

## ARTICLE

# Holding the hope? Therapist and client perspectives on long COVID recovery: A Q-methodology

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**Abstract**

**Purpose:** Long COVID is a global health concern which has debilitating effects on the individual experiencing it. In the United Kingdom, psychological therapies are being offered to people with long COVID, although the evidence for these therapies is yet to be demonstrated. This research aimed to understand how therapists and clients define and understand recovery from long COVID, and use hope theory to interpret the results.

**Methods:** An online Q-methodology was employed, where participants sorted a range of statements pertaining to long COVID recovery based on their level of agreement with them. These arranged statements (Q-sorts) were collated and factor analysed to explore and compare underlying perspectives.

**Results:** Sixteen participants were recruited for the study, including eleven clients, four IAPT therapists and one therapist working in the broader long COVID pathway. A four-factor model is reported, including (1) *Psychological Pathways to Recovery*, (2) *Social Context and Agency*, (3) *Physiological Goals of Recovery* and (4) *Personal Meaning Making*. All IAPT therapists loaded onto the psychological pathways factor, whereas the remaining participants shared more diverse perspectives.

**Conclusions:** The belief that long COVID recovery was possible, taken as an indicator of hopefulness, was rated highest for Factor 1, *Psychological Pathways to Recovery*, and Factor 3, *Physiological Recovery Goals*. This suggested that having a clear definition of recovery, or clear guidance on how to intervene, promoted hopefulness and, theoretically, well-being. However, clients reported experiences of being invalidated and disbelieved by health professionals, with

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psychological explanations sometimes being experienced as dismissive and invalidating. Clinical implications and future research directions are discussed.

#### KEYWORDS

hope theory, IAPT, long COVID, psychology, Q-methodology, therapy

### Statement of contribution

In psychological practice, a therapist might ‘hold hope’ for clients experiencing hopelessness, as part of therapeutic intervention. Hope theory (Snyder, 2002) offers a theoretical framework for understanding how hopefulness might maintain or improve well-being when faced with a given problem. Hopefulness is thought to arise when a person has clear goals, envisages pathways to achieving these goals and has the personal agency to pursue them. However, people experiencing long COVID—and practitioners supporting them towards recovery—currently have limited guidance on how best to intervene. Combined with multiple barriers to agency, including social stigma and the debilitating effects of the illness, people experiencing long COVID (and the practitioners aiming to support them) may therefore experience hopelessness.

#### *What does this study add?*

- The study contributes a new method of addressing long COVID recovery by considering diverse and potentially conflicting perspectives
- People living with long COVID and their therapists might have different definitions of what ‘recovery’ from long COVID means
- This might undermine the ability to ‘hold hope’ for clients and exacerbate historical perceived stigmas around mental and physical well-being
- Methods to promote hopefulness and goal consensus for long COVID interventions are recommended, including co-producing service strategies and exploring diverse therapeutic models.

## INTRODUCTION

As health care services move beyond the acute stages of the COVID-19 pandemic, attention has turned to its longer term consequences. ‘Long COVID’ is one such consequence, which is a chronic (months or years) form of the illness characterized by over 200 symptoms, including the loss of sense of smell, chronic fatigue, headaches and muscle pains (Carfi et al., 2020; University College London [UCL], 2021). Although the causes of long COVID are still being researched, early evidence suggests the illness may in part arise due to organ damage, functional deconditioning, persistent immune response activations and/or chronic inflammation of mitochondrial cells (Kersten et al., 2021; Nunn et al., 2022; Vallee, 2021).

While specific causes and perpetuating factors of long COVID remain under review, individuals’ lived experiences of the illness are well documented. People with long COVID have described it as ‘like a tornado living inside my body’ (Gahan, 2023, p. 17), with symptoms such as tachycardia manifesting at seemingly unpredictable times. Alongside the chronic and painful nature of the illness, this unpredictability means people can struggle to plan and engage with social, leisure and work activities, leading to loneliness, isolation and unemployment (ibid). Psychological consequences of living with these ‘tornadoes’ are therefore common, with many people experiencing depression, anxiety and/or post-traumatic stress (Huang et al., 2021; Janiri et al., 2021).

The United Kingdom's National Health Service (NHS) has developed a series of 'long covid hubs', aimed at addressing the physical and psychological impacts of long COVID. Including specialisms such as occupational therapy, physiotherapy and psychology, these hubs aim to offer triaging and intervention services based on the needs of the individual accessing them (NHS, 2020). These hubs often fall under the long-term condition (LTC) umbrella of Talking Therapies Services (TTS; previously known as 'Improving Access to Psychological Therapies/IAPT'), which offer primary care-level mental health interventions for 'common mental health problems, like anxiety and depression' (National Health Service, 2024).

TTS therapies, including cognitive behavioural therapy and counselling, measure their success using symptom-tracking outcome measures such as the Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder Scale (GAD-7; National Collaborating Centre for Mental Health [NCCMH], 2020). This symptom reduction goal is also reflected in the LTC pathway, which applies similar therapies while additionally measuring physiological recovery (e.g. via the Chalder Fatigue Scale or Francis Irritable Bowel Scale (NCCMH, 2018)). In falling under the LTC service umbrella, long COVID recovery may therefore be similarly approached in physical and psychological terms.

However, the role of psychology in long COVID is a contentious issue, in part due to its comparison to, and potential conflation with, other chronic illnesses (also termed 'invisible illnesses'; Gahan, 2023; Vink & Vink-Niese, 2020). For instance, chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) are post-viral illnesses producing similar symptoms and lived experiences to those with long COVID (Wong & Weitzer, 2021). On this basis, and in the absence of contemporaneous long COVID research, early reports suggested long COVID and CFS/ME may have similar aetiologies (Komaroff & Bateman, 2021). Despite these reports implicating viral causes, concern has arisen that people with long COVID are portrayed as malingering, or experiencing somatized anxiety due to adverse childhood experiences, as has long (and controversially) been the case for people with CFS/ME (Kempke et al., 2013; Thompson et al., 2022). In both instances, beliefs that these illnesses are psychologically based have led to people feeling disbelieved and health care being declined (Callard & Perego, 2020; Kingstone et al., 2020; Ladds et al., 2021; Rehmeier, 2016; Watson et al., 2021).

Consequent to these comparisons is the assumption that psychological interventions, such as cognitive behavioural therapy, might play a role in long COVID recovery (Kuut et al., 2021). Concern exists that such arguments perpetuate the psychological-aetiological argument and the barriers this can bring (Skillbeck, 2022; Vink & Vink-Niese, 2020). Moreover, the National Institute for Health and Care Excellence (NICE) recently withdrew pre-existing psychological intervention guidance (CBT and graded exercise therapy) due to its potential to harm people with chronic fatigue (Turner-Stokes & Wade, 2020; Twisk & Maes, 2009; Van Houdenhove, 2006; Wilshire et al., 2018). There is therefore a limited evidence base from which long COVID interventions might be informed.

