

Evaluation of a comprehensive rehabilitative intervention on quality of life, disease impact and symptomatic control in persons with Multiple Sclerosis

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Background

Persons with Multiple Sclerosis (PwMS) live with long term symptoms that cannot be fully addressed by pharmacological means. A comprehensive symptom management service for PwMS is considered important to provide holistic care. Routine collection and analysis of outcome measures in real world situations facilitates systematic evaluation, refinement and improvement of local services.

Objectives

To evaluate the efficacy of a comprehensive therapy intervention in the PwMS population. The interventions include

1. Group based fatigue management programme - Fatigue: Applying Cognitive behavioural and Energy effectiveness Techniques to life Style (FACETS).
2. Exercise Education in Multiple Sclerosis (EEMS)
3. Vestibular symptom management (VR) clinic

Methods and Materials

Patients attending Multiple Sclerosis (MS) multidisciplinary clinic were enrolled into FACETS, EEMS and VR interventions based on their symptomatology. Patients were considered with no restrictions to age, disease duration and disease subtype.

Quality of Life (QOL) and the impact of MS on daily life were evaluated across all 3 interventions using the abbreviated World Health Organisation- QOL tool (WHOQOL-BREF) and Multiple Sclerosis Impact Scale-29 (MSIS-29).

In addition symptom specific outcomes were evaluated for each intervention as follows:

FACETS:

- i. Neurological Fatigue Index-MS (NFI-MS)
- ii. MS-Fatigue Self Efficacy scale (MS-FSE)

EEMS:

- i. Exercise Efficacy Scale (EES)
- ii. Godin Leisure-Time Exercise Questionnaire

VR:

- i. Dizziness Handicap Inventory (DHI).

Outcomes were measured before and after intervention. In addition FACETS measured outcomes at 3 month follow up. Wilcoxon Signed rank test was used to analyse the outcomes. Statistical analysis was performed using SPSS 23.

SCALE	DOMAINS	VALUE CHANGE THAT DENOTES IMPROVEMENT IN OUTCOMES
1. WHO-QOL-BREF	4	Increase
2. MS-FSE	1	
3. EES	1	
4. GODIN SCALE	1	
1. MSIS-29	1	Decrease
2. NFI-MS	5	
3. DHI	3	

Table 1. Sample size and outcome measure completion rates for each intervention

	Pre intervention	Post intervention(%)	3 month follow up(%)
FACETS	139	121(87%)	88(63%)
EEMS	85	52(61%)	-
VR	76	32(42%)	-

Acknowledgements

Rebecca Flesher, Agnieszka Wilding and Emma Elwill
Long Term Conditions Therapy Team

