

Move While You Wait:

Delivering remote exercise education to those on the physiotherapy waiting list at the NHNN

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Introduction

The Covid-19 pandemic has had a devastating impact on NHS services and waiting lists. The combined effects of lock downs, shielding and that people with MS (pwMS) are typically less active than the general population¹, has led to an increase in referrals to our physiotherapy service for pwMS having become deconditioned and less able.

The benefits of exercise are well known², with recent studies showing that exercise in pwMS is linked to neuroprotection and a reduction in inflammatory markers. High-intensity interval training (HIIT) has shown positive anti-inflammatory effects in pwMS³. Lack of exercise knowledge and understanding can be a barrier to exercise participation⁴.

The team developed a single, one-hour, remote MS exercise education group. The main objective was to provide education on the benefits of physical activity and exercise, empowering pwMS to re-introduce and/or increase their activity levels whilst enduring a lengthy wait for their physiotherapy assessment.

Methods

Potential participants are screened from our waiting list and invited to attend the group via email. They are asked to complete questionnaires on their exercise knowledge, activity participation and current level of function. The group was designed using expert physical activity and exercise recommendations⁵ and consists of exercise education and a HIIT workout, with three different exercise levels. Following the group, attendees are encouraged to continue independent exercise whilst awaiting their initial assessment.

A survey was sent to attendees ($n=77$) of the group in the last 4 months. The response rate was 20.78% ($n=16$). Of these, the average 'Patient Determined Disease Steps' score was 3 (gait disability), the mean time since diagnosis was >10 years, the average amount of time they spent sitting in a day was 8 hours and VAS confidence in knowing the right type of exercise to be doing was 4.9/10.

Results

The results from the survey are presented in table 1. In addition, attendees were asked:

1. Which bit of the group did you find most helpful (if any)?
2. Which bit of the group did you not find helpful (if any)?
3. Did you start to do more physical activity or exercise in the weeks following the group?

Survey questions

Survey questions	Percentage % (n=16)			
	Yes	Somewhat	No	No response
Did you find the remote group informative?	93.75	6.25	0	0
Did the group help to improve your knowledge of what physical activity and exercise may help you?	81.25	12.5	0	6.25
Did you start to do more physical activity or exercise in the weeks following the group?	75	18.75	6.25	0
Would you recommend the group to other pwMS?	100	0	0	0

What attendees liked about the group

"I valued receiving the current up to date research led information regarding exercises in MS."

"The dosage and intensity of the exercise types was valuable."

"It was good to know that physical activity would not make my disease progression worse and in fact would help."

"It has given me... lots of hints as to how I can incorporate certain techniques into everyday life."

"This program has given me a better understanding of how exercise can help."

"I did enjoy the brief interaction between other patients and hearing their opinions and experiences."

Did attendees become more active?

"Helped make me more conscious of my level of exercise. I did a little bit more than I normally would have"

"Have been trying to do more activity unless feeling very rubbish."

"Gave me motivation as it was hard to push myself due to fatigue and discomfort."

"Found the class really helped to kick start my motivation and I have been swimming 2-3 times a week since taking the workshop."

"I try and spend up to an hour daily doing exercise and this program has given me a better understanding of how exercise can help."

Conclusions and next steps

The group has been well received and has given pwMS confidence to become more physically active. Attendee feedback for improving the group included; streaming the group by level of disability, extra exercise options if unable to perform those demonstrated, and breaking up the education section, so they did not have to sustain concentration for too long. Bite size videos of the exercise education have since been recorded for reference. Improvements need to be made to pre and post outcome measure data collection. The utilisation and cost effectiveness of the group needs to be assessed.

References

1. Kinnett-Hopkins D et al. People with MS are less physically active than healthy controls but as active as those with other chronic diseases: An updated meta-analysis. *Multiple Sclerosis and Related Disorders*. 2017;13:38-43.
2. Motl RW et al. Exercise in patients with multiple sclerosis. *The Lancet Neurology*. 2017;16(10):848-856.
3. Joisten N et al. Exercise Diminishes Plasma Neurofilament Light Chain and Reroutes the Kynurenine Pathway in Multiple Sclerosis. *Neurol Neuroimmunol Neuroinflamm*. 2021 Mar 29;8(3):e982.
4. Crank H et al. Qualitative Investigation of Exercise Perceptions and Experiences in People With Multiple Sclerosis Before, During, and After Participation in a Personally Tailored Exercise Program. *Arch Phys Med Rehabil*. 2017 Dec;98(12):2520-2525.
5. Kalb R et al. Exercise and lifestyle physical activity recommendations for people with multiple sclerosis throughout the disease course. *Mult Scler*. 2020 Oct;26(12):1459-1469.

Themes

- **Patient Key take home messages**
- - The current research based information re exercise in MS
- - Understanding of different types and dosage of exercise
- - How to be 'active' in everyday life
- - Positive impact exercise can have on disease progression
- - Something is better than nothing, it doesn't have to take very long
- - All 16 would recommend the group to other pwMS

- **How have you implemented the information from the group:**
- - Has provided structure for own exercise routines
- - Better management of some of my symptoms
- - Implementing techniques/movement patterns into general routine
- - Provided motivation, and made me push myself more
- - Increased the amount of exercise/activity I do per week
- - Setting personal targets

- **How can we do better?**
- - Grouping attendees depending on their capabilities/diagnosis
- - Reduce the amount of information (information overload)

- **Use the info re the videos in the conclusions and next steps**

Number emailed out	41 + 36 = 77
Number responded to survey	16
Percentage response	20.78% response