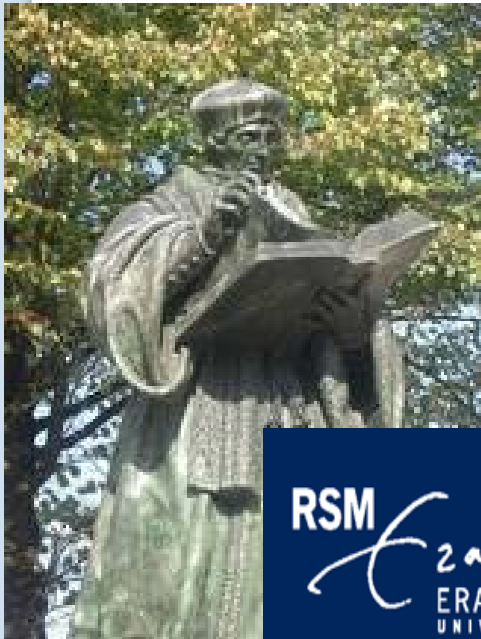




# Mindfulness

**An effective tool for enhancing trader and investor skills?**



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**M. Fenton O’Creivy**



## Outline

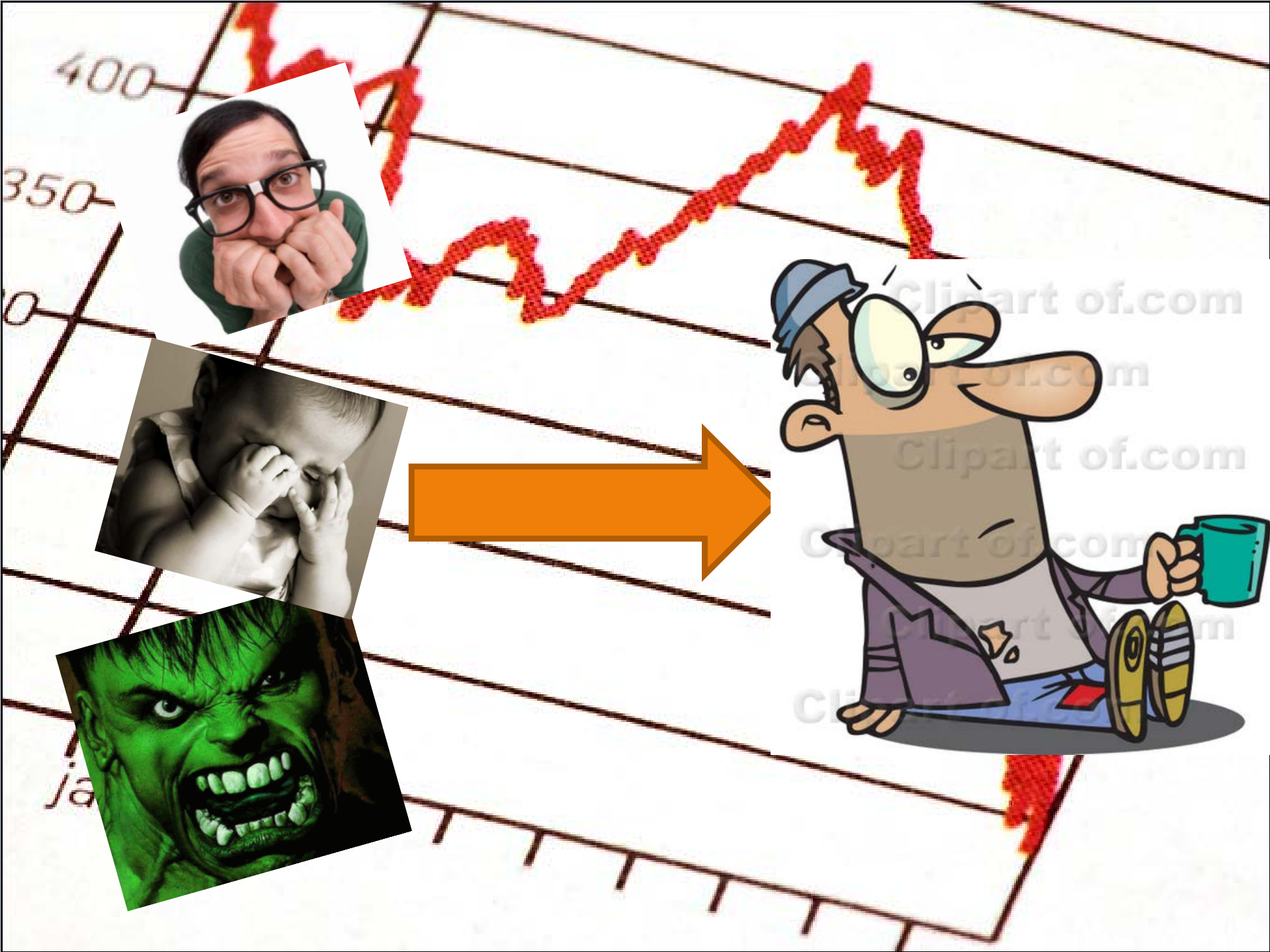
- **Background**
- **Mindfulness**
- **Research question**
- **Study 1**
- **Study 2**
- **Conclusions**



