



Deposited via The University of York.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/230349/>

Version: Published Version

Article:

McCormick, Sheree, Cukic, Iva, Alexanders, Jenny et al. (2025) Exercise professionals in extended scope of practice roles: a qualitative exploration of a new model of rehabilitation. *BMJ Public Health*. e002322. ISSN: 2753-4294

<https://doi.org/10.1136/bmjph-2024-002322>

Reuse



This article is distributed under the terms of the Creative Commons Attribution-NonCommercial (CC BY-NC) licence. This licence allows you to remix, tweak, and build upon this work non-commercially, and any new works must also acknowledge the authors and be non-commercial. You don't have to license any derivative works on the same terms. More information and the full terms of the licence here:

<https://creativecommons.org/licenses/>

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

Exercise professionals in extended scope of practice roles: a qualitative exploration of a new model of rehabilitation

Sheree McCormick ¹, Iva Cukic,¹ Jenny Alexanders,² Gillian Yeowell,¹ Francis Fatoye,¹ Benjamin M Kelly,^{1,2} Victoria Fitzgerald,² Tim Cable,³ Patrick Doherty,⁴ Davina Deniszczyc,² Panayiotis Michael ^{1,2}

To cite: McCormick S, Cukic I, Alexanders J, *et al.* Exercise professionals in extended scope of practice roles: a qualitative exploration of a new model of rehabilitation. *BMJ Public Health* 2025;**3**:e002322. doi:10.1136/bmjph-2024-002322

► Additional supplemental material is published online only. To view, please visit the journal online (<https://doi.org/10.1136/bmjph-2024-002322>).

Received 10 November 2024
Accepted 21 July 2025



© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. Published by BMJ Group.

¹Faculty of Health & Education, Manchester Metropolitan University, Manchester, UK

²Nuffield Health, Epsom, UK

³Institute of Sport, Manchester Metropolitan University, Manchester, UK

⁴Health Sciences, University of York, York, UK

Correspondence to

Panayiotis Michael;
panayiotis.michael@stu.mmu.ac.uk

ABSTRACT

Background There is a need to provide greater patient choice through accessible and sustainable rehabilitation for people with long-term conditions. New models of rehabilitation employing non-clinical healthcare workers in extended service practice roles are developing. Little research has investigated the experiences of non-clinical health workers, such as exercise professionals, in extended scope of practice roles. This research explored the experiences of stakeholders and beneficiaries (exercise professionals in extended scope of practice roles, allied health professionals and people with Long COVID) participating in a new model of rehabilitation delivered online from selected Fitness and Well-being Centres of a UK charity.

Methods A qualitative design using in-depth semistructured interviews was undertaken to explore the experiences of triage physiotherapists, specialist trained exercise professionals, referred to as rehabilitation specialists and people with Long COVID participating in the new model of rehabilitation involving exercise, education and well-being support.

Results Five triage physiotherapists, two rehabilitation specialists and three people with Long COVID were recruited. Facilitators, barriers and opportunities were identified as key themes. Facilitators related to 'it isn't just exercise', 'condition specific needs are met' and 'dedicated team who make a difference'. Barriers related to 'supporting staff training needs' and 'optimising resources/mode of delivery for clinical population'. Opportunities related to the provision of a 'stepped-down approach at programme end', 'building and developing the team', and 'identifying and evaluating emerging trends through process evaluations'.

Conclusions This novel model of rehabilitation provided positive experiences for people living with Long COVID. Some aspects of the role provided job satisfaction for the delivery team but mentorship, support and additional training in psychological skills and mental health are important when considering sustainability and expansion of the programme. Scaling out to other clinical populations and areas where access to conventional services is sparse could provide a viable public health strategy to improve access to services, thereby reducing mainstream healthcare costs.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ A dearth of qualitative studies has explored the experiences of exercise professionals working in extended scope of practice (ESP) roles to deliver exercise and well-being programmes (EWPs) in a non-clinical setting with clinical oversight.

WHAT THIS STUDY ADDS

⇒ This study highlighted important factors that influence the delivery, receipt and engagement with EWPs from the perspective of those accessing and delivering the programme.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Rehabilitation provided by exercise professionals working in ESP roles with clinical oversight is acceptable to beneficiaries. Additional support and training for those delivering the EWP is needed to ensure the sustainability and consistent implementation of this promising approach.

INTRODUCTION

Approximately 26 million individuals in England live with a long-term condition (LTC), with 10 million experiencing 2 or more.¹ Due to the chronic and often incurable nature of LTCs, ongoing management and expenditure is required, with the total long-term health and social care expenditure in the UK reaching £68.2 billion in 2022.^{2,3} The prevalence of LTCs has increased following the COVID-19 pandemic, with the UK National Statistics Survey for Infectious Diseases reporting that over 1.9 million people are living with symptoms of (LC).⁴ The impact of the pandemic has extended waiting lists, placing greater demands for timely rehabilitation.⁵⁻⁷ Accessible and sustainable models of rehabilitation could support the

increasing number of people living with LTCs and reduce their burden on health systems.^{7,8}

Exercise therapy is frequently incorporated into rehabilitation programmes by a range of healthcare professionals including physiotherapists, occupational therapists, mental health practitioners and speech and language therapists.^{9–11} The reported benefits of exercise rehabilitation include reductions in morbidity and mortality, as well as improved physical function, mental health and quality of life.^{12–14} However, rehabilitation programmes remain underdeveloped and underused, with barriers existing at the beneficiary and organisational level that limit access and long-term maintenance.¹⁵ For beneficiaries, barriers often include personal cost, location and condition-specific symptoms such as fatigue (physical) and fear (psychological).¹⁶ For physiotherapists, funding and service constraints, including time and clinician availability, can limit the number of sessions provided to patients.¹⁷ These physical, psychological and organisational barriers can impact on outcomes, particularly when people with LTCs require support with behaviour change.

