

# Misokinesia: a social sensitivity towards fidgeting?

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## Why study misokinesia?

- A strong emotional response to the sight of someone else's small and repetitive movements
- Little-known visual counterpart to the much-researched **misophonia**
  - selective sensitivity to specific sounds accompanied by emotional distress
- No published studies that have investigated participants with misokinesia on a basic behaviour and cognitive level

## Study #1: Does Misokinesia exist?

N: 2751

1. “Do you ever have strong negative feelings, thoughts, or physical reactions when seeing or viewing other peoples' fidgeting or repetitive movements (e.g., seeing someone's foot shaking, fingers tapping, or gum chewing)? ”
  - 38.28% responded yes to our misokinesia question
2. “Do you ever have strong negative feelings, thoughts, or physical reactions to specific or repetitive sounds, such as those from the mouth (e.g., hearing someone's eating, slurping, chewing, whispering, smacking, gum popping etc.) or other body parts (e.g., hearing someone's finger snapping, joint cracking, or foot tapping)?”
  - 51.11% responded yes to our misophonia questions

With more than one-third of the participants reporting having experienced symptomology, we established that misokinesia is prevalent in student population.

## Study #2, Experiment 1: How does misokinesia influence visual detection?

- Participants responded whenever they saw a target stimulus of the sine grating appear on the screen, by button press with their right index finger.
- Participants completed the Misokinesia Assessment Questionnaire, which appraised various negative thoughts and feelings about misokinesia.

