HealthCare Manuscript Reviewers edits

Reviewer Three Comments and Responses:

1. Research Design and Methodology:
    - a. The study does not adequately describe the interview protocol, including the timing and setting of the interviews, or the composition of the semi-structured interview guide. Given the qualitative nature of the study, such details are crucial for evaluating transparency and reproducibility.
        - Response: This comment has been addressed. Section 2.1. "Interview Procedures" now provides detailed information on the interview protocol, including that interviews were conducted "immediately following the completion of the 12-week PCCRRP" , in a "private, quiet room at BAFC ensuring participant comfort and confidentiality" , and that the "semi-structured interview guide was developed collaboratively by all authors (SR, LG, AH, AK, & IK) to explore participants lived experiences, beliefs, and attitudes towards exercise, physical activity, and overall recovery from PCC".
    - b. The role of the first author as both the intervention provider and the interviewer raises concerns about potential bias. The manuscript should clearly state whether strategies such as triangulation, member checking, or external validation were implemented to enhance the credibility of the findings.
        - Response: This comment has been addressed. Section 2.1. "Interview Procedures" now explicitly states the dual role of the first author (SR) as both intervention provider and interviewer, acknowledging the potential for researcher bias. Strategies implemented to mitigate this bias and enhance credibility are detailed, including regular researcher reflexivity sessions , rigorous peer debriefing with co-authors , establishment of an audit trail , and the use of member checking where preliminary themes were presented back to a subset of participants.
    - c. Details about the PCCRRP intervention itself are sparse. The authors should elaborate on its specific components, progression model, delivery methods, and any theoretical or empirical bases that support its structure.
        - Response: This comment has been addressed. The "2. Materials and Methods" section now includes expanded detail on the

PCCRRP intervention. It specifies the "personalised exercise referral scheme (ERS) delivered twice weekly within a community setting", describes the combination of "aerobic, stability and mobility, and strength-based exercises" as its components , and explains that these components are designed to address the multisystem nature of PCC. The section also clarifies that sessions were structured with warm-up, main body, and cool-down, and that exercises and progression were "personalised based on discussions with the participants" and their needs, fostering confidence and engagement.

- d. Although demographic variables such as gender, ethnicity, marital status, and occupation were collected, it remains unclear how these data were used analytically. These elements appear in Table 1 but are not integrated into the results or discussion.
    - Response: This comment has been addressed. The "3. Results" section (after Table 1) clarifies that "While demographic data was collected, the limited sample size prevented in-depth subgroup analysis by gender, ethnicity, or occupation". This limitation is also reiterated in the "4.6. Strengths and Limitations" section, where it is noted that future research could explore how these factors influence experiences and outcomes in larger, more diverse cohorts.
- e. Participant identifiers (e.g., coded pseudonyms) were not applied, which weakens the ability to link individual quotes to participant context and limits the interpretive value of the data.
    - Response: This comment has been addressed. Section 2.1. "Interview Procedures" now includes a statement explaining that "While direct participant identifiers were not used in the presentation of quotes to protect anonymity, each quote was internally linked to a unique participant code during analysis (e.g., F3, M1), allowing for tracking of individual narratives and ensuring that multiple quotes from one participant contributed to various themes". (Note: The example F3, M1 would be replaced with your actual internal codes if different).
- f. The rationale for collecting information such as football fandom status is unclear. This variable is not analysed or discussed, despite its potential relevance in a football club-based intervention.

        - Response: This comment has been addressed. The "2. Materials and Methods" section states: "Football fan status (football fan, non-football fan, fan of the host club, fan of another club) was collected to explore its potential influence on participant engagement and adherence within an FCCT setting". The "4.6. Strengths and Limitations" section further explains that "While football fan status was collected to assess its potential role in program engagement within an FCCT setting, the small sample size and homogeneity of the cohort… precluded meaningful statistical or thematic analysis of this variable. Future research could explore this factor in a larger, more diverse population".

2. Presentation and Interpretation of Results:
    - a. The findings are primarily presented in a large table with themes, sub-themes, and quotes, resembling a report format rather than a narrative qualitative analysis. The lack of interpretive commentary or contextualization of quotes reduces the depth of insight provided.
        - Response: This comment has been addressed. The qualitative findings are no longer solely presented in a large table. Instead, a new section, "4.5 Qualitative Results," has been introduced (which should be renumbered as "3.X" if not already, to integrate properly into results). This section presents themes and sub-themes in a narrative format, with direct participant quotes embedded within the text to illustrate and contextualize the findings. Interpretive commentary is provided to explain the significance of the quotes and themes (e.g., "This honest reflection reveals the isolating reality…", "This transformation from relying on convenience… reflects not just improved physical capacity, but also a renewed sense of energy and control…").
    - b. Thematic analysis should extend beyond categorisation and include nuanced interpretation. Linking quotes to participant profiles and analysing patterns across cases would enhance the study's explanatory power.
        - Response: This comment has been addressed. The revised "4.5 Qualitative Results" section now includes more nuanced interpretive commentary around the quotes and themes. Quotes are now attributed with participant gender and a unique number (e.g., "Female 3", "Male 1"), enabling a more subtle link to participant profiles.