Cost-effective models that overcome barriers and promote person-centred rehabilitation are essential to supporting people living with LTCs.¹⁸ A promising approach to meeting the increasing demand for rehabilitation is through the introduction of extended scope of practice (ESP) roles for exercise professionals, defined as “*the acquisition of additional expertise sufficient to provide services or perform tasks that are outside the usual scope of practice of the profession*”.¹⁹ An early example of this model piloted in Australia involved an exercise-based intervention for knee osteoarthritis delivered by physical therapists and supported by specialist trained health coaches that is, Allied Health Professional (AHP) support health workers employed in an ESP role.²⁰ The programme was perceived as beneficial by stakeholders and beneficiaries, with beneficiaries specifically recognising and valuing the demonstration of ‘genuine interest’ by health coaches. More recently, in an evaluation of National Health Service (NHS) service delivery in the UK, Singh *et al* report that AHP support workers with exercise qualifications can make a valued contribution to clinical exercise services and support the significant expansion of the AHP workforce needed to deliver the long-term NHS plan.²¹ These findings suggest AHP support workers can offer a cost-effective way of supporting personalised and effective rehabilitation.

An innovative rehabilitation programme aimed at relieving the burden on the NHS during the COVID-19 pandemic was piloted in the UK from February 2021 to March 2022.²² The quantitative evaluation of the exercise and well-being programme (EWP) demonstrated clinically significant improvements in dyspnoea, functional capacity, well-being and health-related quality of life.²² The programme was novel in that it was delivered from a non-clinical setting with clinical oversight. The programme was delivered by specialist-trained exercise

professionals working in ESP roles, referred to as rehabilitation specialists (RSs) and triage physiotherapists (TPs). The RSs were employed by Nuffield Health and held Chartered Institute for the Management of Sport and Physical Activity (CIMSPA) accredited personal trainer qualifications. All RSs underwent comprehensive training to support the rehabilitation of individuals with LC. This training was delivered in-service by Nuffield Health’s multidisciplinary learning and development team, which included physiologists, fitness professionals and physiotherapists. A blended learning model comprising both e-learning modules and face-to-face instructional sessions was implemented. To maintain clinical competence and ensure ongoing professional development, RSs participated in monthly clinical supervision meetings with the multidisciplinary team, providing a forum for case discussion and the exchange of rehabilitation practices. The RS delivered a 12-week EWP to support people with LC. The TPs screened people with LC remotely to ensure their eligibility, providing written recommendations for exercise prescription and goal setting to the RS. Subsequently, people with LC engaged in 3×45 min exercise sessions per week, including a synchronous (live, online) group session, an asynchronous (prerecorded, on-demand) session and a self-directed session. The programme was conducted remotely at home for the first 6 weeks and subsequently in selected Fitness and Well-being Centres of a UK charity in the latter 6 weeks. To improve reach, an ‘online only’ version of the EWP was subsequently rolled out, the focus of this study. In this ‘online only’ version, the programme was delivered entirely online throughout the 12-week period and these sessions were based on a one-to-one with the RS. The RS provided support with exercise selection, symptom management, goal setting and emotional well-being. To ensure the safety of online exercise prescription, participants were initially triaged by physiotherapists to screen for any medical, psychological or cognitive contraindications to unsupervised physical activity. Weekly sessions with the RS provided structured opportunities for ongoing evaluation and adjustment of individual exercise programmes, as well as an opportunity for participants to raise questions and seek clarification.

The lack of research exploring the experiences of stakeholders and beneficiaries participating in integrated models of rehabilitation support involving ESP roles provided the motivation for this study. The aim of the study was, therefore, to understand the complexities and nuances of the EWP delivered online to people with LC by TPs and RSs, to inform the development of future, remote models of rehabilitation support.

MATERIALS AND METHODS

Study design

This study employed a cross-sectional design. The theoretical perspective adopted was interpretivism, which is appropriate when a rich understanding of the personal

experience is required.²³ The study is reported in accordance with the Consolidated criteria for Reporting Qualitative research (online supplemental additional file 1).²⁴

Study population

Recruitment occurred through December 2022–February 2023. Participants (people with LC, TPs and RSs) were eligible if they had attended or delivered the EWP. In addition, RSs were required to have delivered at least one full programme of the EWP, and TPs were required to have triaged at least ten people with LC. The initial plan for determining the sample size was based on data saturation, where recruitment would continue until the data sufficiently addressed the research question and no new themes were identified. However, the final sample size was also constrained by the willingness of participants to engage, and recruitment concluded when no additional participants were available.

Data collection

All in-depth semistructured interviews were conducted online by a female member of the research team (SM) experienced in qualitative research. In-depth interviews are structurally free from group pressure and have the ability to expose important attitudinal data.²⁵ Interviews lasted between 45 and 75 min. Participants, unknown to the interviewer, completed a questionnaire of demographic information at the start of the interview. Three separate interview topic guides drawing on the work of others^{26 27} were modified for this study (online supplemental additional file 2). The interview schedules were used to prompt open discussion and, where relevant, new and unanticipated issues were probed further.

