [6-8].

In the UK, GP patient records have been used to understand prevalence and treatment of common mental health problems [9-11]. Recognition of mental health problems in primary care only comes after the patient seeks medical care and discloses relevant symptoms, and the GP identifies and acknowledges the problem's psychological nature. Determinants of whether the GP will recognise psychiatric disorder include the way the patient describes their symptoms, biases held by the physician [12] as well as time pressures on the physician. These steps are important because 90% of identified mental health problems are managed in general practice in the UK, particularly depression and anxiety [13]. The monitoring and management of depression is now financially incentivised in

UK general practice through the quality and outcomes framework (QOF) [14]. The way GPs record depression and its treatment has become more standardised, and has been investigated in previous studies [15-18].

Conversely, anxiety disorders are not covered by the financial incentives of QOF and there is no standardised way of recording a suspicion or diagnosis of anxiety [11]. With multiple causes and manifestations, anxiety is often diagnosed only after excluding physical causes of the symptoms. This is considered necessary because patients with anxiety disorder commonly present in general practice with non-specific somatic symptoms. GPs report that although they recognise behavioural disturbances and distress, common presentations of symptom patterns and morbidity do not fit readily within the discrete diagnostic categories of anxiety disorders [7]. GPs' recording of patients' anxiety may be influenced by many factors, such as their own understanding or beliefs about anxiety, their (un)certainty of diagnosis, their ability to offer help or treatment, or the patient's own barriers or beliefs about anxiety as a disorder [11]. They may also wish to wait to see if symptoms resolve over time or become a long term issue for the patient. In the 50% of cases where anxiety symptoms are comorbid with depression [19], GPs may feel that a depression code is enough to capture the overall clinical picture. Some GPs also report that they feel they have fewer treatment options to offer patients with anxiety, which may dis-incentivise recording a diagnosis. Currently, using GP patient records to understand prevalence and treatment of anxiety is very problematic, especially as there has been a trend over the last decade towards GPs using symptom codes (e.g. anxiousness – symptom; panic attack) and generic codes (e.g. anxiety states) instead of specific diagnostic codes [11].

GPs' diagnosis and recording of anxiety are not well explored in the literature, with few studies since the 1990s examining GPs' interactions with their coding systems. Given the widespread adoption of electronic medical records in British General practice since that time and their growing use for epidemiological research, it is important to explore coding behaviour once again. Studies from the

1990s may not be relevant to the current generation of GPs who interact with computer software in the knowledge that the records they create may be used for secondary purposes such as audit, service planning and research. In this study we interviewed GPs directly with the aim of describing: 1) GPs' coding and recording of anxiety, and 2) the influences on their recording behaviours. We conducted a qualitative interview study asking GPs about their conceptualisation of anxiety, their approach to diagnosis, how they record consultations with regard to anxiety and why they do it that way.

## Methods

### Ethical approval

Ethics approval was granted by the Brighton and Sussex Medical School Research Governance & Ethics Committee, and research and development approval given by Sussex NHS Research Consortium.

### Study design and procedure

Semi-structured interviews were conducted with GPs by two female medical students (AC and DAC) between December 2013 and March 2014, either at the GP's surgery or in the medical school. Interviews were conducted in a closed room with no one else present. The interview started with reading two fictional vignettes (Box 1), and questions expanded from discussion of these cases. Vignettes were developed from text books [20] and online material, and were piloted with two practising GPs. The questions initially focussed on how participants would talk to and diagnose the patients in the vignettes, GPs' own perceptions of anxiety disorders, and how they would manage and record consultations with similar patients (Box 2).

Interviewers received training to ensure uniformity of interview styles, and used a standardised interview schedule with a mixture of open and closed questions to elicit both specific answers and

encourage free-flowing conversation. Interviews were on average between 30 and 40 minutes long and were audio-recorded, no notes were made.

**Box 1: Case Studies**

**Case studies**

**Sally** is a 39 year old divorced mother of two children. She was divorced a year ago after her husband, who had had a string of extra-marital affairs, decided to leave her for another woman he had met at work. Soon after the divorce Sally took a job in a call centre in order to make ends meet. She has started having a lot of headaches. She has been having difficulty getting off to sleep for the last six months, is irritable, on edge, and finds herself shouting at the children frequently. She has recently started experiencing palpitations and a tingling sensation in her hands. She spends most of the day worrying about various things, such as whether she is bringing up her children well, whether she will find another partner, and whether she will get "the sack".

**Andrew,** a 26 year old, is unemployed and afraid to leave his house. His fear of leaving the house started about a year ago when he was in the supermarket and suddenly experienced a feeling of sheer terror. His heart pounded he trembled; his mouth got dry and it felt as if the walls were caving in. He felt like he was totally out of control and might die. He had two subsequent attacks, both when he was out of his house, and since then he has been afraid to go out. On the occasions when he leaves his house, he insists that a friend accompany him and stay by his side until he returns home.

**Box 2: Examples of interview questions**

**Question 1)** *What is your understanding of anxiety?*

**Question 2)** In relation to the case studies: *"What would you document as your initial impression?"*

**Question 3)** *"If you would use a code, which codes would you be likely to use?"*

**Question 4)** *"How would you record different diagnoses of anxiety disorders? What would you code/write in the notes?"*

**Question 5)** *"Would you use a code relating to anxiety or a generic code plus free text? What would you write in the notes?"*

**Question 6)** *"What external influences are there on your choices of codes/text to record?"*

**Read Codes**

After reading the vignettes, GPs were asked how they would record the consultation with the patient, using the coding system specific to UK general practice, called Read codes. Read codes are a hierarchically structured vocabulary developed by a UK GP in the 1980s, called Dr James Read. They map to other nomenclatures such as International Classification of Disease codes and International Classification of Primary Care codes. Each Read code represents a term or short phrase describing a health related concept. There are over 200,000 different codes, which are sorted into categories (diagnoses, processes of care and medication) and sub-chapters [21]. Each clinical entity is represented by a 5 byte alphanumeric code and a Read term which is the plain language description. GPs also have the possibility of entering information in the descriptive free text.

**Participant recruitment**

A convenience sample of currently practising general practitioners was recruited both face to face, and through email adverts, through networks of contacts in a medical school in the South East of England. GPs expressing an interest were sent information leaflets about the study and gave written consent when they agreed to participate. As the study was advertised widely it was not possible to calculate refusal rates. Recruitment ceased when there was consensus that data saturation had occurred. Interviews were transcribed and coded immediately, in parallel with subsequent interviews, and by the 16$^{th}$ and 17$^{th}$ interview it was noted that no new themes were emerging.

**Analysis**

The interview transcripts were analysed thematically [22], using an inductive approach which focussed on creating themes directed by the content of the data. This approach was advantageous because of its flexibility in methods of interpretation, but limited in the sense that it only allowed for a largely descriptive summary of themes [23]. We were guided by a subtle realist – interpretivist position, striving to be as neutral and objective as possible in the collection, interpretation and

presentation of the data [24]. Initial identification of themes across the transcripts was carried out, followed by the generation of codes that captured overarching features of the interviews, using NVivo software (by HHB, MC, EF). Each theme is presented using key illustrative quotations. A summary of findings was sent to all participants.

**Results**

Seventeen GPs were recruited and participated in this study (Table 1).