The issues outlined above indicate that, while acquiring long COVID might lead to significant psychological consequences, there are hazards associated with taking a psychological perspective. Lessons from CFS/ME communities, alongside emerging reports from people with long COVID, indicate that psychological perspectives may be experienced as invalidating, while interventions to promote well-being remain limited. In respect of these cumulative issues, the current study seeks to explore the concept of hope (Snyder, 2002) and whether this might offer an adjunctive understanding of how to promote psychological well-being for people with long COVID.

## Hope

From Snyder's hope theory perspective (Snyder, 2002; Snyder et al., 1991), hopefulness reflects the belief that a personal goal is achievable, that one knows how to achieve that goal (termed 'pathways') and that an individual has the agency (i.e. motivation and ability) to achieve them. Hopefulness might promote psychological well-being by encouraging people to engage in healthful behaviours

(e.g. exercise; Venning et al., 2011), promoting positive emotions and buffering against debilitating distress (Snyder, 2002). Cognitively, people experiencing hopefulness might perceive challenges as temporary and feel motivated to explore alternative routes to achieving their goals, thereby encouraging them to persist in the face of adversity (Leite et al., 2019). In contrast, those experiencing hopelessness might struggle to identify means of improving their life circumstances, leading to a sense of futility and, at times, suicidality (Beck et al., 2006; Knowles et al., 2022).

Other theorists have offered context and nuance to Snyder's original proposal. Bernardo (2010) suggests that one's agency may be externally informed, such as being supported by friends and family who can help them work towards goals. Balen and Merluzzi (2021) further argue that this personal or external agency might help maintain hopefulness even if a person is unclear what their goals are. Moreover, in instances where agency and goal certainty are both absent, a person might seek to make sense of their illness (e.g. understanding how they became ill and how it is affecting them now), in order to develop a coherent narrative which might later lead to alternative solutions (ibid). This then suggests that hopefulness might flourish in various ways, depending on individual experiences and support systems surrounding them. This is now considered in specific relation to invisible illnesses.

## Hope in invisible illnesses

By nature, invisible illnesses can be difficult to understand and formulate, leading to conflicting hypotheses as to their aetiology and prognosis. From a hope theory perspective, this means there may be a lack of consensus on the goals of recovery and the pathways to achieving them (Tryon et al., 2018). Additionally, people with long COVID may experience barriers to exerting personal agency. For instance, health care services' disbelief or misunderstandings of invisible illnesses have prevented people from accessing support (Gahan, 2023; Guise et al., 2010). Agency might also be undermined by the lived experience of long COVID, such as post-exertional malaise (extreme physical and cognitive exhaustion following effort), and unpredictable symptoms disrupting goal planning and pursuit (Devendorf et al., 2020; Ladds et al., 2021; Twomey et al., 2022).

While no known research has yet linked hope theory to long COVID, the issues outlined above implicate such associations. It therefore appears that goal uncertainty, unclear intervention pathways and barriers to personal agency might contribute to hopelessness (and therefore distress) in people with long COVID. In these instances, the role of the therapist may be of 'holding hope' for their clients (Bartholomew et al., 2019, p. 501).

## Therapist hope and agency

'Holding hope' for clients involves therapists believing recovery is possible, based on their sense of competence and understanding of therapeutic interventions (Larsen et al., 2013). Research suggests that therapist hopefulness may promote recovery, as clients come to share a therapist's perspective and adopt their hopefulness (Coppock et al., 2010).

However, with long COVID research in its infancy, effective interventions are yet to be established. This may particularly threaten hopefulness within a 'step 2' talking therapy framework, where support involves the matching of interventions (i.e. pathways) to specific problems (Richard & White, 2011). The 'step 3' approach of adapting therapy to LTCs might somewhat mediate this threat (Panchal et al., 2020); however, this is yet to be established.

Moreover, if a therapist's recovery goals are not respectful of a client's view of a problem, a lack of goal consensus may arise which undermines the transferability of hopefulness (Tryon et al., 2018). It therefore remains to be seen if therapists and clients hold similar views on long COVID causes and recovery, and how these might influence a therapist's ability to hold hope for their clients.

## The current study

A social constructionist epistemology was adopted for this study, which takes the position that understandings of a given topic are interpreted and culturally ascribed (Leeds-Hurwitz, 2009). In this respect, this study is less concerned with uncovering an objectively true definition of 'long covid recovery' or how to achieve it. Rather, it seeks to understand the diverse beliefs groups might hold regarding recovery, and the implications this might have for therapist and client hopefulness.

A long COVID pathway providing psychological therapies (most of which take a cognitive behavioural perspective) is the setting of the study. In the absence of clear guidance, and on the background of physical and social barriers to change, the research question asks Can (and if so, how) therapists and clients hold hope for long COVID recovery?

## METHOD

### Q-methodology

Q-methodology aims to undertake a 'systematic study of human subjectivity' (Brown, 1986, p. 58) and has been used to compare diverse perspectives on topics including therapeutic relationships (Dziopa & Ahern, 2009), mental health client needs (Papworth & Walker, 2008), outcome measurement in paediatrics (Morris et al., 2015) and in learning disabilities (Combes et al., 2004). In this method, participants rank a defined number of statements (the Q-set) pertaining to a given topic (i.e. long COVID recovery) in a fixed sorting grid. These statements are then scored, collated together and factor analysed, before comparing the factors against each other (Watts & Stenner, 2012). In keeping with a social constructionist perspective, this supports an uncovering of diverse cultural understandings and the hazards which may arise from this. Further details of the Q-set and sorting procedure are available below.

### Design

#### Ethics

This study was approved by the Staffordshire University Ethics Committee and the NHS Research Ethics Committee. All participants were given information sheets outlining the study before they consented to participate, including information about withdrawal.

Research may need adapting to promote the inclusion of people with complex health needs, for instance, by using concise statements and allowing for breaks (Banks et al., 2022). To reduce the risk of causing post-exertional malaise in participants with long COVID (Twomey et al., 2022), several adaptations were made to this study. These are described throughout and reflected upon within the discussion section.

#### Q-set

Q-sets (the statements to be sorted within the activity) aim to achieve 'coverage and balance' (Watts & Stenner, 2012, p. 58), meaning they broadly represent all potential perspectives on the topic of choice (long COVID recovery). Numerous sources were consulted to achieve this, including attendance at training and workshops delivered by people with lived experience, discussions with professionals working in the field and conducting a full literature review.

A total of 70 statements were developed using these sources, which were then verified and amended in a focus group of two long COVID therapists. This group read through the statements, contributed ideas which had not yet been covered (e.g. 'long covid recovery is positively/negatively influenced by





Stenner's (2012) Principal component analysis (PCA) technique was employed, where eigenvalues above 1, and scoring higher than the 95th percentile in a parallel analysis, are considered as potential factors (O'Connor, 2000).