Contact

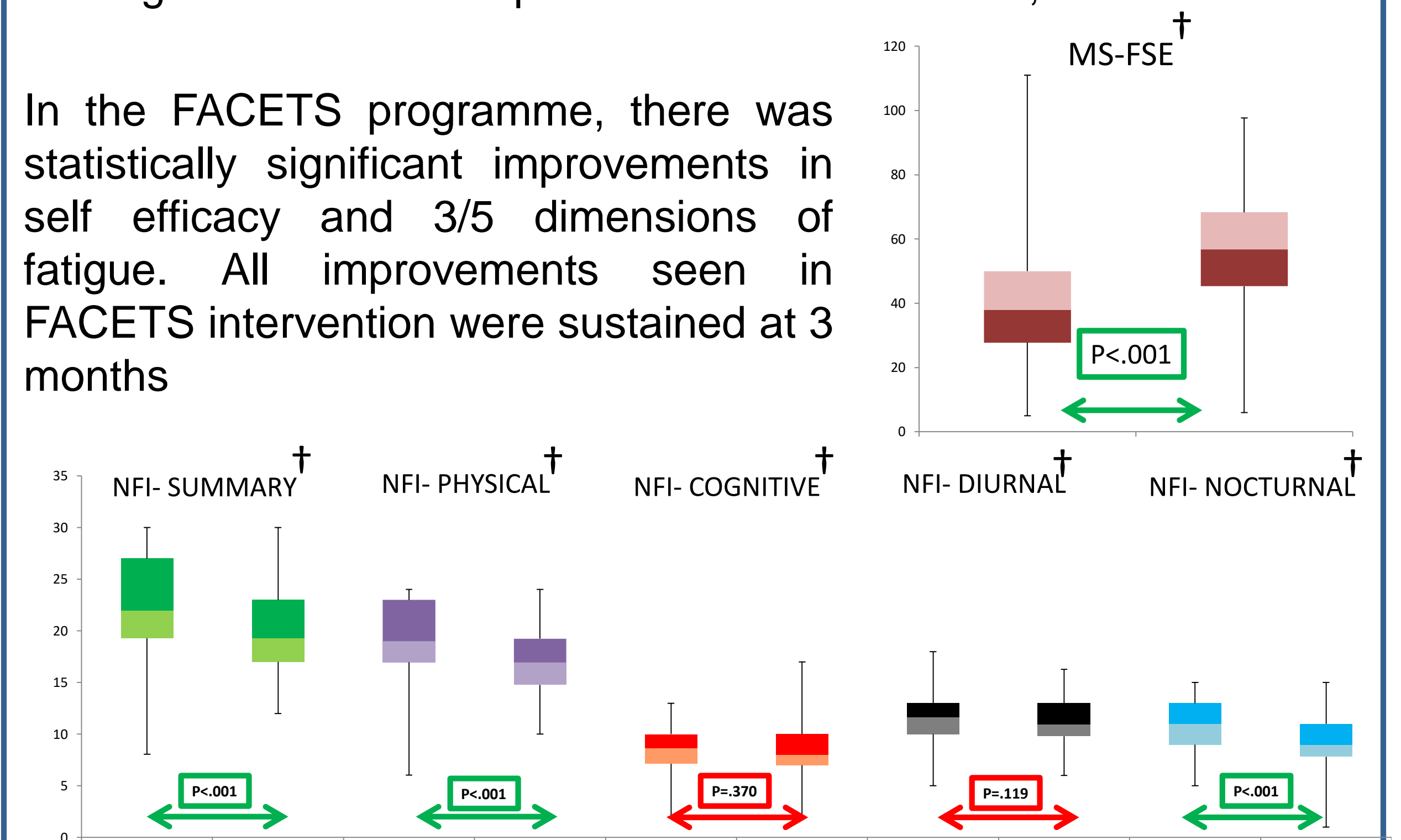
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Results

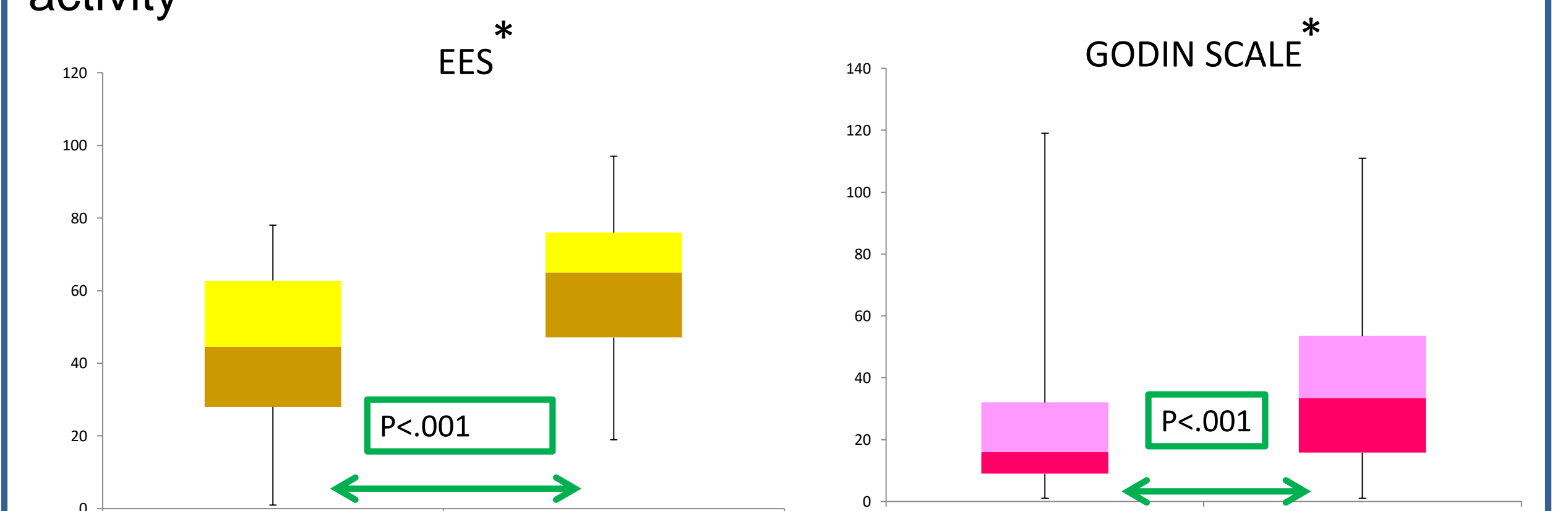
A total of 139, 85 and 76 patients attended the FACETS, EEMS programmes and VR clinic respectively (Table 1). All 3 interventions improved impact scores on the MSIS-29 (P value<.05). Statistically significant improvement was noted in 2 out of 4 domains of WHOQOL-BREF score with FACETS and EEMS intervention.

