Adherence to physical rehabilitation delivered via tele-rehabilitation for people with Multiple Sclerosis: a scoping review protocol

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Background:

- The benefits of exercise and physical activity for people with Multiple Sclerosis (pwMS) are well established.[1] However pwMS are less active than the general population,[1] often find it more difficult to exercise[2] and can experience problems attending out-patient rehabilitation appointments.[3]
- Tele-rehabilitation is one potential solution;[4] its use has recently increased due to the SARS-CoV-2 pandemic[5] and it is promoted in the Department of Health's Long Term Plan.[6] However, there are concerns that using tele-rehabilitation could affect patient-clinician interactions[7] and therefore reduce adherence to interventions.
- Previous tele-rehabilitation reviews[8,9] have not captured data about the experiences of pwMS and their adherence to exercise and physical activity interventions.
- As adherence is vital to the success of exercise programmes,[10] the effect of tele-rehabilitation delivery on adherence warrants investigation.

Aim:

To provide an overview of the literature regarding physical rehabilitation delivered via tele-rehabilitation for pwMS with specific focus on adherence, use of behaviour change interventions, and experiences of pwMS and therapists.

Methods:

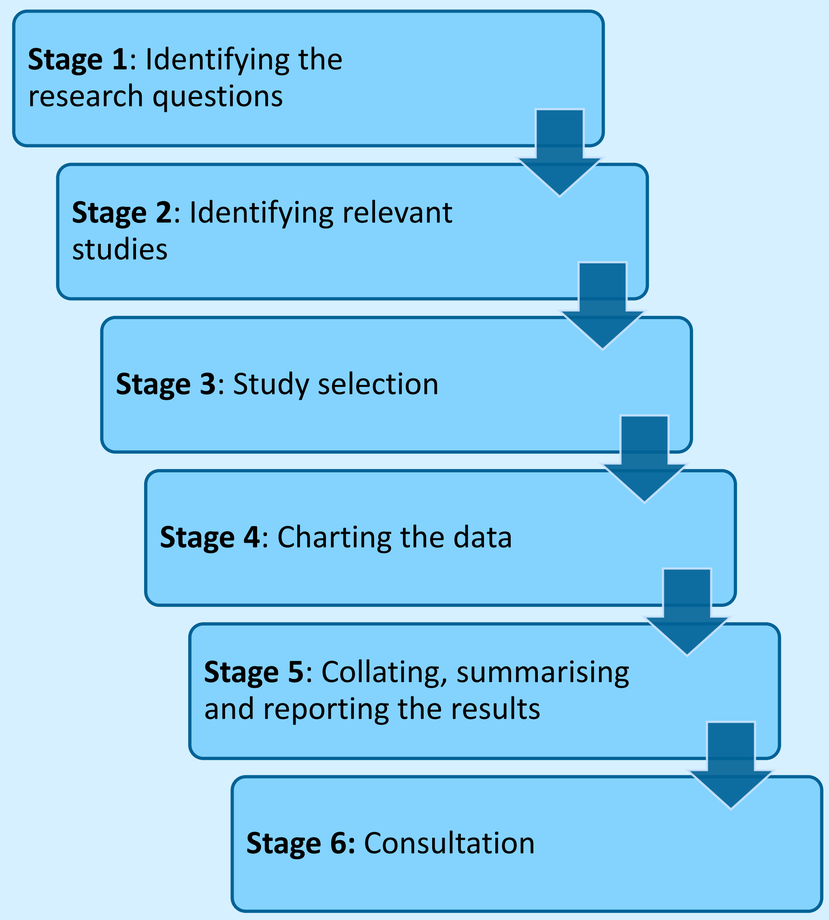
Scoping review methodology based on the 6 stage framework described by Arksey and O'Malley[11] and Levac *et al*.[12]

Research questions:

- What levels of adherence are reported by studies prescribing physical rehabilitation delivered via tele-rehabilitation for pwMS?
- To what degree are valid and reliable measures of adherence used within studies?
- Is there evidence of integration of behaviour change techniques within the physical rehabilitation programmes prescribed, and how well is this reported?
- Is there evidence that integrated behaviour change techniques influence levels of adherence to prescribed physical rehabilitation programmes?
- What are the reported experiences of pwMS and physical rehabilitation prescribers regarding adherence to physical rehabilitation?

Eligibility criteria:

- **Study design:** papers of any study design except study protocols.
- **Population:** adults with Multiple Sclerosis.
- **Intervention:** exercise and physical activity programmes prescribed for a therapeutic purpose and delivered via tele-rehabilitation. This could be as part of a multifactorial rehabilitation programme or a single intervention, delivered to individuals or a group.
- **Outcomes:** information relating to adherence, including: adherence levels, methods of reporting adherence, pwMS' and therapists' experiences of adherence.



Process:

- Article screening, data extraction and quality assessment by one reviewer with 10% checked by a second reviewer and disagreements resolved by consensus and discussion with a third reviewer if needed.
- Discussion will include key findings, identification of gaps in current knowledge, and implications for future research.
- Consultation meetings with pwMS and therapists will be held to discuss initial review findings, identify areas for future research and discuss dissemination methods.

Planned dissemination of scoping review:

- Submission to peer reviewed journals and for presentation at conferences.
- Dissemination to pwMS and clinicians guided by the consultation process.

Conclusion:

This review will assist clinicians in understanding how to help pwMS exercise with optimal adherence and in making decisions regarding the use of tele-rehabilitation. This will help ensure that the benefits of exercise and physical activity are translated into improved clinical outcomes.

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Patient and Public Involvement and Engagement (PPIE):

- PPIE throughout protocol development through written feedback and virtual discussions.
- PPIE feedback integrated through identification of specific dissemination methods and including a research question about pwMS' experiences.

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