After identifying potential factors, KenQ (Banasick, 2016) was used to conduct a varimax rotation and examine the specific statement placements for each factor (termed factor arrays; Watts & Stenner, 2012). These factors arrays offer insights into which statements were most and least agreed with according to each factor (provided in Appendices B–E). Defining statements for factors were determined if they met statistical significance ( $p < .05$ ). Along with qualitative feedback, these factor arrays allowed the researcher to interpret the results into coherent narratives for reporting.

## Participants

Sixteen participants were recruited, consisting of four therapists working within the sponsoring trust's TTS, one non-TTS-based therapist and eleven people who had received TTS support for long COVID ('clients'). TTSs emailed clients and staff members with the study advert, which was also shared on social media. Participants who expressed an interest were contacted by the researcher and then signed a consent form to participate. Table 1 shows the inclusion and exclusion criteria for each participant group.

To offer reassurance of anonymity and limit participation time, demographics beyond a person's status as therapist or client were not recorded. By virtue of having received therapy for long COVID via the NHS, client participants in this group are considered as meeting the standardized definition of long COVID (symptoms of at least 12 weeks; National Health Service England, 2021).

## RESULTS

Sixteen participants completed the study (five therapists, 11 clients). The mean time taken to complete the activity was 43 min (therapists) and 30 min (clients).

The analytic method prior described suggested a four-factor solution. Table 2 shows the eigenvalues of each factor, parallel (by chance) eigenvalue and the total variance explained within the model. Table 3 gives an overview of the correlation between factors, indicating that each factor was distinct.

### Four-factor solution

The final four-factor model included: Factor 1—Psychological Pathways to Recovery; Factor 2—Social Context and Agency; Factor 3—Physiological Recovery Goals; and Factor 4—Personal Meaning Making. Following is an overview of each factor. Q-statements (S) are presented alongside their score (e.g. 'is different for everyone' (S16, +1)). Quotes are provided alongside participant number (U).

TABLE 1 Inclusion and exclusion criteria for clients and therapists.

|                    | Client group   | Therapist group  |
|--------------------|--|--|
| Inclusion criteria | Personal experience of long COVID<br>Received therapy for long COVID via local TTS | Work for the sponsoring trust<br>Trained in long-term conditions<br>Delivered therapy for long COVID |
| Exclusion criteria | TTS therapy for long COVID is ongoing<br>Under 18                                  | Working for a different trust<br>Trained in therapies not including long-term conditions             |

TABLE 2 Initial PCA factor and parallel analyses.

| Component | Eigenvalue (actual) | Eigenvalue (parallel) | Variance explained (%) | Cumulative variance (%) |
|-----------|---------------------|-----------------------|------------------------|-------------------------|
| 1         | 5.415               | 1.585                 | 34                     | 34                      |
| 2         | 2.265               | 1.274                 | 14                     | 48                      |
| 3         | 1.439               | 1.081                 | 9                      | 57                      |
| 4         | 1.056               | .926                  | 7                      | 64                      |

TABLE 3 Correlations between factors.

|          | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|----------|----------|----------|----------|----------|
| Factor 1 | 1        | .2469    | .1804    | .2727    |
| Factor 2 | .2469    | 1        | .3028    | .2831    |
| Factor 3 | .1804    | .3028    | 1        | .2655    |
| Factor 4 | .2727    | .2831    | .2655    | 1        |

### Factor 1—Psychological pathways to recovery

Factor 1 accounted for 34% of the found variance, with six participants loading significantly onto this factor. All four TTS therapists and two clients loaded onto Factor 1.

Statements of recovery showed that it was ‘different for everyone’ (S16, +2), but most often involved ‘learning to pace yourself (boom and bust)’ (S11, +3), ‘accepting how you feel’ (S14, +2, S15, -3) and ‘doing things despite illness’ (S33, +2). Physical recovery was given less precedence in Factor 1, with ‘having less pain’ (S30, -1), ‘brain fog’ (S32, 0) and ‘fatigue’ (S31, 0) scoring lower than in other factors. ‘Taking medication for your physical health’ (S39, -1) was also ranked lower here, suggesting recovery was considered a matter of adapting to illness, rather than ‘curing’ it.

Participant one, a cognitive behavioural therapist working in an TTS, offered context to this position: ‘I have found that underlying core beliefs/rules (often linked to perfectionism) play a definite role in how well people adapt to living with long covid’ (U1). From a cognitive behavioural perspective, perfectionism involves unhelpful beliefs that one must achieve the highest standards, with these beliefs worsening distress when standards are unachievable (Hirsch & Hayward, 1998). Perfectionism in long COVID might therefore be understood as a distress arising from the physical inability to complete tasks to a level the client believes necessary.

Subsequently, psychological interventions aimed at overcoming these beliefs (a central tenet of cognitive behavioural approaches; Beck, 2011) were prioritized. Statements reflecting this position included beliefs that long COVID recovery ‘can be achieved through psychological therapy’ (S1, +2); involving ‘managing anxiety’ (S5, +1); ‘overcoming the fear of moving your body’ (S20, +1); ‘gradually increasing your movement’ (S50, +1); ‘managing unhelpful thoughts’ (S48, +1; S49, +1); and ‘addressing core beliefs’ (S19, +1).

Quotes from other therapists, such as ‘it’s multidisciplinary’ (U7) and ‘it depends on the relationship with the practitioner’ (U4) suggest professional intervention, and the nature of this holds some importance. A client loading onto this factor further suggested that ‘it would be better if doctors pay more attention to the patients with long covid’ (U11), suggesting that a lack of attention from health care professionals may serve as a barrier to recovery.

Despite this potential barrier, the belief that recovery is possible was rated the highest (S37, +3) and that it was not possible, the lowest (S36, -3). This suggests that participants loading onto Factor 1 experienced hopefulness for recovery, or at least held on to the possibility for recovery. For TTS therapists, all of whom loaded onto Factor 1, it may be that their clearly defined roles and training offer them the distinct pathways (i.e. psychological interventions) needed to experience hope.



Speculatively, the two client participants loading onto this factor may have similarly associated therapeutic approaches to their beliefs for recovery.

## Factor 2—Social context and agency

Three participants loaded onto Factor 2, accounting for 14% of the explained variance. Participants included two clients and one therapist, who notably worked within the broader long COVID pathway (i.e. not TTS).

Factor 2 shared some similarities to Factor 1, in that ‘learning to pace yourself (boom and bust)’ was scored highest (S11, +3) and ‘is different for everyone’ remained high (S16, +2). However, the emphasis here shifted from psychological interventions to the social experiences of having long COVID. Participants loading onto expressed that long COVID recovery ‘requires your friends and family to believe you’ (S21, +3) and ‘requires professionals to believe you’ (S22, +2), and that recovery from long COVID ‘is made harder due to society’s stigma towards it’ (S38, +1).