## Background

Trading is purely a mathematical process.







## Background

- Trading and investing is associated with negative emotions like fear and anger (Fenton-O’Creevy et al., 2007)
- Stressful activity
- Requires high attention





# Mindfulness

Possible intervention to learn to manage emotions, stress and attention:

- ✓ Mindfulness

What is mindfulness?

- ✓ Techniques aimed at reducing stress and arousal
- ✓ Focus on emotions
- ✓ Learning to be more aware of emotions
- ✓ Acceptance



**Mindfulness (MF) means paying attention in a particular way; On purpose, in the present moment, and nonjudgmentally (Kabat-Zinn)**



# Mindfulness

## **Strong effects in health psychology:**

- ✓ Alleviates stress (Williams et al., 2001)
- ✓ Significant reductions in anxiety and depression (Segal et al., 2002)
- ✓ Enhances subjective well-being (Brown & Ryan, 2003)
- ✓ Neurological support

Meditators showed activity in orbito-frontal and hippocampal regions, implicated in emotion regulation and response control (Farb et al, 2010; Hölzel et al., 2007; Luder et al., 2009)





# Mindfulness

**Emotion regulation:**





# Mindfulness in trading?

## Feasibility for traders?

- ✓ Reduce stress
- ✓ Managing emotions (such as fear and anger)
- ✓ Learning to accept emotions instead of acting on them
- ✓ Awareness of emotions allows for adequate emotion regulation

## Yet, never been applied within financial contexts

- ✓ May require open-minded individuals, traders may not be open-minded enough for mindfulness-techniques



BUY ASK    SELL ASK

BUY BID    SELL BID

REV    CLOSE

FLAT    ENTRY

**PnL**

Account    Qty  
 65262125    1

ASM Strategy  
 <None>

A: 1419.50    441  
 B: 1419.25    349

1420.00  
 1419.75  
 1419.50  
 1419.00  
 1418.00  
 1417.00  
 1416.00  
 1415.50  
 1415.00  
 1414.00  
 1413.00  
 1412.00  
 90  
 80  
 70  
 58.33  
 40  
 30  
 20  
 10

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Stochastic

08-06    08-13    08-20    08-27    08-34    08-41    08-48    08-55    09-02    09-09    09-16    09-23    09-30    09-37    09-44



## Research questions

1. Can short mindfulness inductions successfully induce state mindfulness in skeptical students of finance?
2. Can short mindfulness inductions successfully improve financial decision-making?

