



# The “vicious circle” of chronic cough: the patient experience – qualitative synthesis

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The voice of those living with chronic cough is currently missing from the literature <https://bit.ly/44UJ1W>

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## Abstract

**Aim** The aim of this study was to systematically search and synthesise findings from peer-reviewed qualitative studies describing the experiences of those living with chronic cough.

**Methods** A systematic search was conducted to identify all studies that used qualitative methodology to report on the experiences of adults living with chronic cough. A thematic synthesis of the first-hand narratives was undertaken. Key themes in relation to personal perspectives and experiences of living with chronic cough were identified and grouped into analytical themes.

**Results** Six studies met the inclusion criteria. The thematic synthesis generated three analytical themes: 1) “It’s just a cough”; 2) “Constant cough and constant worry”; and 3) “No light at the end of the tunnel”, highlighting the biopsychosocial nature of chronic cough. The synthesis highlights chronic cough as a heterogeneous experience that may appear idiosyncratic, completely consuming the lives of those living with it.

**Conclusion** This is to our knowledge the first qualitative synthesis reporting on the perceptions and experiences of adults living with chronic cough. Our review draws attention to the paucity of literature that utilises qualitative methodology to explore the experience of living with chronic cough. We highlight the missing voice of people living with chronic cough in the contemporary literature. There is now a requirement for research exploring the narratives of those living with chronic cough, to gain an understanding of the condition beyond simple quantification.

## Introduction

In the adult population, chronic cough is defined as a cough with a duration of above 8 weeks and is understood to be caused by neural dysregulation [1]. Cough, especially that is persistent and refractory to treatment, is an entity that is associated with significant social, psychosocial and physical morbidity [2]. It continues to challenge both healthcare professionals and researchers alike. It is a condition that until recently had no licensed therapy, with the first authorised use being that of gefapixant, a first in class, non-narcotic, P2X3 receptor antagonist developed for the treatment of chronic cough licensed for use in Japan in January 2022 [3], subsequently followed by Switzerland. This does, however, mean that much of the world continues to have no licensed therapy and relies solely on the use of off-label medication when considering pharmaceutical treatment options with little else to offer. Whilst there is some evidence to support the use of non-pharmacological therapies such as speech and language therapy, there is yet to be a standardised approach to delivering this in clinical practice [4].

There has been an evolution in chronic cough research in recent years, focusing on areas such as the definition of chronic cough [5], its pathophysiology [6] and treatments [7]. This has shown a high



prevalence of anxiety and depression in these individuals [8], but there is little understanding of how these factors affect the individual. This is despite the use of both individual experience and illness being advocated as a crucial benchmark for assessing and improving healthcare [9]. The use of personal experience and co-production within healthcare research is imperative as it allows priority to be given to topics that matter most to people, topics that often may not have been ordinarily prioritised by clinicians [10]. Thus, examining holistic experience of illness is vital as it is crucial to understand not only the nature of the condition but also the impact and reality of living with the condition too [11]. It is therefore advocated that research prominence should now be given to peoples' voices [10] with increased recognition for engaged approaches to healthcare research that reflects the complexities of the needs and preferences of those living with the illness [12].

The aim of this literature review is, therefore, to explore the current literature on the experiences of people living with chronic cough.

### Methods

A systematic search and thematic synthesis are presented that was conducted and reported in accordance with the Enhancing Transparency in Reporting the Synthesis of Qualitative Research: ENTREQ checklist [13] (supplementary file 1).

A comprehensive search, systematic in nature, was undertaken to identify literature focusing on the experiences of people living with chronic cough, using qualitative methodology. The review takes a bottom-up approach by focusing solely on the participant narratives, rather than the author interpretation of these, allowing for a nuanced view of chronic cough to be achieved.

The formulation of a clear, concise structured question was utilised with use of the PEO tool (Population: People Exposure: Chronic Cough Outcome: Experience) [14].

