Research Letter

Chronic Respiratory Disease

Chronic Respiratory Disease
Volume 21: 1–4

DOI: 10.1177/14799731241264789
journals.sagepub.com/home/crd

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Motivations for completing pulmonary rehabilitation - A qualitative analysis

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Abstract

Background: Previous studies have focused on demographic factors that might predict non-completion of pulmonary rehabilitation (PR). We aimed to identify key modifiable factors that promote completion of PR. **Methods:** A mixed methods survey was offered to participants completing a discharge assessment following PR. Descriptive statistics and inductive thematic analysis were used to analyse the survey responses, with investigator triangulation. **Results:** 62 of 187 (33%) patients attending a PR discharge assessment between November 2022 and April 2023 returned the anonymised survey. Desire to improve health and wellbeing was the main reason for both initially committing to a course and for continuing with PR past transient thoughts of leaving. The positive impact of staff was the second most common reason. The enjoyment of the PR programme, being held accountable to attend classes, and the importance of other group members were other key themes identified. **Conclusions:** In conclusion, our findings suggest PR services need to implement strategies which ensure regular promotion and reinforcement of the health benefits of PR as well as implementation of PR modalities which best monopolise on the positive impact skilled staff have on motivating patients to complete PR.

Keywords

pulmonary rehabilitation, healthcare professionals, patient experience, intervention completion, modalities for care delivery

Date received: 14 February 2023; revised: 30 May 2024; accepted: 4 June 2024

Despite the strong evidence that pulmonary rehabilitation (PR) improves dyspnoea, health status and exercise capacity, uptake and completion rates are variable. Perceived lack of benefit from PR is common among those who decline to take up PR referral, while transport limitations and being unwell are key barriers to both uptake and completion of PR.[1] It has been proposed that adherence to and completion of PR could be enhanced by better supporting those at risk of non-completion.[1]

Previous qualitative studies have focused on the reasons for non-completion. However, a paucity of data exists regarding the motivations of those that have successfully completed a PR programme. We aimed to identify key modifiable factors that promote completion of PR.

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A mixed methods survey was offered to participants attending a face-to-face discharge assessment following an eight-week in-person PR programme conducted according to British Thoracic Society Quality Standards. The survey comprised a single Likert scale question and three open answer questions (included in Table 1). Patients were advised the survey would take up to 3 to 5 minutes to complete and were supported by healthcare professionals to read and respond to the questions as required. Survey completion was implicit consent for inclusion in this project.

Data was analysed using MS Excel for the descriptive statistics (counts). Inductive thematic analysis was used to analyse the open answer survey responses, with investigator triangulation with a second researcher co-analysing the data. Open answer responses which presented multiple concepts were divided to create individual statements prior to analysis to allow for accurate coding and theming of the survey responses.

Of 187 attending a PR discharge assessment between November 2022 and April 2023, 62 (33%) returned the anonymised survey. For the Likert scale question 'Once enrolled on the PR course, how often did you have thoughts of/consider leaving the programme?', no patients reported they considered this 'most days' or 'fairly frequently'. Four (6%) and 10 (16%), reported they 'occasionally' and 'rarely' considered leaving the programme respectively. Most patients (48 [77%]) reported 'not at all' as their response to how often they considered leaving the programme.

Desire to improve health and wellbeing was a theme given for both initially committing to a course and for continuing with PR past transient thoughts of leaving. Patients hoped to improve breathlessness, fitness, strength, and mobility, through completion of PR. Aspirations ranged from enhancing wellbeing and happiness to working towards improvements in specific health measures. Patients hoped that PR would help them to increase or maintain physical activity levels or achieve specific personal physical goals. Of interest, the influence of this latter theme waned as a reason for moving past thoughts of leaving compared with as a reason for programme commitment. Table 1 includes the prevalence of the themes and sub-themes.

The positive impact of staff was the second most common theme for continued commitment to PR, and the most common theme among additional comments. Participants appreciated the encouragement that staff provided as

Table 1. Themes and sub-themes according to each of the open answer survey questions.