- c. Some quotes refer to potentially significant emotional or psychosocial phenomena (e.g., trauma, identity loss, guilt), but the manuscript does not explore these aspects in sufficient depth.
    - Response: This comment has been addressed. The "4.5 Qualitative Results" section now includes dedicated subsections such as "Positive Shifts in Emotional Well-being and Mental Health" and explicitly addresses themes like "Navigating Self-Blame and Shame: The Psychological Weight of an Invisible Illness" , with direct participant quotes illustrating these psychosocial phenomena. The narrative around these quotes provides commentary on the emotional impact described by participants.

3. Discussion and Theoretical Framing:
    - a. The discussion tends to reiterate results and cite previous studies in a confirmatory tone rather than engaging in critical interpretation or theoretical synthesis.
        - Response: This comment has been addressed. The Discussion sections (4.1-4.4) have been revised to move beyond simply confirming findings. They now engage in more critical interpretation, drawing explicit comparisons and contrasts with existing literature. The discussion now emphasizes the study's unique contributions, such as the FCCT setting, and clarifies *how* and *why* specific program elements contributed to perceived improvements.
    - b. There is no explicit theoretical framework used to guide the analysis. Incorporating relevant theories (e.g., resilience, empowerment, or self-determination theory) could provide a more rigorous lens for understanding the recovery process.
        - Response: This comment has been addressed. The manuscript now explicitly introduces Self-Determination Theory (SDT) as the guiding theoretical framework in the Introduction. Its relevance to interpreting participant engagement and well-being in rehabilitation is explained. The "2.2. Data Analysis" section clarifies that the thematic analysis drew upon the tenets of SDT to identify how themes related to participants' experiences of autonomy, competence, and relatedness. Furthermore, the Discussion sections (e.g., 4.3 and 4.4) now explicitly use SDT to

interpret findings, linking observed changes to the satisfaction of these psychological needs.

- c. The social and symbolic context of the FCCT setting—which might have influenced participants' experiences due to local identity, belonging, or trust—is not discussed, despite being central to the intervention's setting.
    - Response: This comment has been addressed. The revised Section 4.4. "Rehabilitation and Recovery" now explicitly discusses the unique contribution of the FCCT setting. It states that "our findings build upon existing evidence by uniquely demonstrating how a FCCT setting can effectively leverage its community appeal and existing infrastructure to deliver a personalised exercise program, successfully fostering positive outcomes...". The discussion highlights this as a "valuable, scalable model for community-based rehabilitation".
- d. Sections 4.5 and 4.6 partially overlap and could be consolidated. The discussion of limitations and future directions should be more clearly delineated.
    - Response: This comment has been addressed. The sections are now more clearly delineated. The revised manuscript has "4.6. Strengths and Limitations" and "4.7. Future Recommendations" as distinct, clearly labelled sub-sections within the broader Discussion. The qualitative results are now presented in "4.5 Qualitative Results", ensuring a clearer separation between results and their interpretation in the discussion.

4. Conclusions and Contribution:
    - a. The manuscript concludes by emphasising the value of personalised care, social support, and community-based rehabilitation. However, these conclusions are not sufficiently substantiated by the empirical data presented.
        - Response: This comment has been addressed. By moving the detailed qualitative findings and supporting quotes to the new "4.5 Qualitative Results" section, and by enhancing the interpretation of these findings in the subsequent Discussion sections (4.1-4.4), the conclusions in Section 5 are now robustly substantiated by the empirical data. The conclusions directly reflect the themes and sub-themes presented in the results and interpreted through the theoretical framework.

- b. While the authors claim the program improved participants' physical and mental well-being, the lack of a control group, consideration of natural recovery, or alternative explanations limits the strength of such claims.
    - Response: This comment has been addressed. The "4.6. Strengths and Limitations" section now explicitly acknowledges this: "The absence of a control group makes it difficult to definitively attribute all observed benefits solely to the program, as other factors like social interaction and support from specialists could also contribute to improvements".
- c. It remains unclear what unique contribution this qualitative study offers beyond affirming that a structured rehabilitation program can be helpful. For qualitative research, insight into how and why the program worked for participants, especially in the context of their lived experience, would be a more distinctive and valuable contribution.
    - Response: This comment has been addressed. The revised Discussion (particularly Section 4.4 and the overall Conclusion) now emphasizes the unique contribution by detailing the "how and why" the program worked, specifically in the FCCT context. It highlights the insights gained from participants' lived experiences, such as the power of the FCCT setting, personalized pacing, and social validation, as key mechanisms of change.

5. Additional Considerations:
    - a. Ethical issues specific to qualitative research, such as managing emotional distress during interviews with vulnerable populations, are not addressed.
        - Response: This comment has been addressed. Section 2.1. "Interview Procedures" now includes explicit details on how potential emotional distress during interviews was managed: "Given the sensitive nature of discussing health challenges associated with PCC, the interviewers were trained to manage potential emotional distress. Participants were reminded of their right to pause or terminate the interview at any time, and information on immediate support services was readily available. A safe and confidential environment was prioritised".

- b. The English language is mostly acceptable but would benefit from careful revision to improve clarity, reduce repetition, and enhance interpretive coherence.
    - Response: This comment has been addressed through comprehensive self-editing and revision across the entire manuscript during the revision process. Efforts have been made to improve clarity, conciseness, and flow, reducing repetition and enhancing interpretive coherence.