### *What is the person-reported experience of adults living with chronic cough?*

#### *Search strategy*

The literature search was conducted from inception until December 2022 across Academic Premier, MEDLINE, CINAHL Complete and Psych INFO, via EBSCO host, all of which are commonly used in health sciences [14]. Search terms were deliberately comprehensive and broad in relation to the methodology to capture all literature using qualitative methods. Owing to imprecise terminology historically to describe chronic cough and in line with recently published literature on the terminology of cough [15], search terms in relation to chronic cough were exhaustive to capture all literature in relation to the newly recognised clinical entity. The search terms were developed with the support of an academic librarian. Details of the final search terms and number of hits from each database are presented in supplementary File 2.

#### *Inclusion and exclusion criteria*

Inclusion and exclusion criteria are presented in table 1. The exclusion criteria ensured that peer-reviewed studies using qualitative methodology and reporting experiences of adults with a chronic cough with a duration of >8 weeks that were published in English were retrieved. The inclusion criteria allowed qualitative data presented from mixed method studies to be included if qualitative data were clearly defined and presented.

**TABLE 1** Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> <li>• Study participants age <math>\geq</math>18 years</li> <li>• Chronic cough with a duration of &gt;8 weeks</li> <li>• Peer reviewed</li> <li>• Published in English</li> </ul>	<ul style="list-style-type: none"> <li>• Study participants &lt;18 years</li> <li>• Published in any language other than English</li> <li>• Grey literature</li> <li>• Cough reported as an outcome in another clinically diagnosed respiratory disease, e.g. tuberculosis, lung cancer, bronchiectasis, COPD, asthma, idiopathic pulmonary fibrosis</li> </ul>
<ul style="list-style-type: none"> <li>• Full text</li> <li>• Qualitative methodology</li> <li>• Quantitative methodology</li> </ul>	