intervention	SCALE				
	WHO-QOL-Physical	WHO-QOL-Psychological	WHO-Social	WHO-Environment	MSIS-29
FACETS	<.001	.0023	.352	.724	<.001
EEMS	.048	.119	<.001	.216	.004
VR	.075	.233	.289	.152	.046

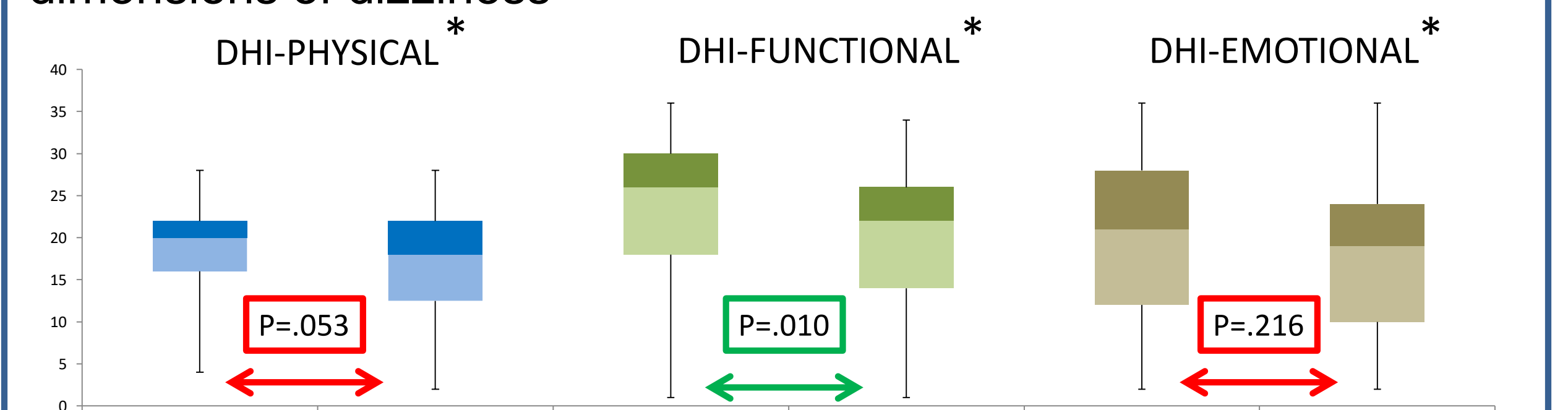
Among the intervention specific outcome measures;



In the EEMS programme, there were statistically significant improvement in both Exercise efficacy and leisure time physical activity



In the VR clinic, there was statistically significant improvement in 1/3 dimensions of dizziness



† Graph comparing values before and 3 month after intervention

* Graph comparing values before and immediately after intervention

Discussion

FACETS, EEMS and VR interventions lead to statistically significant improvements in symptom control, QoL and Impact across a broad range of MS patients.

Further work is required to investigate and optimise patient selection, sequencing of treatments and duration of effect

Conclusions

A comprehensive symptom management service for PwMS is effective in improving aspects of the QOL, disease impact and symptom control for PwMS. Continued data collection and analysis in a real world population provides a powerful tool to develop and evaluate new interventions and to optimise patient selection and sequencing of symptom management interventions

References

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