



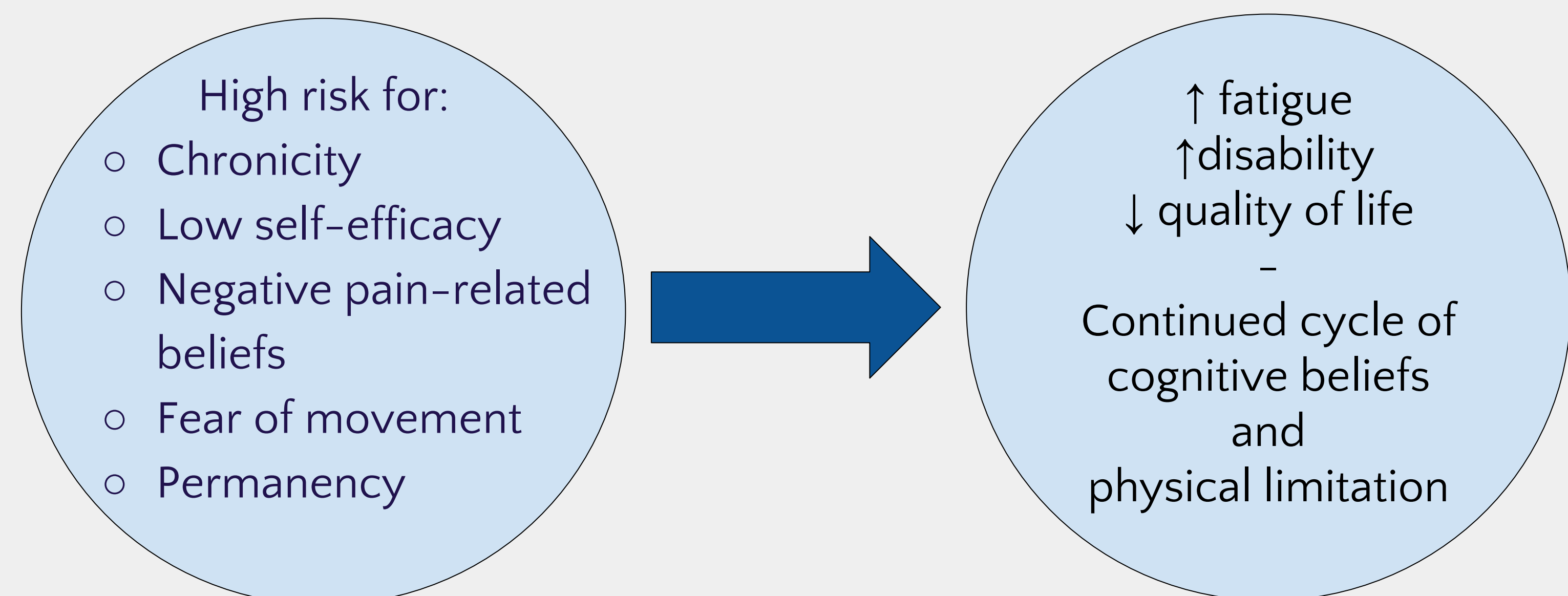
# Effect of a One-Time Cognitive Functional Therapy Intervention in Patients with Moderate to High Risk of Chronic Low Back Pain: Case Series Study

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## Background

*Can an early confrontation of patients' fear and beliefs about low back pain lead to better outcomes?*

### Fear Avoidance Model:



Hypothesis: A one-time treatment geared toward confronting fear and negative pain beliefs will result in reduced pain interference and fatigue, and increased physical function and self-efficacy, as well as guide patients from fear avoidance behavior to active life participation.

## Methods

- 20 participants
- Newberg community
- ages 18-65
- moderate to high risk (STarTBack score)

Each participant received:  
Individualized **one-time CFT intervention** by a physical therapist.