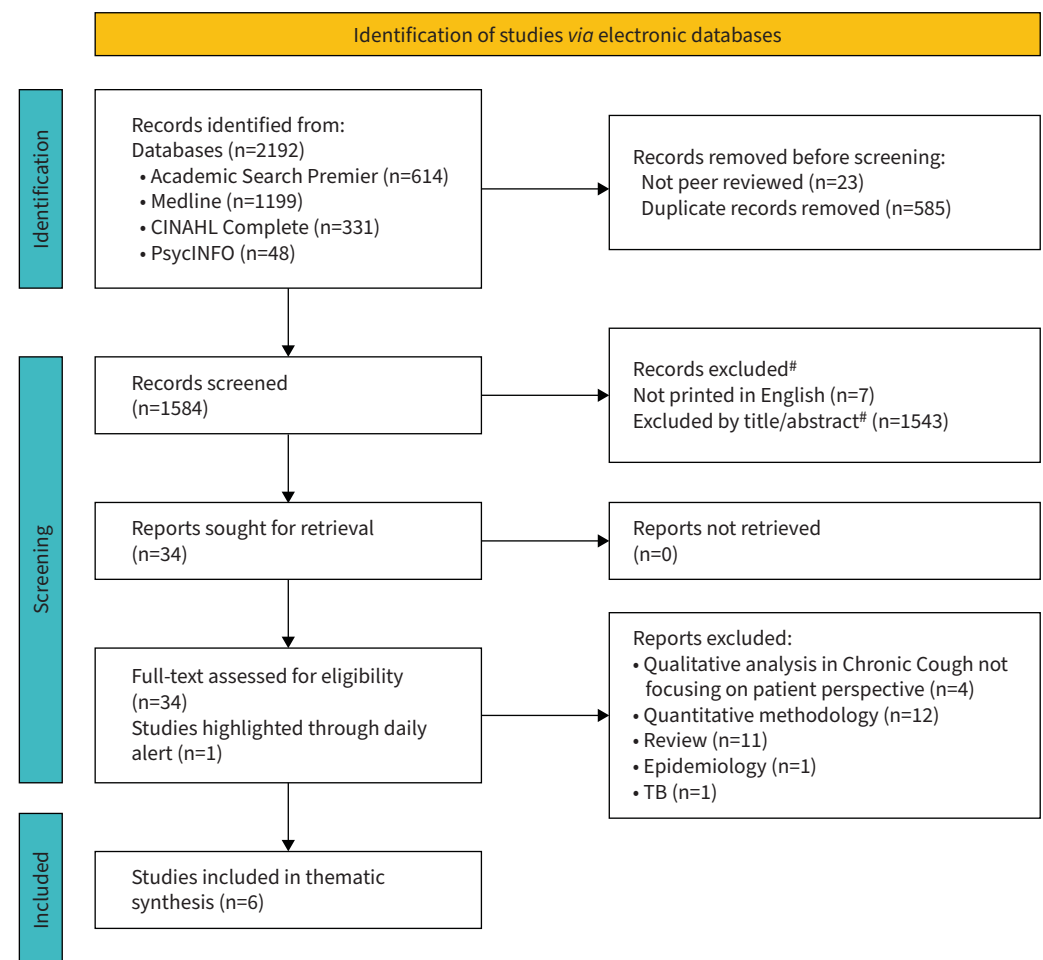
## Results

The search identified 2192 articles across all four databases (figure 1). Application of the exclusion criteria was initiated with the removal of 23 articles when limiting to peer-reviewed articles. The remaining 2169 articles were retrieved, imported and de-duplicated in Endnote 20 (Clarivate, Philadelphia, PA, USA), with removal of 585 articles. Restriction to articles published in English excluded a further seven. The resulting 1577 articles were screened by title and abstract. The breadth of the search strategy meant that most of the studies (n=1543) were excluded at this stage. A full text appraisal of the remaining 34 studies was undertaken to determine studies reporting experiences of individuals living with chronic cough using a qualitative methodology with further exclusion of 24.

Screening of the 10 resulting articles, excluded four for not exploring any experience of living with chronic cough [16–19], with a fifth study [20] excluded as it presented unpublished qualitative data within a literature review, with no other information available.

To ensure no literature had unintentionally been omitted during the search strategy, both forward and backward citation searching of the five studies [21–26] was undertaken, yielding no further results. Daily e-mail alerts were set up, with links to studies that met the search strategy *via* all four of the academic bibliographic databases, allowing one contemporary addition [21].

The resulting six studies [21–26] underwent critical appraisal with the use of the Critical Appraisal Skills Programme Qualitative Research Checklist (CASP, 2018) (Supplementary File 3). This tool was utilised above other common tools in that it is well suited to qualitative research inquiry [27]. No papers were excluded at this stage due to the paucity of literature in the subject area and all were felt to hold some



**FIGURE 1** PRISMA flow diagram highlighting selection of papers for inclusion. TB: tuberculosis. #: multiple reasons.

value in giving insight into living with chronic cough using first-hand narratives. All searches and critical appraisal were undertaken by K. Brindle and N. Carter with disagreements discussed with A. Hilton and A.H. Morice.

### *Study characteristics*

The included studies are presented in table 2. Studies were published between 2009 and 2022. The data reflect the views of individuals from four countries: USA (n=2) [23, 25], Canada (n=1) [26], UK (n=1) [24] and Japan (n=1) [21]. It was not possible to determine the location of participants in one of the studies [22] as data were collected *via* online forums. Of the studies that had clearly defined characteristics [21, 23–26], these collectively reflected 93 individual experiences of chronic cough. The population was predominantly female 67.4% (n=64), in keeping with the aetiology of chronic cough as a condition that disproportionately affects females [28]. Documented age of participants was also in keeping with the demographics of chronic cough with most participants over the age of 50 [29].

The studies utilised qualitative methodologies for data collection including semi-structured interviews (n=4) [21, 22, 24–26], focus groups (n=2) [25, 26] and review of online forum interactions (n=1) [22]. Data analysis was undertaken with the use of thematic analysis (n=4) [22, 24–26], thematic content analysis and clustering analysis (n=1) [21], and grounded theory analysis (n=1) [23].

