

# Anxiety and depression on an acute respiratory ward

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## Abstract

**Objectives:** Psychological difficulties are a common complication among patients with respiratory disease, and are associated with poorer health outcomes and increased use of healthcare. As prevalence studies typically sample patients from community settings, this study aimed to explore the extent and nature of psychological difficulties during acute hospital admission.

**Methods:** A case example of an acute respiratory ward is presented. In total, 41 acute respiratory inpatients completed standardised measures of depression, anxiety, and health anxiety.

**Results:** Rates of clinically significant depression, anxiety, and health anxiety were 71%, 40%, and 21%, respectively, with 76% of participants showing clinically significant scores on at least one measure. Comparison to existing literature suggests depression rates may be elevated in the acute inpatient context. The difficulties experienced encompassed both contextual factors related to being in hospital and broader health concerns.

**Conclusion:** We suggest that psychological distress may be particularly prevalent in inpatient settings and that larger-scale studies are warranted.

## Keywords

Respiratory disease, anxiety, depression, health anxiety, inpatient, prevalence

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## Introduction

In respiratory settings, experiencing psychological difficulties is associated with poorer health outcomes including risk of mortality, lower quality of life, poorer ability to manage physical symptoms, and reduced self-care behaviours.<sup>1–4</sup> Alongside the patient burden, there are significant service-level implications, both financially and regarding healthcare demand: patients have longer and more frequent admissions, higher emergency care attendance, and greater medication use.<sup>5–9</sup> As a result, psychological assessment and intervention is recommended by national guidelines for respiratory conditions.<sup>10–13</sup>

Given the significance of these difficulties, it is important to understand their prevalence and nature, in order to implement effective interventions. Studies have highlighted that treatable difficulties such as anxiety and depression are common in chronic respiratory conditions. Prevalence rates, calculated using standardised screening questionnaires or diagnostic interviews, average between 32% and 65%,<sup>14–16</sup> and estimates of anxiety, depression, or both are as high as 80%.<sup>17</sup>

As most studies use outpatient samples, the prevalence of psychological difficulties during hospital admission is unknown. One study found that 50% and 39% of patients with chronic obstructive pulmonary disease (COPD) on a rehabilitation ward showed clinically significant anxiety and depression, respectively.<sup>18</sup> While there is some evidence that these difficulties generally improve across the admission, difficulties persisted in 9%–40% of patients.<sup>18,19</sup> It is plausible, and perhaps assumed, that the stress of an acute admission may mean there is a higher prevalence in acute ward

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environments, but to the authors' knowledge, there are to date no studies investigating this. A more detailed understanding of psychological functioning in acute respiratory contexts is therefore required.

This study investigated the frequency and nature of anxiety and depression among patients on an acute respiratory ward. It aimed to review psychological need within this patient cohort and consider support and intervention approaches.

## Method

### Design

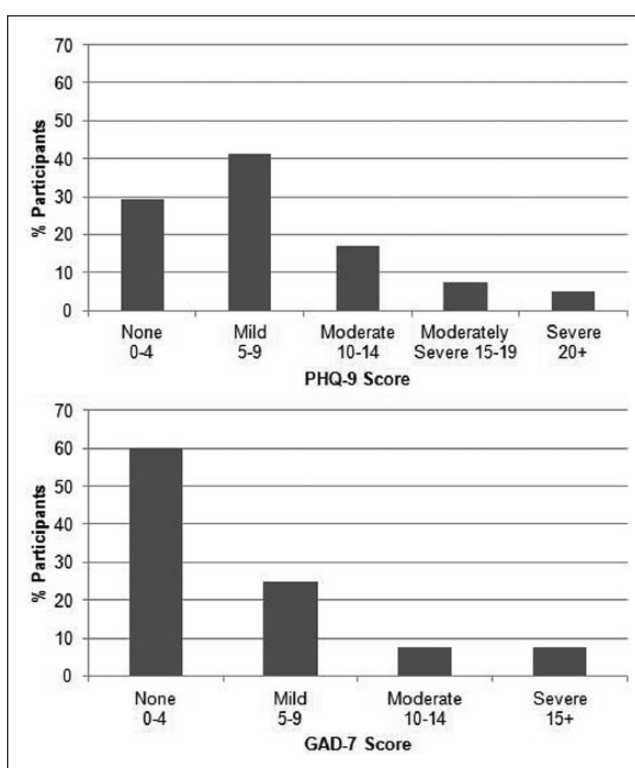
Standardised measures of psychological difficulties were completed by patients on a 33-bed acute respiratory ward in a National Health Service (NHS) hospital. Data from two separate patient samples were collected 3 months apart (January and April 2015) to reduce any potential seasonal effects.

