

# Trait Mindfulness Serves as Protective Factor Against Depressive Symptoms

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## Abstract

Deficits in working memory have been suggested to be predictors of depression. Those prone to depression have a difficult time both disregarding irrelevant negative material and keeping relevant material in mind. Mindfulness-based cognitive therapies have been shown to be effective in preventing relapse of depression. In this study, participants completed measures of anxiety, depression and mindfulness and also completed a working memory task. Results showed that a high level of trait mindfulness can serve as a protective factor against depression even in individuals with low filtering efficiency and working memory capacity.

## Introduction

Depression is associated with difficulty in ignoring irrelevant negative material (Joormann, Levens & Gotlib, 2011). Inability to ignore irrelevant negative material is associated with working memory capacity deficits in depression (Owens, Koster & Derakshan, 2013). Individuals with both low working memory capacity and low filtering efficiency report more depressive symptoms than those with better working memory (Stout & Rokke, 2010). Since we know that working memory difficulties can be predictive of mood disorders, it is important to consider what may protect individuals from developing such disorders. Previous research shows that mindfulness can be a protector against negative emotional health outcomes because it serves as a buffer against stressful situations and has a positive influence on attentional control (Branstrom, Duncan & Moskowitz, 2011; Radford et al., 2014). In the present study, participants completed a change detection task under emotionally challenging conditions. It was hypothesized that a high level of trait mindfulness would interact with working memory to predict fewer depressive symptoms.

## Methods

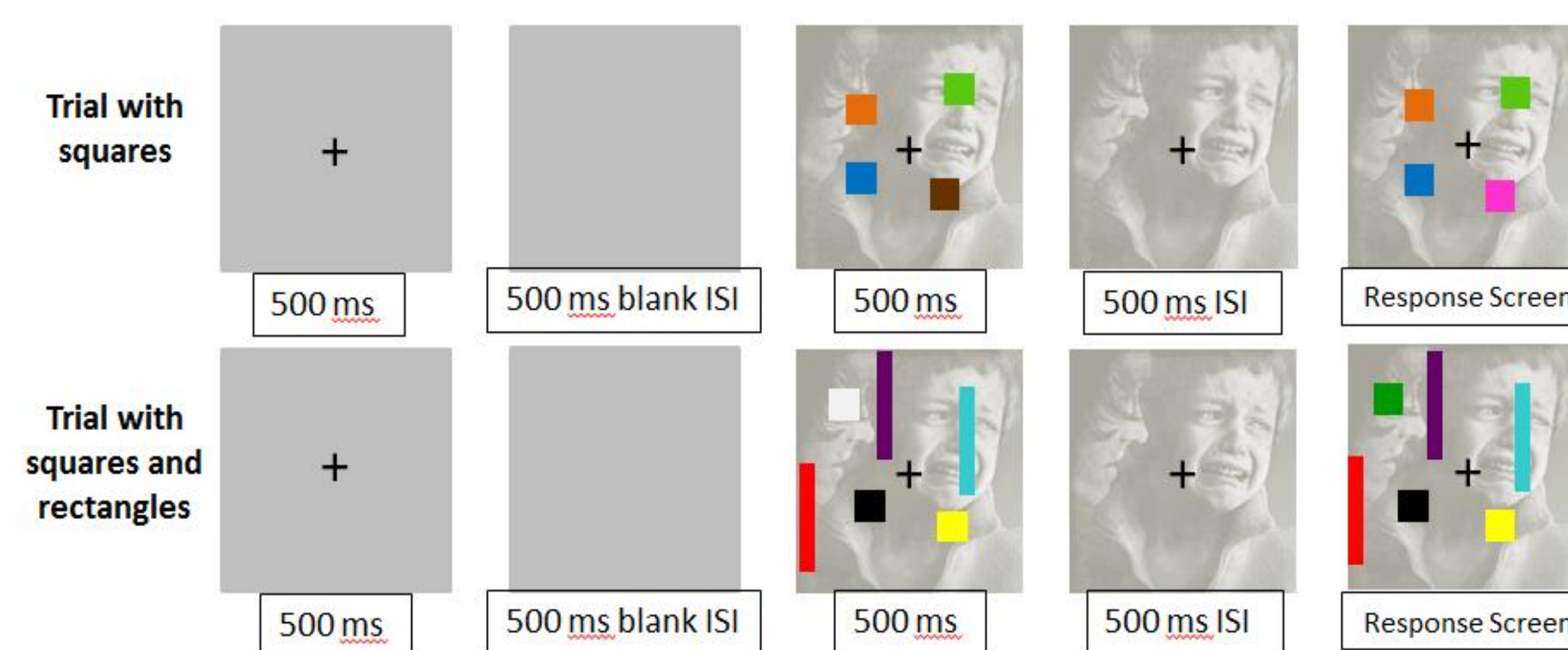
### Participants

Fifty-six NDSU undergraduates (23 female) participated in exchange for course credit.