### *Synthesis*

In view of the heterogeneity of the qualitative literature retrieved it was decided to conduct a thematic synthesis [29]. This enables a more powerful explanation of the data, as it goes beyond the primary research, resulting in findings that may not have been deemed important in the primary research due to the original research question [30]. Data extraction and analysis were guided by thematic synthesis [29], undertaken using a three-step process beginning with inductive line-by-line coding of the first-hand narratives in each paper. A decision was made to synthesise only the first-order direct participant quotations given the heterogeneity of the research aims of the studies, allowing for a synthesis that was as close to the participant's primary data as possible [29]. The first-hand narratives from each paper were extracted by K. Brindle with preliminary grouping into identified themes by K. Brindle and N. Carter. This allowed grouping of both themes and quotations by similarities and differences. Three overarching analytical themes on the experiences of living with chronic cough were obtained: Theme 1 – “You’ve only got a cough”; Theme 2 – “Constant cough and constant worry”; and Theme 3 – “No light at the end of the tunnel”. Illustrated quotes from study participants are presented from across all six studies to support the analytical themes.

#### *Theme 1 – “you’ve only got a cough”*

There is a huge frustration amongst individuals living with chronic cough that others do not always appreciate the serious effect that living with chronic cough has on them:

If it was you know cancer or something people would look for a cure whereas this is just “You’ve only got a cough”.

Patient 11 [24]

It is a condition that has many physical attributes associated with it, extending beyond just the act of coughing. It is clearly described by those living with it as multifaceted:

It’s retching, it’s struggling for breath, its vomiting, nose running, headaches just with the coughing.

Patient 5 [24]

Sometimes I throw up a lot of mucous and I really cough a lot at night...sometimes I wet on myself I cough so hard it makes my head hurt.

User #128 [22]

Coughing can cause a loss of concentration, momentary difficulty in breathing or pain in my lungs [21].

It has significant impact on fundamental activities of daily living. Activities such as eating and drinking become difficult and distressing:

Sometimes I choke while I’m eating, and choke when I am drinking, and cough even more [21].

TABLE 2 Study characteristics

Author/year	Country	Study objective	Stated data collection method	Sample description	Theoretical approach to data analysis
WRIGHT <i>et al.</i> 2022 [23]	USA	Elucidate the features of chronic refractory cough from the patient perspective	Semi-structured interviews	20 adult patients with cough for >8 weeks <ul style="list-style-type: none"> <li>• Male n=2</li> <li>• Female n=18</li> <li>• Median age 53.5 (19–80)</li> </ul>	Grounded theory analysis
VERNON <i>et al.</i> 2009 [25]	USA	Explore patients' experiences with cough symptom severity including cough frequency, intensity, provocation and periodicity	Focus groups/ semi-structured interviews	22 adult patients with cough for >8 weeks <ul style="list-style-type: none"> <li>• Male n=6</li> <li>• Female n=16</li> <li>• Age, mean±sd 66.1±12.9 years</li> </ul>	Content analysis approach Thematic analysis
HULME <i>et al.</i> 2019 [24]	UK	Gain an insight into chronic cough and its psychosocial factors that may be involved in its onset, maintenance and overall experience	Semi-structured interviews	<ul style="list-style-type: none"> <li>• Convenience sampling</li> <li>• 14 adult patients with cough for &gt;8 weeks</li> <li>• Male n=2</li> <li>• Female n=14</li> </ul>	Thematic analysis
KUM <i>et al.</i> 2022 [26]	Canada	Exploration of patients' attributes of their cough and severity whilst exploring issues important to patients in relation to cough severity	Focus groups	<ul style="list-style-type: none"> <li>• Purposive sampling</li> <li>• 16 adult patients with cough for &gt;8 weeks</li> <li>• Male n=5</li> <li>• Female n=11</li> <li>• Median age 61 (50–79) years</li> </ul>	Thematic analysis
SINHA <i>et al.</i> 2018 [22]	Not determined	Assessment of chronic cough sufferers' use of online health forums, including treatment advice they share with one another and the possible uses of online forums in chronic cough	Data extraction from online health forums	223 users – characteristics unknown	Thematic analysis
UEDA <i>et al.</i> 2022 [21]	Japan	To qualitatively describe knowledge, awareness, experiences and subtypes of burdens (physical, social, psychological) among Japanese patients with refractory chronic cough and unexplained chronic cough	Semi-structured interviews	21 adult patients with cough for >8 weeks <ul style="list-style-type: none"> <li>• Male n=16</li> <li>• Female n=5</li> <li>• Age, mean±sd 53.5±11.9 years</li> </ul>	Thematic network analysis followed by a clustering analysis