**Table 1: Participant information**

| *Participant information* | |
|---|---|
| Gender | **9 Female, 8 Male** |
| Part or full time work | **9 part time, 8 full time** |
| Age range | **31-40y 4 GPs**<br>**41-50y 6 GPs**<br>**51-60y 7 GPs** |
| Average number years in practice | **14 (range 1-30)** |
| Location of practice | **11 South East England**<br>**3 North Wales**<br>**3 West Midlands** |
| Average practice size | **9250 patients (range 5350-16000)** |

**1) Choice of codes**

In relation to documenting the two vignettes, GPs were asked "which codes would you be likely to use?" The range of Read codes stated by the GPs are summarised for each vignette in Table 2. GPs chose a range of Read codes some of which were only loosely related to anxiety, while others were quite specific. Of the 17 participants, 12 mentioned they would use free text in the recording of anxiety, 9 described *what* they would document in the free text although three GPs said they would just write "what's going on", "what the patient exactly said" or "what I am worried about". Six GPs stated definitively what aspects they would document: history (10, 12, 17) symptoms (2, 3, 8, 10) assessment/examination (12, 17), discussion of management plan (3, 10, 17) social context (3) and Hospital Anxiety and Depression Scale (HADS) score (3). One participant said explicitly "*well we don't use free text very much because nobody reads it…basically*" (15) perhaps reflecting this participant's experience working as a GP in a hospital emergency medicine department.

**Table 2: Read codes chosen by GPs for each vignette**

| **Read Term** | **Vignette: Sally** (No. of GPs giving code) | **Vignette: Andrew** (No. of GPs giving code) |
|---|---|---|
| Anxiety | 7 | 5 |
| Anxiety states | 0 | 3 |
| Anxiety attacks | 2 | 1 |
| Anxiousness symptom | 1 | 1 |
| Generalized anxiety | 3 | 1 |
| Anxiety and/with depression | 7 | 2 |
| Depression | 2 | 1 |
| Stress related problem | 2 | 0 |
| Stress | 1 | 0 |
| Panic attack | 0 | 5 |
| Panic disorder | 0 | 1 |
| Agoraphobia | 0 | 1 |

NB: Participants could respond with more than one code per vignette.

**2) Coding Culture – influences on how anxiety is documented**

Seven themes arose from the data that represent influences on GP's recording, and which reflect a wider "coding culture", within the specific exemplar of anxiety.

*Theme 1: Anxiety – or a normal response to stress?*

Almost all participants responded that they felt confident in recognising symptoms of anxiety, particularly physical ones. However many clinicians noted that it was difficult with some patients to distinguish anxiety that was a 'normal' response to stress from more serious or chronic presentations that interfered with everyday life and required more detailed documentation and management. In response to the former, participants either avoided applying an anxiety code or resorted to using broad Read codes such as 'stress at home'. Behind this was a widespread desire to avoid medicalising anxiety that was just a 'natural' response to stressful life events:

*"I don't want to sort of start "medicalising" her because as far as I'm concerned there's a lot of life events, this is life - we have to deal with it!" (5).*

They also considered that anxiety was a normal part of individual's lives and would only choose to diagnose it when it became "*debilitating"* (2).

*"It's a spectrum, it's a degree so it often is a kind of decision as to how much it's affecting that person's life which then determines whether you call it anxiety.(2)*

*Theme 2: Granularity of diagnosis – getting it "good enough"*

Participants gave the sense that reaching the exact diagnosis was not as important as getting the right management plan in place. The same strategies were used for recognising anxiety as for any other mental health diagnosis, for example visual cues from the patient:

*"Central to this what you don't really get with this case study is that you can't just look at the patient and I think with depression you often do get clues as to whether it is." (11)*

GPs did not attempt to differentiate between different types of anxiety such as "*depression with anxiety, GAD, anxious symptoms, panic attacks"* (13), and doubted their competence to code such a detailed diagnosis:

*"Whether I would be happy, have the balls, to write, code it as obsessive compulsive disorder or whether I would fob it off as depression, I'm not sure…"(13)*

Instead they just aimed to "*document what was going on*" (1) in a general code:

*"The big two codes that we use mainly for mental health, one is anxiety, one is depression. And that's it. We're simple people". (5)*

Participants in this study questioned the utility and diagnostic validity of the wide selection of available Read codes for anxiety. This was because of "*grey areas*" (13) that could result where symptoms overlapped, fluctuated or a patient had co-existing conditions such as anxiety and depression. GPs overall aim was to develop a suitable management plan for the particular patient, with or without a specific diagnosis. Despite sometimes feeling *"out of their depth" (13)*, this approach appeared to be effective:

*"Patients clearly like what I'm telling them because they're coming back and seeing me and they've got trust in me, but I feel quite uncomfortable with the fact that I'm just sort of following my nose… I'm not really sure I have confidence in what I'm doing" (13)*

*Theme 3: Giving patients a "label" – worry about stigma*

The majority of GPs stated they would be reluctant to code a patient with an anxiety disorder at their first consultation. This was from a desire to avoid prematurely coding anxiety, partly because of diagnostic uncertainty, but also due to the perception that such a code would be "stigmatising" (14).

*"You don't immediately stick a label on them as being anxious" (14)*

Practitioners also expressed concern about the permanence of patients' medical records and urged caution about making an entry in haste:

*"GPs can get a little bit ahead of themselves and start labelling patients with something… it's very difficult to get rid of that label." (13)*

Other participants were concerned with the permanence of such a Read code for specific practical considerations, for example the implications for future insurance:

*"That (coding) I might be a bit more canny about… because I think there are potential implications when someone's applying for a mortgage or insurance, to have a hard Read coded diagnosis" (12)*

Some clinicians would avoid formally recording an anxiety disorder due to pressure from patients, who did not accept their diagnosis or questioned its validity:

*"Sometimes the patient is uneasy with certain diagnoses and sometimes they tell you that. That can be an external factor… (to coding)" (11)*

Some clinicians even reported documenting anxiety with Read codes that were totally non-specific and which added little to the value of data entry: *"I often put "seen in GP's surgery" if I'm going to do a generic code" (16).*

*Theme 4: Time as a tool – "next week they'll be fine"*

Coding was described by some as being a fluid process, evolving and developing over a number of consultations as the diagnosis was refined.

*"I'd probably just put down at this stage as a stress related problem… the diagnosis of anxiety would come not with just one interview but with a series of interviews"* (*2).*

This strategy reflected the sometimes ambiguous nature of psychiatric diagnoses, due to fluctuating or overlapping symptoms, uncertainty at what was 'pathological' verses 'normal' worry and the GP's experience that symptoms could spontaneously resolve over time.

*"If I was to use a code…urm, the first time you ever see someone you don't necessarily [enter a Read code] because you might see them next week and say "oh it's fine" which just happens so often" (16)*

With this perspective in mind, GPs suggested they would follow up the patient: *"you'd be reviewing them again you see" (16)* and factor time into the management plan as an aid to resolution of symptoms:

*"Then we could just give her a bit of time to think or talk to certain people or change a few bits basic stuffs in her life, and just get her back, you know a lot of stuff eases off after time." (5)*

*Theme 5: Justifying the choice of code*

A number of practitioners expressed doubts about their Read-coding abilities: "*I'm not good in coding" (1)*. Some lacked confidence generally in being able to translate a clinical diagnosis to a Read code, whilst others experienced difficulty because of the perception that there were too many codes to choose from.

*"But I don't know how you do it (coding) well… you know, how do you choose that code?" (12)*

This led to some participants either not coding at all, and only using free text to document consultations and diagnoses; or using one of three strategies for justifying the code chosen, all of which drew on other sources of information:

First was to use a formal screening tool (such as GAD 7) as "*evidence*" and "*as the main factor in determining what to code*" (17).

The second strategy for choosing codes was to defer to mental health professionals by *"wait(ing) for the psychs or psychologists to give… the proper Read codes" (12).*

Thirdly, in the absence of these influences, GPs tried to standardise coding between doctors in their clinics stating that their strategy was to look at "*what did the doctor before you used and copy that*" (13).

