



# OLDER ADULT EXPERTISE IN EMOTION REGULATION: GAINS AND COSTS

Fredda Blanchard-Fields


School of Psychology

College of Sciences

Georgia Institute of Technology


Georgia Tech Tuesday Talks, September 16, 2008





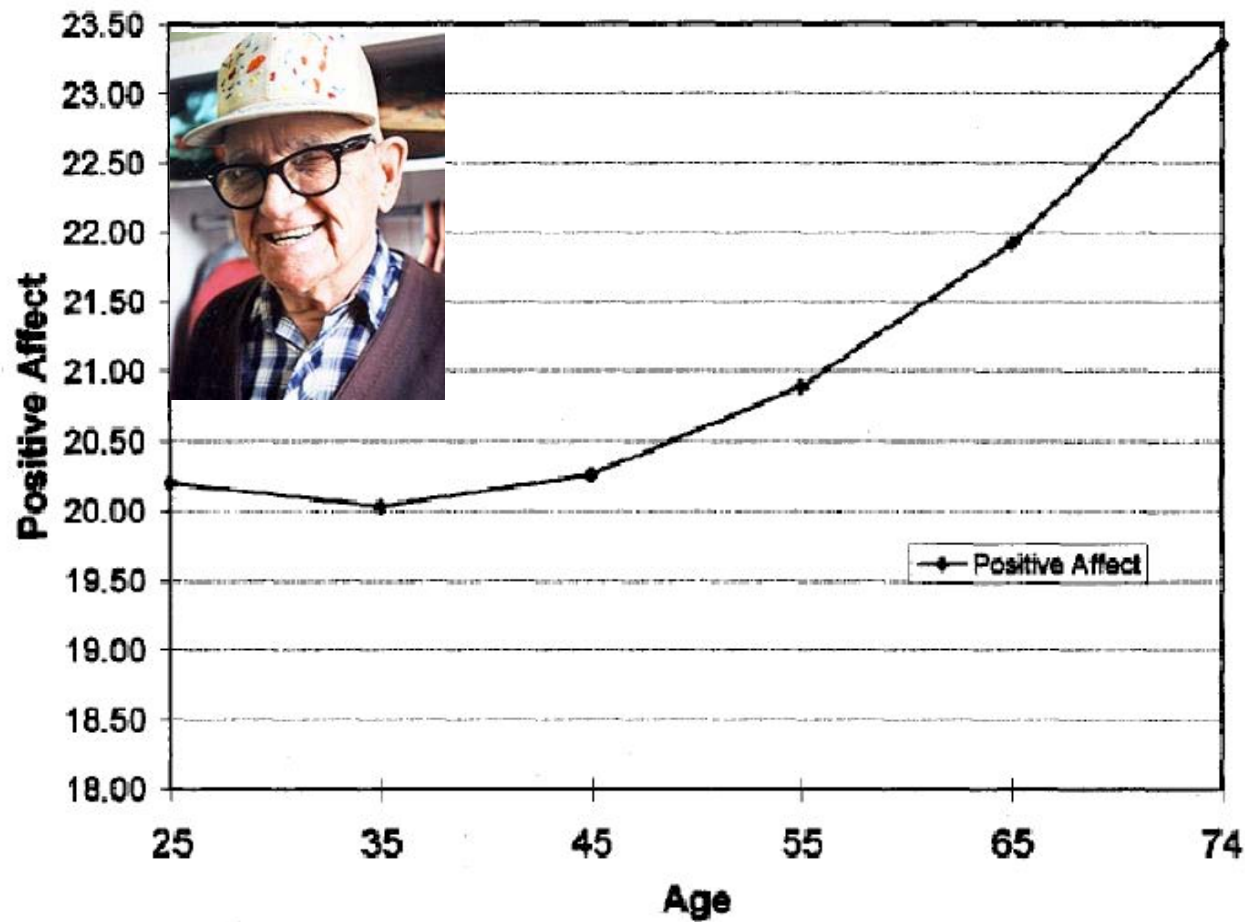
An older woman's daughter-in-law just gave birth to her fifth grandchild. However, her daughter-in-law and son were quite insulting instructing her on how to hold the baby. In order not to escalate the conflict, the older woman gently gave the baby back to the mother and left the hospital room to vent her emotions alone. She did not want to cause a fight with her family at such a vulnerable time. Later, when things calmed down, she would revisit the issue with her family.



- 
- Age-related increases in experience, pragmatic knowledge, expertise, “invested” skills
  - Older adults are effective in social problem solving and emotion regulation




# Positive emotional trajectory



Mroczek & Kolarz (1998)



# Emotion has a positive developmental trajectory into older adulthood



- Subjective experience of emotion is maintained with age (Kunzmann & Grühn, 2005)
- Older adults report heightened ability to control their emotions (Gross et al., 1997; Lawton et al., 1991)
- Emotion regulation is prioritized and more effective as we get older (Blanchard-Fields, 2007; Carstensen, 2006)

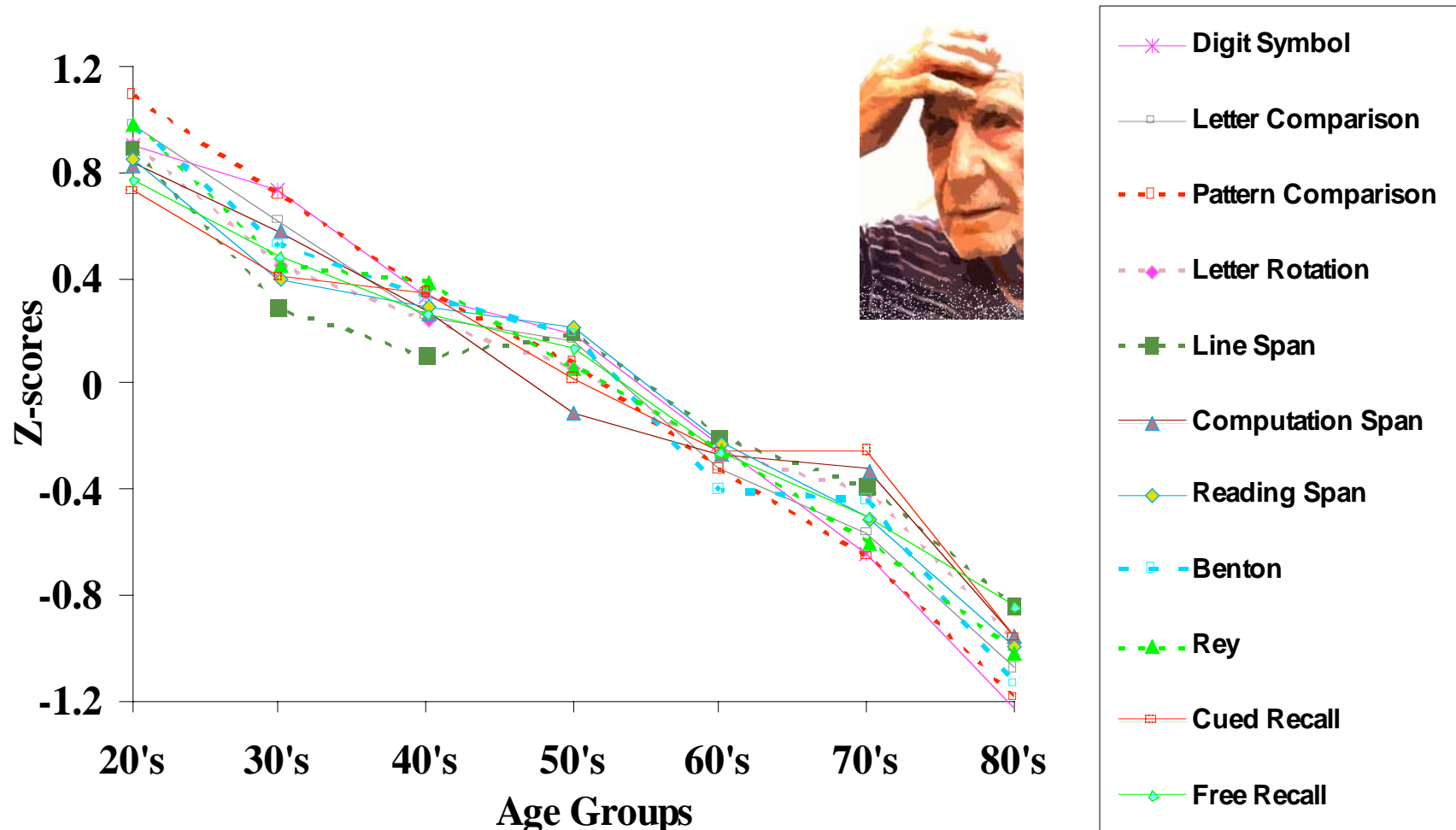




How do we reconcile this with...