It also leads to issues with continence. The cough results in a lack of control over bladder and bowel movements, resulting in urinary, faecal and at times double incontinence:

I have incontinence so [sic] bad, that I have to urinate every hour.

User #158 [22]

I literally have to go to the bathroom, or I might go in my pants type of thing. And it's not pee, it's the opposite – it's diarrhoea. It's not always, it's just when I have those really severe ones and if it's morning.

Patient 9 [26]

The physical attributes of constantly coughing result in some debilitating health problems:

At times it will get bad enough where I black out or, feel like I am going to black out, like I can't get my breath, I'm choking constantly.

Patient 4 [26]

Last year the cough was so severe I fractured two ribs.

User #001 [22]

Those living with chronic cough do, however, report a condition that has both idiosyncrasies and heterogeneity, with evidence of many associated symptoms and at times unusual presenting factors:

It's like electric pylons....buzzing going on in my head and...it's all mixed up blurry picture...I couldn't walk on.

Patient 3 [24]

I find myself, like doubling over either trying to get the air in or the air out [23].

It's almost like someone is squeezing your neck from both sides, like a hard pressure and pain.

Patient 15 [26]

Unlike other medical conditions, it is a condition that may have many triggers. Individuals are triggered by stimuli that are almost impossible to avoid in their daily life. These triggers can be from external stimuli such as perfumes, but often the act of simply moving from one position to another can be enough to evoke coughing:

I can't stand the smell of perfume. I'll start coughing [23].

Laundry usually requires vertical motion of the body. Lifting clothing to dry them. It was so hard that I had to ask somebody else to do it [21].

Activity. Anything. Getting out of bed, walking to the bathroom, walking to the family, to the kitchen, to washing the dishes. Any of that. Walking from my car to the parking lot. Any sort of activity [23].

Whilst some report awareness of what may trigger them to cough, others report that they have been unable to identify an obvious precipitant for their cough:

There's no rhyme or reason to it you know, there are certain things that aggravate it but...it can just happen so we are never quite sure so you've always got that thought that something could happen.

Patient 5 [24]

Generally speaking, when cough happens, it comes out of the blue. It's unexpected [23].

There is also reported heterogeneity in the pattern of chronic cough with differences to when individuals experience coughing bouts. Some report only a daytime cough:

For me it would be intermittent coughing during the day [25].

I'll have a severe cough at least once a day, sometimes two and three times a day with my short coughs, the easy coughs happen, some days 10 times some days maybe 50 times.

Patient 15 [26]

Whilst others find that it affects their sleep, exacerbating both the physical and psychological attributes of living with the cough:

Yes, I find at night, like most nights, my nights are just as bad as my days, just out of the blue I'll start coughing. Doesn't matter if I'm on my back, my side, sometimes I have to sit up and just cough it out, or I leave the room and go sit somewhere just because I can't catch my breath.

Patient 10 [26]

For me it's not being able to sleep, you know, just waking up coughing, coughing, and coughing [25].

Now it is a constant cough, is intensified at night (all the night), I can't sleep. Therefore, I am very tired, with anxiety, irritable, desperate.