• N = 669

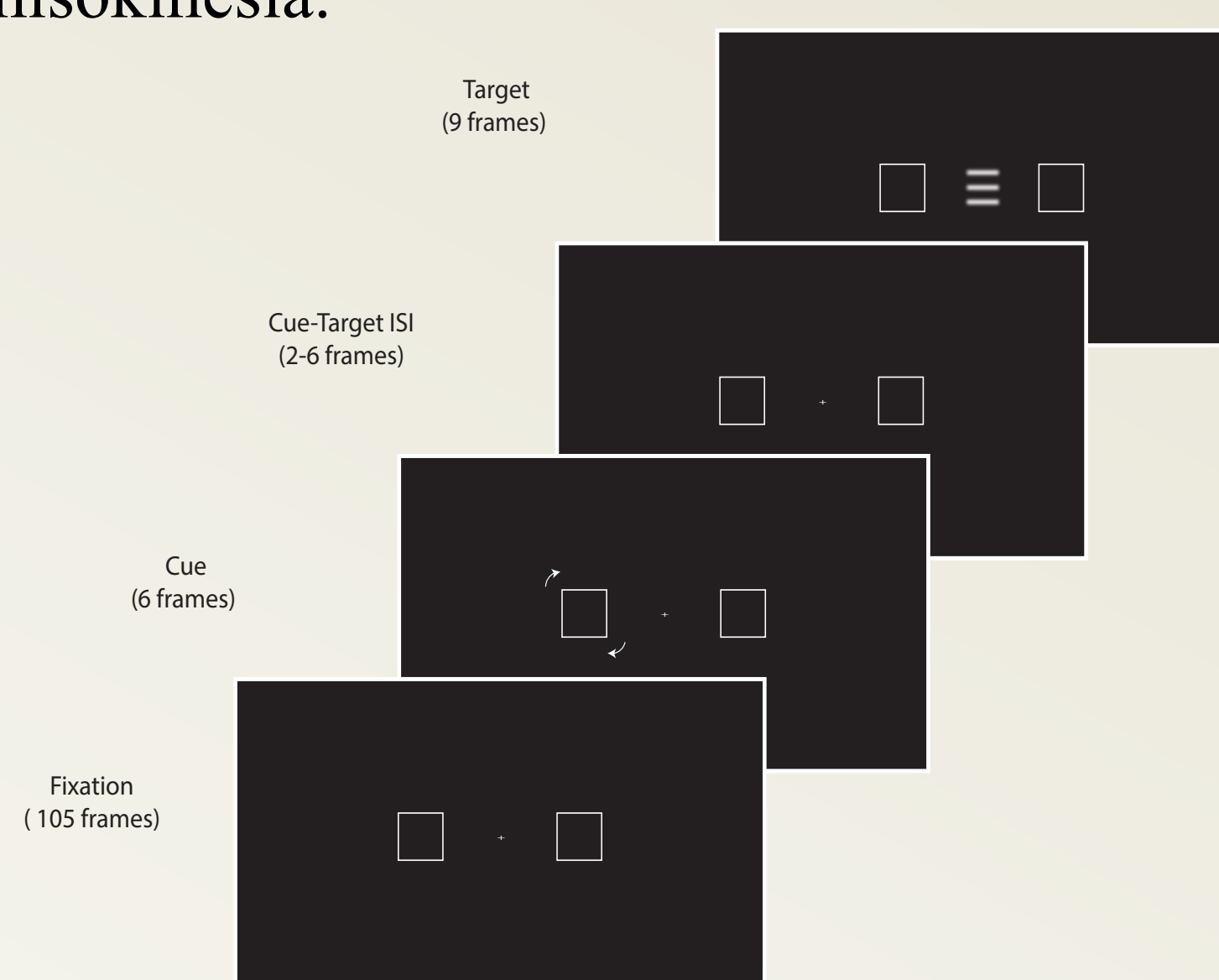


Figure 1. Task paradigm showing timing and sequence of stimuli

- Reaction time on distractor-cued trials was significantly faster compared to un-cued trials ( $p < .001$ ).
  - No group differences for misokinesia ( $p = .89$ ), and no interaction effect of cue x misokinesia group on reaction time ( $p = .36$ ).
- $d'$  on distractor-cued trials was significantly higher relative to un-cued trials ( $p < .001$ ).
  - No group differences for misokinesia ( $p = .33$ ), and no interaction effect of cue x misokinesia group on reaction time ( $p = .99$ ).

Experiment 1 failed to demonstrate an influence of misokinesia on detection in a low perceptual load task.

## Study #2 Experiment 2: How does misokinesia influence classic cueing effects?

- Participants responded whenever they saw a target stimulus of the sine grating appear on the screen, by button press with their right index finger.
- Participants completed the Misokinesia Assessment Questionnaire
- N = 188