### Procedure

Patients were considered eligible if their medical status and communicative ability were sufficient to complete the measures verbally or in writing. Eligible patients were approached and invited to participate. Verbal informed consent was obtained, and patients were informed that non-participation would not affect the care they received. As the measures were already being used by the clinical psychologist on the ward as part of routine practice, and that the principal aim was to evaluate the specific ward, the study was classified as service evaluation rather than research, and thus did not require additional ethical approval.<sup>20</sup>

### Measures

- Patient Health Questionnaire (PHQ-9):<sup>21</sup> A widely used and validated brief measure assessing depression severity; scores  $\geq 5$  are clinically significant, with scores 5–9, 10–14, 15–19, and 20 and above reflecting mild, moderate, moderately severe, and severe depression, respectively (maximum score 27). Cronbach's alpha for the present sample was 0.81.
- Generalised Anxiety Disorder Questionnaire (GAD-7):<sup>22</sup> A widely used and validated brief measure assessing anxiety severity; scores  $\geq 5$  are clinically significant, with scores 5–9, 10–14, and 15 and above reflecting mild, moderate, and severe anxiety, respectively (maximum score 21). Cronbach's alpha was 0.92.
- Health Anxiety Inventory – 14 item (SHAI):<sup>23</sup> A well-validated tool assessing health anxiety symptoms (from mild concerns to hypochondriasis); scores  $\geq 15$  are clinically significant,<sup>24</sup> although different cut-off scores have been used in the literature<sup>25</sup> (maximum score 42). Health anxiety was assessed to explore the



**Figure 1.** Distribution of participants' scores on the PHQ-9 (top panel) indicating depression severity (n=41) and the GAD-7 (bottom panel) indicating anxiety severity (n=40).

extent of symptoms such as body hypervigilance and health-related worries in this patient group. Cronbach's alpha was 0.74.

### Participants

From 66 inpatients, 44 were considered eligible, 41 of whom (93%) consented verbally to participation (21 female; mean age, 67; range, 19–86; 88% White British). A total of 25 participants (61%) had a chronic respiratory diagnosis (68% COPD; 12% asthma; 12% bronchiectasis; 4% lung cancer; 4% interstitial lung disease) with the remainder admitted for acute conditions (e.g. infection, pneumonia).

### Results

The distributions of PHQ-9 (n=41) and GAD-7 (n=40) scores are shown in Figure 1. Totally, 71% of participants showed scores indicating depressive symptoms of mild severity or higher; the equivalent figure for anxious symptoms was 40%. For both measures, scores ranged from those indicating no symptoms through to moderate and severe symptoms.

On the SHAI (n=38), 21% of participants scored above the clinical cut-off, indicating significant levels of health anxiety, and 76% of patients showed clinically significant scores on at least one of the three measures.

## Discussion

The present results highlight high levels of anxiety, health anxiety, and particularly depression within the inpatient sample. The rates are broadly consistent with existing literature using outpatient samples, although depression symptoms may be particularly elevated in the acute setting. Given the association between psychological distress and poorer respiratory outcomes,<sup>1</sup> the findings suggest a need to consider inpatients' psychological functioning and its impact on their ability to cope following discharge.

When completing the questionnaires, some participants highlighted that some difficulties are context dependent, for example, low mood resulting from reduced sleep, social interaction, or activity in hospital, or anxiety driven by an increased focus on illness, and long time periods in which to worry or ruminate. We may therefore expect an improvement in some patients following discharge without a need for psychological intervention. However, two points are raised: first, the above issues often occur concurrently with broader psychological difficulties such as adjustment to illness, coping with physical limitations, and anxiety about the future. These may persist beyond discharge and could require specialised support. Second, even without these broader issues, inpatients should be supported in managing psychological distress, and it seems critical that ward staff feel sufficiently trained and confident in this aspect of patient care. This is important to prevent misunderstandings and difficulties in patient–staff communication and to deliver the compassionate and person-centred care central to the recommendations of the Francis enquiry into failures of care in Mid-Staffordshire.<sup>26</sup>

As a small-scale evaluation of a single ward, the study findings may have limited generalisability to other acute respiratory settings, and replication and large-scale controlled studies would be required to evaluate this. It is noted that the present sample had a potential overrepresentation of White British participants relative to ethnic diversity in the local population, although it is unclear if and how this may have affected the findings. Sampling throughout the year may help to further mitigate potential seasonal differences should these be present. Despite these limitations, the ability of this study to highlight and describe the psychological difficulties experienced in this patient group can be considered a strength, and it is hoped the findings may encourage larger-scale research in this area.

The high rates of psychological difficulties among respiratory inpatients mean the ward environment is an important location to identify those in need. Integrating psychology provision within inpatient multidisciplinary teams can serve to support staff in the care of distressed patients and provide clinical assessment to distinguish difficulties that are appropriate given the context from broader issues that may require further intervention without complicating medication regimes.

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## Declaration of conflicting interests

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Ethics approval

Ethical approval was not sought for this study because the study was classified as service evaluation rather than research.

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## Informed consent

Verbal informed consent was obtained from all subjects before the study.

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