User #097 [22]

However, often no two days are the same:

No, I think everyday, you know, everyday is different [25].

For some it is a condition that has no reprieve. It is relentless, with no perceived breaks from coughing, resulting in individuals having no comprehension of how much they cough:

Mine's just all the time. I cough all the time [25].

I don't keep track of how many times I cough a day, I just know I cough constantly.

Patient 10 [26]

The multifaceted effects of chronic cough result in it completely consuming the lives of those living with it. It exhausts them:

I think it just wears you out "cause it just using all of this energy trying to hold back a cough...And you just get exhausted from the whole thing" [23].

When I finish it one of my bad sessions, I feel extremely exhausted [26].

...one of those that goes on and on and on and I think "I can't do with that, it's tired me out" ...you know drained.

Patient 2 [24]

Such is its all-encompassing nature; it strips individuals of their identity. They are no longer known as an individual, instead they are known in terms of their cough:

They don't even know me by name, but they know me by my cough.

Patient 14 [24]

It's becoming part of life at the moment, it's just becoming...that's just me, it's like having blue eyes, that just I've got a cough.

Patient 1 [24]

*Theme 2 – “Constant cough and constant worry”*

Living with chronic cough has a significant psychological and social impact. Individuals describe the constant worry of coughing whilst out in public, borne out of fear of how they are perceived by others. Thus, they become socially isolated and withdrawn:

I stopped going to church because people look at me like I have something really bad...I can't go anywhere without fear of having these attacks, I've become withdrawn from society.

User #128 [22]

It's definitely affected my social life. I literally did virtually nothing all summer but cough, feel bad and sleep [23].

It's annoying, and I am always worried about going out, and about and what I would do if I couldn't stop coughing again when I am on a train or a plane [21].

Conversely, others make efforts not to let it consume them, refusing to let the cough control every aspect of their life, and often putting mitigation strategies in place to limit the chances of coughing:

I refuse not to go out, I refuse to stop socialising. I can't let it rule because I would end up with nothing.

Patient 14 [24]

I can't go anywhere without a handkerchief or a bottle of water, everywhere I go...It's not your lipstick and your keys anymore.

Patient 5 [24]

Those who don't limit social interaction find themselves the centre of unwanted attention and negative reactions. This in turn leads to embarrassment, anger and frustration:

Some folk they can look at you, some folk are not very nice...if the place is really, was really crowded and things it was an embarrassment quite frankly...I felt like two fingers up at them.

Patient 9 [24]

They've obviously really noticed it...to come up to a total stranger...I think it just makes you really aware of how loud it is and how noticeable it is to other people.

Patient 11 [24]

They feel stigmatised by others when out in public as they are perceived to be contagious:

It's embarrassing sometimes too, I mean, either you're – if I'm standing in a grocery line and start coughing, people are looking at me like I'm contagious with something [25].

Obviously, they don't know I have a problem with cough so they must think I'm a big walking germ.

Patient 14 [24]

It's a problem when there are people around me such as when I am on a train. People would think I have COVID-19 nowadays, or a cold during the pre-COVID era. In such cases, I would endure it or hold my mouth tightly and try to keep the sound as low as possible [21].

Such unwanted attention often leads individuals to attempt to justify and explain the condition to others:

Not that you want anybody's sympathy, but you know you think “god have I got to explain myself and you're not even interested”.

Patient 8 [24]

...You should just stop coughing. Just stop. Don't do it. And I say but I get this tickle and I have to cough, you know, and it's all day [25].



For some avoidance of public transport to avoid unwanted attention and stigma becomes almost impossible due to the danger of coughing when driving:

Driving is scary. If I cough when I'm holding the wheel, I can't see ahead. I don't drive much now [21].

To me that strikes me as always a very serious bout of coughing, because obviously, oxygen wasn't getting where it was supposed to be getting. Um, and I find this freaky, especially if you're driving, you know, and your coughing, and all of a sudden you're dizzy [25].

