

# THE ROLE OF ATTENTION IN FUNCTIONAL MOVEMENT DISORDERS

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## Background

The most characteristic, yet intriguing feature of functional movement disorders is that they typically manifest with attention to the affected limb and improve or even disappear with distraction<sup>1</sup>.

In order to improve treatment approaches, our aim is to elucidate which aspect of attention contributes to symptom generation.

## Methods & Results

3 groups: 20 functional tremor patients, 20 organic action tremor controls, 20 healthy controls

### Attentional manipulations

Identical sliding movements from a start to a target position on a touchpad are performed, while the subject's attentional focus is manipulated onto different aspects of the movement:

Red: attentional focus leading to **worsening** of functional tremor, green to **improvement**

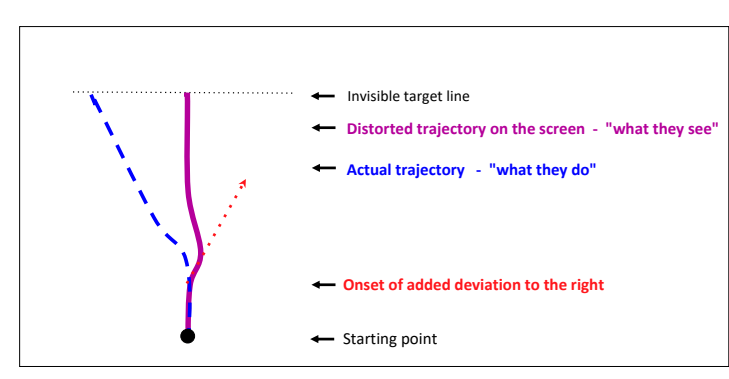
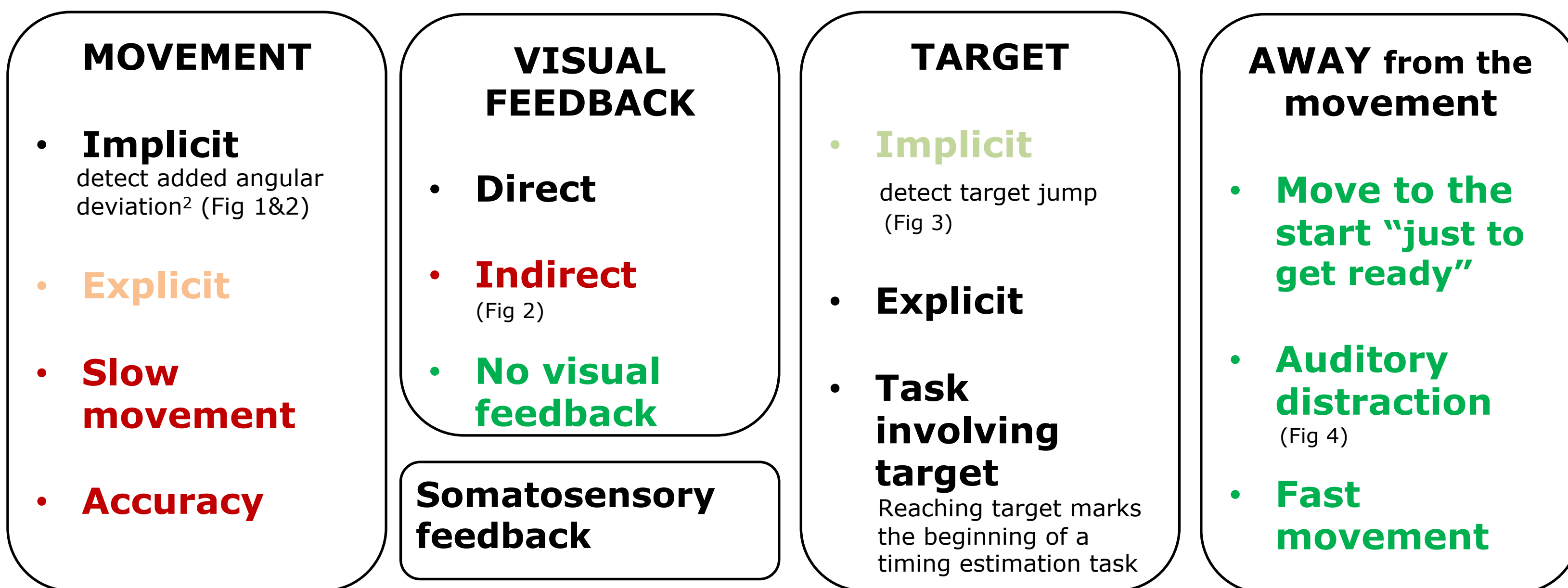