"Copying" the codes and aiming for consistency between practitioners could however lead to the use of more general codes:

*"We tend to keep it general, quite general because then we've got more chance [that] most people in surgery will code it similar and you'll find if you need to search for it..."* (5)

This strategy was perceived to be helpful in aiding consistency of care and information retrieval:

*"If you choose a code, how do you know that everyone else in the organisation is going to do it... It's an absolute nightmare and it matters when you want to retrieve information."*(12)

Some GPs additionally described that they would be told what terms to use in practice meetings to ensure external services could be accessed patients:

*"The only thing that would affect me …is if in maybe one of the staff meetings, someone said "oh there's a new support group opening up or something but in order to access it you need to label the patient as this or you need to put this in a referral or a dictation" (13)*

*Theme 6: Perceptions about usefulness of coding in general*

There were differences of opinion about the usefulness of coding in contributing to patient care. Some clinicians questioned the necessity of having a Read code system as they believed it did not affect patient management:

*"But I'm not sure it (coding) particularly brings anything more to the party…I'm not sure how useful it is to have a strict coding system" (11)*

*"(coding) on a practical basis it's irrelevant really…" (13)*

Conversely, others believed that in certain cases it could be beneficial, for example where there was a clear treatment protocol for a diagnosis. A number of participants believed coding was useful for "*statistical purposes*" (17) and resource allocation both at a national level, and in terms of service provision within individual surgeries.

Some practitioners were of the view that the coding process was useful in "*putting a name*" (5) to what patients' were experiencing, and that it could "*empower*" (5) patients, such that they could start to take their problem forward:

*"I guess to the patient it might be quite useful to have it kind of categorised" (8)*

*Theme 7: Practice specific pressures*

A factor identified by a number of clinicians that influenced coding behaviour was time pressure. Many participants felt that they did not have enough time to find the most appropriate Read code and that "*it could take you 10 minutes to find the right code" (16).* One reason for this was because some GPs believed it was more important to dedicate all the available consultation time to the patient.

*"I'm probably more guilty of putting more time into the discussion than the recording of the discussion." (11)*

Some GPs reported that practices had tried to address wider time pressures by employing non-medical staff to code. There were differing opinions as to the effectiveness of this with some finding it useful: *"…and she'll pick up the right code which is lovely" (12),* while others expressed concern about non clinical staff interpreting and transcribing data from consultations.

Another factor identified by a minority of clinicians was the influence of coding software on inputting Read codes, with codes that were selected most frequently being more prominent and more likely to be used.

*"Only I suppose it's governed by what codes are prominent on our IT system." (10)*

Finally, the exclusion of anxiety from the Quality and Outcomes Framework meant that some practitioners felt they experienced less pressure to diagnose anxiety than other mental health conditions, in particular depression.

*"If you diagnose someone as being depressed you know you've got a hell of a lot of boxes to tick on a regular basis… so there's actually less pressure on anxiety… so we've got some benefit to diagnose someone as anxious rather than depressed". (5)*

**Discussion**

This study identified multiple dimensions of a "coding culture" in general practice that emerged from investigating the exemplar condition of anxiety. Influences on coding included recognition of anxiety as a normal state which may resolve over time. This knowledge led to uncertainty over diagnosis in initial consultations, and coupled with the perceived stigma of having a permanent label, it shifted the chosen Read codes towards more symptom-based ones. Alternatively, non-specific or administrative codes were entered and symptoms and history documented in the free text.

The vignettes we used were static and only represented a single consultation. In response to this stimulus, where information was somewhat ambiguous and no questions could be asked of the patient, 12 of 17 GPs said they would use descriptive free text to supplement coded information. A

wide variety of recording styles was evident, as in relation to the two vignettes the 17 participants chose 12 different codes ranging from the vague "stress" to the more specific "agoraphobia". When choosing a code, GPs sought to have justify the code chosen, such as test scores, letters from specialist, and harmonising codes between practitioners in their clinic. In addition they reported accepting suggestions made by their coding software in order to save time.

Because of the ambiguity of initial presentations of anxiety, GPs suggested that they used time as a tool in two ways. Firstly to increase certainty over the diagnosis, and secondly as a form of management, as anxiety could get better over time even without clinical intervention. This suggests a pragmatic attitude to resolving both clinical uncertainty and to dealing with constraints on resources by adopting a wait and see approach, and to enable a relationship of trust to develop between doctor and patient [25]. This use of time was evident in their management plan which was usually to "bring the patient back" to see them within a short time frame. Interestingly, time was also seen as a constraint to good coding within patient consultations, as GPs said they had to choose between focusing on the patient, or focusing on recording the discussion.

This study additionally reveals a tension between a static coding system and the way mental health is managed in general practice. There is a wider difficulty exposed here in categorising mental health problems – the classification of which is continually discussed and adjusted (e.g. in DSM-V [26]). Psychiatric diagnoses lack consensus on their validity, and some diagnostic categories relevant to, for example, a psychotherapist tailoring cognitive behavioural therapy to their client, are not relevant to a GP who may only have the option of prescribing anti-depressants or not. Previous research on depression suggests that primary care physicians hold two conflicting models of depression, a biomedical understanding, supplemented by a recognition of the psychosocial context of depression. These arise due to their biomedically-oriented training, coupled with their everyday experiences and awareness of patients' daily lives [27]. This can lead to apparent dissonance or tension in the way GPs approach depression, and this may hold true for anxiety. In mental health consultations, GPs

have several goals to achieve. They must exclude a physical cause for the problem before settling on a psychological explanation and work within the wider context of the patient's social environment, current stressors and other illnesses, without over-pathologising normal responses to those stressors. Evidence reported here suggests that it is likely that the GP aims to get the diagnosis to only the level of granularity at which an appropriate and feasible management plan can be implemented.

Additionally, GPs perceive negative consequences for the patient of having a mental health diagnosis recorded. In our study GPs referred to implications for applying for a mortgage or for insurance, and this is borne out by other studies. For example Rost et al., [28] reported that over 50% of US-based primary care physicians had deliberately coded depression as something else in a two week period, for reasons of uncertainty or problems with reimbursement for the patient. The most common substitutions were fatigue/malaise and insomnia. Re-imbursement is not an issue for the patient in the UK, but there still appears to be a hesitation to formally label a patient when any uncertainty exists.

Our findings are consistent with Walters et al., [11] who found that the recording of anxiety symptoms rather than firmer diagnoses was increasing in recent years. Like us, they speculate that this might be because of an increasing debate over the meaning and value of discrete psychiatric categories, in particular for patients with milder presentations. Walters et al., also conjecture that GPs may be uncertain of or lack training in the criteria needed for firm diagnoses, that they may believe that distinctions are not meaningful in primary care practice and that they are reluctant to stigmatise patients [11]. We have been able to show that labels are a genuine concern for GPs, and that they are unwilling to firmly code anxiety disorders without additional evidence for the diagnosis.

**Implications for future research**

With the numerous influences reported on recording practices, it remains a difficult task to predict how anxiety cases may best be ascertained from patient records for research and audit purposes. By

acknowledging the existence of a wider coding culture, researchers should be aware that GPs use symptom and other non-specific codes in their records and that making and coding a firm psychiatric diagnosis may be less of a priority than formulating an appropriate management plan. The variety of strategies for documenting anxiety present a problem for researchers ascertaining cases. It is clear that both high order diagnostic codes and symptom codes should be included in case ascertainment strategies and that to increase sensitivity, free text should also be considered. Due to codes evolving from more vague to more precise within the patient record, case ascertainment could also usefully have a time element incorporated.

Of interest was the fact that GPs tried to harmonise coding at a practice level, suggesting that codes for anxiety may be standardised within a practice but not between practices. EHR researchers may therefore wish to factor practice level effects into their case ascertainment strategies. Currently the curriculum of the Royal College of General Practitioners does not include specific Read code training [29] so it is not clear how individuals or practices develop their coding strategies.