Data analysis

The interviews were digitally video-recorded and transcribed verbatim by the lead researcher (SM). An inductive thematic analysis was used to transform the data and identify codes, subthemes and key themes using NVivo V.14.²⁸ The thematic analysis was conducted by SM and PM; transcripts were read several times for familiarisation and subsequently coded line by line, relevant to the aim. The dataset was explored to identify subthemes and conceptually similar subthemes were grouped together to form key themes. All themes were reviewed and agreed on an iterative basis by SM and PM. An independent researcher, JA, assisted with member checking and triangulated the data to ensure the themes were sufficiently clear and unbiased by the researchers' own thoughts and knowledge, thus enhancing credibility²⁹ and ensuring confirmability of the data analysis.³⁰ Participants were reminded at the start of their interview that all information would remain confidential, and quotations would be anonymised. Finally, respondent validation was conducted by sharing the preliminary analysis with the TPs, RSs and people with LC to ensure the interpretive claims made by the researchers resonated with their personal experiences.³¹

Table 1 Participant demographics

	Age	Sex	Ethnicity
Triage physiotherapists			
P1	35–44	Female	White/English
P4	45–54	Female	White/English
P7	25–34	Female	White/English
P8	35–44	Female	White/English
P9	25–34	Female	White/English
Rehabilitation specialists			
P5	35–44	Male	White/English
P6	25–34	Female	White/Scottish
People living with Long COVID			
P2	55–64	Male	White/English
P3	55–64	Female	Asian/Pakistani
P10	55–64	Male	White/English

RESULTS

All invited TPs consented and took part in the study (100% response rate). Of the five invited RSs, three participated, resulting in a 60% response rate. Among the 28 invited participants with LC, 3 consented and took part, corresponding to an 11% response rate (table 1). All TPs worked from home, RSs either worked from home or from the charity's Fitness and Well-being Centres based in England.

Data saturation was achieved in the interviews with the TPs. There was commonality in the responses made by RSs and by people with LC. Several subthemes were identified under the three key themes of (1) 'Facilitators', (2) 'Challenges and barriers' and (3) 'Opportunities'. These overarching key themes related to factors influencing participation in the programme, implementation of the programme and opportunities to enhance the programme's effectiveness (figure 1). Where relevant, the perspectives of TPs, RSs and people with LC have been presented to provide a triangulated understanding of each issue. Pseudonyms have been used to maintain participants' anonymity.

Facilitators

'It isn't just exercise'

People with LC discussed the importance and positive impact of social support from peers and staff delivering the programme (TPs and RSs). Group cohesion allowed people with LC to overcome feelings of isolation and facilitated feelings of acceptance.

Because one of the big problems with Long COVID is quite often you feel as though you're on your own. And there's nobody else who's suffering in the way that you are. So that helped enormously to be with a group, you know, even remotely of people who are in a similar situation. [Person with LC, P10]

And, you know, some of their GP's palm them off and some of their friends and family don't believe them or just say power

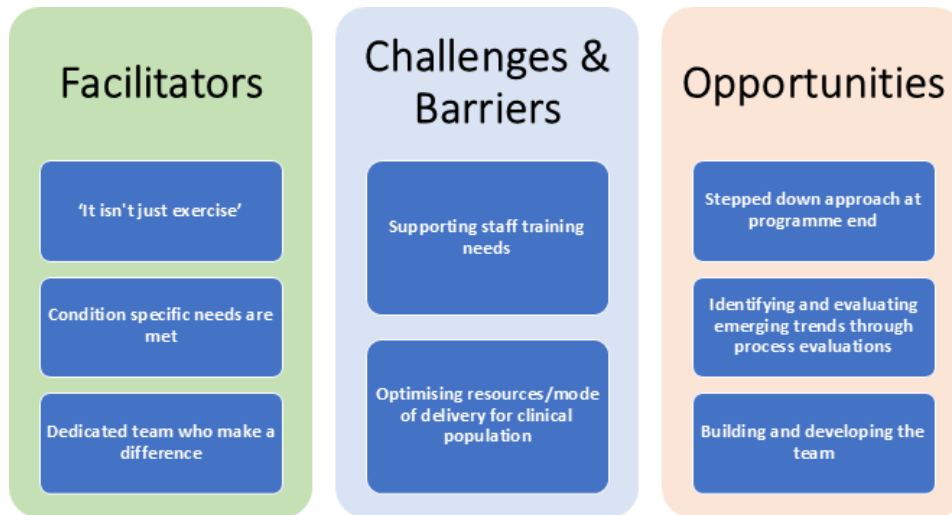


Figure 1 Key themes and subthemes identified.

through. You'll be fine. So just some understanding and just someone to say you're doing the right thing. [RS, P6]

Condition-specific needs are met

A positive physical activity experience leading to 'exercise self-efficacy' was identified as a key facilitator by all three people with LC.

My highest priority thing since I've had it [Long COVID] is to do exercise. What do I do? I go out for a walk with the dog and 10 weeks ago it was sort of 15-20 minutes kind of thing and now this last week I've done two or three over an hour kind of thing. [Person with LC, P10]

The programme offered participants the opportunity to learn how to pace, which was an important skill to acquire in the management of LC.

When I tried to do exercise on my own, I often went too far and did too much. And then the symptoms would return. It's been not very nice, but with the [provider's] classes I that didn't happen. I would feel tired at the end of it, sometimes quite tired, but I didn't have a return of breathlessness and feeling weak and my legs locking up with lactic acid. [Person with LC, P2]

The role of the TPs and RSs was further highlighted as a facilitator to participation by people with LC, as they commented on the expert knowledge and advice provided during this time.

Also the knowledge I was quite surprised about the knowledge of the person that did the assessment.... And like I said, [Name] the instructor, she's got a lot more knowledge than you'd imagine for your typical gym instructor kind of thing. [Person with LC, P10]

Additionally, the online delivery of the programme enhanced the accessibility of the programme and catered for the needs of people with LC suffering from fatigue.