Maintaining focus,  
attention



In control



## Study I

### **213 University students International Business Administration**

135 men (60%), age 20.5 years (SD=1.57; range 18-26)

Control group (N = 53); Lord of the Rings audio

Mindfulness groups:

Focused breathing task (N = 53)

Naming emotions exercise (N = 55)

Sitting meditation (N = 52)

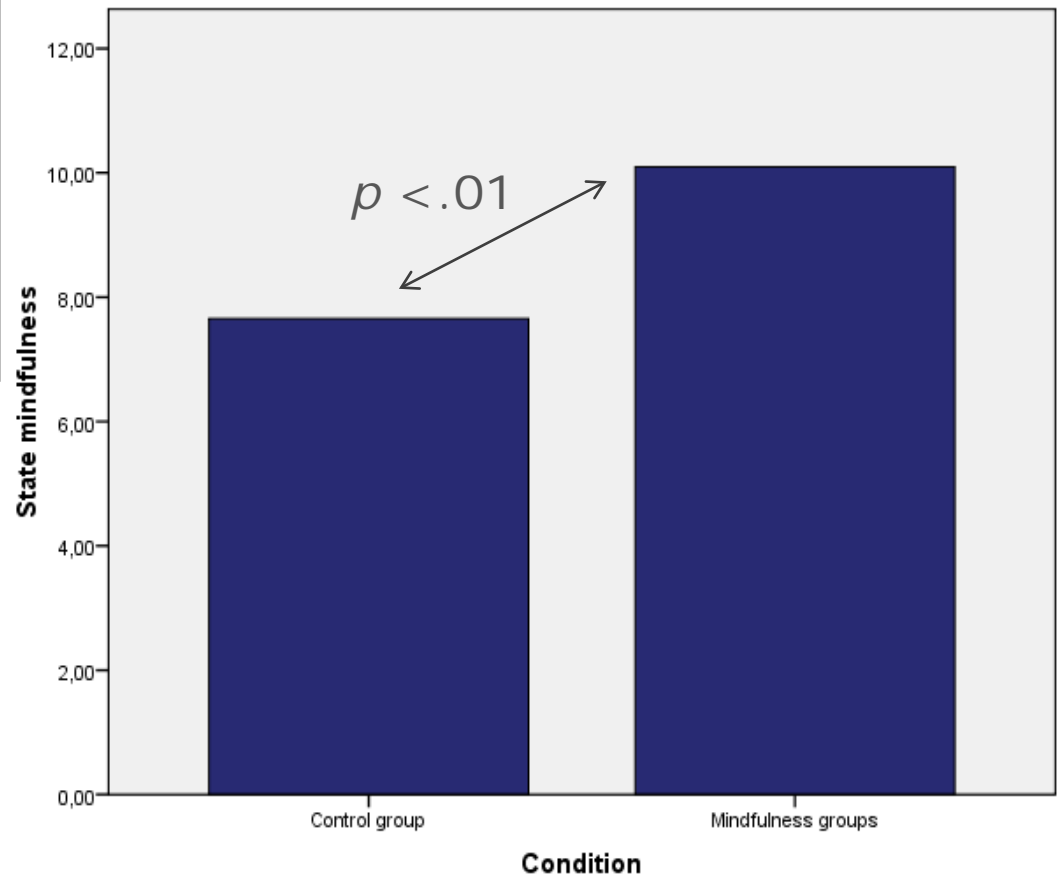


Dependent variables: mindfulness (state-TMS; trait KIMS), emotions (PANAS), focus on bodily signals (Body Consciousness Questionnaire, Body Vigilance Scale), emotion regulation (ERQ)