**Strengths and Limitations**

This is the first UK study looking at influences on GPs' coding behaviour with regard to anxiety. This is an important condition and one that GPs may approach differently from other common mental health problems due to its overlap with somatic symptoms, and the lack of financial incentive for its diagnosis and management. However, this is a small qualitative study and therefore it is not known if the results can be generalised across the UK population of GPs. Certainly results are unlikely to generalise to other countries' primary care systems, especially those which do not use Read Codes, or where mental health is managed in specialist settings. A further potential weakness was that this study was undertaken by a team of researchers rather than in-depth by one researcher. On the other hand this approach offers insight into diverse representations of the phenomenon under study, thus potentially strengthening the findings of the study [30].

An additional limitation is the approach of using static vignettes whereas in real life the GP would have the opportunity to invite the patient back and observe how their condition develops over time. However, increasingly, British GPs are working in larger surgeries without a named doctor-patient relationship and personal knowledge of patients and therefore may have to make assessments about mental health the first time they meet the patient or on the basis of notes made by colleagues. It is clear that it may not be clinically appropriate to give a firm diagnosis on the first meeting, but this study still illustrates the wide variation in approach to recording, highlighting the problems for EHR researchers.

**Conclusions**

This study has identified dimensions of a coding culture in general practice that appear to arise from clinical uncertainty, a long term perspective and a focus on clinical management rather than diagnosis. The coding strategies described reflect core clinical challenges facing generalists working in the community. For that reason it is unlikely that coding training or more user-friendly software will improve the epidemiological usefulness of clinical codes for mental health in general practice. Greater research attention should therefore be paid to the free text records made by GPs, especially for conditions like anxiety that can present with "normal" symptoms, be stigmatising or impact on insurance.

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**Author Contributions:** Conceived and designed the study: EF. Data collection: AC and DAC. Data Analysis: HHB, MC, EF. Writing the manuscript: EF, MC, HHB. Read and approved the final version: All authors.

**Data Sharing Statement:** Extra data in the form of anonymised typewritten interview transcripts are available by emailing e.m.ford@bsms.ac.uk.

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COREQ Checklist

| No | Item | Guide Questions | Page number where information is found in manuscript |
|---|---|---|---|
| **Domain 1: Research team and reflexivity** | | | |
| Personal Characteristics | | | |
| 1. | Interviewer/ facilitator | Which author/s conducted the interview or focus group? | Page 6 line 1 |
| 2. | Credentials | What were the researcher's credentials? *E.g.PhD, MD* | Page 6 line 1: medical students |
| 3. | Occupation | What was their occupation at the time of the study? | Page 6 line 1: medical students |
| 4. | Gender | Was the researcher male or female? | Page 6 line 1 |
| 5 | Experience and training | What experience or training did the researcher have? | Page 6 line 9 |
| Relationship with participants | | | |
| 6. | Relationship established | Was a relationship established prior to study commencement? | The majority of GPs were unknown to the researchers before study, two GPs were providing GP placements to students during the study. |
| 7. | Participant knowledge of the interviewer | What did the participants know about the researcher? | They knew they were medical students doing a dissertation project. |
| 8. | Interviewer characteristics | What characteristics were reported about the interviewer/facilitator? | That they were medical students doing a dissertation project. |
| **Domain 2: study design** | | | |
| Theoretical framework | | | |
| 9. | Methodological orientation and Theory | What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis* | Page 6 line 23 |
| Participant selection | | | |
| 10. | Sampling | How were participants selected? *e.g. purposive, convenience, consecutive, snowball* | Page 6 line 15 |
| 11. | Method of approach | How were participants approached? e.*g. face-to-face, telephone, mail, email* | Page 6 line 15 |
| 12. | Sample size | How many participants were in the study? | Page 7 line 8 |
| 13. | Non-participation | How many people refused to participate or dropped out? Reasons? | Page 7 line 18 |
| Setting | | | |

| | | | |
|---|---|---|---|
| 14. | Setting of data collection | Where was the data collected? e.*g. home, clinic, workplace* | Page 6 line 2 |
| 15. | Presence of nonparticipants | Was anyone else present besides the participants and researchers? | Page 6 line 3 |
| 16. | Description of sample | What are the important characteristics of the sample? *e.g. demographic data, date* | Page 7 Table 1 |
| Data collection | | | |
| 17. | Interview guide | Were questions, prompts, guides provided by the authors? Was it pilot tested? | Page 6 line 9 |
| 18 | Repeat interviews | Were repeat interviews carried out? If yes, how many? | No a single interview was carried out with each participant |
| 19. | Audio/visual recording | Did the research use audio or visual recording to collect the data? | Page 6 line 12 |
| 20. | Field notes | Were field notes made during and/or after the interview or focus group? | Page 6 line 12 |
| 21. | Duration | What was the duration of the interviews or focus group? | Page 6 line 11 |
| 22. | Data saturation | Was data saturation discussed? | Yes. Page 6 line 19 |
| 23. | Transcripts returned | Were transcripts returned to participants for comment and/or correction? | No |
| **Domain 3: analysis and findings** | | | |
| Data analysis | | | |
| 24 | Number of data coders | How many data coders coded the data? | Mainly HHB, with regular feedback and discussion with MC and EF (page 7 line 5) |
| 25. | Description of the coding tree | Did authors provide a description of the coding tree? | No |
| 26 | Derivation of themes | Were themes identified in advance or derived from the data? | Page 6 line 23 |
| 27. | Software | What software, if applicable, was used to manage the data? | Page 6 line 5 |
| 28. | Participant checking | Did participants provide feedback on the findings? | No although a summary was sent (Page 7 line 6) |
| Reporting | | | |
| 29. | Quotations presented | Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number* | Yes Pages 8-13 |
| 30. | Data and findings consistent | Was there consistency between the data presented and the findings? | Yes Pages 8-13 |
| 31. | Clarity of major themes | Were major themes clearly presented in the findings? | Yes Pages 8-13 |
| 32. | Clarity of minor themes | Is there a description of diverse cases or discussion of minor themes? | No – we searched for minor themes and dissenting views but did not find any. |

BMJ Open

# "You don't immediately stick a label on them": A qualitative study of influences on general practitioners' recording of anxiety disorders.



| | |
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| | |

# *"You don't immediately stick a label on them": A qualitative study of influences on general practitioners' recording of anxiety disorders.*

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**Abstract**

**Objectives:** Anxiety is a common condition usually managed in general practice (GP) in the UK. GP patient records can be used for epidemiological studies of anxiety as well as clinical audit and service planning. However it is not clear how General Practitioners (GPs) conceptualise, diagnose and document anxiety in these records. We sought to understand these factors through an interview study with GPs.

**Setting:** United Kingdom (UK) NHS General Practice (England and Wales)

**Participants:** 17 UK GPs

**Primary and Secondary Outcome Measures:** Semi-structured interviews used vignettes to explore the process of diagnosing anxiety in primary care and investigate influences on recording. Interviews were transcribed verbatim and analysed using thematic analysis.

**Results:** GPs chose 12 different codes for recording anxiety in the two vignettes, and reported that history, symptoms and management would be recorded in free text. GPs reported on four themes representing influences on recording of anxiety: “anxiety or a normal response”, “granularity of diagnosis”, “giving patients a label”, and “time as a tool”; and three themes about recording in general: “justifying the choice of code”, “usefulness of coding” and “practice specific pressures”. GPs reported using only a regular selection of codes in patient records to help standardise records within the practice and as a time saving measure.

**Conclusions:** We have identified a coding culture where GPs feel confident recognising anxiety symptoms, however due to clinical uncertainty, a long term perspective and a focus on management they are reluctant to code firm diagnoses in the initial stages. Researchers using GP patient records should be aware that GPs may prefer free text, symptom codes and other general codes rather than firm diagnostic codes for anxiety.

**Strengths and Limitations of This Study**

- An in-depth qualitative study reporting on how GPs record anxiety and what influences this.
- This is the first study to investigate these issues in anxiety disorders.
- A convenience sample of 17 GPs means that findings cannot be generalised.
- Researchers and policy makers using GP patient records for epidemiological studies should be aware that GPs may prefer descriptive rather than diagnostic codes for anxiety.