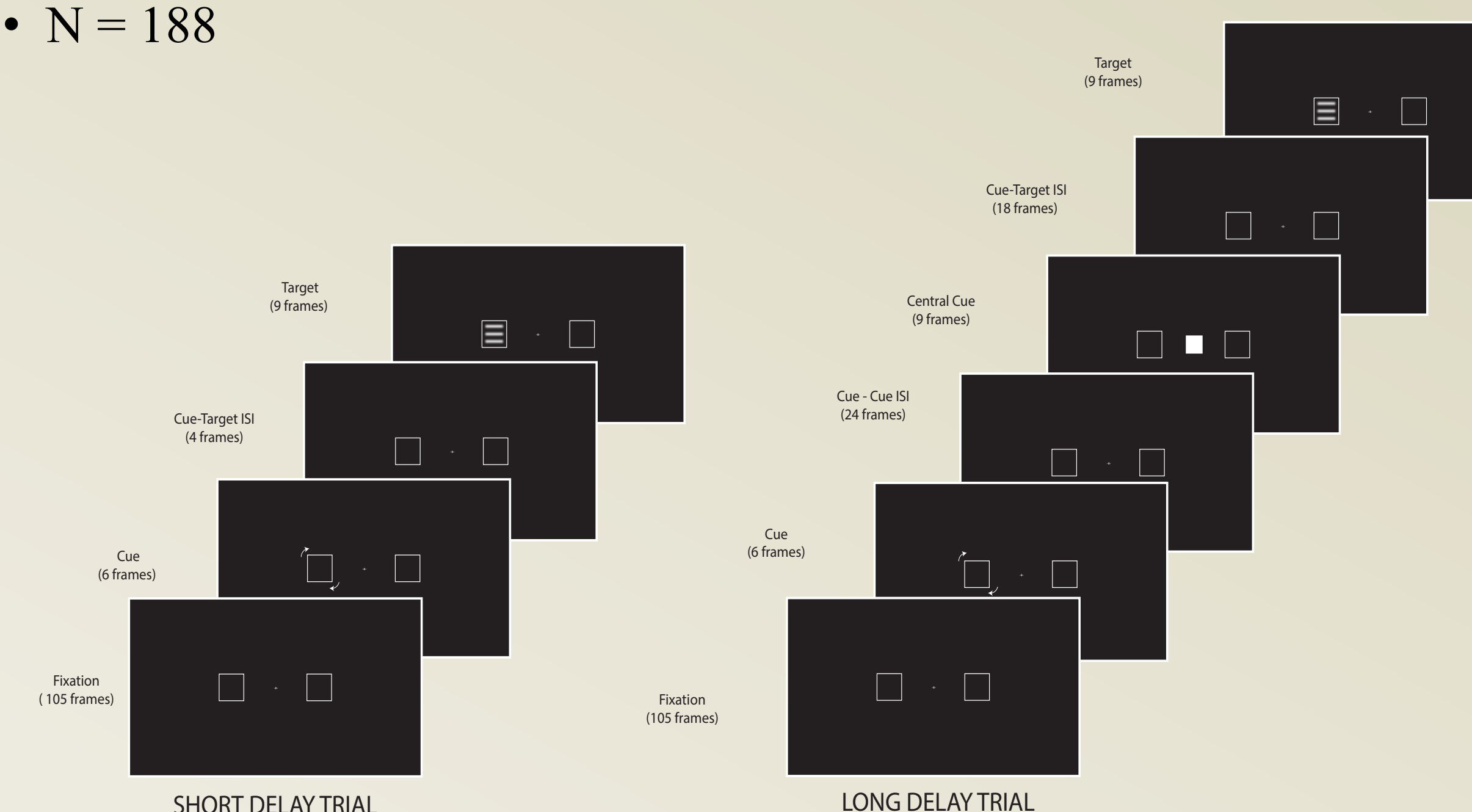


Figure 2. Task paradigm showing timing and sequence of stimuli

- Participants are slower on distractor-cued trials compared to un-cued trials ( $p < .001$ ).
- Participants were significantly faster in the long SOA condition compared to the short SOA condition ( $p < .001$ ).
  - In the short SOA condition, participants were significantly slower on distractor-cued trials compared to un-cued trials ( $p < 0.001$ ).
  - In the long SOA condition, participants were significantly faster on distractor-cued trials compared to un-cued trials ( $p < 0.001$ ).

Experiment 2 failed to demonstrate an influence of misokinesia on the classic cueing effects (IOR, facilitation).

## Study #2 Experiment 3: How does misokinesia influence classic cueing effects?

- Participants responded whenever they saw a target stimulus of the sine grating appear on the screen, by button press with their right index finger.
- Participants completed the Misokinesia Assessment Questionnaire
- N = 489