# Cognitive aging characterized by losses



Park, Lautenschlager, Hedden, Davidson, Smith, & Smith (2002)



# Two Questions

---

- What are the skills, motivational preferences, and social knowledge older adults possess and use to regulate their emotions?
- Under what conditions are older adults more effective at regulating their emotions? Under what conditions are they less effective?



# Motivational Preferences

---

- Shift in motivational goals to optimize emotionally gratifying experience
  - ▣ Maximize positive
  - ▣ Avoid negative
  - ▣ In service of emotion regulation
  - ▣ Emotion regulation may be well-practiced in older adulthood



# Motivational Preferences

---

- Perhaps coupled with the idea that older adults are also motivated to use their resources wisely given the respective decrease in cognitive capacity.



# Motivation to Regulate Emotions Questionnaire

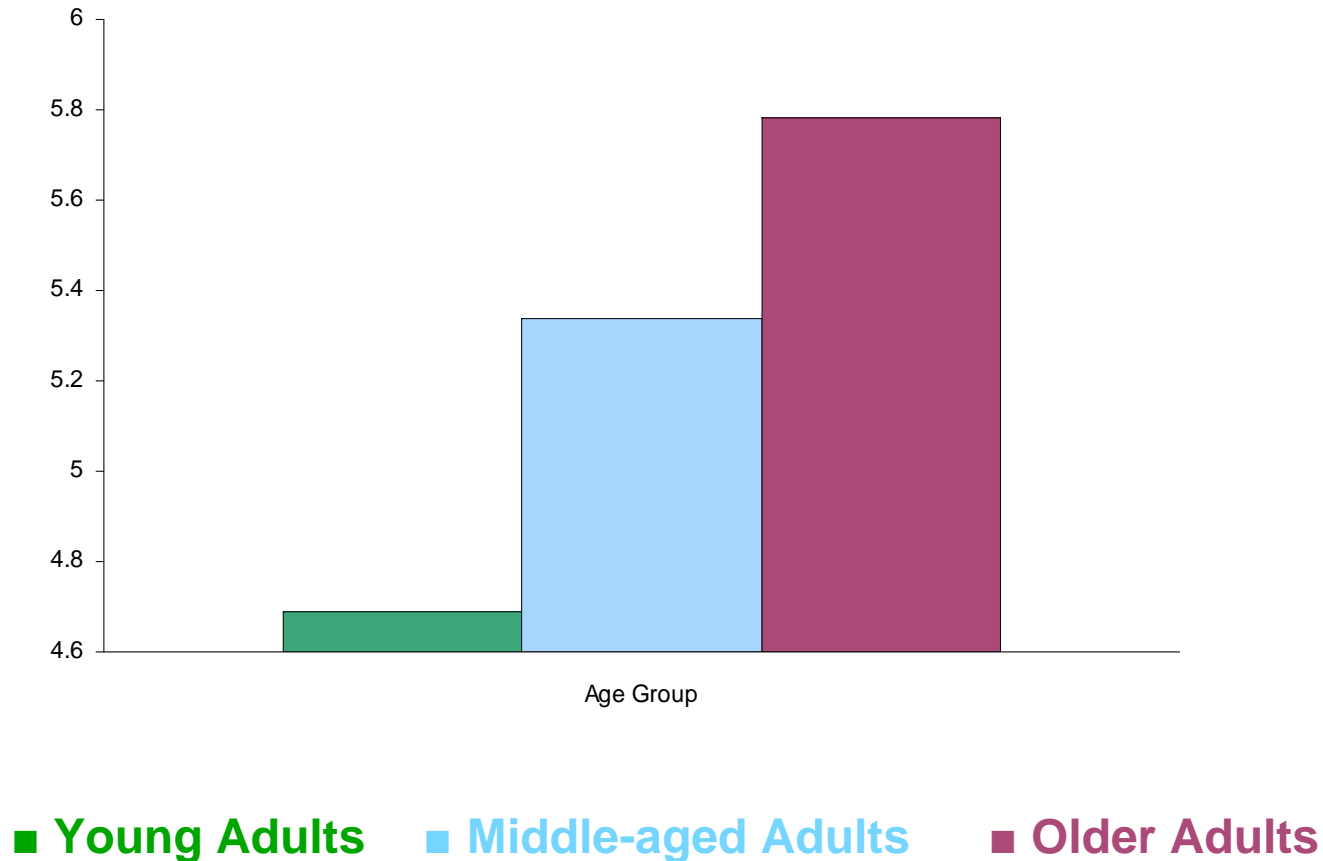
---

1. I find it personally satisfying to be able to feel my emotions without letting them be disruptive.
2. I enjoy being aware of my feelings but I also find it satisfying to maintain a positive outward appearance.
3. It is an interesting challenge to remain calm and not always be getting upset.

(SRWNE: Kim, Deci, & Zuckerman, 2002)



# Age Differences in Motivation to Regulate Emotions





# Emotion Regulation Strategy Use



In my research we focus on emotion regulation in the context of interpersonal problem solving in developmentally relevant life domains

When the problem situation involves emotional or social factors, older adults can draw on accumulated personal experience in social and emotional realms to regulate emotions and effectively solve problem



# Strategies



- Instrumental problem-solving strategies: direct action to solve or analyze the problem
- Passive emotion-regulation strategies: deliberate withdrawal from conflict
- Proactive emotion-regulation strategies: directly confronting and managing one's emotions



# When older adults solve everyday problems:



- They prefer combinations of emotion-regulation and instrumental strategies, whereas younger age groups prefer instrumental strategies only (Watson & Blanchard-Fields, 1998)
- They tailor strategies to fit the problem solving context (Blanchard-Fields, 2007; Blanchard-Fields et al., 1995, 1997, 2004)
  - Emotion regulation strategies preferred in emotionally-charged, interpersonal, and uncontrollable situations



# What Predicts Strategy Use?

---

- Older adults tend to use more passive emotion regulation strategies
- Strategy use is not correlated with cognitive functioning
- Emotional complexity and Motivation to regulate predicts strategy use (Boron & Blanchard-Fields, 2008; Coats & Blanchard-Fields, 2008)



# The Special Case of Anger

---

- Anger avoidance effect
  - Anger poses possibility of high arousal, more toxic for older adults (Blanchard-Fields, 2007; Consedine et al., 2002)
  - Emotion regulation literature shows that in their daily lives, older adults avoid experiencing anger in problem situations (Birditt & Fingerman, 2003; Blanchard-Fields & Coats, 2008; Charles & Carstensen, in press)



# Emotion Regulation and Discrete

## Emotions (Blanchard-Fields & Coats, in press)



- What are the specific emotions experienced during problem situations and how are they handled?
- Are specific emotions related to specific types of emotion regulation strategies in the same way for different age groups?