## Introduction

Mental health problems represent a large proportion of the disease burden in UK and are an important cause of long-term disability and dependency. Mental and substance use disorders are the leading cause of "years lived with disability" (YLDs) worldwide, accounting for 31.7% of all YLDs [1]. Anxiety disorders are an important part of this burden, accounting for 14.6% of disease burden measured in disability adjusted life years [2]. Anxiety disorders, such as generalised anxiety disorder (GAD), panic disorder, phobias, obsessive compulsive disorder (OCD) and posttraumatic stress disorder (PTSD), are common, with a global lifetime prevalence of around 17% [3]. In the UK, the point prevalence of anxiety has been reported as follows: mixed anxiety and depressive disorder 9.0%; GAD 4.4%, panic, phobias and OCD 1-1.5% [4].

Health services are not provided equitably to people with mental disorders [1]. The World Health Organisation calculated the global treatment gap (that is, the percentage of patients who remain untreated although effective treatments exist) for panic disorder is 55.9%; for GAD is 57.5%; and for OCD is 57.3% [5]. In the UK, anxiety of all types is under treated with 57% of adults with phobia in receipt of treatment, around 35% of those with GAD, and only 15% of those with mixed anxiety and depressive disorder [4]. Depression is also under recognised and under diagnosed in general practice with approximately half of patients receiving a diagnosis [6-8].

In the UK, GP patient records have been used to understand prevalence and treatment of common mental health problems [9-11]. Recognition of mental health problems in primary care only comes after the patient seeks medical care and discloses relevant symptoms, and the GP identifies and acknowledges the problem's psychological nature. Determinants of whether the GP will recognise psychiatric disorder include the way the patient describes their symptoms, biases held by the physician [12] as well as time pressures on the physician. These steps are important because 90% of identified mental health problems are managed in general practice in the UK, particularly depression and anxiety [13]. The monitoring and management of depression is now financially incentivised in

UK general practice through the quality and outcomes framework (QOF) [14]. The way GPs record depression and its treatment has become more standardised, and has been investigated in previous studies [15-18].

Conversely, anxiety disorders are not covered by the financial incentives of QOF and there is no standardised way of recording a suspicion or diagnosis of anxiety [11]. With multiple causes and manifestations, anxiety is often diagnosed only after excluding physical causes of the symptoms. This is considered necessary because patients with anxiety disorder commonly present in general practice with non-specific somatic symptoms. GPs report that although they recognise behavioural disturbances and distress, common presentations of symptom patterns and morbidity do not fit readily within the discrete diagnostic categories of anxiety disorders [7]. GPs' recording of patients' anxiety may be influenced by many factors, such as their own understanding or beliefs about anxiety, their (un)certainty of diagnosis, their ability to offer help or treatment, or the patient's own barriers or beliefs about anxiety as a disorder [11]. They may also wish to wait to see if symptoms resolve over time or become a long term issue for the patient. In the 50% of cases where anxiety symptoms are comorbid with depression [19], GPs may feel that a depression code is enough to capture the overall clinical picture. Some GPs also report that they feel they have fewer treatment options to offer patients with anxiety, which may dis-incentivise recording a diagnosis. Currently, using GP patient records to understand prevalence and treatment of anxiety is very problematic, especially as there has been a trend over the last decade towards GPs using symptom codes (e.g. anxiousness – symptom; panic attack) and generic codes (e.g. anxiety states) instead of specific diagnostic codes [11].

GPs' diagnosis and recording of anxiety are not well explored in the literature, with few studies since the 1990s examining GPs' interactions with their coding systems. Given the widespread adoption of electronic medical records in British General practice since that time and their growing use for epidemiological research, it is important to explore coding behaviour once again. Studies from the

1990s may not be relevant to the current generation of GPs who interact with computer software in the knowledge that the records they create may be used for secondary purposes such as audit, service planning and research. In this study we interviewed GPs directly with the aim of describing: 1) GPs' coding and recording of anxiety, and 2) the influences on their recording behaviours. We conducted a qualitative interview study asking GPs about their conceptualisation of anxiety, their approach to diagnosis, how they record consultations with regard to anxiety and why they do it that way.

## Methods

### Ethical approval

Ethics approval was granted by the Brighton and Sussex Medical School Research Governance & Ethics Committee, and research and development approval given by Sussex NHS Research Consortium.

### Study design and procedure

Semi-structured interviews were conducted with GPs by two female medical students (AC and DAC) between December 2013 and March 2014, either at the GP's surgery or in the medical school. Interviews were conducted in a closed room with no one else present. The interview started with reading two fictional vignettes (Box 1), and questions expanded from discussion of these cases. Vignettes were developed from text books [20] and online resources [21], and were piloted with two practising GPs. The questions initially focussed on how participants would talk to and diagnose the patients in the vignettes, GPs' own perceptions of anxiety disorders, and how they would manage and record consultations with similar patients (Box 2).

Interviewers received training to ensure uniformity of interview styles, and used a standardised interview schedule with a mixture of open and closed questions to elicit both specific answers and

encourage free-flowing conversation. Interviews lasted an average of 24 minutes (S.D. 10 minutes) and were audio-recorded; no notes were made.

**Box 1: Case Studies**

**Case studies**

**Sally** is a 39 year old divorced mother of two children. She was divorced a year ago after her husband, who had had a string of extra-marital affairs, decided to leave her for another woman he had met at work. Soon after the divorce Sally took a job in a call centre in order to make ends meet. She has started having a lot of headaches. She has been having difficulty getting off to sleep for the last six months, is irritable, on edge, and finds herself shouting at the children frequently. She has recently started experiencing palpitations and a tingling sensation in her hands. She spends most of the day worrying about various things, such as whether she is bringing up her children well, whether she will find another partner, and whether she will get "the sack".

**Andrew,** a 26 year old, is unemployed and afraid to leave his house. His fear of leaving the house started about a year ago when he was in the supermarket and suddenly experienced a feeling of sheer terror. His heart pounded he trembled; his mouth got dry and it felt as if the walls were caving in. He felt like he was totally out of control and might die. He had two subsequent attacks, both when he was out of his house, and since then he has been afraid to go out. On the occasions when he leaves his house, he insists that a friend accompany him and stay by his side until he returns home.

**Box 2: Examples of interview questions**

**Question 1)** *What is your understanding of anxiety?*

**Question 2)** In relation to the case studies: *"What would you document as your initial impression?"*

**Question 3)** *"If you would use a code, which codes would you be likely to use?"*

**Question 4)** *"How would you record different diagnoses of anxiety disorders? What would you code/write in the notes?"*

**Question 5)** *"Would you use a code relating to anxiety or a generic code plus free text? What would you write in the notes?"*

**Question 6)** *"What external influences are there on your choices of codes/text to record?"*

**Read Codes**

After reading the vignettes, GPs were asked how they would record the consultation with the patient, using the coding system specific to UK general practice, called Read codes. Read codes are a hierarchically structured vocabulary developed by a UK GP in the 1980s, called Dr James Read. They map to other nomenclatures such as International Classification of Disease codes and International Classification of Primary Care codes. Each Read code represents a term or short phrase describing health related concepts such as diagnoses, symptoms, tests, referrals, administration, and correspondence. There are over 200,000 different codes, which are sorted into categories (diagnoses, processes of care and medication) and sub-chapters [22]. Each clinical entity is represented by a 5 byte alphanumeric code and a Read term which is the plain language description. The way that GPs use Read codes varies, but many describe choosing a "summary" code which is a keyword representing the main body of the consultation [23]. The GP may then add text beside the code to capture complexity, evolving circumstances, uncertainty and severity [24].