These statements suggest participants with long COVID have experienced invalidation or rejection by those around them. One participant explained, ‘I feel very let down by the medical profession as I was not believed and made to feel stupid’ (U12). Another stated ‘[long covid] takes away so much of what is important to someone, which often includes supportive relationships and expectations that a medical professional you consult will be able to help, or even believe your symptoms in the first place’ (U4). For these people, their social contexts proved as barriers to recovery, which undermined their self-esteem and identity.

With exception to having less brain fog (S32, +2), these participants broadly saw long COVID recovery as ‘one size does not fit all’ and that ‘the meaning of recovery and how to achieve it is different for everyone’ (U14). Where recovery goals/pathways were noted, they remained couched within these broader social contexts. As described by one client, ‘[I] manage my symptoms through yoga, breathing techniques, meditation, walking my dog and good nutrition. Every day is a struggle and although my family are incredibly supportive, none of them fully appreciate just how hard it is living with long covid’ (U12).

In contrast to Factor 1, Factor 2 participants believed that recovery was ‘not a psychological issue’ (S52, +1), and did not involve ‘addressing core beliefs’ (S19, -2) or ‘managing unhelpful thoughts’ which either existed before the illness (S49, -2) or subsequent to it (S48, -3). Again, qualitative responses suggest a social element to these, based on the stigma or invalidation people have experienced: ‘Long covid is not a psychological issue – however, it is extremely psychologically challenging and these two ideas are easily and frequently mixed up’ (U4).

As identified in previous literature, many people living with long COVID have been told ‘it’s just anxiety’ (Thompson et al., 2022, p. 327). This proved to be a barrier to psychological and physical health care and understanding, which from a hope theory perspective might reduce a sense of agency and, therefore, hopefulness (Bernardo, 2010, 2015). Factor 2 participants’ experiences reflected this, which might therefore explain their tentativeness around the idea that long COVID recovery ‘is possible’ (S37, 0) and ‘is not possible’ (S36, -1).

## Factor 3—Physiological recovery goals

Five clients loaded onto Factor 3, accounting for 9% of the explained variance.

This factor demonstrated the view that long COVID recovery was a physical task, which involved taking physical health medication (S39, +1) and having less fatigue (S31, +3), brain fog (S32, +2) and pain (S30, +2). In a clear rejection of Factor 1’s psychological perspective (S52, +1), participants here disagreed that recovery involved addressing core beliefs (S19, -2), managing anxiety (S5, -1) or overcoming the fear of moving one’s body (S20, -1). In contrast, participants here felt that increasing physical

movement could hamper, rather than help (S10, +2). As one client simply put, 'we need more groups talking about it. It's not just mental health issues' (U5).

Factor 3 participants also rejected the notion that recovery involved learning to live with pain (S45, -2) or pacing oneself (S11, 0), with accepting how one feels seen as giving up (S14, -1; S15, +2). There was also less attention given to social issues, such as feeling close to people again (S23, -1), feeling less lonely (S4, -1) or a need to feel believed by friends and family (S21, -1).

The overall sense from these responses is that long COVID recovery is a medical task, where the goal is symptom elimination using physiologically curative pathways. This suggestion is confirmed by one participant's written feedback: 'Covid infected our bodies. Long covid is the result of the original infection which remains in our bodies, not yet 100% removed. We did not cure Covid. The remaining infection impacts our lives, our mobility & abilities, and our breathing [...] Cure the route cause, kill the infection 100% and allow for us to recover with support and assistance if required' (U12).

Notably, despite the acknowledged lack of a cure, this group believed such a physical recovery was possible (S37, +3; S36, -3), suggesting a hope that such cures may be found in the future.

## Factor 4—Personal meaning making

Two clients loaded onto Factor 4, accounting for 7% of the explained variance.

This factor represented an effort to live a personally meaningful and valued life, represented by the statement 'means doing things that are important to you in spite of the illness' (S33, +3). For these participants, the disability caused by the illness led them to seek new meanings in life (S24, +2) and finding meaning in having the illness (S35, +2).

Despite the cognitive processes potentially involved in meaning making, psychological therapy was not viewed as the method of achieving this (S1, -2), suggesting more personal agentic processes were prioritized. Yoga, an intervention suggested as beneficial for long COVID (Venugopal & Venkateswaran, 2022), was strongly rejected here (S34, -3) while breathing techniques, a central tenet of yoga (Capella Santos et al., 2023), were strongly supported (S41, +3). No qualitative data remarked on this distinction; however, it may be an artefact of the statement wording ('long covid recovery is achieved through yoga' vs. 'long covid recovery involves learning breathing techniques'). Other qualitative feedback appears to support the notion that recovery cannot be 'achieved' but is a process of persistence: 'It is difficult. There are good days and bad days. Setbacks are very frustrating and lead me to low times. Deciding to get on and live life anyway is helpful but hard' (U6).

To support this idea, many highly ranked statements represented the actions and broader contexts conducive to living a meaningful life, such as 'involves taking medication for your mental health' (S46, +2), 'Involves living alongside pain' (S45, +1), 'includes building your self-esteem' (S25, +1), 'requires professionals to believe you' (S22, +2) and 'feeling less lonely' (S4, +1). Perhaps in reflection of their personal social circumstances, both participants rejected the idea that sharing self-management tips with others was helpful (S38, -1) and neither saw societal stigma as a priority (S38, -1).

While less pronounced than in factors one and three, participants here held some belief that recovery was possible (S37, +1; S36, -2). This suggests that, while objective and external ideas (e.g. 'cure') were viewed as unattainable, sense-making notions of recovery helped maintain a level of hopefulness for the future.

## DISCUSSION

### Summary of findings

A variety of recovery perspectives were found in this study. Most clients commonly emphasized a medical symptom reduction version of recovery, or reflected the perceived stigma and invalidation they had

experienced from society and health care professionals. For two people, meaning-making processes on a more personal basis were advocated. This demonstrated that clients' definitions of recovery were individual and subjective, which may contrast with the more model-driven (e.g. specific formulations and interventions for specific problems) format of low-intensity TTS approaches (National Collaborating Centre for Mental Health, 2020; Richard & White, 2011).

Indeed, while therapists acknowledged a holistic understanding of long COVID (e.g. 'it's multidisciplinary', U7), they most strongly contextualized recovery within a psychological framework. The exception to this perspective was participant U4, a non TTS-based practitioner, who prioritized a person's social context (Factor 3) over other factors. This might therefore implicate Factor 1 as representative of TTS-specific approaches (i.e. CBT-based therapy), rather than therapeutic approaches to recovery as a whole. Imperatively, participants loading on to Factor 1 did not *reject* the idea that long COVID is a physical illness with physical causes. However, broader social and historical contexts mean this position must be carefully explained and demonstrated, should hopefulness be promoted.