Question	1. Which factors were most motivating for you personally in making the commitment to attend the PR programme in the first instance?	2. Which factors were most motivating for you personally in moving past any thoughts of leaving the programme during the eight weeks of your course	3. Additional comments
Themes (sub-theme)			
Desire to improve health and wellbeing			
(Improve breathing)	16	2	1
(Improve general health/ wellbeing, or specific aspect of)	26	15	2
(Improve fitness/ strength/mobility/ physical activity)	29	11	2
Positive impact of staff	9	14	16
Noticing improvement in health and wellbeing	4	4	10
Enjoyment of classes/ course	2	5	5
Little or no thought of leaving PR once enrolled	N/A	16	0
Other codes	18	18	14
Total number of unique concepts	**104**	**85**	**50**

Note: The data included in the table for each theme is the number of times that theme was coded within the unique statements drawn from open answer survey responses.

a source of motivation, and valued staff as a resource of knowledge. They felt able to ask questions of professionals, and were confident that staff provided personalised programmes to meet their individual needs.

Another major theme was that most respondents reported having no significant thoughts of leaving PR during the course. Despite this, it was also recognised that a significant proportion of respondents identified factors that motivated them to continue past transient thoughts of ceasing attendance.

There were also a fair proportion of responses which were miscellaneous and provided individual reasons for initially committing to the programme: for some it was an appreciation of the opportunity, for others it was a desire to prove something to themselves, and for one it was the encouragement of family.

Similarly, there were factors influencing continued commitment to PR. For example, the enjoyment of the PR programme and attending the classes themselves seemed a recurrent motivator. Some responses identified the importance of other members of the group in relation to ongoing commitment to the programme.

Our findings have identified key modifiable factors which could be deliberatively targeted by implementing simple, low-cost strategies to allow PR services to promote completion of PR. First, PR services could deliberatively and periodically reiterate the strong evidence which demonstrates benefits of PR so those attending retain focus on how PR can help them achieve their desire to improve their health. Deliberative encouragement of patients to remain committed in order to prove themselves should also be considered as part of the conversations had during PR. This strategy is supported by previous research which showed people living with both chronic obstructive pulmonary disease (COPD) and frailty remained motivated to continue with PR despite interruptions to attendance caused by ill health or conflicting priorities as they viewed PR as a 'challenge worth facing'.[2]

Second, our findings corroborate other qualitative studies that made note of the importance of skilled staff and tailored exercise programmes in creating a safe and encouraging environment appreciated by patients regardless of whether they completed PR or not.[2] Oates et al. (2019) similarly found staff to be a structural facilitator and driving force for attendance at PR. This supports the recent British Thoracic Society Clinical Statement on Pulmonary Rehabilitation which advocates for all individuals referred for PR to be offered the option of face-to-face supervised PR as the gold standard.[4] Consequently, the active involvement of skilled staff may be vital for the success of digital alternatives to PR, particularly those delivered remotely.

Third, although there is inadequate depth of information in this survey to further explain the way in which course peers might provide motivation to persist with PR, it could be relevant when considering non-completion rates in telephone-based or app-based home PR. PR services may want to be more purposeful and deliberate with how they incorporate peer support into modalities used for PR delivery where social interaction and peer support does not naturally occur.[3]

There are limitations to this single centre service evaluation. First, our findings may not be generalisable to other services providing PR, which may differ in patient demographics and also service structure. Second, our lower than desired response rate may also influence the representativeness of the sample to the population, and an increased risk of non-response bias as a result. Third, given our survey was anonymous, we are unable to report demographic information of respondents, and how this influenced the responses.

Further work should include a more in-depth exploration of why some patients, who have transient thoughts of discontinuing PR, are able to avoid PR discontinuation. Greater understanding of this mindset may enable PR services to better support patients who otherwise would be unsuccessful in moving past their transient thoughts of discontinuing PR and as a result drop out from the programme.

In conclusion, our findings suggest PR services need to implement strategies which ensure regular promotion and reinforcement of the health benefits of PR as well as implementation of PR modalities which best monopolise on the positive impact skilled staff have on motivating patients to complete PR.

Author contributions

JH, KI, GG, WD-CM conceived this project. JH, KI, GE, TOJ, GG, SP, and REB was responsible for project co-ordination and data collection. JH and REB were responsible for data cleaning. JH and REB had access to the raw data, conducted the analysis. JH, WD-CM, and REB wrote the first draft of the manuscript. All authors reviewed and edited the manuscript for important intellectual content, gave final approval of the version to be published. WDC-M and REB had final responsibility for the decision to submit the manuscript for publication.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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