**Participant recruitment**

A convenience sample of currently practising general practitioners was recruited both face to face, and through email adverts, through networks of contacts in a medical school in the South East of England. GPs expressing an interest were sent information leaflets about the study and gave written consent when they agreed to participate. As the study was advertised widely it was not possible to calculate refusal rates. Recruitment ceased when there was consensus that data saturation had occurred (between AC, ADC, MC and EF). Interviews were transcribed and coded immediately, in parallel with subsequent interviews, and by the 16$^{th}$ and 17$^{th}$ interview it was noted that no new themes were emerging.

**Analysis**

The interview transcripts were analysed thematically [25], using an inductive approach which focussed on creating themes directed by the content of the data. This approach was advantageous because of its flexibility in methods of interpretation, but limited in the sense that it only allowed for a largely descriptive summary of themes [26]. We were guided by a subtle realist – interpretivist position, striving to be as neutral and objective as possible in the collection, interpretation and presentation of the data [27]. Initial identification of themes across the transcripts was carried out, and in an iterative process, codes were generated that arranged features into groups of meaningful concepts using NVivo software (by HHB, MC, EF). The transcripts were studied again to explore dimensions of these concepts and the system thus refined. Each theme is presented using key illustrative quotations. A summary of findings was sent to all participants.

**Results**

Seventeen GPs were recruited and participated in this study (Table 1).

**Table 1: Participant information**

| *Participant information* | |
|---|---|
| Gender | **9 Female, 8 Male** |
| Part or full time work | **9 part time, 8 full time** |
| Age range | **31-40y 4 GPs**<br>**41-50y 6 GPs**<br>**51-60y 7 GPs** |
| Average number years in practice | **14 (range 1-30)** |
| Location of practice | **11 South East England**<br>**3 North Wales**<br>**3 West Midlands** |
| Average practice size | **9250 patients (range 5350-16000)** |

**1) Choice of codes**

In relation to documenting the two vignettes, GPs were asked "which codes would you be likely to use?" The range of Read codes stated by the GPs are summarised for each vignette in Table 2. GPs chose a range of Read codes some of which were only loosely related to anxiety, while others were quite specific. Of the 17 participants, 12 mentioned they would use free text in the recording of anxiety, 9 described *what* they would document in the free text although three GPs said they would

just write "what's going on", "what the patient exactly said" or "what I am worried about". Six GPs stated definitively what aspects they would document: history (10, 12, 17) symptoms (2, 3, 8, 10) assessment/examination (12, 17), discussion of management plan (3, 10, 17) social context (3) and Hospital Anxiety and Depression Scale (HADS) score (3). One participant said explicitly "*well we don't use free text very much because nobody reads it…basically*" (15) perhaps reflecting this participant's experience working as a GP in a hospital emergency medicine department where there is a lack of continuity between clinicians and patients.

**Table 2: Read codes chosen by GPs for each vignette**

| **Read Term** | **Vignette: Sally** (No. of GPs giving code) | **Vignette: Andrew** (No. of GPs giving code) |
|---|---|---|
| Anxiety | 7 | 5 |
| Anxiety states | 0 | 3 |
| Anxiety attacks | 2 | 1 |
| Anxiousness symptom | 1 | 1 |
| Generalized anxiety | 3 | 1 |
| Anxiety and/with depression | 7 | 2 |
| Depression | 2 | 1 |
| Stress related problem | 2 | 0 |
| Stress | 1 | 0 |
| Panic attack | 0 | 5 |
| Panic disorder | 0 | 1 |
| Agoraphobia | 0 | 1 |

NB: Participants could respond with more than one code per vignette.

**2) Coding Culture – influences on how anxiety is documented**

Seven themes arose from the data that represent influences on GP's recording, and which reflect a wider "coding culture", within the specific exemplar of anxiety.

*Theme 1: Anxiety – or a normal response to stress?*

Almost all participants responded that they felt confident in recognising symptoms of anxiety, particularly physical ones. However many clinicians noted that it was difficult with some patients to distinguish anxiety that was a 'normal' response to stress from more serious or chronic presentations that interfered with everyday life and required more detailed documentation and

management. In response to the former, participants either avoided applying an anxiety code or resorted to using broad Read codes such as 'stress at home'. Behind this was a widespread desire to avoid medicalising anxiety that was just a 'natural' response to stressful life events:

*"I don't want to sort of start "medicalising" her because as far as I'm concerned there's a lot of life events, this is life - we have to deal with it!" (5).*

They also considered that anxiety was a normal part of individual's lives and would only choose to diagnose it when it became "*debilitating"* (2).

*"It's a spectrum, it's a degree so it often is a kind of decision as to how much it's affecting that person's life which then determines whether you call it anxiety.(2)*

*Theme 2: Granularity of diagnosis – getting it "good enough"*

Participants gave the sense that reaching the exact diagnosis was not as important as getting the right management plan in place. The same strategies were used for recognising anxiety as for any other mental health diagnosis, for example visual cues from the patient:

*"Central to this what you don't really get with this case study is that you can't just look at the patient and I think with depression you often do get clues as to whether it is." (11)*

GPs did not attempt to differentiate between different types of anxiety such as "*depression with anxiety, GAD, anxious symptoms, panic attacks"* (13), and doubted their competence to code such a detailed diagnosis:

*"Whether I would be happy, have the balls, to write, code it as obsessive compulsive disorder or whether I would fob it off as depression, I'm not sure…"(13)*

Instead they just aimed to "*document what was going on*" (1) in a general code:

*"The big two codes that we use mainly for mental health, one is anxiety, one is depression. And that's it. We're simple people". (5)*

Participants in this study questioned the utility and diagnostic validity of the wide selection of available Read codes for anxiety. This was because of "*grey areas*" (13) that could result where symptoms overlapped, fluctuated or a patient had co-existing conditions such as anxiety and depression. GPs overall aim was to develop a suitable management plan for the particular patient, with or without a specific diagnosis. Despite sometimes feeling *"out of their depth"* (13), this approach appeared to be effective:

*"Patients clearly like what I'm telling them because they're coming back and seeing me and they've got trust in me, but I feel quite uncomfortable with the fact that I'm just sort of following my nose… I'm not really sure I have confidence in what I'm doing" (13)*

*Theme 3: Giving patients a "label" – worry about stigma*

The majority of GPs stated they would be reluctant to code a patient with an anxiety disorder at their first consultation. This was from a desire to avoid prematurely coding anxiety, partly because of diagnostic uncertainty, but also due to the perception that such a code would be "stigmatising" (14).

*"You don't immediately stick a label on them as being anxious" (14)*

Practitioners also expressed concern about the permanence of patients' medical records and urged caution about making an entry in haste:

*"GPs can get a little bit ahead of themselves and start labelling patients with something… it's very difficult to get rid of that label." (13)*

Other participants were concerned with the permanence of such a Read code for specific practical considerations, for example the implications for future insurance:

*"That (coding) I might be a bit more canny about… because I think there are potential implications when someone's applying for a mortgage or insurance, to have a hard Read coded diagnosis" (12)*

Some clinicians would avoid formally recording an anxiety disorder due to pressure from patients, who did not accept their diagnosis or questioned its validity:

*"Sometimes the patient is uneasy with certain diagnoses and sometimes they tell you that. That can be an external factor… (to coding)" (11)*

Some clinicians even reported documenting anxiety with Read codes that were totally non-specific and which added little to the value of data entry: *"I often put "seen in GP's surgery" if I'm going to do a generic code" (16).*

*Theme 4: Time as a tool – "next week they'll be fine"*

Coding was described by some as being a fluid process, evolving and developing over a number of consultations as the diagnosis was refined.

*"I'd probably just put down at this stage as a stress related problem… the diagnosis of anxiety would come not with just one interview but with a series of interviews"* (*2).*

This strategy reflected the sometimes ambiguous nature of psychiatric diagnoses, due to fluctuating or overlapping symptoms, uncertainty at what was 'pathological' verses 'normal' worry and the GP's experience that symptoms could spontaneously resolve over time.