## Hope in recovery

Hopefulness is thought to be an active ingredient for psychological and physical well-being, as it promotes perseverance, positive emotions and resilience against feelings of futility and suicide (Bartholomew et al., 2019). Snyder (2002) proposed that hopefulness requires clearly defined goals, foreseeable pathways to achieving those goals, and the ability and motivation (agency) to pursue these pathways. Later theories suggested agency may be supported by also external sources (e.g. social and health care services), which may become more relevant if there is uncertainty surrounding a goal (Balen & Merluzzi, 2021; Bernardo, 2010). Statements intended to measure participants' hopefulness for recovery (S36 and S37) indicated that all factors disagreed with the idea that recovery was not possible. However, only the psychological (Factor 1) and physiological (Factor 3) factors were emphatic in their agreement that it *is* possible.

From a hope theory perspective, Factor 1, *Psychological Pathways to Recovery*, had clear goals of recovery (living alongside illness), pathways to achieving them (various psychological interventions) and well-defined agency roles (personal responsibility with less expectation for therapist expertise). For this group, most of whom were therapist practitioners, a shared and clear understanding of the direction and definition of recovery might explain the high score of hopefulness. This aligns with previous literature, which suggests that when therapeutic approaches provide a coherent framework, the enacting therapists really are capable of 'holding hope' (Bartholomew et al., 2019, p. 501).

In Factor 3, *Physiological Recovery Goals*, respondents similarly had clearly defined goals (physical recovery) achieved through medical pathways (i.e. finding cures), with a more shared idea of agency between individuals and professionals. Their belief that recovery is possible was also strong, suggesting they too were hopeful. It is particularly striking that such hopefulness for recovery existed, considering the lack of an available medical cure. Balen and Merluzzi's (2021) theory of uncertainty and agency might go some way to explaining this finding, as in the face of an uncertain goal, this group emphasized personal agency and control (e.g. avoiding increasing movement, taking medication). As such, their hope may arise from the recognition that there were things they *could* do while waiting for health care developments (ibid).

In contrast to the above factors, recovery goals and pathways were less well defined in Factor 2. Rather, the social context was emphasized, including a need to be believed by family, friends and professionals. In this respect, societal attitudes and dismissal were presented as barriers to agency, in that personal validation and access to health care was prevented. Participant U4's quote that '[long covid] takes away so much of what is important to someone, which often includes supportive relationships and expectations that a medical professional you consult will be able to help, or even believe your symptoms in the first place' speaks to this idea, reflecting broader historical and social contexts faced by people

with invisible illnesses. Alongside the general threat to recovery a lack of goal consensus poses (Tryon et al., 2018), the privileging of psychological explanations might carry a risk of repeating historically invalidating experiences (e.g. “it’s just anxiety”; Thompson et al., 2022, p. 327), thereby undermining personal agency and increasing hopelessness.

Factor 4, *Personal Meaning Making*, outlines how some participants navigated the reality that no physical cure yet exists. For this group, physical symptom amelioration remained a goal of recovery, yet the pathways represented an acceptance and living alongside the illness. Participants here were more tentative about the possibility for recovery and had resorted to personal meaning making (agency) as a means of seeking well-being. This factor supports Balen and Merluzzi’s (2021) theory that, where uncertainty is high and control is low, people with illnesses might more readily turn to meaning-making processes.

## Implications for clinical practice

Reflecting clients’ experiences of invalidation, it is imperative to recognize the validity and existence of long COVID, as to promote agency and hopefulness. Indeed, this position is emphasized within TTS training procedures and, therefore, will hopefully be acceptable to therapeutic professions (Taylor et al., 2023).

Moreover, examined through the lens of hope theory, these results suggest taking a cautious approach to offering psychological support. While therapists did indeed hold the hope for their clients, most participants here did not wholly share the same recovery goals. This diversity of recovery goals, despite all clients having received TTS support, underscores the personal and subjective nature of long COVID recovery, thereby recommending careful exploration of a clients’ expectations for intervention. In doing so, a goal consensus, and therefore positive therapeutic outcome, may be promoted (Tryon et al., 2018).

Where indicated, alternative therapeutic models might also be considered. For instance, in respect of Factor 4 *Personal Meaning Making*, acceptance and commitment therapy (Hayes, 2004 [ACT], 2019) can be used to support clients with living a valued life despite illness. Operating on the basis of ‘creative hopelessness’ (Hayes et al., 2012, p. 189), ACT promotes a willingness to accept difficult emotions in the service of one’s values (ibid). ACT has a growing evidence base for problems including health anxiety (Eilenberg et al., 2016), chronic muscle disease (Rose et al., 2022) and fibromyalgia (Simister et al., 2018), and might be useful where CBT has previously been unsuccessful (Clarke et al., 2014).

Similarly, narrative therapy (NT) can be helpful in supporting clients to make sense of their illness and change experiences (Brown & Scott, 2007), with promising results in areas such as strokes (Chow, 2018) and cancer (Sun et al., 2021). Through a process of putting their illness experience into a story format, NT can help clients understand changes to identity caused by illness, and make plans for their future selves based on this (Brown & Scott, 2007).

The results also indicate a therapeutic benefit to social support groups, reflecting previous literature which finds such groups may promote feelings of validation, inclusion and support seeking (Day, 2022). A clinical implication, then, is to advertise such groups widely (e.g. during sessions, on social media channels), as to promote agency and hopefulness. Moreover, involving these groups in service design, such as assessment and intervention models used, is recommended, as to ensure the broad range of perspectives are heard and goal consensus is promoted (Akerblom & Ness, 2022).

Finally, despite the evidence suggesting hope may be an active ingredient for recovery (Leite et al., 2019), hopefulness must not be considered as a prerequisite for receiving support. Concerns exist regarding an over-emphasis of client personal responsibility, and how this might leave the sometimes-harmful systems surrounding clients (e.g. societal stigma and health care inequality) unacknowledged (Cosgrove & Karter, 2018). It is hoped that the framing of therapists ‘holding hope’ for clients, alongside an emphasis on *external* sources of agency, has gone some way to demonstrating this position.

## Limitations

There are a number of limitations to the current study. First, the study design was atypical of Q-methodology, in that it used a leptokurtic sorting distribution and omitted participant demographics and interviews. These adaptations were made to reduce the time taken to complete the task, thereby limiting the possibility of inducing post-exertional malaise (Twomey et al., 2022). However, the relatively limited demographic and contextual detail meant finer grained analysis (e.g. if factors differed by age, sex, ethnicity or length of long COVID) could not be made.

Moreover, a failure to recruit clients for the initial focus groups may have limited the potential perspectives covered in the initial Q-set (cohort of statements). Similarly, the online-only nature of the study may have disproportionately excluded groups with less access to the internet, including older people (Choi & DiNitto, 2013), and people on lower incomes (Estacio et al., 2017). However, it is hoped that the reference to lived experience texts (Gahan, 2023) and training went some way to ensure these client perspectives were thoroughly represented.

## Future research

To overcome the limitations mentioned, it is recommended that demographics are measured in future studies, alongside conducting qualitative interviews which can offer more detailed and nuanced perspectives.

