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# The Barriers and Solutions to Participation in Exercise for People with MS: Consensus Study Using NGT

## Background

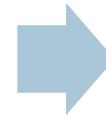
- People with MS are less physically active than healthy controls (Motl, McAuley, Sandroff and Hubbard, 2015, Rietberg et al, 2014).
- Exercise helps manage some of the symptoms associated with MS;
  - Fatigue (Pilutti et al, 2013),
  - Depression (Ensari, Motl & Pilutti, 2014),
  - Walking speed and endurance (Pearson, Dieberg and Smart, 2015)
- Adequate amounts of physical activity/ exercise are required to maintain health.

# Definitions: Physical Activity & Exercise

PA is movement of the body that is produced by skeletal muscles and requires energy expenditure (WHO, 2014)



Includes exercise and non-exercise related PA (Caspersen, Powell and Christensen, 1985).



Exercise = planned performance of systematically repeated movements to accomplish skills, maintain and strengthen physical condition and improve performance (Doring et al, 2012).

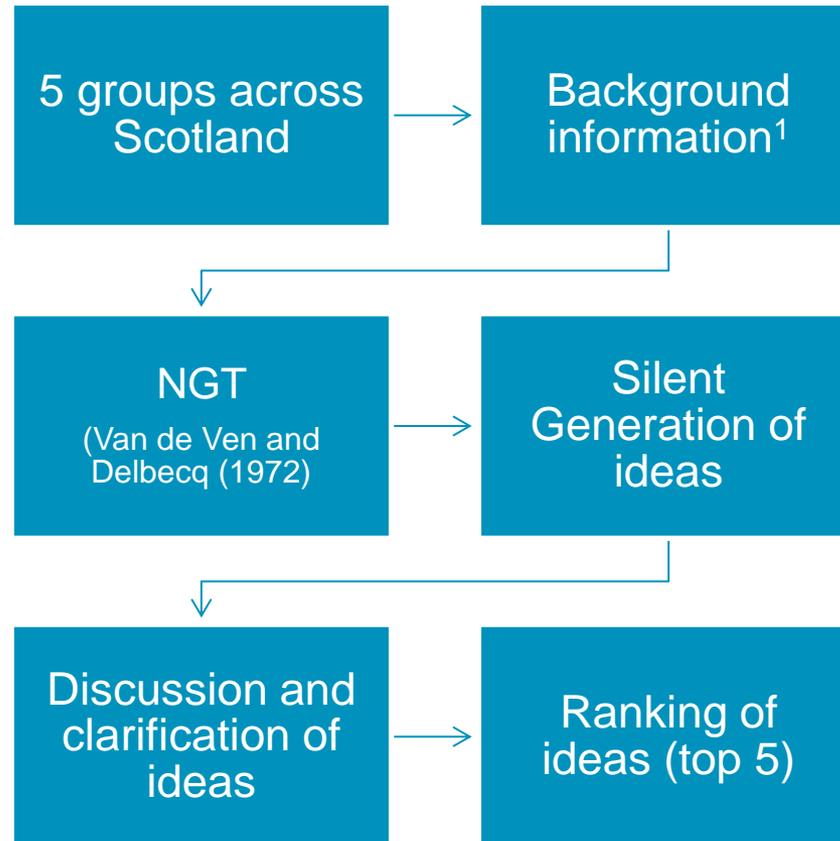
# Research Aims

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graph TD; A[Research Aims] --> B[To identify the barriers and solutions to participation in exercise for people with MS living in Scotland who are not currently exercising regularly.]; A --> C[To explore if there is consensus on the barriers and solutions to participation in exercise.];
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To identify the barriers and solutions to participation in exercise for people with MS living in Scotland who are not currently exercising regularly.

To explore if there is consensus on the barriers and solutions to participation in exercise.

# Method



<sup>1</sup> Age, employment status, marital status, highest level of education, years since diagnosis, type of MS, MSIS-29

# Analysis

Response	Ranking	Adjusted Sum of Ranking	Frequency of Ranking	Priorities
Full list of what disabled access there is	1,2,4	11	3	1
A driver to take you there	2,2,4	10	3	2
Acceptance of disability and ignoring past fitness	1,4,4,	9	3	3
Non stuffy or hot venue	1,3,5	9	3	3
Public need to be more aware of people in wheelchairs	2,2,5,	9	3	3

# Data Analysis Within Groups

50% of  
participants  
ranking an item

Frequency of  
ranking  
(amount)

Summing of  
votes  
(strength)

# Data Analysis Between Groups

Included  
priorities only

50% of groups  
ranking an  
item

Thematic  
Analysis

# Participants

- 35 participants (11 male, 24 female)
- 77% over 51 years of age
- 83% retired or medically retired
- 60% diagnosed more than 10 years ago
- Type of MS: 40% RR, 37% SP, 14% PP, 9% unknown.