Fig. 1: Movement feedback distorted by an added angular deviation



Fig. 2: Hand hidden by screen displaying start, target & finger position

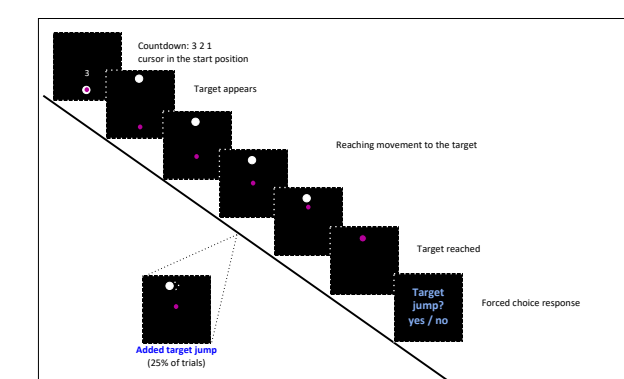


Fig. 3: "Jump / no jump", implicit attentional manipulation onto target

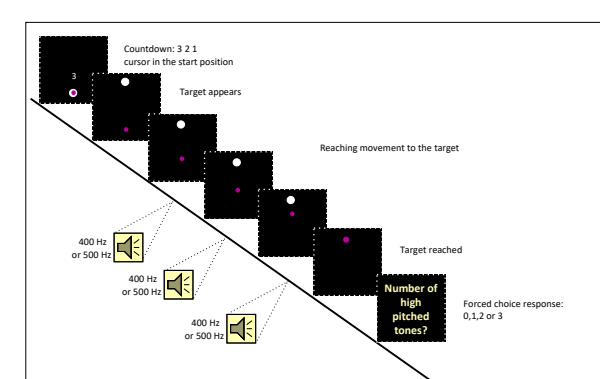


Fig. 4: Auditory distraction task

### Self-report

#### free-text

#### Aggravating factors



#### Alleviating factors



Functional tremor

Organic tremor

### Masters' movement specific reinvestment scale<sup>3</sup>

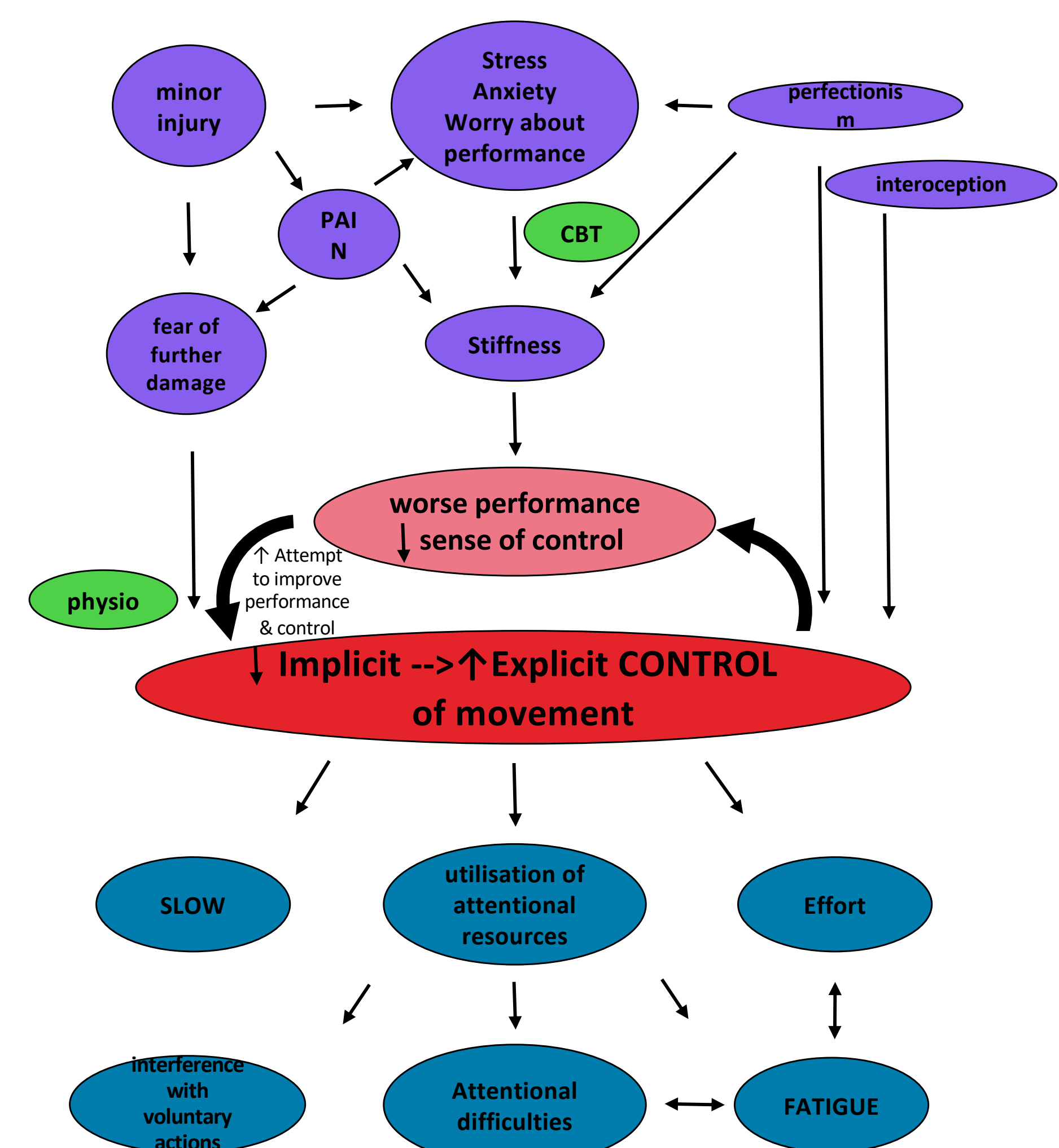
Ten-item questionnaire testing a person's tendency to conscious monitoring of their movements  
Functional & organic tremor similarly high scores compared to healthy controls

## Discussion

### Dos and don'ts for functional tremor



### Model of symptom generation & reinforcement



### References

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- Slachevsky A, et al. J Cogn Neurosci 2001; 13:332-40.
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