Additionally, it may be that the four-factor structure uncovered a more latent phenomenon described as ‘recovery’ in long COVID. To test this further, development of a long COVID recovery scale is suggested which, after confirmatory factor analysis, may be used as an assessment tool in long COVID pathways.

Finally, it is recommended that alternative social and psychological interventions are explored further. This might include randomized controlled trials comparing long COVID recovery outcomes for ACT, NT and treatment as usual. Additionally, exploring the role of social peer support groups is recommended, including comparing the potential benefits of in-person versus online modalities.

## CONCLUSION

The aims of this research were to explore therapist and client understandings of and hopefulness for long COVID recovery. Results suggested varying perspectives, with participants prioritizing either psychological, social, physical or meaning-making notions of recovery. Where therapists might be more inclined to offer psychological explanations, these are not always shared by clients and must therefore be approached cautiously as to avoid creating feelings of invalidation. Alternative therapeutic models are implicated and future research suggested.

## AUTHOR CONTRIBUTIONS

**William Burton-Fisher:** Data curation; software; formal analysis; writing – original draft; conceptualization; investigation; methodology. **Kim Gordon:** Supervision; writing – original draft; writing – review and editing; methodology.

## ACKNOWLEDGEMENTS

Special thanks to the participants in the study, and to those who offered advice and guidance around its design.

## CONFLICT OF INTEREST STATEMENT

The authors declare no known conflicts of interest.



## DATA AVAILABILITY STATEMENT

Research data are not shared.

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**How to cite this article:** Burton-Fisher, W., & Gordon, K. (2024). Holding the hope? Therapist and client perspectives on long COVID recovery: A Q-methodology. *British Journal of Health Psychology*, 00, 1–25. <https://doi.org/10.1111/bjhp.12724>

## APPENDIX A

### A.1 | Full Q Set Including Statement Number

1. Can be achieved through psychological therapy.
2. Is easier if you meet other people with long COVID.
3. Is helped by sharing self-management tips with other sufferers.
4. Includes feeling less lonely.
5. Involves learning to manage anxiety.
6. Is more likely if your therapist has had it.
7. Is less likely if your therapist has had it.
8. Include getting back into work.
9. Includes finding a new identity.
10. Is hampered by increasing physical movement.
11. Includes learning to pace yourself (boom and bust).
12. Is harder if you meet other people with Long COVID.
13. Happens naturally with time.
14. Involves learning to accept how you feel.
15. Cannot involve accepting how you feel, as this is like giving up.
16. Is different for everyone.
17. Includes getting back to your old self.
18. Involves addressing underlying trauma.
19. Involves addressing the core beliefs people have about themselves.
20. Involves overcoming the fear of moving your body.
21. Requires your friends and family to believe you.
22. Requires professionals to believe you.
23. Involves feeling close to people again.

24. Includes finding a new meaning in life.
25. Includes building your self esteem.
26. Can make you feel stronger than you were before the illness.
27. Involves becoming more independent.
28. Is negatively influenced by a therapist's personal experience of COVID-19.
29. Means having better mental health.
30. Means having less pain.
31. Means having less fatigue.
32. Means having less brain fog.
33. Means doing things that are important to you in spite of the illness.
34. Is achieved through doing yoga.
35. Means finding meaning in having the illness.
36. Is not possible.
37. Is possible.
38. Is made harder due to society's stigma towards it.
39. Involves taking medication for your physical health.
40. Is positively influenced by a therapist's personal experience of COVID-19.
41. Involves learning breathing techniques.
42. Involves overcoming guilt you have for contracting it.
43. Requires you to advocate for yourself.
44. Involves focussing on what you are grateful for.
45. Involves learning to live with pain.
46. Involves taking medication for your mental health.
47. Treatments are shaped by a therapist's own experiences of COVID-19.
48. Means managing unhelpful thoughts caused by the illness.
49. Means managing unhelpful thoughts which existed before the illness.
50. Requires you to gradually increase your movement.
51. Means taking responsibility for your own health.
52. Is not a psychological issue.
53. Practitioners know how to support people.
54. Requires practitioners to be experts.

## APPENDIX B

Factor 1 factor array distribution grid.

| -3 | -2 | -1 | 0  | +1 | +2 | +3 |
|----|----|----|----|----|----|----|
| 15 | 34 | 30 | 22 | 5  | 16 | 37 |
| 36 | 12 | 39 | 26 | 20 | 1  | 11 |
|    | 28 | 27 | 3  | 48 | 51 |    |
|    | 17 | 53 | 25 | 19 | 14 |    |
|    | 52 | 54 | 2  | 49 | 33 |    |
|    |    | 8  | 21 | 43 |    |    |
|    |    | 10 | 47 | 24 |    |    |
|    |    | 13 | 44 | 35 |    |    |
|    |    | 46 | 42 | 50 |    |    |
|    |    | 7  | 4  | 29 |    |    |
|    |    |    | 23 |    |    |    |
|    |    |    | 38 |    |    |    |
|    |    |    | 40 |    |    |    |

| -3 | -2 | -1 | 0  | +1 | +2 | +3 |
|----|----|----|----|----|----|----|
|    |    |    | 31 |    |    |    |
|    |    |    | 32 |    |    |    |
|    |    |    | 18 |    |    |    |
|    |    |    | 45 |    |    |    |
|    |    |    | 9  |    |    |    |
|    |    |    | 41 |    |    |    |
|    |    |    | 6  |    |    |    |

**Factor 1 Array** All statements start with “Long covid recovery...”.

Given below are the highest and lowest ranking statements in this factor array compared to all other factor arrays, as outlined in Watts and Stenner (2012).

### Highest ranked statements

|  |   |
|--|---|
| 37. Is possible  | 3 |
| 11. includes learning to pace yourself (boom and bust) | 3 |

### Positive statements ranked higher in Factor 2 array than in other factor arrays

|   |   |
|---|---|
| 16. Is different for everyone   | 2 |
| 1. Can be achieved through psychological therapy                              | 2 |
| 51. Means taking responsibility for your own health                           | 2 |
| 14. Involves learning to accept how you feel                                  | 2 |
| 5. Involves learning to manage anxiety  | 1 |
| 20. Involves overcoming the fear of moving your body                          | 1 |
| 48. Means managing unhelpful thoughts caused by the illness                   | 1 |
| 19. Involves addressing the core beliefs people have about themselves         | 1 |
| 49. Means managing unhelpful thoughts which existed before the illness        | 1 |
| 43. Requires you to advocate for yourself                                     | 1 |
| 50. Requires you to gradually increase your movement                          | 1 |
| 29. Means having better mental health   | 1 |
| 26. Can make you feel stronger than you were before the illness               | 0 |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19        | 0 |
| 44. Involves focussing on what you are grateful for                           | 0 |
| 42. Involves overcoming guilt you have for contracting it                     | 0 |
| 23. Involves feeling close to people again                                    | 0 |
| 40. Is positively influenced by a therapist's personal experience of COVID-19 | 0 |
| 9. Includes finding a new identity  | 0 |
| 6. Is more likely if your therapist has had it                                | 0 |

