



The Relationship Between Physical Activity, Fatigue, Mood, and Perceived Cognitive Impairment in Adults with Multiple Sclerosis

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Introduction

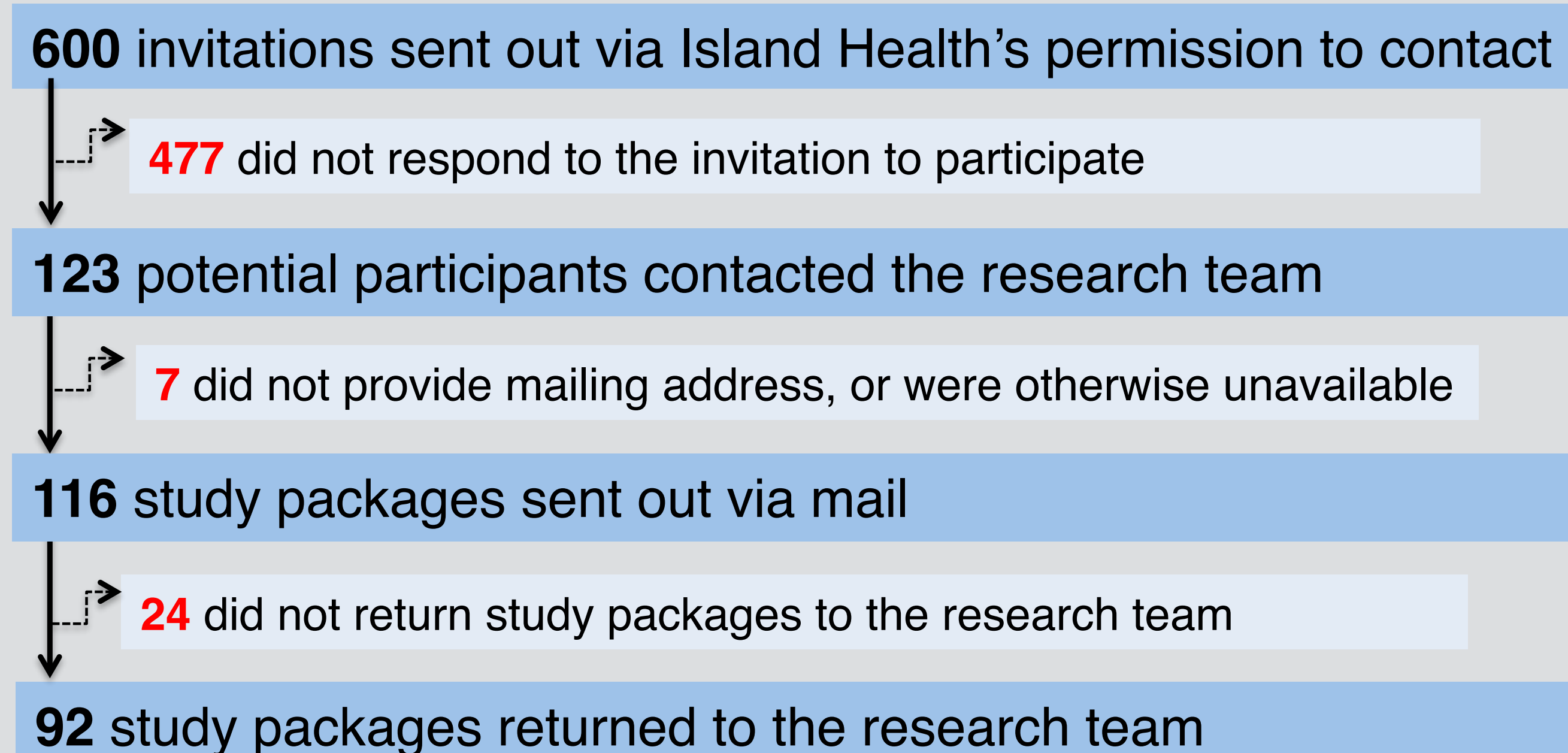
- Multiple Sclerosis (MS) is a chronic neurological disease typically diagnosed in young adulthood¹
- Most individuals require costly treatment for motor and sensory symptoms as well as fatigue, depression, and cognitive decline²
- Many continue to have debilitating MS symptoms and side effects from medication³
- There is a crucial need for low cost behavioural treatments that are effective in reducing MS symptoms
- Physical activity has shown promise in managing other neurological disorders and it has been hypothesized that physical activity may be neuroprotective^{4,5}