It was fatigue and the muscle aches and the body aches, basically not being able to do the things I used to before. I can't even move fast enough. I'm disorganised. It's like

the world is in chaos, but my life is not what it used to be. [Person with LC, P3]

I think the accessibility of the session makes it easier [...] if they [people with LC] are having a lower day they can just yeah, not have to get the bus to go to the gym to walk up the stairs and you know they can just turn the computer on that so it's very accessible for them. [RS, P5]

Dedicated team who make a difference

Having the time to listen and the opportunity to exercise a duty of care at a time of unprecedented social disruption contributed to job satisfaction for TPs and RSs.

I'd say I get off every call and I feel as if I've made a difference, even if I've just given them a website to look at or I've just listened to them moan. I come after off that call and I feel I've made a difference to their day and a lot of them are so grateful that they've just been able to offload. [TP, P8]

The importance of a dedicated team was commented on by both TPs and RSs, who spoke positively about the supportive network in which they operated.

They are always there, you know, we do have that and e-mail address that we can e-mail for any sort of advice. But you know, if we do have any referrals, you know whether they be like clinical referrals etcetera, they are, they are always there and you will always get a response back very, very quickly. [RS, P5]

TPs indicated a clear understanding of how important their role was in ensuring that people with LC were medically fit to enter the programme and thus protect the RSs from working beyond their ESP.

And when we screen them, we make sure that to the best of our ability that they're medically fit to undertake exercise. So there shouldn't be anyone going into the programme that has anything that couldn't be that, you know, that if anything came up, it shouldn't be anything that couldn't

be managed by like the first aid skills that I know the rehab specialists will have. [TP, P7]

Challenges and barriers

Supporting staff training needs

The perceived importance of using goal setting varied among the team which may highlight a potential training need. Some TPs emphasised that they make an active effort to set Specific, Measurable, Achievable, Realistic and Timely (SMART) goals with participants, while others do not feel it was a priority.

[...] I think because I'm there to make sure that people are medically safe to participate in the programme. The goal setting, although I do it, is probably actually my lowest priority on the triage[...] [TP, P7]

[...] I think in the journal it's one or two pages of kind of goal setting and then that's kind of it and I suppose it's very easy to just kind of be out of sight out of mind. [RS, P6]

Additionally, many TPs felt that training in relation to managing the symptoms of people with LC, in particular poor mental health and suicidal thoughts, could be improved.

And we're not qualified mental health professionals. So people unload all this information and then I don't feel qualified to deal with it. [TP, P7]

I wouldn't offer too much advice as to kinda what they should do or how they can deal with it. I can always tell them you know there's self-help websites and that sort of stuff and it's going to have a look at and open up conversations with friends and family. But past that, yeah, I wouldn't offer advice. [RS, P6]

Building on this, the poor emotional well-being of people with LC is leading to frequent emotive and difficult conversations for TPs and RSs. Some TPs reported symptoms of burnout, further highlighting the complexity, skills and support required within their role, in particular when dealing with new and evolving conditions.

Think that that's the main thing. I mean, some days I definitely do still burnout. I definitely did this week and you know there are there are some weeks where I just am so fried. My partner asked me like, why do you do this? Why don't you just stop? [TP, P7].

In the same sense with COVID is they're not heard, they're not listened to. They get brushed off quite easily. You're the first person really that's listening to them and willing to help, and they just whoompf with every emotion, every feeling. [TP, P8]

Optimising resources/mode of delivery for clinical population

People with LC acknowledged goal setting was part of the EWP, however, one person with LC reported that the term 'goal setting' had a stressful connotation.

You just maybe add on what's one thing you think, what one task maybe you could do for next week that would be right rather than talking about goals. Like that just sounds like a big thing. [Person with LC, P3]

Similarly, RSs commented on the paradoxical nature of goal setting as it can both motivate participants but also lead to feelings of frustration when those goals are not attained.

Yeah, um goals are an interesting one because some of them, a lot of people have been burned by the goals that they set before, you know, they—and that's just historically as well, like New Year's comes around. I'm gonna lose weight this year. You don't lose the weight. You feel like crap. [RS, P6]

In addition to this, the use of available resources by people with LC was dependent on factors such as fatigue, existing level of knowledge and personal preference. This included both the activity booklets and additional online resources such as the on-demand recorded sessions.

It depended on how I felt, because some of the exercises I found so hard after a live session. I'd be out for a couple of days. So what I would do with the build your own, I'd do the ones I could easily do. [Person with LC, P3]

The first week I may have clicked on the webinar things but like I said, I felt as if I knew quite a bit beforehand because about being in the Long COVID clinic support groups. So actually, it just reinforced perhaps most of the knowledge I already had, so I haven't been back to it since. [Person with LC, P10]

Opportunities

Stepped down approach at programme end

People with LC described a missing link between programme completion and the independent exercise phase, which made it difficult to sustain the positive changes they had achieved.

When the course ended—was all suddenly stopped. It might have been nice actually to maybe have a little meeting again just for a couple of months just to touch base with the tutor and the whole group, just to see how we're getting along. When you're kind of left your own devices sometimes things can change. [Person with LC, P3]

Identifying and evaluating emerging trends through process evaluations

Informal WhatsApp group chats were created by some, but not all, cohorts. The group chats fostered a sense of solidarity and provided social support, external to the core programme.

[...] and having the WhatsApp group, the online support groups still going. Just to know that the other people are still going through the same thing and talking. [Person with LC, P3]

That [a WhatsApp group] was not really an option, so that's probably an area where they could improve it. Because I think that's quite good having a sort of a support group of your own individuals. [Person with LC, P10]

Building and developing the team

The unique skillsets and experiences of the RSs and TPs provided the opportunity for the delivery team to engage in knowledge exchange in scheduled team meetings. This included learning and development opportunities such as upskilling of RSs, understanding of programme structure for TPs and feedback on patient outcomes to inform clinical decision-making practices.

