



Pain Catastrophizing as a Predictor of Physical Performance among Older Adults with and without Fibromyalgia

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FIBROMYALGIA

- A chronic disorder characterized by widespread musculoskeletal pain, fatigue, and tenderness in localized areas

PAIN CATASTOPHIZING

- Pain Catastrophizing is defined by three characteristics
 - magnify the threat value of pain
 - feel helpless in the context of pain
 - inability to inhibit pain-related thoughts surrounding a painful event

PURPOSE

- Investigate whether pain catastrophizing predicts physical performance in people 50 years and older with and without Fibromyalgia

HYPOTHESIS

- Score of pain catastrophizing would predict physical performance scores

DEMOGRAPHICS

	FM	Non-FM
N	38	33
Female	36 (94.7%)	19 (57.6%)
Mean Age	64.03 (SD= 6.75)	71.30 (SD= 9.11)
Mean BMI	29.78 (SD= 7.39)	28.71 (SD= 6.61)

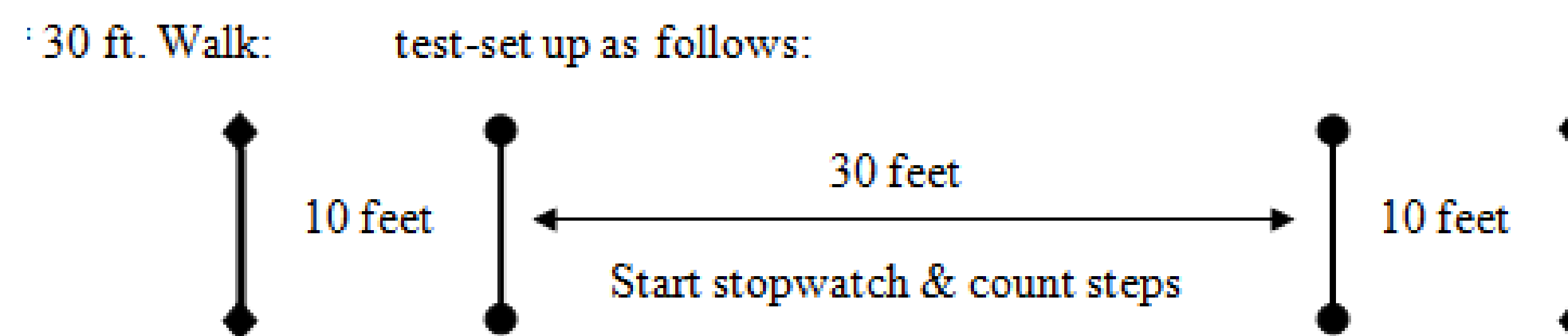
METHOD

- Participants came in for 2-3 hours on one day and completed questionnaires and a battery of physical and cognitive tests. The assessments below are relevant to this analysis.