### Procedure

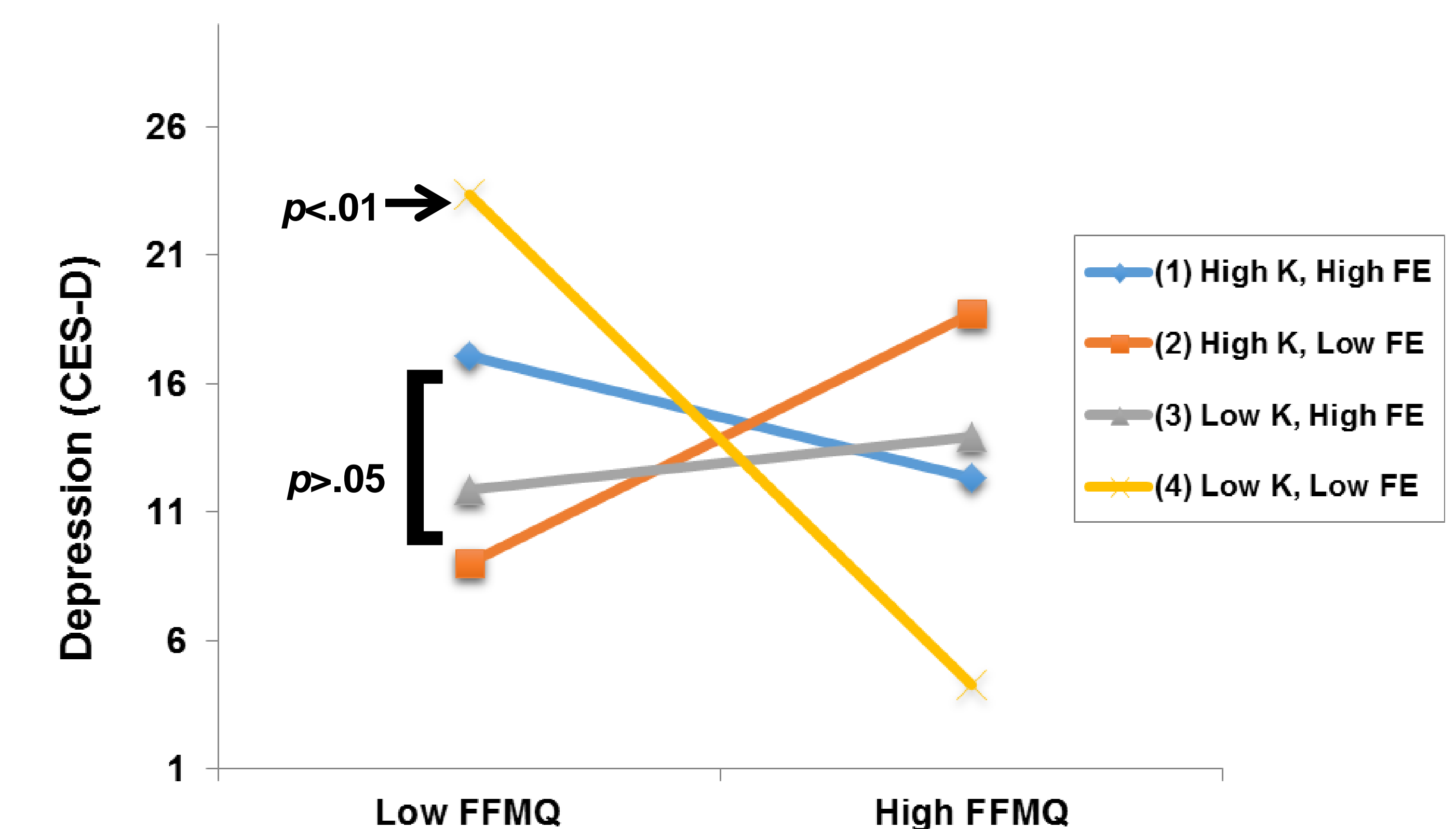
Participants completed several individual difference measures such as the State-Trait Inventory for Cognitive and Somatic Anxiety-State Version (STICSA-S), the Center for Epidemiological Studies Depression Scale (CES-D), and the Five Facet Mindfulness Questionnaire (FFMQ). In addition, all participants completed a computerized change detection task as a measure of working memory. The change detection task was presented over diffused pictures with sad content. Some trials included only squares while others included rectangles and squares. Participants were told to ignore rectangles.

### Change Detection Task:



## Results

A linear regression was conducted in which CES-D scores were predicted from FFMQ scores, filtering efficiency (FE), working memory capacity (K), and their interactions while controlling for STICSA-S scores. All predictor variables were centered. The overall model was significant ( $R^2=.628$ ,  $F(8,55)=9.921$ ,  $p<.05$ ) and the interaction of mindfulness, working memory capacity and filtering efficiency ( $\beta=-.409$ ,  $t=-2.793$ ,  $p<.01$ ) significantly predicted depression. A simple slopes analysis revealed that if a participant was able to efficiently ignore distractors (high FE), then mindfulness did not have any additional value. However, if a participant had low filtering efficiency, mindfulness had a significant effect. High mindfulness coupled with low working memory capacity and low filtering efficiency predicted the lowest level of depression ( $p<.01$ ).



## Conclusions

- Combination of low FE and low K has both the best and worst possible outcomes that depend on the level of trait mindfulness.
- It could be that individuals high in mindfulness do not experience emotional reactivity in the same way those who are low in mindfulness do.
- Perhaps better emotional control helps to supplement whatever attentional control they have when coping with negative events.

### References

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