I remember I used it once for one of my cohorts, had a particular case, and I just don't really know what to do with him. I was just a bit stuck. So yeah. And we discussed that. So yeah, that's been handy. [RS, P6]

Some TPs felt that RS engagement with the meetings was low, possibly due to an element of self-doubt.

The only thing I can think of is that they feel, and of course it sounds awful, but maybe they're not as qualified as us, so it might be a bit intimidating to say how they're feeling. I think a lot of the rehab specialists are younger as well. I think they tend to be more of a younger demographic and maybe that's an input as well when they see some of the faces and obviously looking middle-aged [TP, P1]

DISCUSSION

Few qualitative studies have explored the experiences of exercise professionals working in ESP roles to deliver EWPs in a non-clinical setting with clinical oversight. This study explored the experiences of stakeholders and beneficiaries participating in a remote online rehabilitation programme to better understand the complexities and nuances that emerged, and to inform the development of future models of rehabilitation support. The facilitators, barriers and opportunities identified through the qualitative analysis are discussed below.

Facilitators

The holistic approach of the EWP, including beneficiaries 'being listened to' and experiencing 'social connectedness', emerged as prominent facilitators to participation and supports previous research.²⁰ The notion that social support, both practical and emotional, is important in community physical activity groups is supported by Hartley and Yeowell.³² The authors reported that social spaces which help convey a sense of belonging are the linchpin to fostering long term adherence to physical activity programmes. The EWP was delivered virtually (online) from the Fitness and Well-being centres of a UK charity. As such, the EWP was uniquely positioned to provide credible continuity of care including signposting to its own and external services and resources. The additional social support provided by TPs and RSs, not available in a traditional clinical setting, came at a time when people with LC felt shunned by medical doctors. This was valued by people with LC and supports other research that has identified the importance of programme deliverers having additional time to demonstrate 'genuine interest' in their patient's care.²⁰ Indeed, the value of

'validating the patient's experience' was recently recommended as a key therapeutic activity to help manage new levels of functioning in people with LC.³³ Evaluating and optimising the significance of social spaces created physically and virtually by the Fitness and Well-being centres is a key area for future consideration.

Learning how to pace and having the confidence to engage in activities without a flare-up of symptoms was an important element of the EWP for people with LC. From a theoretical perspective, the capability, opportunity, motivation and behaviour (COM-B) model identifies psychological capability and reflective motivation, including one's stamina and beliefs about their capabilities, as key domains that support behaviour.³⁴ Further, social cognitive theory posits that self-efficacy, confidence in one's ability to perform a behaviour, is strongly related to one's ability to actually perform that behaviour.³⁵ The EWP offered multiple opportunities to enhance exercise self-efficacy, such as gaining experience, verbal persuasion and observing others. Given the importance of self-efficacy in this and other studies,^{36 37} assessing self-efficacy as a causal factor in behaviour change should be considered in future programmes.

Dedicating time to actively listen and being acknowledged as a listener during a time of severe social disruption, that is, the COVID-19 pandemic, contributed to the job satisfaction of both TPs and RSs. Supporting this theme, several reviews have found that practitioners in ESP roles experience increased job satisfaction as a result of feeling empowered and being able to address local health needs.³⁸ Triangulating this evidence, people with LC acknowledged and valued the knowledge, skill and compassion of RSs, noting that these attributes set RSs apart from more conventional exercise professionals. Importantly, the expertise of the practitioners (TPs and RSs) more than satisfied beneficiaries' expectations about condition management, which likely helped make the programme highly acceptable by enhancing trust in the service being provided.³⁹ These findings suggest there exists an opportunity to map out the key skills and competencies of the unique RS role to facilitate the personal development of exercise professionals working in ESP roles within other rehabilitation programmes, offering a sustainable and cost-effective method of meeting the demands of an increasing healthcare burden on the NHS.

Challenges and barriers

Providing beneficiaries with information resources that target their particular symptoms, referred to as 'information prescription', can activate them to become more involved in their care and improve their health.^{40 41} The mode in which the information resources are delivered, however, can influence^{42 43} the effectiveness of the intervention component.⁴⁴ In the EWP, people with LC did not engage with the digital information available on the online hub even when directed to do so by the RS, which was not routine. National Institute for Health and Care

Excellence guidelines suggest that patients should be provided with information in an accessible format, and as a minimum written or oral format.⁴⁵ Using the criteria (Acceptability, Practicability, Effectiveness, Affordability, Side-effects and Equity) to assess components such as the online resources against can guide programme developers in identifying appropriate behaviour change techniques and mode of delivery.⁴⁶

Consistent with previous research, people with LC experienced difficulty formulating goals, and RSs found assessing and evaluating beneficiaries' goals challenging.^{47 48} These findings highlight the need for future models of rehabilitation involving exercise professionals in ESP roles to provide additional goal-setting training and support for stakeholders. Goal setting is a complex process, underpinned by psychological theory, that centres on many factors including patient expectations, therapeutic rapport, mood, social, financial stresses and condition specific symptoms.⁴⁹ Using appropriate goal setting processes will enable people with LC to collaborate with staff, feel empowered and increase their autonomy and confidence to cross the Rubicon of goal pursuit.^{42 48} While SMART goals are commonly used across healthcare and the fitness sector,⁵⁰ upskilling the RS to be able to use a range of evidence-based goal setting tools, including behaviour or outcome driven goals, can improve the likelihood of successful goal attainment.