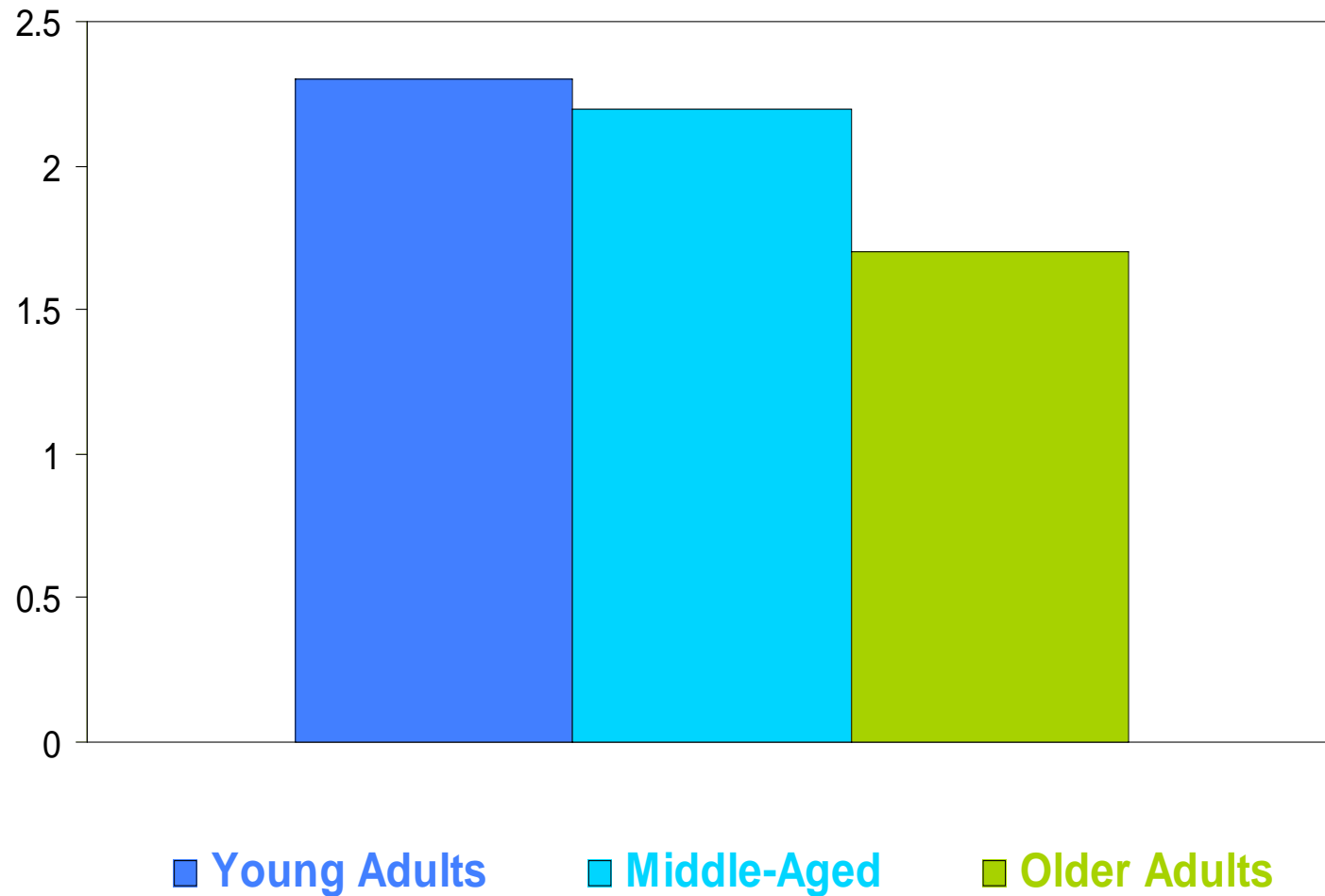
# METHOD

---

- Interview: recall financial, family, friend, and romantic other problems and how they solved them (no age differences)
- Participants also reported specific emotions experienced and strategies used to handle each emotion

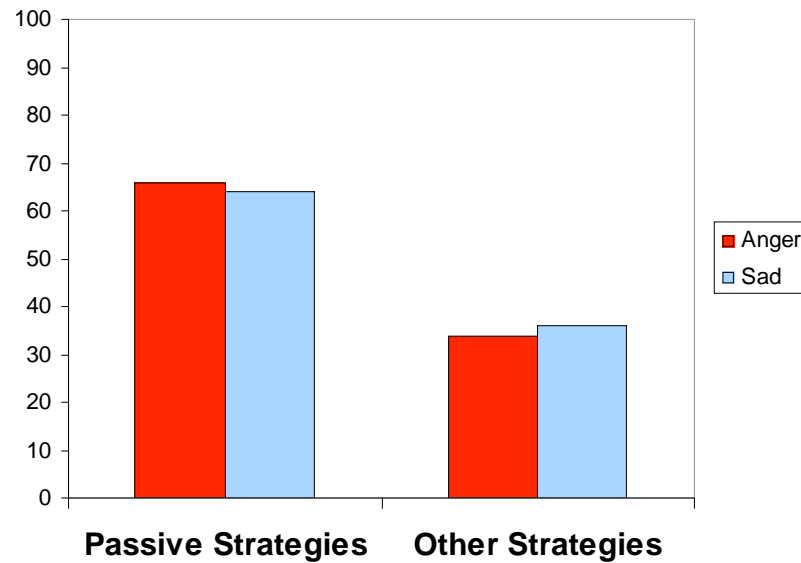


# Frequency of Anger Evoked Across Problems

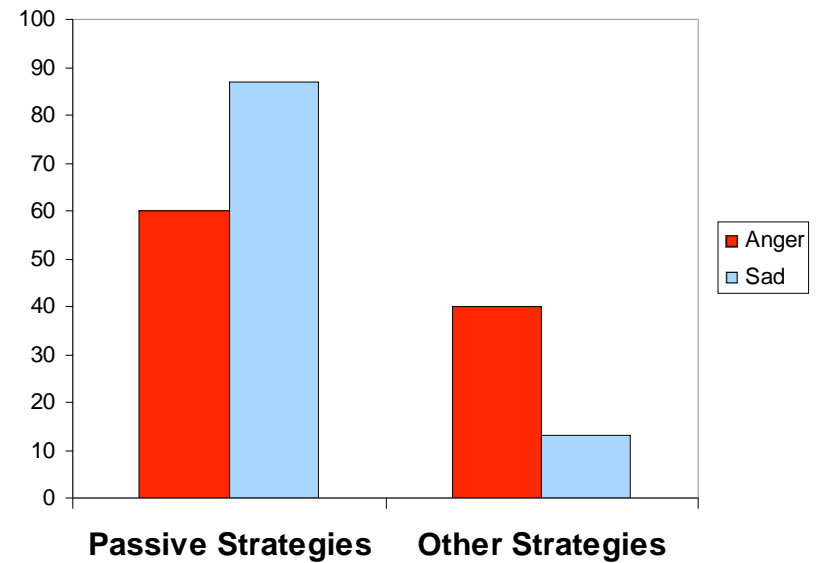




# Passive Emotion Regulation Strategy Use



Young Adults



Older Adults



# Furthermore...

---

The reduced experience of anger on the part of older adults partially accounted for why they did not use a high degree of proactive emotion regulation strategies.