### Negative statements ranked lower in Factor 2 array than in other factor arrays

|   |   |
|---|---|
| 22. Requires professionals to believe you                             | 0 |
| 26. Can make you feel stronger than you were before the illness       | 0 |
| 2. Is easier if you meet other people with Long COVID                 | 0 |
| 47. Treatments are shaped by a therapist's own experience of COVID-19 | 0 |
| 4. Includes feeling less lonely                                       | 0 |
| 31. Means having less fatigue   | 0 |

|   |    |
|---|----|
| 32. Means having less brain fog   | 0  |
| 41. Involves learning breathing techniques                                    | 0  |
| 6. Is more likely if your therapist has had it                                | 0  |
| 30. Means having less pain  | -1 |
| 39. Involves taking medication for your physical health                       | -1 |
| 53. Practitioners know how to support people                                  | -1 |
| 54. Requires practitioners to be experts                                      | -1 |
| 8. Includes getting back into work  | -1 |
| 10. Is hampered by increasing physical movement                               | -1 |
| 13. Happens naturally with time   | -1 |
| 28. Is negatively influenced by a therapist's personal experience of COVID-19 | -2 |
| 17. Includes getting back to your old self                                    | -2 |
| 52. Is not a psychological issue  | -2 |
| <b>Lowest ranked statements</b>   |    |
| 15. Cannot involve accepting how you feel, as this is like giving up          | -3 |
| 36. Is not possible   | -3 |

## APPENDIX C

Factor 2 factor array distribution grid.

| -3 | -2 | -1 | 0  | +1 | +2 | +3 |
|----|----|----|----|----|----|----|
| 49 | 15 | 39 | 30 | 38 | 22 | 21 |
| 12 | 42 | 26 | 51 | 43 | 41 | 11 |
|    | 48 | 53 | 34 | 33 | 31 |    |
|    | 19 | 1  | 14 | 52 | 32 |    |
|    | 46 | 18 | 45 | 3  | 16 |    |
|    |    | 35 | 17 | 54 |    |    |
|    |    | 13 | 37 | 2  |    |    |
|    |    | 36 | 5  | 8  |    |    |
|    |    | 7  | 25 | 4  |    |    |
|    |    | 27 | 20 | 23 |    |    |
|    |    |    | 44 |    |    |    |
|    |    |    | 47 |    |    |    |
|    |    |    | 29 |    |    |    |
|    |    |    | 10 |    |    |    |
|    |    |    | 50 |    |    |    |
|    |    |    | 24 |    |    |    |
|    |    |    | 6  |    |    |    |
|    |    |    | 28 |    |    |    |
|    |    |    | 40 |    |    |    |
|    |    |    | 9  |    |    |    |

**Factor 2 Array** All statements start with “Long covid recovery...”

Given below are the highest and lowest ranking statements in this factor array compared to all other factor arrays, as outlined in Watts and Stenner (2012).



**Highest ranked statements**

|  |   |
|--|---|
| 21. Requires your friends and family to believe you    | 3 |
| 11. Includes learning to pace yourself (boom and bust) | 3 |

**Positive statements ranked higher in Factor 2 array than in other factor arrays**

|  |   |
|--|---|
| 22. Requires professionals to believe you                              | 2 |
| 16. Is different for everyone  | 2 |
| 32. Means having less brain fog  | 2 |
| 38. Is made harder due to society's stigma towards it                  | 1 |
| 3. Is helped by sharing self-management tips with other sufferers      | 1 |
| 43. Requires you to advocate for yourself                              | 1 |
| 52. Is not a psychological issue                                       | 1 |
| 54. Requires practitioners to be experts                               | 1 |
| 4. Includes feeling less lonely  | 1 |
| 2. Is easier if you meet other people with long COVID                  | 1 |
| 5. Involves learning to manage anxiety                                 | 1 |
| 8. Includes getting back into work                                     | 1 |
| 23. Involves feeling close to people again                             | 0 |
| 34. Is achieved through doing yoga                                     | 0 |
| 9. Includes finding a new identity                                     | 0 |
| 44. Involves focussing on what you are grateful for                    | 0 |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19 | 0 |
| 6. Is more likely if your therapist has had it                         | 0 |
| 26. Can make you feel stronger than you were before the illness        | 0 |
| 53. Practitioners know how to support people                           | 0 |

**Negative statements ranked lower in Factor 2 array than in other factor arrays**

|  |    |
|--|----|
| 51. Means taking responsibility for your own health                    | 0  |
| 37. Is possible  | 0  |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19 | 0  |
| 6. Is more likely if your therapist has had it                         | 0  |
| 29. Means having better mental health                                  | 0  |
| 26. Can make you feel stronger than you were before the illness        | 0  |
| 39. Involves taking medication for your physical health                | -1 |
| 18. Involves addressing underlying trauma                              | -1 |
| 13. Happens naturally with time  | -1 |
| 42. Involves overcoming guilt you have for contracting it              | -2 |
| 19. Involves addressing the core beliefs people have about themselves  | -2 |
| 27. Involves becoming more independent                                 | -2 |
| 46. Involves taking medication for your mental health                  | -2 |
| 49. Means managing unhelpful thoughts which existed before the illness | -2 |

**Lowest ranked statements**

|   |    |
|---|----|
| 48. Means managing unhelpful thoughts caused by the illness | -3 |
| 12. Is harder if you meet other people with Long COVID      | -3 |

## APPENDIX D

Factor 3 factor array distribution grid.

| -3 | -2 | -1 | 0  | +1 | +2 | +3 |
|----|----|----|----|----|----|----|
| 9  | 44 | 42 | 11 | 51 | 10 | 37 |
| 36 | 45 | 12 | 41 | 16 | 32 | 31 |
|    | 34 | 5  | 48 | 22 | 15 |    |
|    | 24 | 1  | 13 | 17 | 18 |    |
|    | 35 | 4  | 43 | 8  | 30 |    |
|    |    | 23 | 40 | 39 |    |    |
|    |    | 14 | 2  | 33 |    |    |
|    |    | 19 | 29 | 38 |    |    |
|    |    | 20 | 26 | 54 |    |    |
|    |    | 21 | 53 | 52 |    |    |
|    |    |    | 3  |    |    |    |
|    |    |    | 49 |    |    |    |
|    |    |    | 47 |    |    |    |
|    |    |    | 6  |    |    |    |
|    |    |    | 28 |    |    |    |
|    |    |    | 46 |    |    |    |
|    |    |    | 50 |    |    |    |
|    |    |    | 27 |    |    |    |
|    |    |    | 25 |    |    |    |
|    |    |    | 7  |    |    |    |

**Factor 3 Array** All statements start with “Long covid recovery...”

Given below are the highest and lowest ranking statements in this factor array compared to all other factor arrays, as outlined in Watts and Stenner (2012).