## Study I

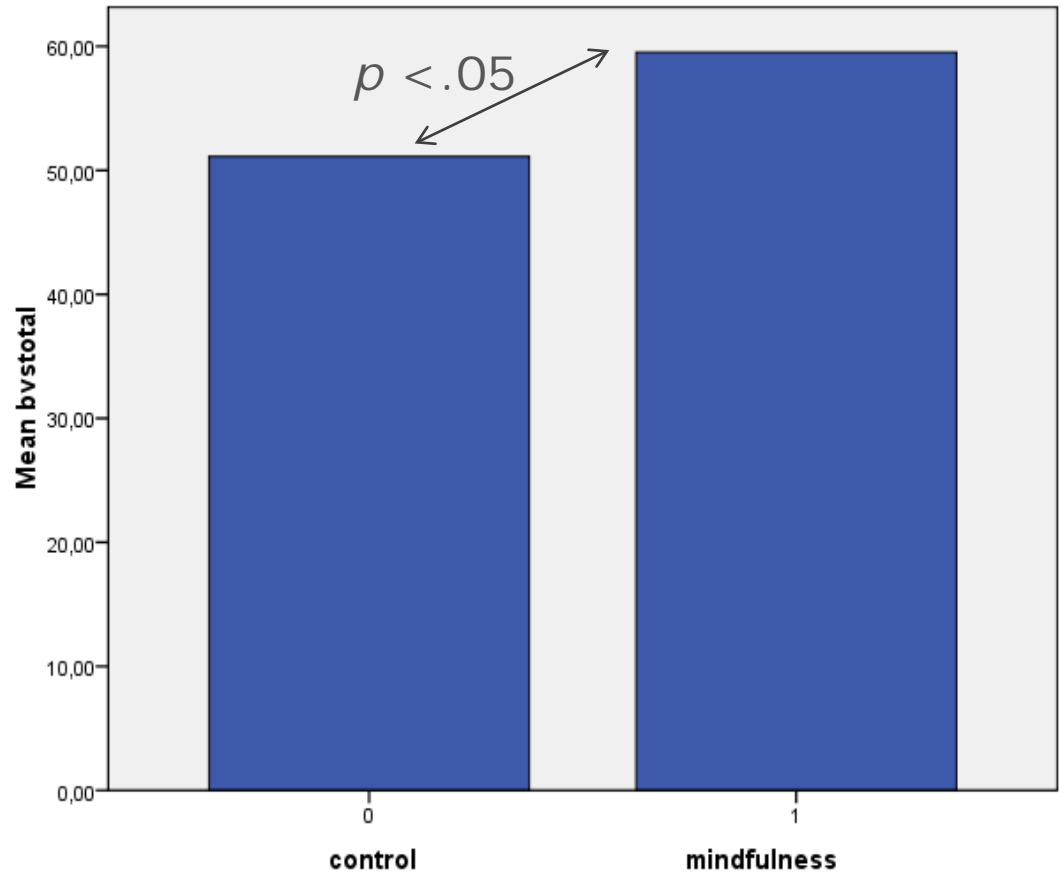
Students in mindful conditions scored significantly higher on state mindfulness.





## Study I

Students in mindful conditions scored significantly higher on scanning body.





## Conclusion

### Main findings:

- ✓ Mindful groups indicated that they had no trouble completing the exercise
- ✓ Mindful groups demonstrated higher levels of state (TMS) but not trait mindfulness (KIMS)
- ✓ Mindful groups did not experience less emotions
- ✓ Mindful groups reported stronger focus & awareness of bodily signals



## Study II

### **Can a short induction of mindfulness influence financial decision-making?**

- ✓ 50 students
- ✓ MF group (breathing and meditation) and a control group (LOTR)
- ✓ Dependent variables: mindfulness, emotions, and emotion regulation and performance on Columbia Card Task



## Practice 2

Current Round Total: 30

The computer will record your Point Total for each round and will show you those totals after you finish all 24 rounds of the game.

This is the second practice round. Please again turn over as many cards as you would like to, given the number of loss cards and the amounts that you can win or lose if you turn over a gain or loss card, as shown below.