# MSIS-29

Group	Range Physical score	Range Psychological Score	Mean Physical Score	Mean Psychological Score	Mean Total
<b>1 (n=7)</b>	43-87	15-34	63.3	21.5	<b>84.8</b>
<b>2 (n=7)</b>	40-85	13-31	59.3	25.3	<b>84.6</b>
<b>3 (n=7)</b>	31-61	11-28	51.1	19	<b>70.1</b>
<b>4 (n=6)</b>	74-94	22-39	78.5	30	<b>109.5</b>
<b>5 (n=7)</b>	30-84	10-26	55.3	16.7	<b>72</b>

# Barriers - Fatigue

- 4 out of 5 groups identified fatigue as a barrier to exercise
- *“You can’t fight it (fatigue), it wins, it just makes matters worse” (Group 4).*
- *“Fatigue is you might want to do it, your body won’t do it. Laziness is just your brain doesn’t want to do it” (Group 3).*
- *“That’s the thing you say I’ll go out and do such-and-such then I’ll do a bit of exercise in the afternoon but by the afternoon you can’t be bothered doing anything.....just too tired”. (Group 1).*

# Other Barriers

## Support and advice

- Finding a suitable class.
- Lack of information on what I can /should do.
- Need individual support from a person to exercise
- Cost
  
- *“If you need help that’s a distinct put off. The fact that you know when I go there I’m going to have to get someone to help me off it [gym equipment]....it puts you off”*  
(Group 1).

# Other Barriers

## Impairments and symptoms

- Pain
- Need to go to the toilet
- Balance limits physical exercise
- Fear of falling
- Physical limitations

# Other Barriers

## Time

- Lack of time sometimes
- Less time because takes longer to do things
- Time of day unable to exercise in the afternoon or morning
- Putting time aside at right time of day.

# Solutions

## Exercise with similar others

- To have company
- A group of people in a similar situation
- Exercising with others with humour and a positive environment.
- Possible sessions at gym for less able people (where you are not judged)
- Group situation preferred.

# Solutions

## Specialist Support

- More specialised gyms and specialised support

# Solutions

## Exercise with Similar Others

*“I wouldn’t be put off in a group situation as long as people are similar and you are not looking at people who are very fit with nothing wrong with them, especially if they are keep- fit fanatics”. (Group 1)*

## Specialist Support

*[A solution would be] If there is a class where the teacher is qualified and knows what the limitations of MS can be and they can devise a course of exercises that is suitable for people”. (Group 5)*

## Attitude of Self and Others

*“Personally I always think its forward thinking, not what you used to be able to do, that’s gone, don’t put yourself down about that”. (Group 4)*

# Solutions

## Environment and Improving Accessibility

*“I wouldn’t even try a rowing machine because it’s too low unless there was a grab rail next to it and I could haul myself up”. (Group 1)*

# Summary of Barriers and Solutions to Participation in exercise

Barrier	Solutions
<b>Fatigue</b>	
Difficulty exercising with fatigue	<ul style="list-style-type: none"> <li>Supervised exercise programmes – it might be easier in a group. Find a suitable group or buddy to exercise with.</li> <li>Mindfulness: Cognitive Behavioural Techniques</li> <li>Fatigue Management programmes providing advice on managing factors such as overexertion, stress, heat and time of day</li> </ul>
<b>Impairments and symptoms</b>	
Lower urinary tract dysfunction or symptoms	<ul style="list-style-type: none"> <li>Advice on management of LUTD</li> </ul>
Bowel dysfunction	<ul style="list-style-type: none"> <li>Advice on management of bowel dysfunction</li> </ul>
Falls	<ul style="list-style-type: none"> <li>Assessment of falls risk factors and input to address some identified risks.</li> </ul>
<b>Support and Advice</b>	
Finding a suitable class and needing support to exercise	<ul style="list-style-type: none"> <li>Information on the exercise opportunities available locally</li> <li>Identify exercise preferences: group or alone</li> <li>Provide opportunities for exercise out with the home environment</li> <li>Support on dealing with expectations of exercise</li> </ul>
Lack of information on what to do and how to do it	<ul style="list-style-type: none"> <li>Individualised advice on the FITT principles (Frequency, intensity, type and time) for exercise</li> <li>Individualised advice on managing symptoms during and after exercise</li> <li>Person with knowledge of MS providing this advice</li> </ul>
<b>Time</b>	
Lack of time sometimes	<ul style="list-style-type: none"> <li>Advice on how to make exercise a priority –time management strategies and dealing with competing priorities</li> <li>Provide information on the importance of exercise for people with MS</li> </ul>

# Future Research

- Future research needs to explore the barriers and solutions to exercise:
  - For younger people with MS
  - For people with MS who are working
  - For women with MS who have children
- Future research needs to:
  - Consider the stage of change category to identify barriers and solutions for each stage.
  - Scope out exercise opportunities and support
  - Include a brief cognitive assessment as a screening tool and separate out people with or without cognitive impairment.