Taking care of staff was a prominent subtheme identified under the umbrella of challenges and barriers. TPs and RSs commented on the poor mental health and psychological distress of the people with LC, consistent with research findings.^{51 52} TPs appreciated having the additional time to listen to the needs of people with LC during triage. However, triaging on the 'front line' and over the phone for extended periods of time compromised the health and well-being of some, leading to self-reported burnout. Recognised as a work-related disorder, burnout includes symptoms such as fatigue, depression, withdrawal and low work morale.^{53 54} A growing body of evidence reports a lack of preparedness to deal with mental ill-health and burnout in physiotherapists and first contact practitioners.^{26 55 56} Given that scheduled non-contact time is reported to have a direct influence on reducing burnout,⁵⁵ future models of rehabilitation support should consider providing non-contact hours and training to help practitioners manage extreme mental health conversations and protect themselves from burnout. This could be developed into standards of training and practice to meet the specific needs of front-line staff.²⁶

Opportunities

Highlighting their readiness to continue with their onward recovery, people with LC spoke of their desire for a follow-on programme or 'check-in' with the group and RS following completion of the EWP. Other authors have reported an increase in patient readiness to continue exercising following rehabilitation and suggest this is an

optimum time for practitioners to signpost patients to relevant services to continue their recovery.⁵⁷ Thus, the EWP could consider offering a stepped-down approach to support exercise maintenance. Semiformal group meet-ups (education refresher sessions), scheduled follow-on exercise classes or signposting to other community-based exercise programmes could help address fears of loneliness and physical activity regression.

The EWP was a multifaceted intervention that required service deliverers to work in newly created ESP roles in the real world. Consequently, a degree of diversity in the implementation across different sites was expected (the creation of WhatsApp groups is an example of this). An opportunity exists to strengthen the delivery, receipt and enactment of intervention components and capture emerging trends by embedding process evaluations into future programmes. This could be achieved using bespoke checklists that are supported by evidence-based frameworks, for example, the TIDieR (Template for Intervention Description and Replication) and Action, Actor, Context, Target, Time framework.^{58 59}

The EWP provided the opportunity to develop closer working relationships through its regular delivery team meetings; however, engagement in these meetings by RSs was low. Hinman *et al* report that teamwork between practitioners in ESP roles is important, stating that clear and agreed on strategies for communication must be valued and utilised by stakeholders.²⁰ Others have suggested regular check-ins and informal conversations,³² and training, education and clinical supervision are also recommended to reduce anxieties about new obligations in ESP roles.^{21 60} Follow-up research to further understand the barriers to exercise professionals working in ESP roles should be considered to inform future models of rehabilitation and guarantee the long-term viability of this innovative care approach.

Limitations

The findings should be viewed cautiously as two of the subgroups, people with LC and RSs, were small, and one group, TPs, was relatively homogenous (white British, female). Inclusion of all three groups is, however, a strength of the study, and the codes generated were triangulated by stakeholders and beneficiaries. The experiences captured through the interviews took place during the COVID-19 pandemic, which may influence the interpretation and scope of the findings.

CONCLUSIONS

This study investigated the experiences of stakeholders and beneficiaries participating in a novel model of rehabilitation involving exercise professionals in ESP roles supporting people with LC. The findings identified several barriers and facilitators that influenced implementation and revealed opportunities for further exploration. Importantly, the results suggest that people with LC found the integrated model of rehabilitation

acceptable and valued the holistic support provided by RSs and TPs throughout the programme. Evaluating the long-term sustainability of the programme and the provision of additional support and training for those delivering the intervention may inform potential directions for future research.

Contributors SM, BMK and IC contributed to conception and design. SM was responsible for data collection. SM, PM, JA, IC and GY contributed to the interpretation of the data. SM, PM and JA drafted the original manuscript. FF, VF, BMK, TC, PD and DD contributed to revising and editing the manuscript. All authors reviewed and approved the manuscript. SM is the guarantor. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

Funding This research was funded by the Nuffield Health charity (England and Wales Charity Number: 205533; Scotland Charity Number: SC041793), a not-for-profit organisation (Grant/award number: not applicable).

Disclaimer While staff from the Nuffield Health charity were involved in conception and manuscript preparation, the funder played no role in data collection, analysis, interpretation of findings, or decision to publish. These steps were conducted independently by the research team. The views expressed in this paper do not necessarily represent the views, decisions or policies of Nuffield Health charity.

Competing interests All authors have completed the ICMJE uniform disclosure form at <https://www.icmje.org/disclosure-of-interest/> and declare: SM (lead author), IC, GY, FF, TC and PD are not members of the Nuffield Health charity, the funding organisation, and as such declare not competing interests. All other contributors were employees of the Nuffield Health charity during preparation of this manuscript. No financial relationships with any organisations that might have an interest in the submitted work in the previous 3 years have been declared. No other financial associations with the authors' spouses or children under the age of 18 have been declared. DD is a trustee on the board of The National Academy of Social Prescribers. No other non-financial associations or activities that may be relevant to the manuscript have been declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants, and institutional ethical approval was obtained from the Lead Researcher's Faculty Ethics Committee at Manchester Metropolitan University (ref: 43765) and conforms to the principles embodied in the Declaration of Helsinki. Two managers at the charity facilitated access to the participants. Email invitations were sent to programme attendees and deliverers. Written informed consent was obtained from all participants prior to interview.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request. Requests should be made to the corresponding author.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iDs

Sheree McCormick <http://orcid.org/0000-0002-4920-1431>
Panayiotis Michael <http://orcid.org/0009-0003-7902-9630>