*"If I was to use a code…urm, the first time you ever see someone you don't necessarily [enter a Read code] because you might see them next week and say "oh it's fine" which just happens so often" (16)*

With this perspective in mind, GPs suggested they would follow up the patient: *"you'd be reviewing them again you see" (16)* and factor time into the management plan as an aid to resolution of symptoms:

*"Then we could just give her a bit of time to think or talk to certain people or change a few bits basic stuffs in her life, and just get her back, you know a lot of stuff eases off after time." (5)*

*Theme 5: Justifying the choice of code*

A number of practitioners expressed doubts about their Read-coding abilities: "*I'm not good in coding" (1)*. Some lacked confidence generally in being able to translate a clinical diagnosis to a Read code, whilst others experienced difficulty because of the perception that there were too many codes to choose from.

*"But I don't know how you do it (coding) well… you know, how do you choose that code?" (12)*

This led to some participants either not coding at all, and only using free text to document consultations and diagnoses; or using one of three strategies for justifying the code chosen, all of which drew on other sources of information:

First was to use a formal screening tool (such as GAD 7) as "*evidence*" and "*as the main factor in determining what to code*" (17).

The second strategy for choosing codes was to defer to mental health professionals by *"wait(ing) for the psychs or psychologists to give… the proper Read codes" (12).*

Thirdly, in the absence of these influences, GPs tried to standardise coding between doctors in their clinics stating that their strategy was to look at "*what did the doctor before you used and copy that*" (13).

"Copying" the codes and aiming for consistency between practitioners could however lead to the use of more general codes:

*"We tend to keep it general, quite general because then we've got more chance [that] most people in surgery will code it similar and you'll find if you need to search for it..."* (5)

This strategy was perceived to be helpful in aiding consistency of care and information retrieval:

*"If you choose a code, how do you know that everyone else in the organisation is going to do it... It's an absolute nightmare and it matters when you want to retrieve information."*(12)

Some GPs additionally described that they would be told what terms to use in practice meetings to ensure external services could be accessed patients:

*"The only thing that would affect me …is if in maybe one of the staff meetings, someone said "oh there's a new support group opening up or something but in order to access it you need to label the patient as this or you need to put this in a referral or a dictation" (13)*

*Theme 6: Perceptions about usefulness of coding in general*

There were differences of opinion about the usefulness of coding in contributing to patient care. Some clinicians questioned the necessity of having a Read code system as they believed it did not affect patient management:

*"But I'm not sure it (coding) particularly brings anything more to the party…I'm not sure how useful it is to have a strict coding system" (11)*

*"(coding) on a practical basis it's irrelevant really…" (13)*

Conversely, others believed that in certain cases it could be beneficial, for example where there was a clear treatment protocol for a diagnosis. A number of participants believed coding was useful for "*statistical purposes*" (17) and resource allocation both at a national level, and in terms of service provision within individual surgeries.

Some practitioners were of the view that the coding process was useful in "*putting a name*" (5) to what patients' were experiencing, and that it could "*empower*" (5) patients, such that they could start to take their problem forward:

*"I guess to the patient it might be quite useful to have it kind of categorised" (8)*

*Theme 7: Practice specific pressures*

A factor identified by a number of clinicians that influenced coding behaviour was time pressure. Many participants felt that they did not have enough time to find the most appropriate Read code

and that "*it could take you 10 minutes to find the right code" (16).* One reason for this was because some GPs believed it was more important to dedicate all the available consultation time to the patient.

*"I'm probably more guilty of putting more time into the discussion than the recording of the discussion." (11)*

Some GPs reported that practices had tried to address wider time pressures by employing non-medical staff to code. There were differing opinions as to the effectiveness of this with some finding it useful: *"…and she'll pick up the right code which is lovely" (12),* while others expressed concern about non clinical staff interpreting and transcribing data from consultations.

Another factor identified by a minority of clinicians was the influence of coding software on inputting Read codes, with codes that were selected most frequently being more prominent and more likely to be used.

*"Only I suppose it's governed by what codes are prominent on our IT system." (10)*

Finally, the exclusion of anxiety from the Quality and Outcomes Framework meant that some practitioners felt they experienced less pressure to diagnose anxiety than other mental health conditions, in particular depression.

*"If you diagnose someone as being depressed you know you've got a hell of a lot of boxes to tick on a regular basis… so there's actually less pressure on anxiety… so we've got some benefit to diagnose someone as anxious rather than depressed". (5)*

**Discussion**

This study identified multiple dimensions of a "coding culture" in general practice that emerged from investigating the exemplar condition of anxiety. Influences on coding included recognition of anxiety as a normal state which may resolve over time. This knowledge led to uncertainty over diagnosis in initial consultations, and coupled with the perceived stigma of having a permanent label,

it shifted the chosen Read codes towards more symptom-based ones. Alternatively, non-specific or administrative codes were entered and symptoms and history documented in the free text.

The vignettes we used were static and only represented a single consultation. In response to this stimulus, where information was somewhat ambiguous and no questions could be asked of the patient, 12 of 17 GPs said they would use descriptive free text to supplement coded information. A wide variety of recording styles was evident, as in relation to the two vignettes the 17 participants chose 12 different codes ranging from the vague "stress" to the more specific "agoraphobia". When choosing a code, GPs sought to have justify the code chosen, such as test scores, letters from specialist, and harmonising codes between practitioners in their clinic. In addition they reported accepting suggestions made by their coding software in order to save time.

Because of the ambiguity of initial presentations of anxiety, GPs suggested that they used time as a tool in two ways. Firstly to increase certainty over the diagnosis, and secondly as a form of management, as anxiety could get better over time even without clinical intervention. This suggests a pragmatic attitude to resolving both clinical uncertainty and to dealing with constraints on resources by adopting a wait and see approach, and to enable a relationship of trust to develop between doctor and patient [28]. Watchful waiting is a recommended approach for other mild mental health conditions such as depression [29].This approach was also evident in their management plan which was usually to "bring the patient back" to see them within a short time frame. Interestingly, time was also seen as a constraint to good coding within patient consultations, as GPs said they had to choose between focusing on the patient, or focusing on recording the discussion.

This study additionally reveals a tension between a static coding system and the way mental health is managed in general practice. There is a wider difficulty exposed here in categorising mental health problems – the classification of which is continually discussed and adjusted (e.g. in DSM-V [30]). Psychiatric diagnoses lack consensus on their validity even in specialist settings, and in primary care,

many patients present with clear distress but with undifferentiated symptoms which may fluctuate over time, rather than a discernible disorder fitting a psychiatric category [31]. Previous research on depression suggests that primary care physicians hold two conflicting models of depression, a biomedical understanding, supplemented by a recognition of the psychosocial context of depression. These arise due to their biomedically-oriented training, coupled with their everyday experiences and awareness of patients' daily lives [32]. This can lead to apparent dissonance or tension in the way GPs approach depression, and this may hold true for anxiety. In mental health consultations, GPs have several goals to achieve. They must exclude a physical cause for the problem before settling on a psychological explanation and work within the wider context of the patient's social environment, current stressors and other illnesses, without over-pathologising normal responses to those stressors. Evidence reported here suggests that it is likely that the GP aims to get the diagnosis to only the level of granularity at which an appropriate and feasible management plan can be implemented.

Additionally, GPs perceive negative consequences for the patient of having a mental health diagnosis recorded. In our study GPs referred to implications for applying for a mortgage or for insurance, and this is borne out by other studies. For example Rost et al., [33] reported that over 50% of US-based primary care physicians had deliberately coded depression as something else in a two week period, for reasons of uncertainty or problems with reimbursement for the patient. The most common substitutions were fatigue/malaise and insomnia. Re-imbursement is not an issue for the patient in the UK, but there still appears to be a hesitation to formally label a patient when any uncertainty exists.

