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Investigating Adherence and Quality of Life in relation to Group Based Exercise among Individuals with Multiple Sclerosis: A Systematic Review

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INTRODUCTION

- **Exercise plays an important role in symptom management for persons with Multiple Sclerosis (pwMS) and can positively impact function, aerobic capacity, strength, mood, cognition, quality of life, and reduce fatigue (Latimer-Cheung et al. 2013).**
- **Fatigue and low self-efficacy present as barriers to exercise (Stroud, Minahan and Sabapathy 2009).**
- **Physical activity has been shown to improve Quality of Life (QOL) among pwMS, (Motl et al. 2009).**
- **Group exercise has been proven to be beneficial increasing adherence and health state, while decreasing pain and depression scores (Crane, Hoffman, and Reyes 2015).**

AIMS AND OBJECTIVES

Determine the effects of group-based exercise on adherence and quality of life (including fatigue) among individuals with Multiple Sclerosis of all ages and ability levels.

Identify the particular components of group-based exercise leading to positive or negative outcomes in quality of life and adherence.

METHOD

- **A list of databases were systematically searched as per details in *Figure 1*. Studies published between January 2006 and September 2016 were sought.**
- **All group based intervention sessions, were examined including aquatic or land based sessions. Group based sessions could also include an educational or support component.**
- **Two independent reviewers conducted Quality Assessment and followed the CASP checklist.**

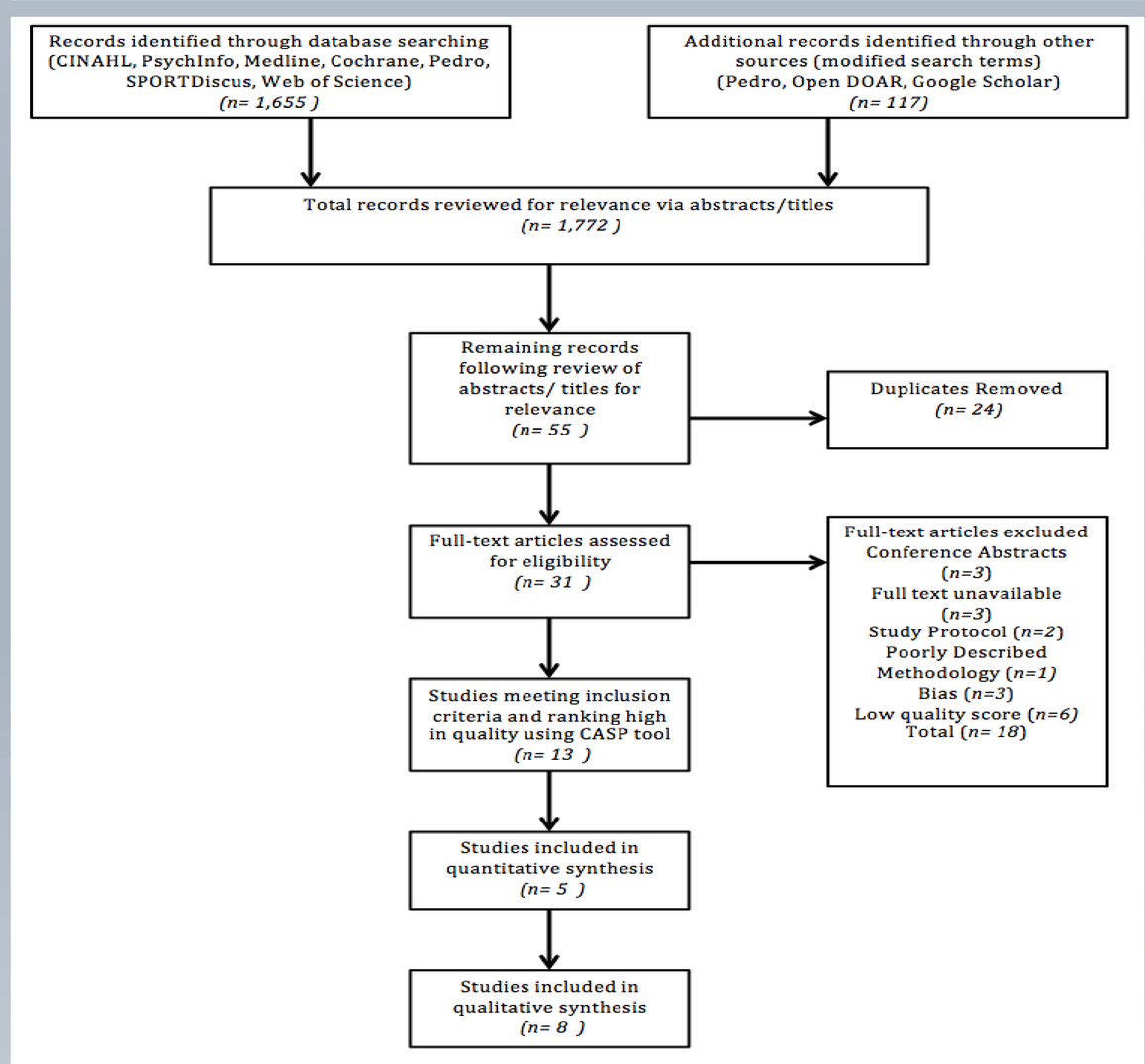

Figure 1: **Flowchart of Systematic Search and Review process**

RESULTS

- 31 Full text articles were assessed for eligibility using CASP of which 13 were included.
- 7 out of 8 Quantitative studies reported a significant improvement in QOL.
- All 5 Qualitative studies discussed factors of Group Exercise contributing to adherence.

- Group exercise of any form, with a knowledgeable instructor, was significantly effective in improving quality of life among participants of any ability level, due to social and motivational factors.
- Exercising among others with Multiple Sclerosis improved confidence and feelings of normality, improved fatigue and improved functional ability.
- Programmes lasting eight to twelve weeks were most effective in improving fatigue, a large factor contributing to quality of life.
- Exercise involving a combined programme with a strengthening component may be more effective for individuals with fewer mobility issues.
- Individual self-efficacy and positive attitude towards exercise are factors were found to be important to creating participant adherence, a finding in agreement with previous research.
- Adherence to exercise decreased following the conclusion of group exercise. This indicates the necessity for appropriate follow-up among participants, or the option to participate in blocks of group exercise.

CONCLUSIONS

Group exercise is an effective clinical option for improving quality of life among individuals with Multiple Sclerosis, and may improve exercise adherence during the course of the group. This is important in keeping with current clinical guidelines, which suggest health professionals encourage individuals with Multiple Sclerosis to remain physically active in the long-term.

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