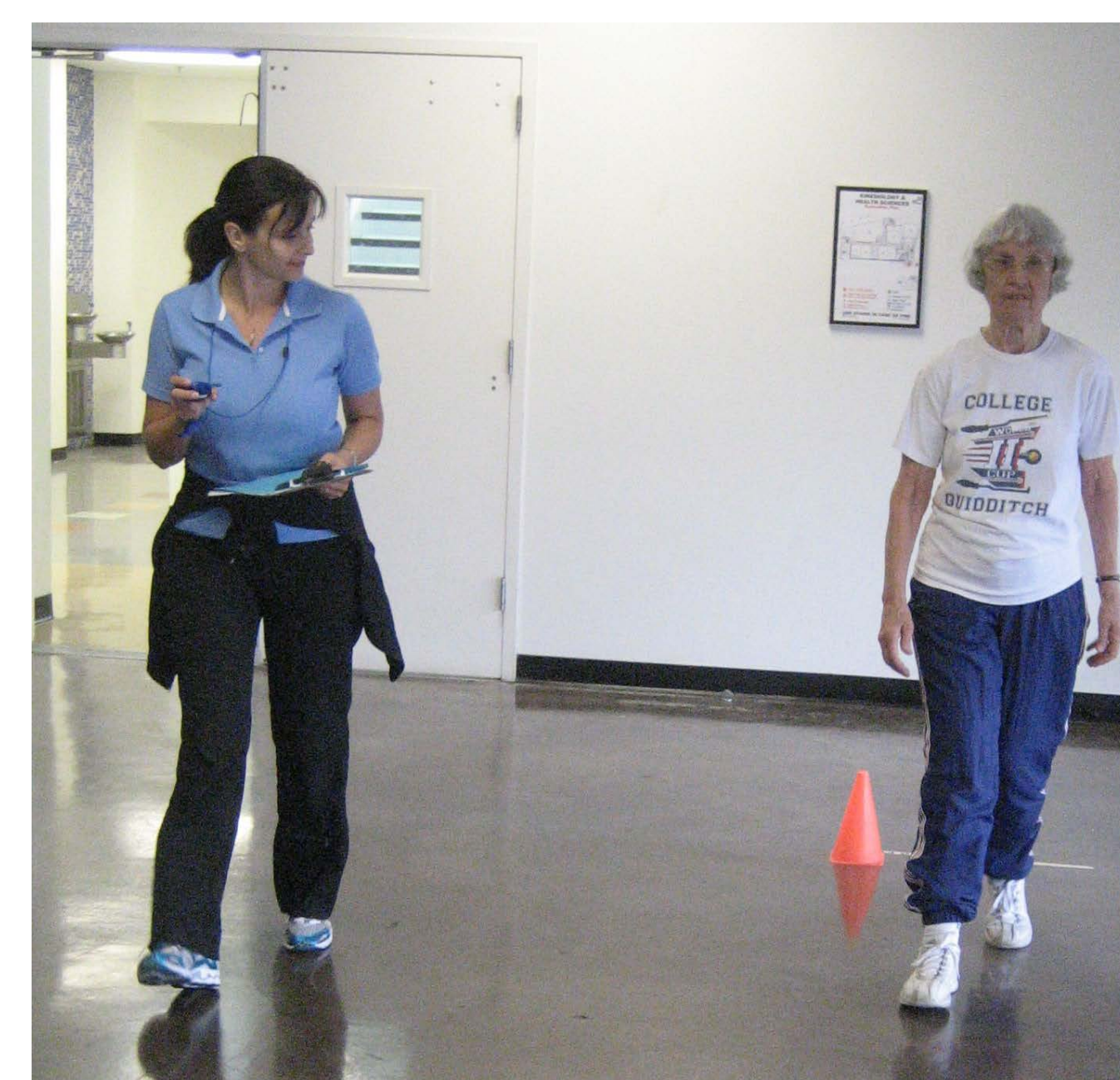


Picture 1 (Left): Illustrates a component of the Fullerton Advanced Balance Scale. Picture 2 (Right): Illustration of the 30 second chair stand.

Assessments	Measures
FAB- Fullerton Advanced Balance Scale	Multidimensional balance
30 sec. Chair stand	Lower body strength
8ft up and go	Physical mobility
30 ft. walk (preferred speed)	Normal gait velocity
30 ft. walk (fast speed)	Fast gait velocity
6 minute walk	Aerobic endurance
Pain Catastrophizing Scale (PCS)	13 questions assessing the catastrophizing of pain <ul style="list-style-type: none"> Higher scores indicated higher levels of pain catastrophizing
Composite Physical Functional Scale (CPF)	12 questions assessing a wide range of physical function <ul style="list-style-type: none"> Lower composite scores indicated greater physical functioning



Picture 3: Illustrates the set up for the 30ft. walk



RESULTS

- Hierarchical regression analyses controlling for age, BMI, and Fibromyalgia status were conducted
- Pain catastrophizing predicted preferred velocity and composite physical function
- People with less pain catastrophizing had higher preferred velocity

Table 1. Regression Results for Age, Fibromyalgia Status, BMI, and Pain Catastrophizing Total Predicting FAB, 30 Second Chair Stand, 8 Minute Up and Go, 6 Minute Walk, 30 Foot Walk (Fast and Preferred), and Composite Physical Function.

		Step 1			Step 2
		BMI	FM Status	Age	PCS Total
FAB	β	-0.39***	-0.18	-0.58***	-0.15
	ΔR^2		0.41***		0.02
30 Sec Chair Stand	β	-0.12	-0.25 ⁺	-0.18	-0.04
	ΔR^2		0.08		0.00
8ft Up & Go	β	0.25*	0.10	0.41**	0.14
	ΔR^2		0.18**		0.02
6 Minute Walk	β	-0.38***	-0.23	-0.45***	-0.12
	ΔR^2		0.35***		0.01
30ft. Walk (Fast)	β	-0.28*	-0.17	-0.29*	-0.03
	ΔR^2		0.16*		0.00
30ft. Walk (Preferred)	β	-0.28*	0.12	-0.26*	-0.31*
	ΔR^2		0.12*		0.08*
CPF	β	-0.29**	-0.38***	-0.06	-0.31**
	ΔR^2		0.33***		0.08**

Note: Coefficients are from final 2-step model; ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CONCLUSION

- Preferred velocity did not have complex instructions—may have enabled participants to ruminate about their pain
- Other physical assessments not performed on a daily basis-- participants may have been distracted by the instructions to perform to the best of their ability
- Results suggest that people with chronic pain work through pain catastrophizing by focusing on other challenging tasks or skills

FUTURE RESEARCH

- Focus on levels of difficulty of instructions for challenging tasks
 - May act as distraction for people with chronic pain
 - See how pain catastrophizing is altered as a result of the complexity of the instructions
- Should see if reducing pain catastrophizing scores will reduce levels of depression and anxiety in people with fibromyalgia