# Early Processing of Anger

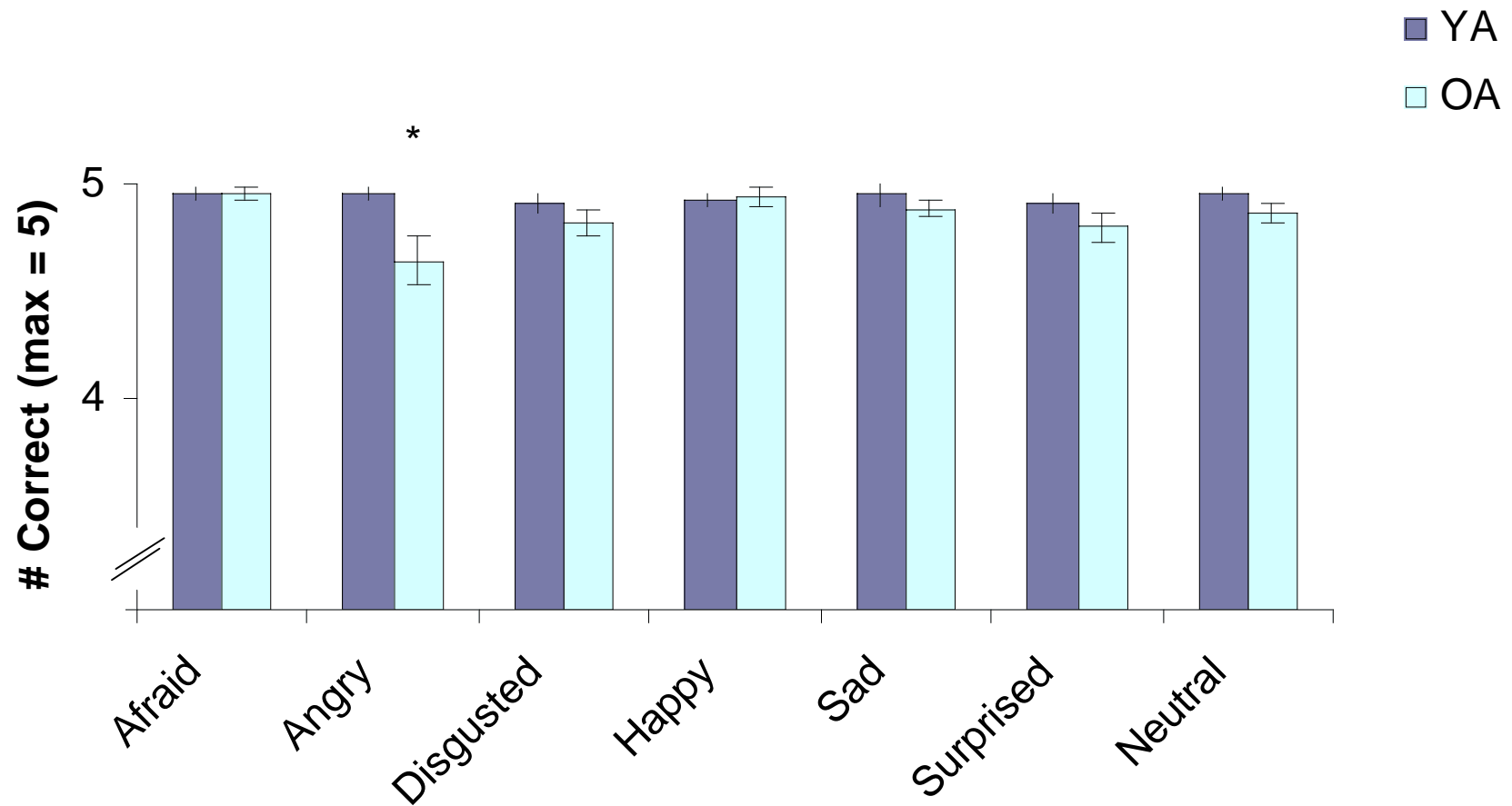


- Recognition of Emotions
- Attention to Emotions



# Age differences in emotion recognition persist for anger when information is combined

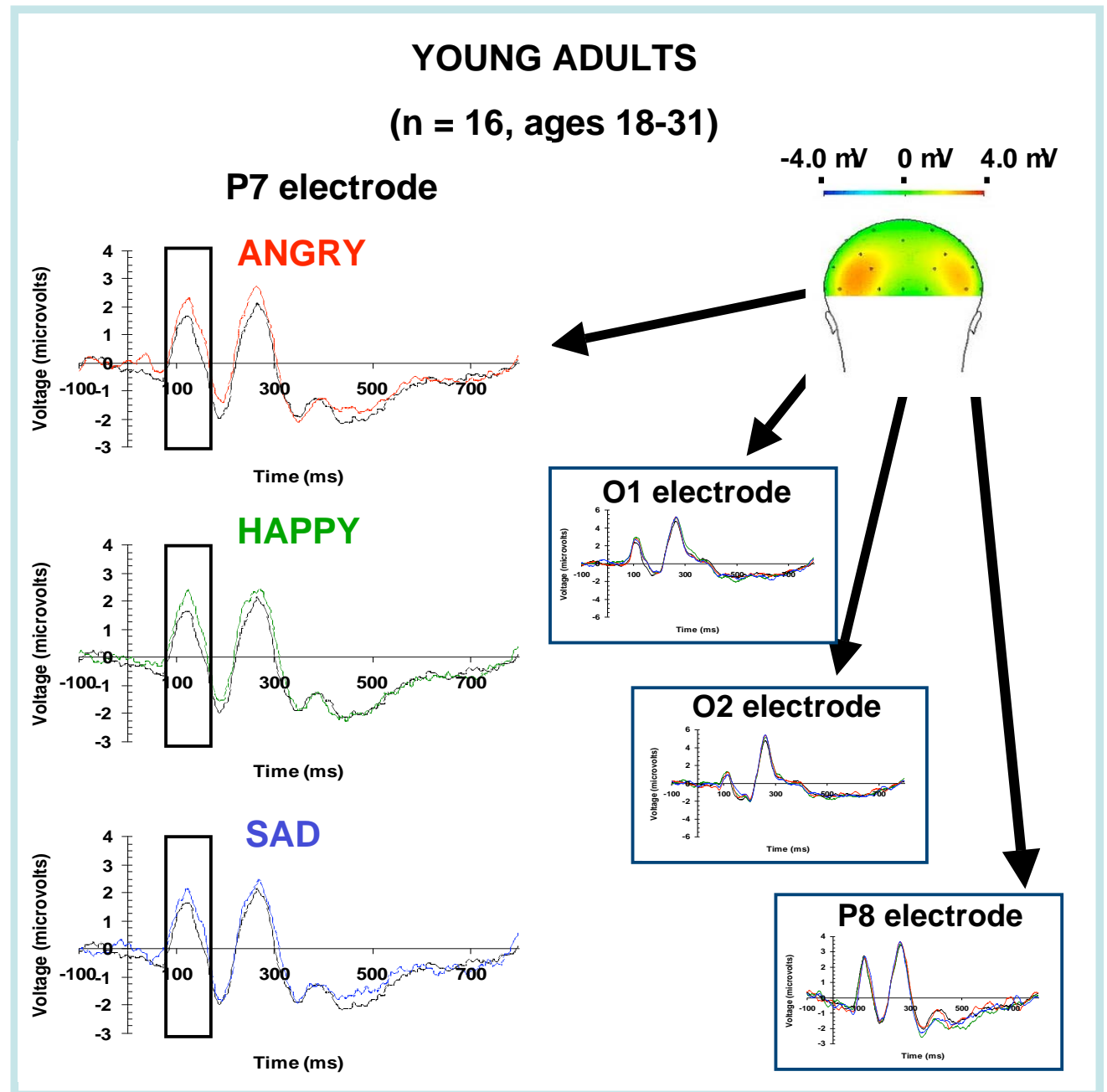
(Stanley & Blanchard-Fields, 2008)





## Young Adults

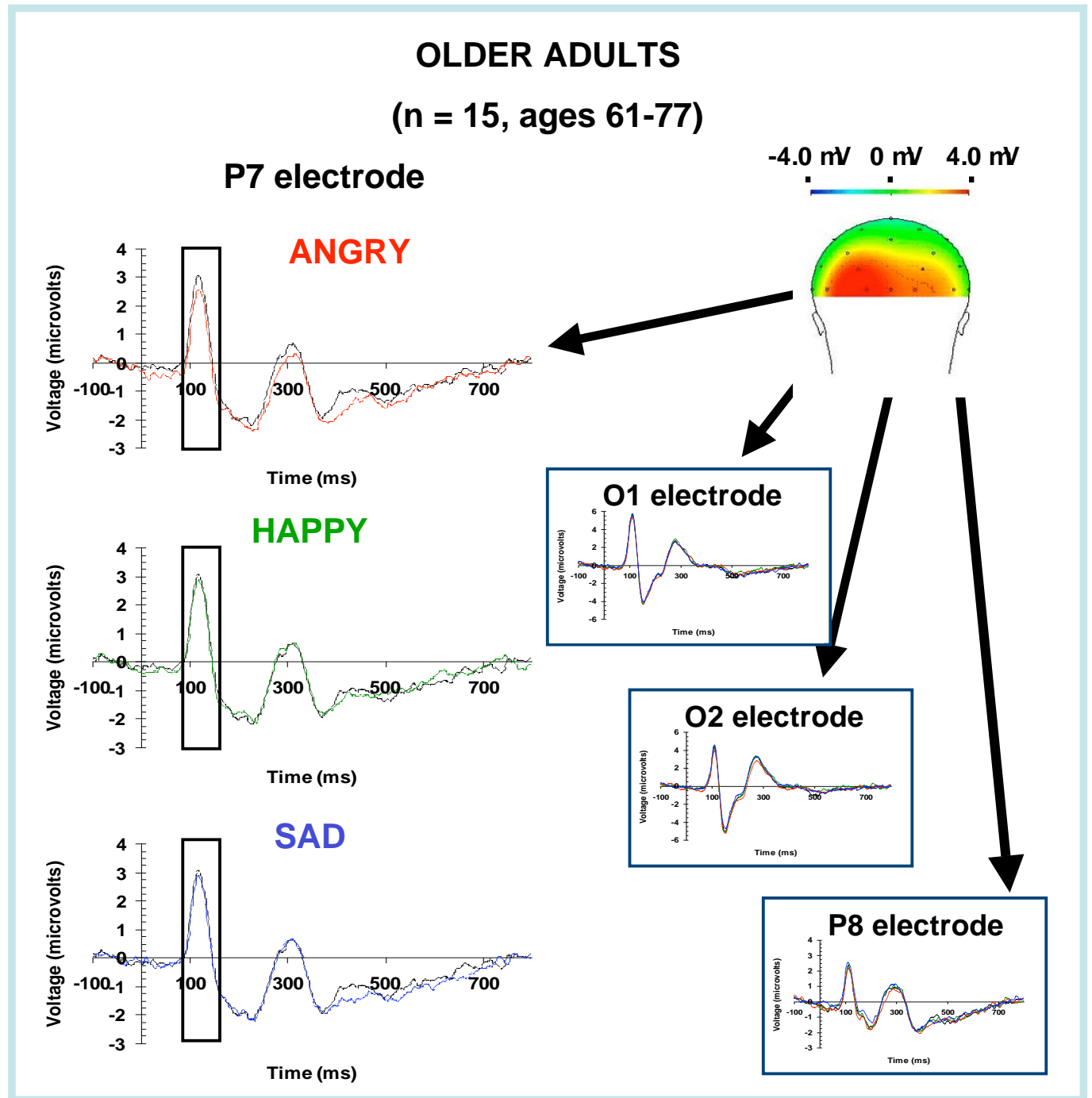
- Increased amplitudes of the P1 components at occipito-temporal electrodes for emotional facial expressions compared to neutral.
- Young adults deploy more attention to emotional faces than neutral faces.