Our findings are consistent with Walters et al., [11] who found that the recording of anxiety symptoms rather than firmer diagnoses was increasing in recent years. Like us, they speculate that this might be because of an increasing debate over the meaning and value of discrete psychiatric categories, in particular for patients with milder presentations. Walters et al., also conjecture that

GPs may be uncertain of or lack training in the criteria needed for firm diagnoses, that they may believe that distinctions are not meaningful in primary care practice and that they are reluctant to stigmatise patients [11]. We have been able to show that labels are a genuine concern for GPs, and that they are unwilling to firmly code anxiety disorders without additional evidence for the diagnosis.

**Implications for future research**

With the numerous influences reported on recording practices, it remains a difficult task to predict how anxiety cases may best be ascertained from patient records for research and audit purposes. By acknowledging the existence of a wider coding culture, researchers should be aware that GPs use symptom and other non-specific codes in their records and that making and coding a firm psychiatric diagnosis may be less of a priority than formulating an appropriate management plan. The variety of strategies for documenting anxiety present a problem for researchers ascertaining cases. It is clear that both high order diagnostic codes and symptom codes should be included in case ascertainment strategies and that to increase sensitivity, free text should also be considered. Due to codes evolving from more vague to more precise within the patient record, case ascertainment could also usefully have a time element incorporated.

Of interest was the fact that GPs tried to harmonise coding at a practice level, suggesting that codes for anxiety may be standardised within a practice but not between practices. EHR researchers may therefore wish to factor practice level effects into their case ascertainment strategies. Currently the curriculum of the Royal College of General Practitioners does not include specific Read code training [34] so it is not clear how individuals or practices develop their coding strategies.

**Strengths and Limitations**

This is the first UK study looking at influences on GPs' coding behaviour with regard to anxiety. This is an important condition and one that GPs may approach differently from other common mental health problems due to its overlap with somatic symptoms, and the lack of financial incentive for its

diagnosis and management. However, this is a small qualitative study and therefore it is not known if the results can be generalised across the UK population of GPs. Certainly results are unlikely to generalise to other countries' primary care systems, especially those which do not use Read Codes, or where mental health is managed in specialist settings. A further potential weakness was that this study was undertaken by a team of researchers rather than in-depth by one researcher. On the other hand this approach offers insight into diverse representations of the phenomenon under study, thus potentially strengthening the findings of the study [35].

An additional limitation is the approach of using static vignettes whereas in real life the GP would have the opportunity to invite the patient back and observe how their condition develops over time. However, increasingly, British GPs are working in larger surgeries without a named doctor-patient relationship and personal knowledge of patients and therefore may have to make assessments about mental health the first time they meet the patient or on the basis of notes made by colleagues. It is clear that it may not be clinically appropriate to give a firm diagnosis on the first meeting, but this study still illustrates the wide variation in approach to recording, highlighting the problems for EHR researchers.

**Conclusions**

This study has identified dimensions of a coding culture in general practice that appear to arise from clinical uncertainty, a long term perspective and a focus on clinical management rather than diagnosis. The coding strategies described reflect core clinical challenges facing generalists working in the community. For that reason it is unlikely that coding training or more user-friendly software will improve the epidemiological usefulness of clinical codes for mental health in general practice. Greater research attention should therefore be paid to the free text records made by GPs, especially for conditions like anxiety that can present with "normal" symptoms, be stigmatising or impact on insurance.

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**Author Contributions:** Conceived and designed the study: EF. Data collection: AC and DAC. Data Analysis: HHB, MC, EF. Writing the manuscript: EF, MC, HHB. Read and approved the final version: All authors.

**Data Sharing Statement:** Extra data in the form of anonymised typewritten interview transcripts are available by emailing e.m.ford@bsms.ac.uk.

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COREQ Checklist

| No | Item | Guide Questions | Page number where information is found in manuscript |
|---|---|---|---|
| **Domain 1: Research team and reflexivity** | | | |
| Personal Characteristics | | | |
| 1. | Interviewer/ facilitator | Which author/s conducted the interview or focus group? | Page 6 line 1 |
| 2. | Credentials | What were the researcher's credentials? *E.g.PhD, MD* | Page 6 line 1: medical students |
| 3. | Occupation | What was their occupation at the time of the study? | Page 6 line 1: medical students |
| 4. | Gender | Was the researcher male or female? | Page 6 line 1 |
| 5 | Experience and training | What experience or training did the researcher have? | Page 6 line 9 |
| Relationship with participants | | | |
| 6. | Relationship established | Was a relationship established prior to study commencement? | The majority of GPs were unknown to the researchers before study, two GPs were providing GP placements to students during the study. |
| 7. | Participant knowledge of the interviewer | What did the participants know about the researcher? | They knew they were medical students doing a dissertation project. |
| 8. | Interviewer characteristics | What characteristics were reported about the interviewer/facilitator? | That they were medical students doing a dissertation project. |
| **Domain 2: study design** | | | |
| Theoretical framework | | | |
| 9. | Methodological orientation and Theory | What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis* | Page 6 line 23 |
| Participant selection | | | |
| 10. | Sampling | How were participants selected? *e.g. purposive, convenience, consecutive, snowball* | Page 6 line 15 |
| 11. | Method of approach | How were participants approached? e.*g. face-to-face, telephone, mail, email* | Page 6 line 15 |
| 12. | Sample size | How many participants were in the study? | Page 7 line 8 |
| 13. | Non-participation | How many people refused to participate or dropped out? Reasons? | Page 7 line 18 |
| Setting | | | |

| | | | |
|---|---|---|---|
| 14. | Setting of data collection | Where was the data collected? e.*g. home, clinic, workplace* | Page 6 line 2 |
| 15. | Presence of nonparticipants | Was anyone else present besides the participants and researchers? | Page 6 line 3 |
| 16. | Description of sample | What are the important characteristics of the sample? *e.g. demographic data, date* | Page 7 Table 1 |
| Data collection | | | |
| 17. | Interview guide | Were questions, prompts, guides provided by the authors? Was it pilot tested? | Page 6 line 9 |
| 18 | Repeat interviews | Were repeat interviews carried out? If yes, how many? | No a single interview was carried out with each participant |
| 19. | Audio/visual recording | Did the research use audio or visual recording to collect the data? | Page 6 line 12 |
| 20. | Field notes | Were field notes made during and/or after the interview or focus group? | Page 6 line 12 |
| 21. | Duration | What was the duration of the interviews or focus group? | Page 6 line 11 |
| 22. | Data saturation | Was data saturation discussed? | Yes. Page 6 line 19 |
| 23. | Transcripts returned | Were transcripts returned to participants for comment and/or correction? | No |
| **Domain 3: analysis and findings** | | | |
| Data analysis | | | |
| 24 | Number of data coders | How many data coders coded the data? | Mainly HHB, with regular feedback and discussion with MC and EF (page 7 line 5) |
| 25. | Description of the coding tree | Did authors provide a description of the coding tree? | No |
| 26 | Derivation of themes | Were themes identified in advance or derived from the data? | Page 6 line 23 |
| 27. | Software | What software, if applicable, was used to manage the data? | Page 6 line 5 |
| 28. | Participant checking | Did participants provide feedback on the findings? | No although a summary was sent (Page 7 line 6) |
| Reporting | | | |
| 29. | Quotations presented | Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number* | Yes Pages 8-13 |
| 30. | Data and findings consistent | Was there consistency between the data presented and the findings? | Yes Pages 8-13 |
| 31. | Clarity of major themes | Were major themes clearly presented in the findings? | Yes Pages 8-13 |
| 32. | Clarity of minor themes | Is there a description of diverse cases or discussion of minor themes? | No – we searched for minor themes and dissenting views but did not find any. |