**Outcome Measures** (taken prior to and 7-14 days after treatment [except for PASS]):

**STarTBack Tool**  
9 item questionnaire that stratified patients into low, medium, and high risk for chronic lower back pain based on psychological factors.

- 3 steps of CFT:**
1. Making Sense of Pain
  2. Exposure with Control
  3. Lifestyle Modifications

**Patient Reported Outcome Information System (PROMIS)**  
CAT PROMIS physical function, pain interference, fatigue, and self efficacy scales were used to assess patients before and after the guided behavioral experiment. T-scores were recorded, with a score of 50 being the average of the US population.

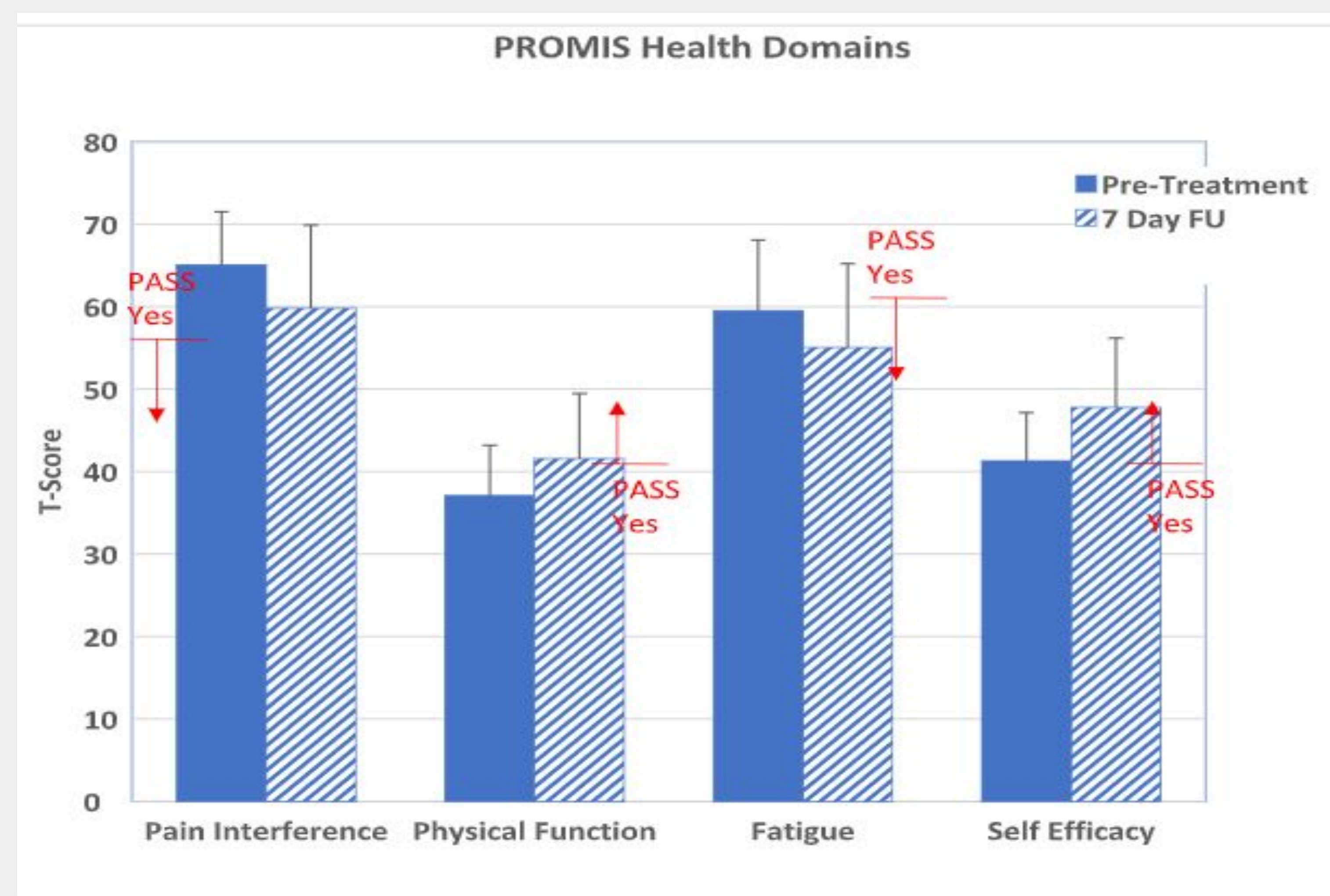
### Fear of Daily Activities Questionnaire (FADO)