## Older Adults

- Older adults deploy less attention to probes following angry faces, compared to neutral faces.
- Older adults withdraw attention from angry faces.





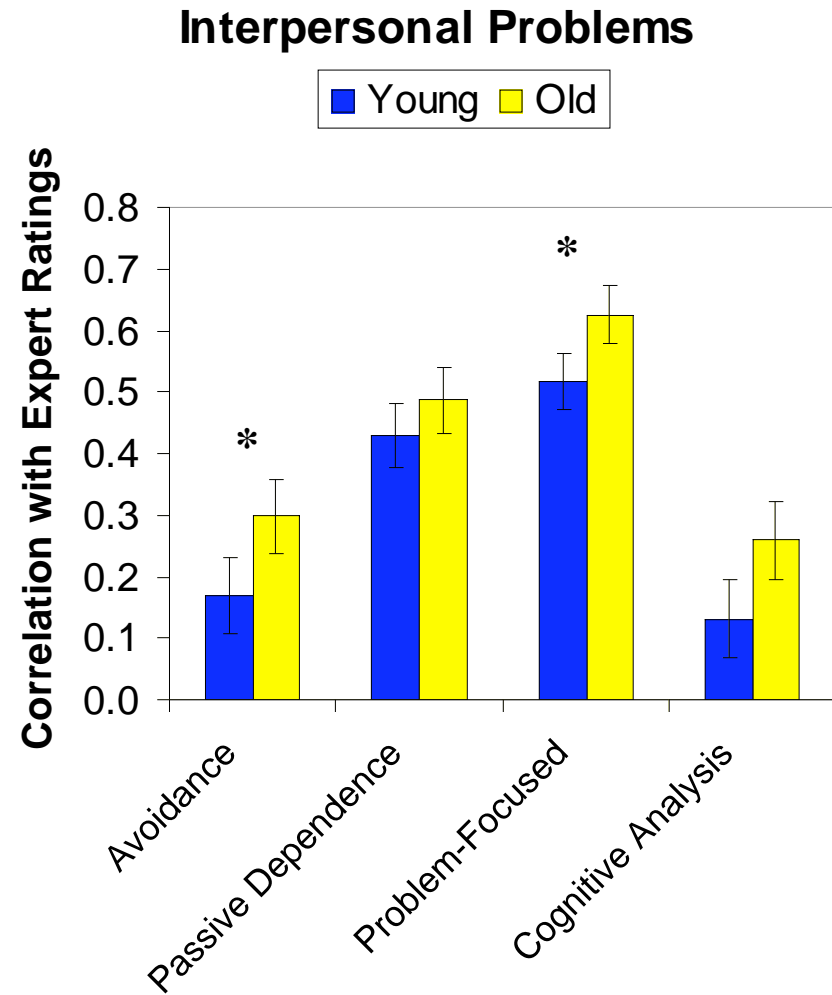
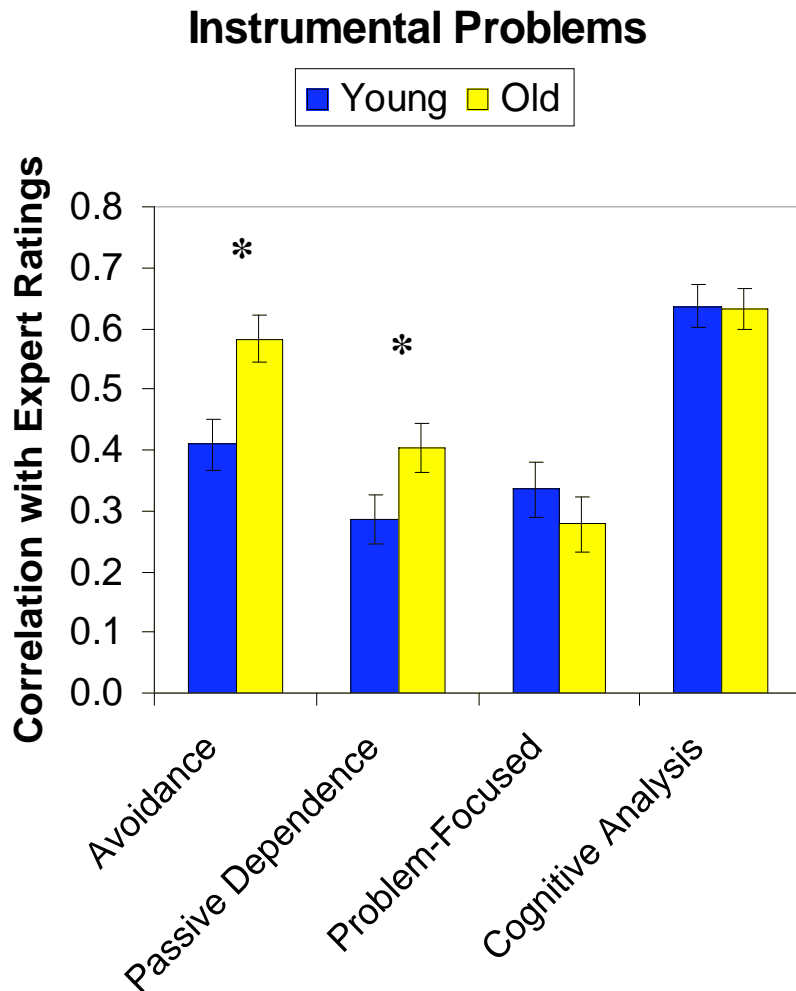


## **Question 2:**

Are older adults more effective at regulating their emotions and solving everyday problems?




# Expert Ratings of Effectiveness by Age for Instrumental and Interpersonal Domains (Blanchard-Fields et al., 2007)





# With respect to emotion regulation strategies:



Previous work based on self-report data.

What about on-line emotion regulation?





To what extent does  
emotion regulation draw on  
cognitive resources?



# Emotion Regulation Requires Resources

- Regulating emotions disrupts simultaneously or subsequently performed tasks
  - ▣ Concealing feelings worsens memory performance  
(Richards & Gross, 2001)
  - ▣ Suppressing forbidden thoughts leads to lower persistence in solving anagrams  
(Muraven, Tice, & Baumeister, 1998)
  - ▣ In smokers, presence of craving-eliciting cues increases RT's and worsens language comprehension  
(Madden & Zwaan, 2001; Zwaan & Truitt, 1998)
- Possible explanations
  - ▣ Processing capacity sharing
  - ▣ Self-control as a limited resource



# Adding an Aging Perspective

---

- Is regulating emotions equally effortful or costly for people of different ages?