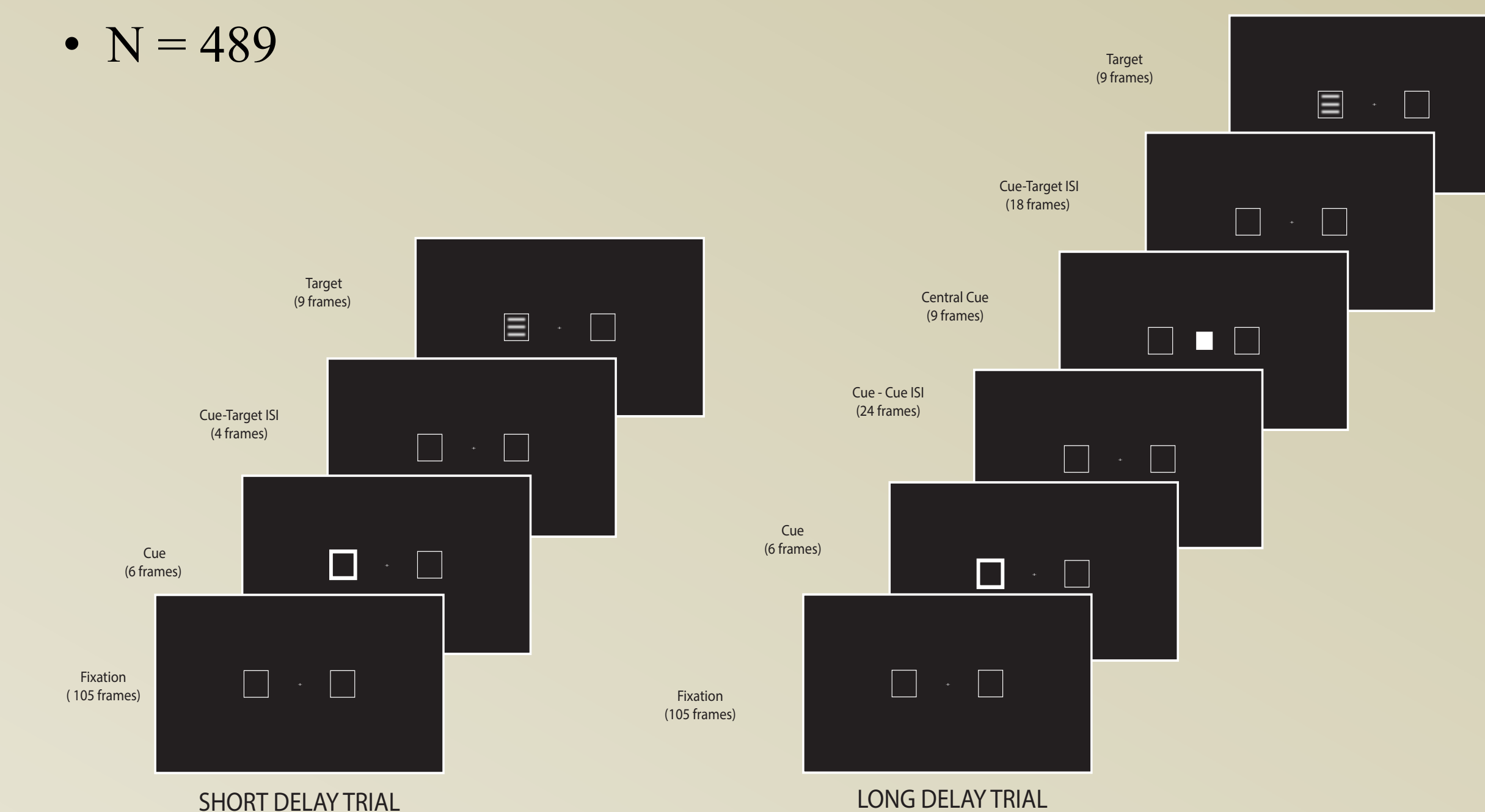


Figure 3. Task paradigm showing timing and sequence of stimuli

- Participants are on average faster on un-cued trials compared to cued trials ( $p < .001$ ).
- Participants are significantly faster in the long SOA condition compared to the short SOA condition ( $p < 0.001$ ).
  - In the short SOA condition, reaction times were significantly faster to un-cued trials compared to cued trials ( $p < 0.001$ ).
  - In the long SOA condition, reaction times were significantly faster to cued trials compared to un-cued trials ( $p < 0.001$ ).

Experiment 3 failed to demonstrate an influence of misokinesia on the classic cueing effects (IOR, facilitation).

Although our results did not show attentional effects for participants with misokinesia, the stimuli used in our study may not be a valid proxy for human fidgeting. Further research is needed to explore our null results and whether attention in misokinesia may be selective for actual human movement.