Objective

- To investigate the relationship between physical activity and MS symptoms of fatigue, depression, and perceived cognitive impairment

Methods

Recruitment



Measures

- Physical activity and MS symptoms were assessed using the following measures⁶⁻⁹:

Physical Activity	Fatigue	Mood	Cognition
Godin Leisure-Time Exercise Questionnaire (GLTEQ)	Modified Fatigue Impact Scale (MFIS)	Patient Health Questionnaire (PHQ-9)	Patient Deficit Questionnaire (PDQ)

Statistical Analyses

- Descriptive and correlational statistics were performed with R Studio
- Partial correlation coefficients were calculated to investigate the relationship between GLTEQ and MFIS, PHQ-9, and PDQ, controlling for age

Results

Table 1. Participant Demographics

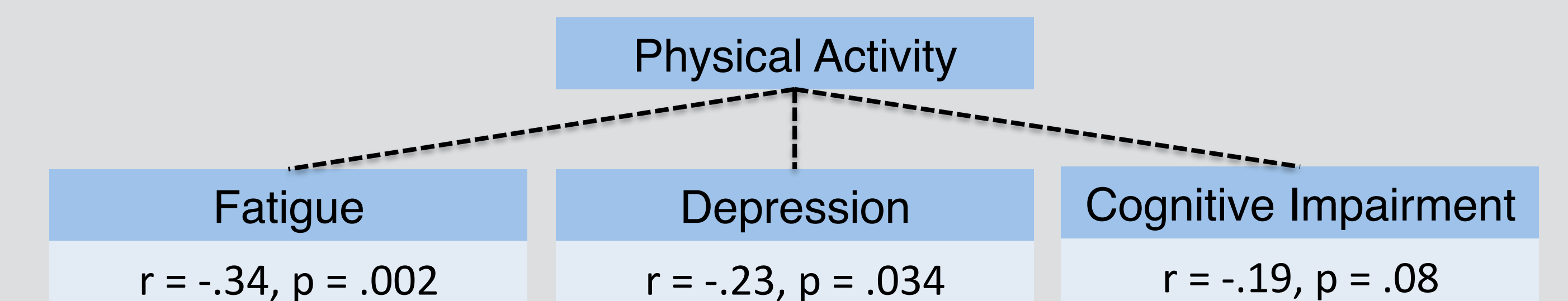
N	Age	Education	Females	MS Subtype				
				RRMS	SPMS	PPMS	PRMS	Unknown
86	56.45 ± 12.25	15.27 ± 3.17	68	58	17	6	1	4

RRMS: relapsing remitting MS, SPMS: secondary progressive MS, PPMS: primary progressive MS, PRMS: primary relapsing MS

Table 2. Descriptive Statistics for Measures

Measure	Mean Score	Median Score	Standard Deviation	Possible Range	Observed Range
GLTEQ	33.94	30	25.87	≥0	0-101
MFIS	38.28	41	18.19	0-84	1-78
PHQ-9	5.74	4	4.64	0-27	0-19
PDQ	26.57	26	15.93	0-80	0-67

- There was a significant negative relationship between reported physical activity and fatigue and depression scores, but not perceived cognitive impairment:



Conclusions

- Individuals with MS who reported more strenuous and/or frequent physical activity reported fewer symptoms of fatigue and depression
- Physical activity holds promise as an additional behavioural treatment to better manage MS symptoms

References

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