REFERENCES

- 1 Stagg AL, Hatch S, Fear NT, *et al*. Long-term health conditions in UK working-age adults: a cross-sectional analysis of associations with demographic, socioeconomic, psychosocial and health-related factors in an inner-city population. *BMJ Open* 2022;12:e062115.
- 2 Healthcare expenditure, UK health accounts: 2022 and 2023. 2024.
- 3 Lourida I, Bennett HQ, Beyer F, *et al*. The impact of long-term conditions on disability-free life expectancy: A systematic review. *PLOS Glob Public Health* 2022;2:e0000745.
- 4 Prevalence of ongoing symptoms following coronavirus (COVID-19) infection in the UK. 2023.
- 5 Catsis S, Champneys AR, Hoyle R, *et al*. Process modelling of NHS cardiovascular waiting lists in response to the COVID-19 pandemic. *BMJ Open* 2023;13:e065622.
- 6 Howlett NC, Wood RM. Modeling the Recovery of Elective Waiting Lists Following COVID-19: Scenario Projections for England. *Value Health* 2022;25:1805-13.
- 7 Shah SA, Robertson C, Sheikh A. Effects of the COVID-19 pandemic on NHS England waiting times for elective hospital care: a modelling study. *Lancet* 2024;403:241-3.
- 8 Rathnayake D, Clarke M, Jayasinghe VI. Health system performance and health system preparedness for the post-pandemic impact of COVID-19: A review. *Int J Healthc Manag* 2021;14:250-4.
- 9 Hansen D, Marinus N, Cornelissen V, *et al*. Exercise prescription by physiotherapists to patients with cardiovascular disease is in greater agreement with European recommendations after using the EXPERT training tool. *Med Educ Online* 2023;28:2182660.
- 10 Anderson R, Collier G, Khan N, *et al*. Exercise Adherence and Exercise Prescription by Physical Therapists, Occupational Therapists, as well as Speech and Language Pathologists. *Arch Phys Med Rehabil* 2021;102:e13.
- 11 Kelly K, Moloney A, de Jong G, *et al*. Healthcare Practitioners' Perceptions of the Barriers to Prescribing or Promoting Exercise in the Treatment of People with Mental Illness: A Scoping Review. *Health & Social Care in the Community* 2024;2024:8894586.
- 12 Richardson CR, Franklin B, Moy ML, *et al*. Advances in rehabilitation for chronic diseases: improving health outcomes and function. *BMJ* 2019;365:i2191.
- 13 Morres ID, Hatzigeorgiadis A, Stathi A, *et al*. Aerobic exercise for adult patients with major depressive disorder in mental health services: A systematic review and meta-analysis. *Depress Anxiety* 2019;36:39-53.
- 14 Ramos-Sanchez CP, Schuch FB, Seedat S, *et al*. The anxiolytic effects of exercise for people with anxiety and related disorders: An update of the available meta-analytic evidence. *Psychiatry Res* 2021;302:114046.
- 15 Frontera WR, Bean JF, Damiano D, *et al*. Rehabilitation research at the National Institutes of Health: moving the field forward (executive summary). *Neurorehabil Neural Repair* 2017;31:304-14.
- 16 Teo JL, Zheng Z, Bird SR. Identifying the factors affecting "patient engagement" in exercise rehabilitation. *BMC Sports Sci Med Rehabil* 2022;14:18.
- 17 Stead A, Vishnubala D, Marino KR, *et al*. UK physiotherapists delivering physical activity advice: what are the challenges and possible solutions? A qualitative study. *BMJ Open* 2023;13:e069372.
- 18 Dukhu S, Purcell C, Bulley C, *et al*. Person-centred care in the physiotherapeutic management of long-term conditions: a critical review of components, barriers and facilitators. *IPDJ* 2018;8:1-27.
- 19 Jackson S, Martin G, Bergin J, *et al*. Understanding advanced and extended professional practice. *Australian Pharmacist* 2015;34:76-9.
- 20 Hinman RS, Delany CM, Campbell PK, *et al*. Physical Therapists, Telephone Coaches, and Patients With Knee Osteoarthritis: Qualitative Study About Working Together to Promote Exercise Adherence. *Phys Ther* 2016;96:479-93.
- 21 Singh V, Pollard K, Okasheh R, *et al*. Understanding the role of allied health professional support workers with exercise qualifications in the delivery of the NHS Long Term Plan within allied health professional services in England. *BMJ Open Sport Exerc Med* 2023;9:e001625.
- 22 Smith JL, Deighton K, Innes AQ, *et al*. Improved clinical outcomes in response to a 12-week blended digital and community-based long-COVID-19 rehabilitation programme. *Front Med (Lausanne)* 2023;10:1149922.
- 23 Pulla V, Carter E. Employing Interpretivism in Social Work Research. *JRH* 2018;6:9-14.
- 24 Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349-57.
- 25 Stokes D, Bergin R. Methodology or "methodolatry"? An evaluation of focus groups and depth interviews. *Qualitative Market Research* 2006;9:26-37.