Loss Amount: 750

Gain Amount: 10

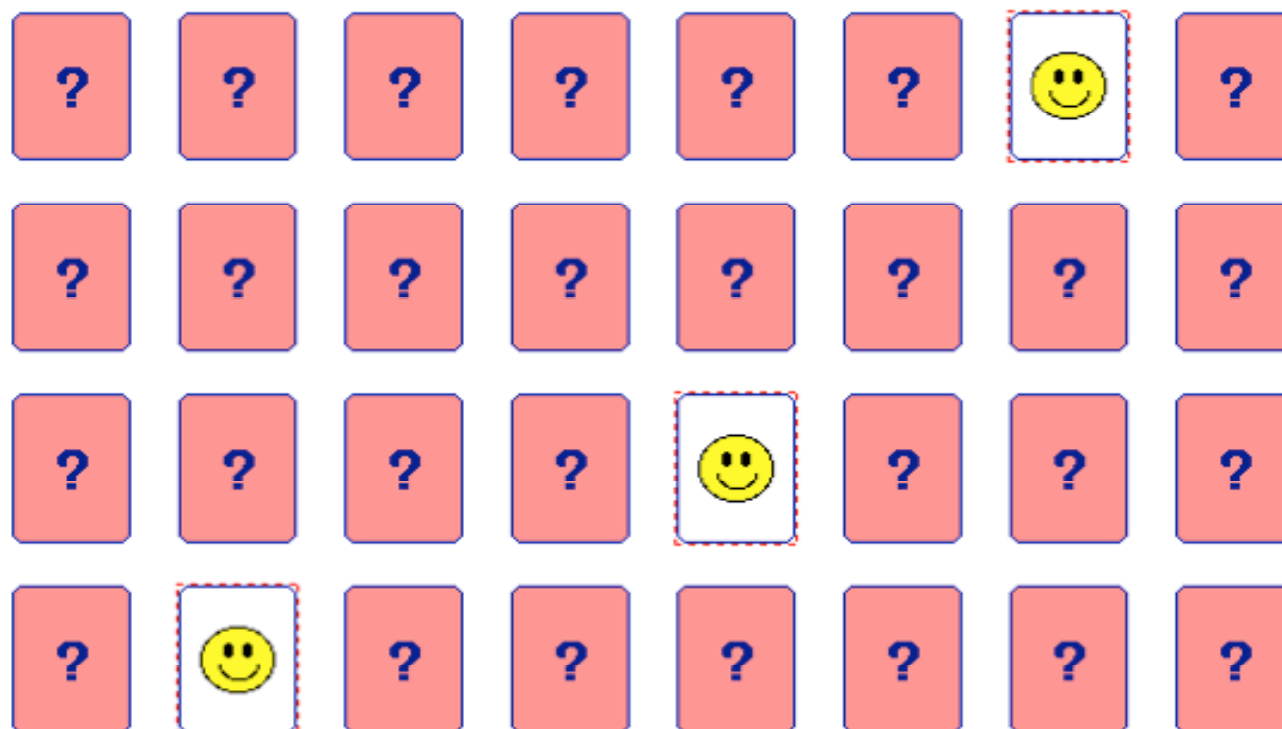
Number of Loss Cards: 3

No Card

STOP/Turn Over

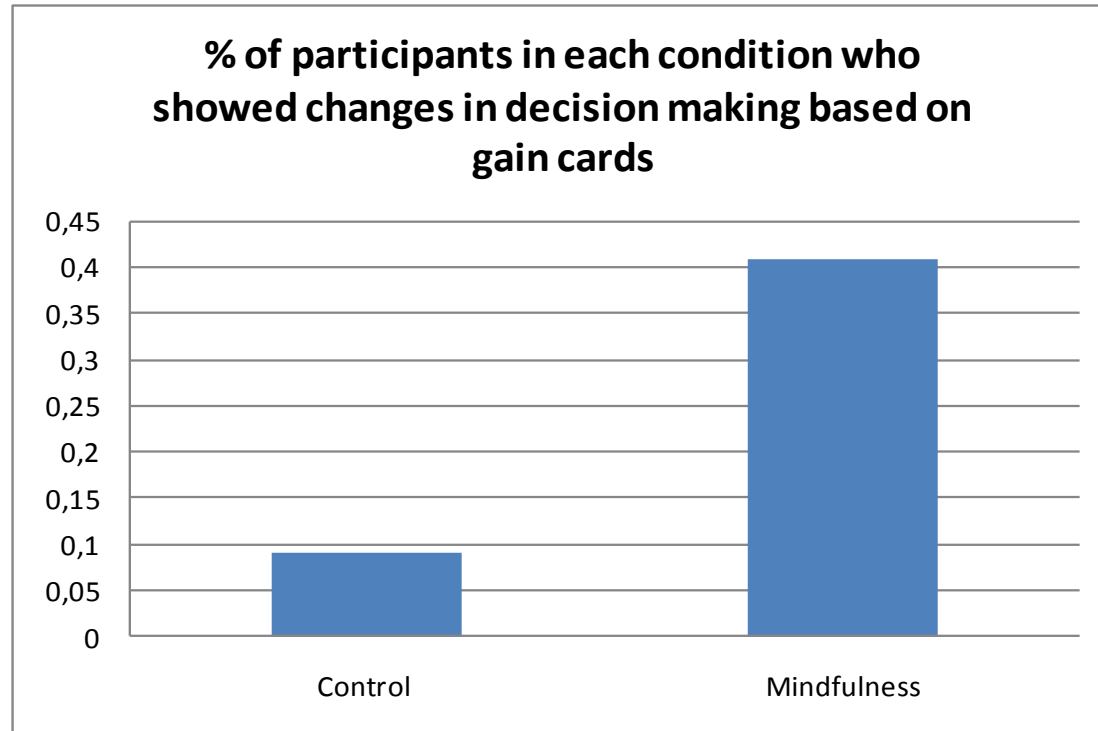
Next Round

00:00:05.0





## Study II

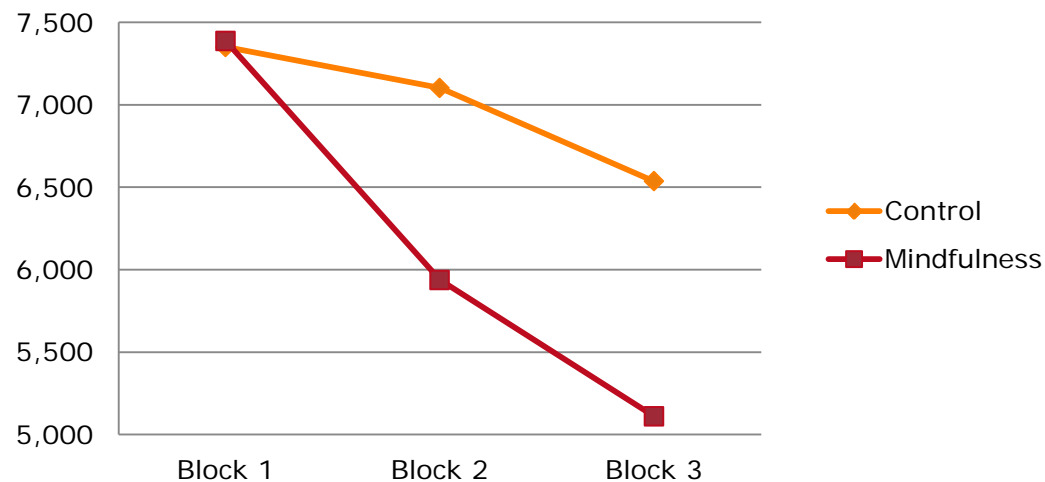


Short mindfulness exercises improved financial decision making by increased sensitivity to financial gain information.



## Study II

**Absolute Deviation from Optimal Solution  
(higher number indicates greater  
deviation)**



Mindfulness improved performance on the Columbia Card Task over time (smaller deviation from the optimal solution over time,  $p < .05$ ).



## Conclusion

### Main findings:

- ✓ Mindful groups demonstrated higher levels of state (TMS) mindfulness
- ✓ Mindful groups reported stronger focus & awareness of bodily signals
- ✓ Mindfulness increased **gain sensitivity** ( $p < .05$ ) and **improved performance** on the Columbia Card Task over time (smaller deviation from the optimal solution over time,  $p < .05$ ).



## Conclusions

- Short mindfulness exercises are effective in increasing state mindfulness.
- Short mindfulness exercises improve financial decision-making in the lab

**Yes, mindfulness could be an effective tool for investors and traders, and a full MF-training will likely benefit financial decision-making through enhanced levels of emotion regulation**



## Future work

- ✓ **Constructing a full MF-course tailored to financial decision-makers**
- ✓ **Implementation in investors at Saxo Bank**