The ever-intrusive nature of chronic cough is again highlighted, as individuals report impact on their careers as individuals feel like a nuisance amongst work colleagues. The embarrassment associated with coughing in the work environment, results in shame and stigma with individuals no longer able or wanting to work:

It's embarrassing when I'm trying to work or, you know, I'm in a group and all I can do is hack [23].

It becomes a nuisance to work. I feel like I don't want to work anymore [21].

I noticed my voice was becoming more hoarse near the end of the day, which made it difficult to do my job [23].

My boss would sometimes say, "You have to get well" or "coughing is annoying for others" [21].

Those living with chronic cough also allude to the widespread effects of it, not only on themselves but also to those closest to them:

My husband was sitting staring at me waiting for me to – I felt like he was waiting for me to die, and it was like is she ever going to get her breath back.

Patient 4 [26]

It must embarrass him, but he never lets on...he just turns me in and cuddles me in...as if you know, protecting me from the world...

Patient 5 [24].

This suggests that chronic cough also has a significant impact on those proximate to the patient.

### *Theme 3 – No light at the end of the tunnel*

There is a clear frustration amongst individuals living with chronic cough. They perceive they live with a condition that has no end to it:

Not being able to see a light at the end of the tunnel where it's going to be "oh it's okay, it's only going to last another couple of months because I am going to have this done" I can't see it ever getting better.

Patient 1 [24]

This is exacerbated by the reported lack of solutions offered by healthcare professionals tasked to diagnose and treat them:

I know he [doctor] exhausted every avenue and I've still got this cough.

Patient 10 [24]

They never offered a solution. It was just more of the same [23].

With individuals alluding to protocol-driven care and a lack of a personalised approach:

I think she has done her job as far as following the protocol she has been given [23].

I felt that she took me seriously...I just felt there was this protocol, and, uh, yeah, it just took longer [23].

Those who do receive answers in relation to their cough, however, describe relief at finally receiving a diagnosis and the requirement to no longer search for answers:

Just getting diagnosed is, like, the burden has lifted. Everything is better [23].

I feel like I can finally stop searching for what is wrong with me [23].

Even with a diagnosis, there are issues with therapies suggested. Those offered non-pharmaceutical therapies such as steam inhalation and speech therapy describe them as a lengthy process and at times impractical:

They sound practical but they're not practical...a cup of steam which is fine if you're sitting but then you don't sit all day.

Patient 14 [24]

It would be nicer to know if there was something easier to get rid of it "cause therapy, you know is always a longer process" [23].

I've been seeing a speech therapist to try to help me control the cough and she's heard me cough a couple of times and she'll say to me, "oh, you can control that just swallow it down", [and] it's like no I can't swallow it down, because then I'll start to choke so it's a no win situation for me.

Patient 4 [26]

Pharmaceutical therapies are not the answer for some as they have an aversion to them:

I don't want to take any medicine if possible. Medicines are not natural, so I feel like they are not good for me [21].

Whilst those who do trial them report a lack of significant benefit at times:

I have it under control with the medication, but I still get some fits that usually last five minutes, and they're rather intense, uh, in coughing [25].

Now I've got a 50/50 chance of it being a good day or a bad day.

Patient 5 [24]

There is also the financial burden of treatment costs for some depending on their geographical location:

The medicine is expensive. I take a lot of it. It has become an economic burden [21].

The perceived burden and lack of effective therapies lead individuals to continuously seek resolution, resulting in desperation and a willingness to try anything that may offer some relief:

You are willing to sort of grasp at anything...if they told me to hold my head underwater for ten minutes a day I would try and do that you know.

Patient 7 [24]

I would like to try [new medication]. If I was asked to be a human guinea pig for a trial, I would [21].

The combination of long healthcare journeys, no real answers and little to offer in terms of effective treatment for their cough result in feelings of guilt and self-blame:

There is a real component to my cough, but there is a learned component [23].