- 26 Greenhalgh S, Selfe J, Yeowell G. A qualitative study to explore the experiences of first contact physiotherapy practitioners in the NHS and their experiences of their first contact role. *Musculoskelet Sci Pract* 2020;50:102267.
- 27 Moore GF, Moore L, Murphy S. Facilitating adherence to physical activity: exercise professionals' experiences of the National Exercise Referral Scheme in Wales: a qualitative study. *BMC Public Health* 2011;11:1–12.
- 28 Naeem M, Ozuem W, Howell K, et al. A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *Int J Qual Methods* 2023;22:16094069231205789.
- 29 Bans-Akutey A, Tiimub BM. Triangulation in Research. *Academia Letters* 2021;2:1–7.
- 30 Sciberras M, Dingli A. *Investigating AI readiness in the Maltese public administration*. Springer, 2023.
- 31 Ahmed SK. The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health* 2024;2:100051.
- 32 Hartley SE, Yeowell G. Older adults' perceptions of adherence to community physical activity groups. *Ageing Soc* 2015;35:1635–56.
- 33 Goldberg NC, Poirier S, Kanas A, et al. A new clinical challenge: supporting patients coping with the long-term effects of COVID-19. *Fatigue* 2022;10:212–30.
- 34 Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* 2011;6:42.
- 35 Bandura A, Walters RH. *Social learning theory*. Englewood Cliffs, NJ: Prentice hall, 1977.
- 36 Dutton GR, Tan F, Provost BC, et al. Relationship between self-efficacy and physical activity among patients with type 2 diabetes. *J Behav Med* 2009;32:270–7.
- 37 Degerstedt Å, Alinaghizadeh H, Thorstensson CA, et al. High self-efficacy - a predictor of reduced pain and higher levels of physical activity among patients with osteoarthritis: an observational study. *BMC Musculoskelet Disord* 2020;21:380.
- 38 Leong SL, Teoh SL, Fun WH, et al. Task shifting in primary care to tackle healthcare worker shortages: An umbrella review. *Eur J Gen Pract* 2021;27:198–210.
- 39 Dyer TA, Owens J, Robinson PG. The acceptability of healthcare: from satisfaction to trust. *Community Dent Health* 2016;33:242–51.
- 40 Siegel ER, Logan RA, Harnsberger RL, et al. Information Rx: Evaluation of a new informatics tool for physicians, patients, and libraries. *Inf Serv Use* 2006;26:1–10.
- 41 Ahern DK, Woods SS, Lightowler MC, et al. Promise of and potential for patient-facing technologies to enable meaningful use. *Am J Prev Med* 2011;40:S162–72.
- 42 Kang E, Kim MY, Lipsey KL, et al. Person-Centered Goal Setting: A Systematic Review of Intervention Components and Level of Active Engagement in Rehabilitation Goal-Setting Interventions. *Arch Phys Med Rehabil* 2022;103:121–30.
- 43 Alexanders J, Perry J, Douglas C. A THEORETICAL BASED PHYSIOTHERAPY GOAL SETTING MODEL FOR ANTERIOR CRUCIATE LIGAMENT REHABILITATION. *Physiother Theory Pract* 2022;38:2330–8.
- 44 Dombrowski SU, O'Carroll RE, Williams B. Form of delivery as a key "active ingredient" in behaviour change interventions. *Br J Health Psychol* 2016;21:733–40.
- 45 Patient experience in adult NHS services: improving the experience of care for people using adult NHS services (CG138). 2015. Available: <https://www.nice.org.uk/guidance/cg138/resources/patient-experience-in-adult-nhs-services-improving-the-experience-of-care-for-people-using-adult-nhs-services-pdf-35109517087429> [Accessed 02 Nov 2024].
- 46 Atkins L, Michie S. Designing interventions to change eating behaviours. *Proc Nutr Soc* 2015;74:164–70.
- 47 Mozafarinia M, Mate KKV, Brouillette M-J, et al. An umbrella review of the literature on the effectiveness of goal setting interventions in improving health outcomes in chronic conditions. *Disabil Rehabil* 2024;46:618–28.
- 48 Alexanders J, Perry J, Douglas C. Goal setting practices used within anterior cruciate ligament rehabilitation: An exploration of physiotherapists understanding, training and experiences. *Musculoskeletal Care* 2021;19:293–305.
- 49 Locke R, Wilkinson E, Wallis L, et al. The experiences of physiotherapists and occupational therapists working as rehabilitation ward leaders. *Int J Ther Rehabil* 2022;29:1–16.
- 50 Swann C, Jackman PC, Lawrence A, et al. The (over)use of SMART goals for physical activity promotion: A narrative review and critique. *Health Psychol Rev* 2023;17:211–26.
- 51 Cénat JM, Blais-Rochette C, Kokou-Kpolou CK, et al. Prevalence of symptoms of depression, anxiety, insomnia, posttraumatic stress disorder, and psychological distress among populations affected by the COVID-19 pandemic: A systematic review and meta-analysis. *Psychiatry Res* 2021;295:113599.
- 52 Naylor C, Parsonage M, McDaid D, et al. *Long-term conditions and mental health: the cost of co-morbidities*. King's Fund (London, England), 2012.
- 53 Koutsimani P, Montgomery A. A Two-Wave Study On The Associations Of Burnout With Depression And Anxiety: The Mediating And Moderating Role Of Perceived Family Support. *Psychol Rep* 2023;126:220–45.
- 54 Shi Y, Gugiu PC, Crowe RP, et al. A Rasch Analysis Validation of the Maslach Burnout Inventory-Student Survey with Preclinical Medical Students. *Teach Learn Med* 2019;31:154–69.
- 55 Nozedar L, O'Shea S. What is the prevalence of burnout amongst first contact physiotherapists working within primary care? *Musculoskeletal Care* 2023;21:776–85.
- 56 Rodríguez-Nogueira Ó, Leirós-Rodríguez R, Pinto-Carral A, et al. Examining the Association between Evidence-Based Practice and Burnout among Spanish Physical Therapists: A Cross-Sectional Study. *J Pers Med* 2021;11:805.
- 57 Rimmer JH. Getting Beyond the Plateau: Bridging the Gap Between Rehabilitation and Community-Based Exercise. *PM&R* 2012;4:857–61.
- 58 Bird M-L, Mortenson WB, Eng JJ. Evaluation and facilitation of intervention fidelity in community exercise programs through an adaptation of the TIDier framework. *BMC Health Serv Res* 2020;20:68.
- 59 Presseau J, McCleary N, Lorencatto F, et al. Action, actor, context, target, time (AACTT): a framework for specifying behaviour. *Implement Sci* 2019;14:102.
- 60 Kersten P, McPherson K, Lattimer V, et al. Physiotherapy extended scope of practice – who is doing what and why? *Physiotherapy* 2007;93:235–42.