Ten item questionnaire rating the fear of performing 10 daily activities as well as specific activities specified by patient, each activity is rated on a 0-10 scale.

### Patient Acceptable Symptom State (PASS)

Singular question regarding patient satisfaction with their ability to perform daily and functional tasks. Answered yes or no.

## Results



All PROMIS Health demands are significantly improved posttreatment. The PASS Yes thresholds for each scale are identified.

### StartBack Tool risk classification pretreatment and posttreatment.

		Pre-Treatment		
		Moderate Risk	High Risk	Row Total
Post-Treatment	Low Risk	7	2	9
		35.0%	10.0%	45.0%
	Moderate Risk	5	5	10
		25.0%	25.0%	50.0%
High Risk	1	0	1	
		5.0%	0.0%	5.0%
Column Total		13	7	20
		65.0%	35.0%	100.0%

Average STarT Back tool scores dropped from 6.15 (1.5 SD) to 4.3 (2.36 SD) pre- to post-treatment. 13 participants at moderate risk prior to treatment: 7 became low risk, 5 remained moderate risk, and 1 became high risk following treatment. 7 participants at high risk prior to treatment: all 7 were successfully moved from that category by one-week follow-up (5 moderate, 2 low).

*Can a physical therapist accurately predict whether one CFT treatment will be successful?*

## Physical Therapist Judgement of Success

### Agreement: PT judgment of success vs actual change in STarT Back scores

		Change in STarTBack Classification			Total	
		.00	1.00	2.00		
GroupPTJudge	NO	Count	3	3	0	6
	% of Total		15.0%	15.0%	0.0%	30.0%
YES	Count	4	8	2	14	
	% of Total		20.0%	40.0%	10.0%	70.0%
Total	Count	7	11	2	20	
% of Total		35.0%	55.0%	10.0%	100.0%	

Chi-square test  $X^2=1.45$ , 0.485. GroupPTJudge Yes=anticipated positive outcome.

### Agreement: PT judgment of success vs highest level of confrontation achieved

		Highest Level of Fear Challenged?		Total	
		YES	NO		
GroupPTJudge	NO	Count	1	5	6
	% of Total		5.0%	25.0%	30.0%
YES	Count	12	2	14	
	% of Total	60.0%	10.0%	70.0%	
Total	Count	13	7	20	
% of Total		65.0%	35.0%	100.0%	

Chi-square test  $X^2=8.8$ , 0.003. GroupPTJudge Yes=anticipated positive outcome.

## Discussion

In an attempt to maximize the benefit of each patient's initial interaction the highest degree of confrontation that a patient could tolerate was utilized. *Assumption:* if a confrontation failed = patient's beliefs or fears of movement were too ingrained to yield success in one visit.



Considerations regarding variance in PT approach, subjectiveness of confrontational method, and level of confrontation should be made.

*This study can guide future research and shift the chronic pain framework, changing how patients at risk of developing chronic pain are treated.*

## Conclusion

1. Patients scoring moderate to high on the **STarTBack Tool** are responsive to a **one-time individualized cognitive functional therapy**.
2. This one-time CFT treatment should be aimed at **fear of movements** and **negative pain-related beliefs** to reduce fatigue and pain interference and improve physical function and self efficacy.
3. Physical therapists are not able to accurately predict the success of the intervention based on the level of confrontation achieved.