That is a vicious circle with the cough and clear that, um, every time I do that, I just irritate my, um, throat and vocal cords... [23]

You can easily feel guilty with the [healthcare] system...go through all the routines...“none of this is any good for you” so you begin to think “oh god, it’s me”...I should be better; I should be able to control it.

Patient 7 [24]

Despite intensive investigation, often over decades, individuals find themselves no longer seeing an end to the cough, whilst it is apparent that they come to accept that they do not have the ability to control it anymore. They conclude that the cough will be lifelong:

I don’t think I’ve got the ability anymore to stop my cough [23].

It’s never changed in those 18years...unless a miracle occurs, I will have this cough ‘til I die.

Patient 6 [24]

These lived experiences of real-life chronic cough patients clearly highlight chronic cough as an urgent unmet clinical need.

## Discussion

This synthesis aimed to explore the experience of living with chronic cough. Whilst each individual’s experiences are personal to them, the synthesis highlights evidence of some common experiences shared amongst individuals living with chronic cough. The first-hand narratives of those living with chronic cough describe how they live with a complex multifaceted condition, highlighted through the plethora of debilitating symptoms described. Such is the complexity of chronic cough that both those who live with it and healthcare professionals are mystified by the condition. The current lack of recognised effective therapies precludes treatment with a “one size fits all” model or anachronistic rigid protocol-driven care as is alluded to within this review. It should be treated with an individual holistic model of care.

Chronic cough is a condition that extends beyond its physical attributes with a suggestion of significant concomitant psychological impact. The stigma of living with a condition that is noticeable to others results in social isolation due to the fear of contagion. It is detrimental to work life and career progression as the cough and its physical attributes limit the work that those with the condition can do, especially as it is a condition that can be triggered simply by the act of talking, moving, eating and drinking, all of which are fundamental in daily life. The impact also extends further than the individual with the condition, as those living with it describe the impact it has on those closest to them.

This review emphasises that chronic cough is a complex multifaceted condition. Told through the individual-reported experiences of those living with a chronic cough, it has synthesised the only six studies to the authors’ knowledge that have used qualitative methods to explore any person-reported experience in the peer-reviewed literature. There is, therefore, a requirement for further research to aid our understanding of the lived experience of people with chronic cough, and to understand it beyond the biomedical perspective. This has been achieved through first-hand narratives of those who experience it.

Although this review highlights studies that have used qualitative methodology, many of these studies focused solely on issues such as aiding the quantification of cough severity [24, 26]. Our holistic approach encapsulates the real lived experience of those with chronic cough. Such research is advocated by policymakers [31] and can be used to identify collaboratively further research gaps with relevant impact for the target population [32]. Exploring the lived experience of chronic cough through qualitative methodology provides a means of understanding life with chronic cough more deeply, whilst highlighting prominent matters to those living with it [33]. Research into the lived experience of chronic cough would bring research into the condition in line with other respiratory clinical conditions.

This review, to the best of the authors’ knowledge, presents the first synthesis of qualitative data exploring the perceptions and experiences of people living with chronic cough. Although a systematic search was undertaken, using a comprehensive search of four academic electronic databases, it is possible that relevant published research may have been missed due to the language restriction and omission of grey literature. The use of a thematic synthesis, however, has enabled the review to stay as close as possible to the

primary research and participant first-order constructs in a transparent way, whilst facilitating the development of new concepts [34]. Although there is a dearth of qualitative literature exploring chronic cough, this review marks an important contribution to our current understanding of the experience of living with chronic cough and highlights gaps in the literature where future research is required.

### Conclusion

The voice of individuals living with chronic cough is currently missing from the literature. The lack of qualitative methodology that offers a deeper and rich understanding of the issues and perspectives of those living with chronic cough can in part explain why it continues to be a poorly recognised condition by health policy and many healthcare professionals alike. Although this review highlights a paucity of literature on the experience of people living with chronic cough, it has highlighted a complex condition with many facets alongside the act of coughing. There is now, undoubtedly, a requirement for further research into the condition focusing on the holistic experience of those living with chronic cough.

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