- 
- Given that growing older is related to increased focus on and better regulation of emotions, it should be less costly for older adults



# Procedure

---

Baseline Affect Rating  
Three blocks: N-Back 2 & Affect  
Rating

Mood Induction  
Disgust / Neutral

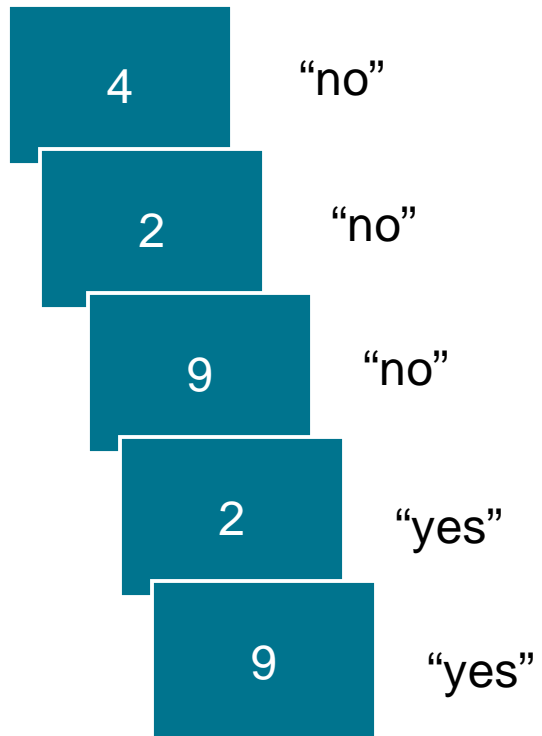
Affect immediately after film clip  
Three blocks: N-Back 2 & Affect  
Rating

Cognitive Tests  
Personality and Emotion  
Regulation Surveys  
Follow-up Questions



# N-Back 2 Task

---





# Mood Induction

Disgust



(2:10 min)

Neutral



(2:11 min)

Film clips from Shiota & Levenson, 2008



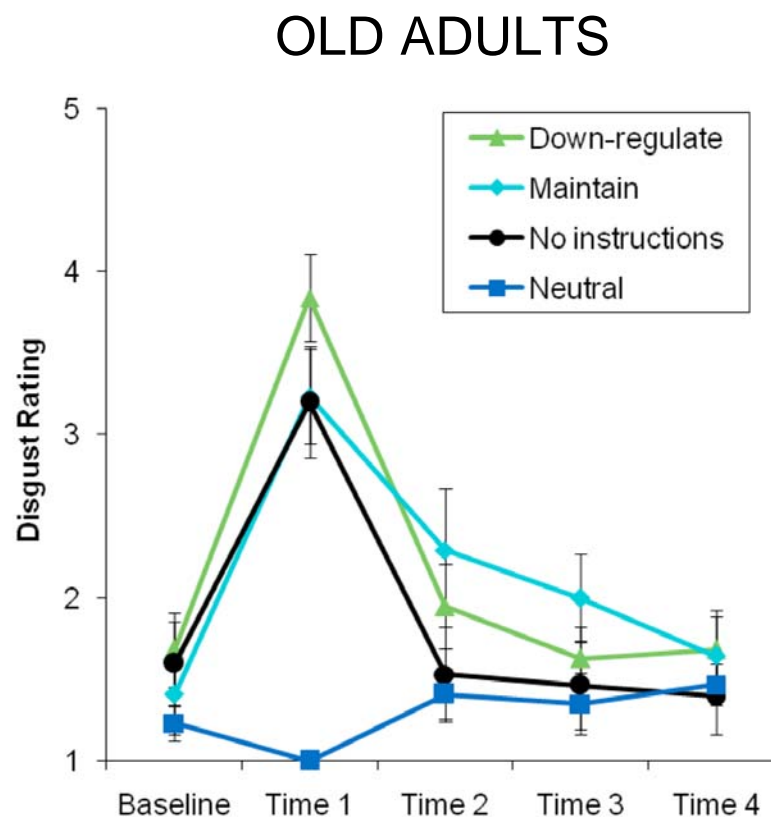
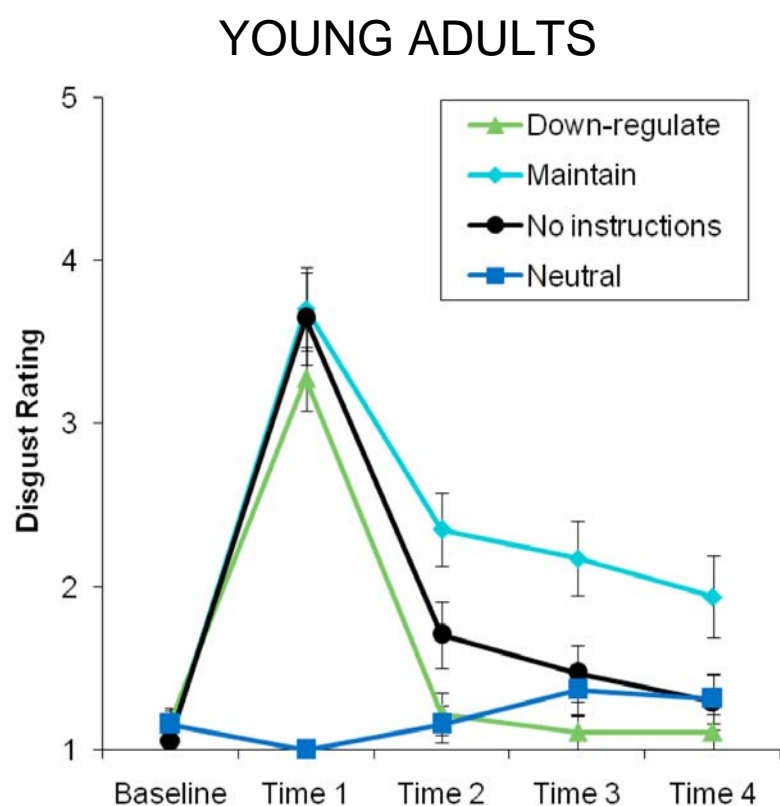
# Four Conditions

---

- Experimental: Disgust - Down-Regulate
  - The movie you just saw probably caused you to experience a negative emotional reaction. When working on the next tasks, *we would like you to change that negative reaction as fast as you can. Use any strategy you have available to turn your negative feelings into positive ones.* At the same time, remember it is important that you do a good job in performing the other tasks.
- Control 1: Disgust – No instructions
- Control 2: Disgust – Maintain
  - ... *When working on the next tasks, we would like you to maintain the intensity of your negative reaction to the film. Just keep your negative feelings going and do not try to change them in any way. ...*
- Control 3: Neutral – No instructions



# Disgust Ratings: Young and Old Report Comparable Emotional Reactions to Film Clips



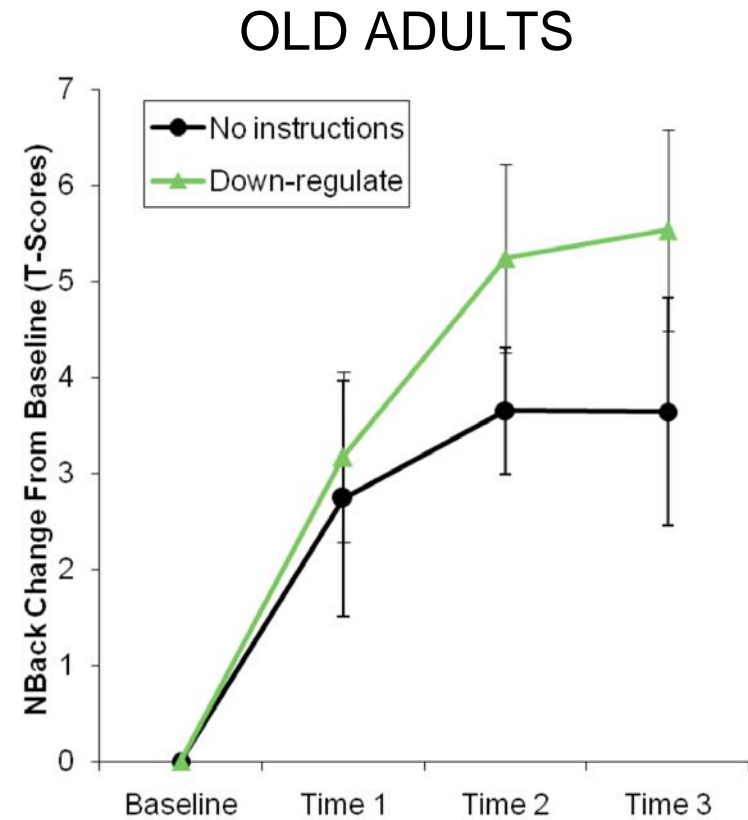
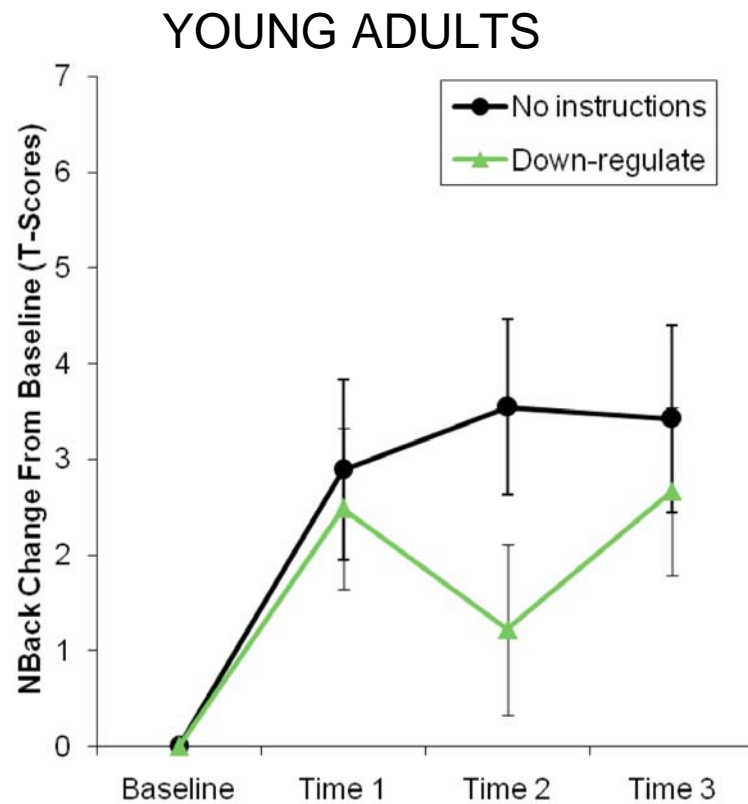
\*\*\* Time x Condition:  $F(12, 352) = 14.58, p = .001, \eta^2 = .30$