### Highest ranked statements

|                               |   |
|-------------------------------|---|
| 37. Is possible               | 3 |
| 31. Means having less fatigue | 3 |

### Positive statements ranked higher in Factor 3 array than in other factor arrays

|   |   |
|---|---|
| 32. Means having less brain fog   | 2 |
| 10. Is hampered by increasing physical movement                               | 2 |
| 18. Involves addressing underlying trauma                                     | 2 |
| 15. Cannot involve accepting how you feel, as this is like giving up          | 2 |
| 30. Means having less pain  | 1 |
| 8. Include getting back into work   | 1 |
| 39. Involves taking medication for your physical health                       | 1 |
| 38. Is made harder due to society's stigma towards it                         | 1 |
| 52. Is not a psychological issue  | 1 |
| 54. Requires practitioners to be experts                                      | 1 |
| 17. Includes getting back to your old self                                    | 0 |
| 13. Happens naturally with time   | 0 |
| 40. Is positively influenced by a therapist's personal experience of COVID-19 | 0 |
| 26. Can make you feel stronger than you were before the illness               | 0 |

|   |   |
|---|---|
| 53. Practitioners know how to support people                                  | 0 |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19        | 0 |
| 28. Is negatively influenced by a therapist's personal experience of COVID-19 | 0 |
| 27. Involves becoming more independent  | 0 |
| 6. Is more likely if your therapist has had it                                | 0 |
| 7. Is less likely if your therapist has had it                                | 0 |

### Negative Statements ranked lower in Factor 3 array than in other factor arrays

|  |    |
|--|----|
| 41. Involves learning breathing techniques                             | 0  |
| 2. Is easier if you meet other people with long COVID                  | 0  |
| 29. Means having better mental health                                  | 0  |
| 26. Can make you feel stronger than you were before the illness        | 0  |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19 | 0  |
| 50. Requires you to gradually increase your movement                   | 0  |
| 6. Is more likely if your therapist has had it                         | 0  |
| 25. Includes building your self esteem                                 | -1 |
| 14. Involves learning to accept how you feel                           | -1 |
| 21. Requires your friends and family to believe you                    | -1 |
| 23. Involves feeling close to people again                             | -1 |
| 5. Involves learning to manage anxiety                                 | -1 |
| 4. Includes feeling less lonely  | -1 |
| 20. Involves overcoming the fear of moving your body                   | -2 |
| 44. Involves focussing on what you are grateful for                    | -2 |
| 19. Involves addressing the core beliefs people have about themselves  | -2 |
| 45. Involves learning to live with pain                                | -2 |
| 35. Means finding meaning in having the illness                        | -2 |

### Lowest ranked statements

|                                    |    |
|------------------------------------|----|
| 9. Includes finding a new identity | -3 |
| 36. Is not possible                | -3 |

## APPENDIX E

Factor 4 factor array distribution grid.

| -3 | -2 | -1 | 0  | +1 | +2 | +3 |
|----|----|----|----|----|----|----|
| 7  | 3  | 8  | 16 | 32 | 31 | 33 |
| 34 | 1  | 11 | 27 | 10 | 24 | 41 |
|    | 36 | 42 | 14 | 37 | 35 |    |
|    | 40 | 18 | 19 | 51 | 46 |    |
|    | 15 | 23 | 48 | 25 | 22 |    |
|    |    | 38 | 2  | 30 |    |    |
|    |    | 39 | 54 | 45 |    |    |
|    |    | 43 | 9  | 29 |    |    |
|    |    | 49 | 44 | 4  |    |    |
|    |    | 20 | 50 | 5  |    |    |
|    |    |    | 53 |    |    |    |

| -3 | -2 | -1 | 0  | +1 | +2 | +3 |
|----|----|----|----|----|----|----|
|    |    |    | 6  |    |    |    |
|    |    |    | 13 |    |    |    |
|    |    |    | 17 |    |    |    |
|    |    |    | 21 |    |    |    |
|    |    |    | 52 |    |    |    |
|    |    |    | 47 |    |    |    |
|    |    |    | 12 |    |    |    |
|    |    |    | 28 |    |    |    |
|    |    |    | 26 |    |    |    |

#### Factor 4 Array All statements start with “Long covid recovery...”

Given below are the highest and lowest ranking statements in this factor array compared to all other factor arrays, as outlined in Watts and Stenner (2012).

#### Highest ranked statements

|  |   |
|--|---|
| 33. Means doing things that are important to you in spite of the illness | 3 |
| 41. Involves learning breathing techniques                               | 3 |

#### Positive statements ranked higher in Factor 4 array than in other factor arrays

|   |   |
|---|---|
| 24. Includes finding a new meaning in life                                    | 2 |
| 35. Means finding meaning in having the illness                               | 2 |
| 46. Involves taking medication for your mental health                         | 2 |
| 22. Requires professionals to believe you                                     | 2 |
| 25. Includes building your self esteem  | 1 |
| 29. Means having better mental health   | 1 |
| 45. Involves learning to live with pain                                       | 1 |
| 4. Includes feeling less lonely   | 1 |
| 5. Involves learning to manage anxiety  | 1 |
| 27. Involves becoming more independent  | 0 |
| 9. Includes finding a new identity  | 0 |
| 44. Involves focussing on what you are grateful for                           | 0 |
| 53. Practitioners know how to support people                                  | 0 |
| 6. Is more likely if your therapist has had it                                | 0 |
| 13. Happens naturally with time   | 0 |
| 12. Is harder if you meet other people with Long COVID                        | 0 |
| 28. Is negatively influenced by a therapist's personal experience of COVID-19 | 0 |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19        | 0 |
| 26. Can make you feel stronger than you were before the illness               | 0 |

#### Negative statements ranked lower in Factor 4 array than in other factor arrays

|  |    |
|--|----|
| 16. Is different for everyone  | 0  |
| 2. Is easier if you meet other people with long COVID                  | 0  |
| 50. Requires you to gradually increase your movement                   | 0  |
| 6. Is more likely if your therapist has had it                         | 0  |
| 47. Treatments are shaped by a therapist's own experiences of COVID-19 | 0  |
| 26. Can make you feel stronger than you were before the illness        | -1 |

---

|   |    |
|---|----|
| 8. Includes getting back into work                                | -1 |
| 11. Includes learning to pace yourself (boom and bust)            | -1 |
| 18. Involves addressing underlying trauma                         | -1 |
| 23. Involves feeling close to people again                        | -1 |
| 38. Is made harder due to society's stigma towards it             | -1 |
| 39. Involves taking medication for your physical health           | -1 |
| 43. Requires you to advocate for yourself                         | -1 |
| 20. Involves overcoming the fear of moving your body              | -2 |
| 3. Is helped by sharing self-management tips with other sufferers | -2 |
| 1. Can be achieved through psychological therapy                  | -2 |

---

**Lowest ranked statements**

|  |    |
|--|----|
| 7. Is less likely if your therapist has had it | -3 |
| 34. Is achieved through doing yoga             | -3 |

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