Time x Age x Condition:  $F(12, 352) = 1.08, p = .38, \eta^2 = .03$

Note. Error bars represent standard errors.



# N-Back: Old Have Larger Practice Gains Relative to Young in Down-Regulation Condition



\*\*\* Time x Age x Condition:  $F(3, 65) = 2.86$ ,  $p = .04$ ,  $\eta^2 = .12$

Note. Error bars represent standard errors.




# Summary of Results

---


- In all conditions, both age groups improved N-Back performance after mood induction
- Experience of disgust per se did not seem to affect performance
  - After a disgust-evoking event, N-Back performance was unaffected when not given any explicit emotion regulation instruction, or when given instructions to maintain disgust
- Active emotion regulation may be less costly for old adults than it is for young adults
  - Instructions to down-regulate emotions disrupted working memory performance in young adults, but not in older adults





Does the type of emotion  
regulation strategy used influence  
cost?

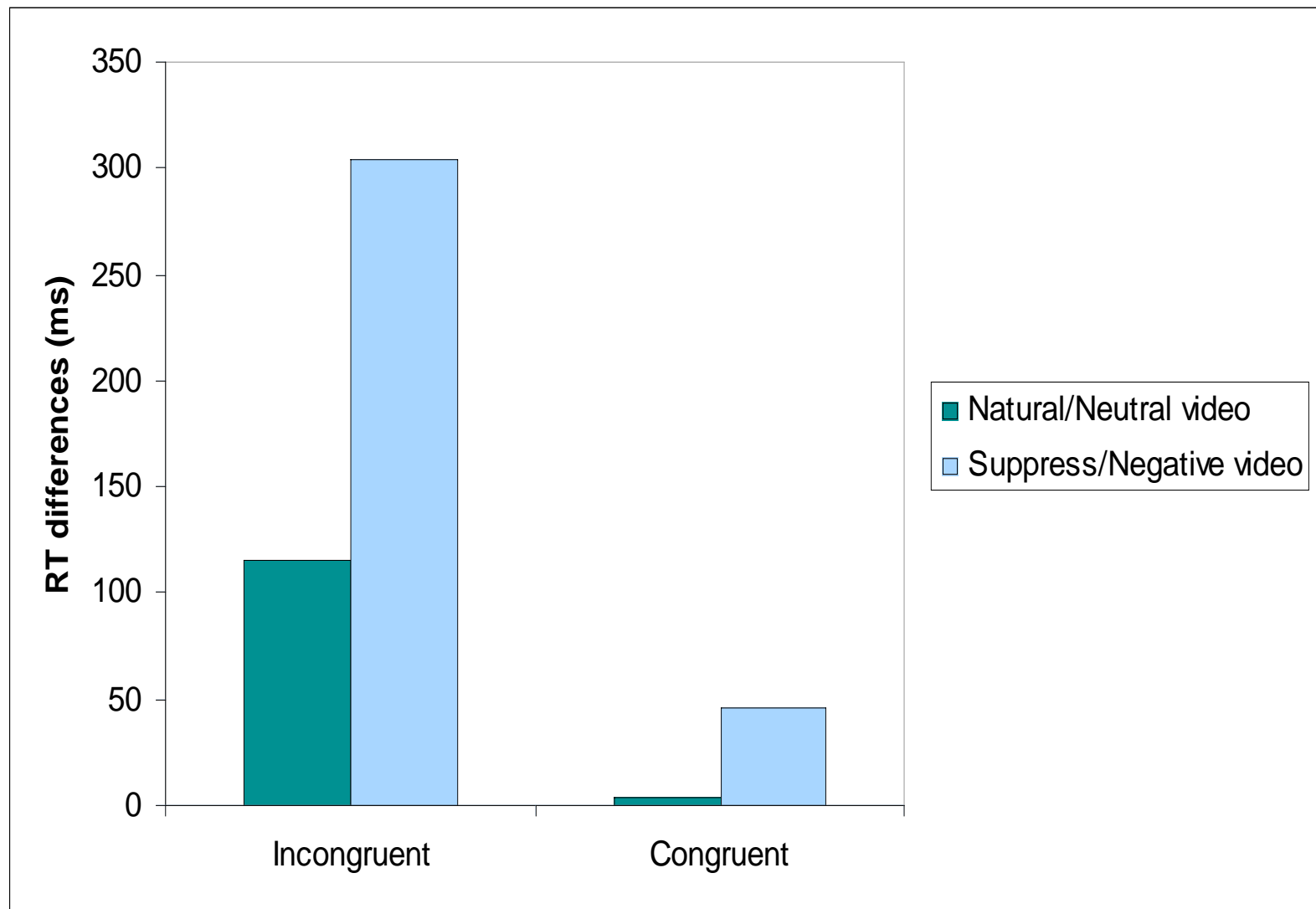


- 
- What happens when emotion regulation instructions are to suppress the **expression** of emotion?
  - Evidence suggests this is the most demanding strategy on **cognitive resources** (Phillips et al., in press; Richards & Gross, 2001)



# Older Adults' Reaction Time for Incongruent and Congruent Stroop Trials Relative to Neutral

(In collaboration with Erin Senesac)







What emotion regulation  
strategies underlie age differences  
in emotional outcomes?

(in collaboration with Abby Coats)



# Strategies

---

- “Focusing on the positive” (similar to positive reappraisal)
- “Avoiding negative” (similar to distraction)
- “Focusing on the negative”



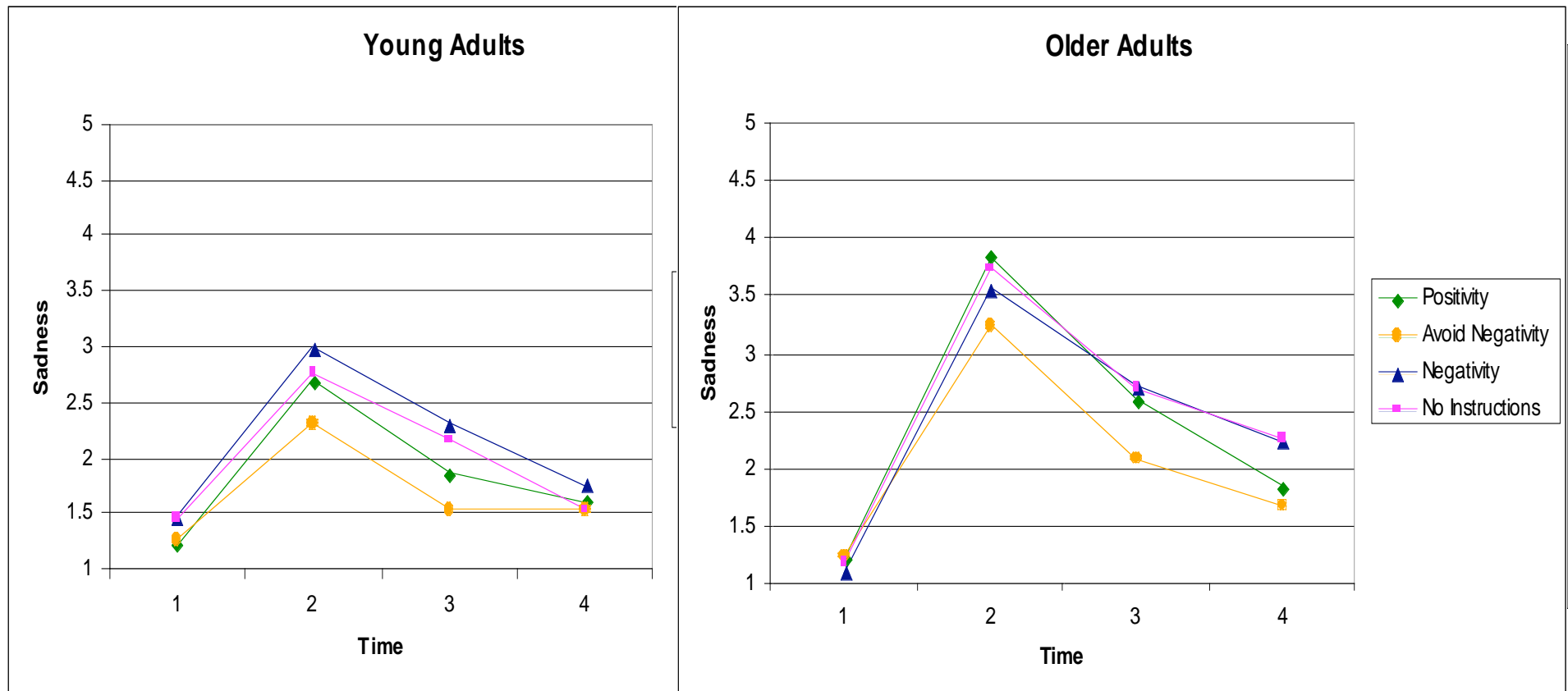
# Procedure

---

- Mood assessment (Time 1)
- Receive emotion regulation instructions
- Watch sad film
- Mood assessment (Time 2)
- Write about film (instructions varied by condition)
- Mood assessment (Time 3)
- Report strategies actually used (open-ended, then questionnaire)
- Mood assessment (Time 4)
- Individual differences measures
- Memory for film (retell it; then recall of positive, negative, neutral information)
- Read happy story (for ethical purposes)

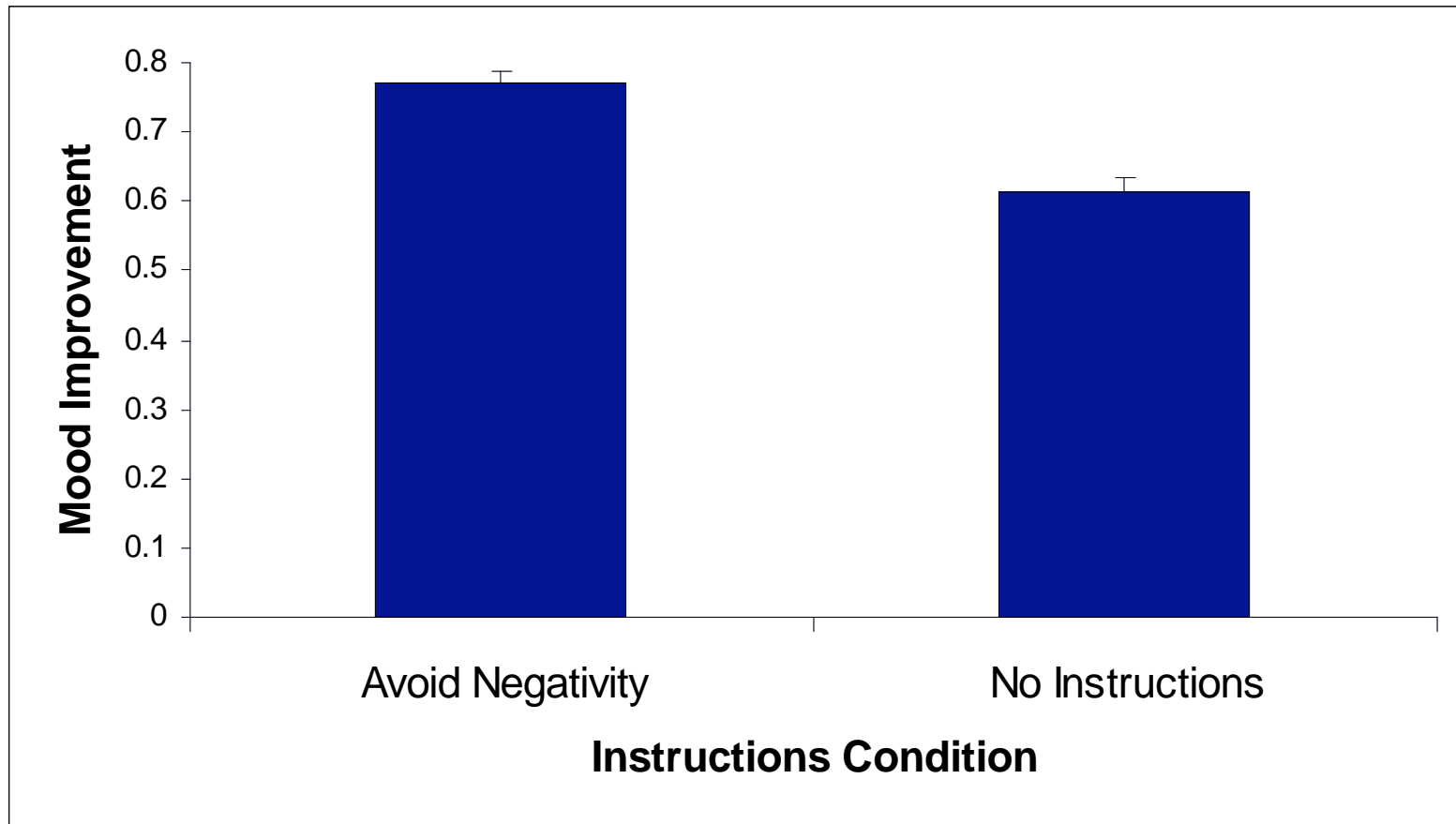


# Sadness ratings are reduced when avoiding negativity over time





# Young adults' mood improves when instructed to avoid negativity





# Effects of Instructions

---

- Young adults who were instructed to avoid negativity had better mood outcomes & more positive memory than young adults without instructions
- Avoid Negativity more effective than Positivity



# Conclusions



- ❑ Emotion regulation is less costly for older adults (experience vs. expression of emotion)
- ❑ Older adults tailor strategies to fit the problem solving context (domain, discrete emotions experienced)
- ❑ Older adults are more effective in strategy use
- ❑ Avoiding or diverting attention away from negativity may explain why older adults are more positive




# Our Current Research:



- Adaptive significance of these patterns related to both psychological and bodily well-being
  - ▣ Time-sampling study
- Combine what we found from the above studies with multiple levels of analysis





Although advancing age may be associated with cognitive decline, such declines do not readily translate into impaired emotion regulation and everyday problem solving effectiveness.

Instead, both types of developmental changes exist in parallel and may even complement one another.



# Cultural/Societal Perspective

---

In a society where the aging mind can be viewed as obsolete, from a broader cultural/societal perspective we need both the thinking of youth and the thinking of mature adults

The Case of Imo



# Acknowledgements

Susanne Scheibe, Abby Coats, Jenny Stanley, Andy Mienaltowski, Paul Corballis, Julie Boron, Erin Senesac, Fong Hum, Michelle Horhota, Bina Ali, Jonathan Hertzog, Daniel Pierce, Liz Piper, Erin Pridgen, Katy Riddle, and other members of the Adult Development Lab

## Thank you for your attention

Contact: [fb12@mail.gatech.edu](mailto:fb12@mail.gatech.edu)