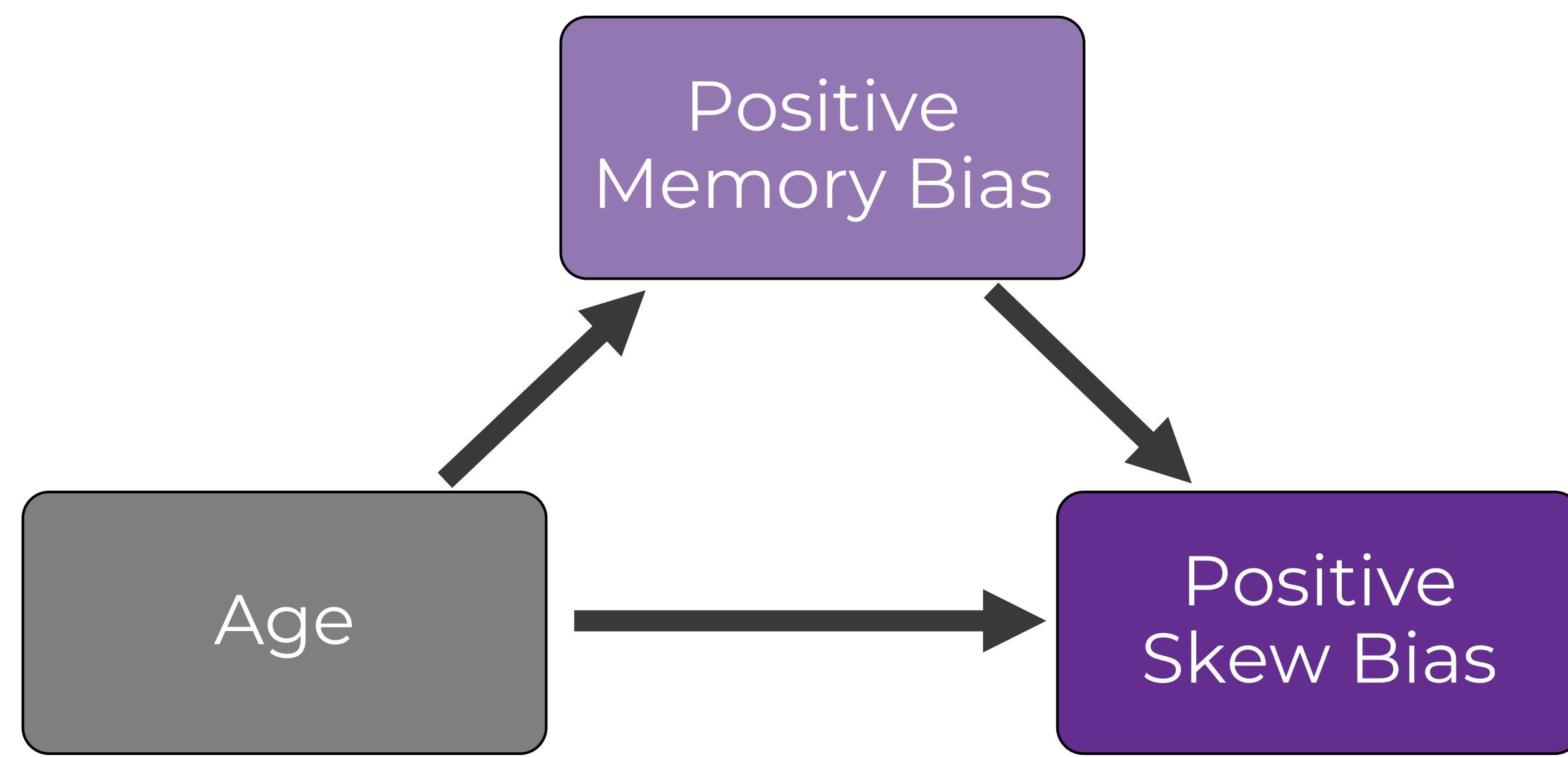


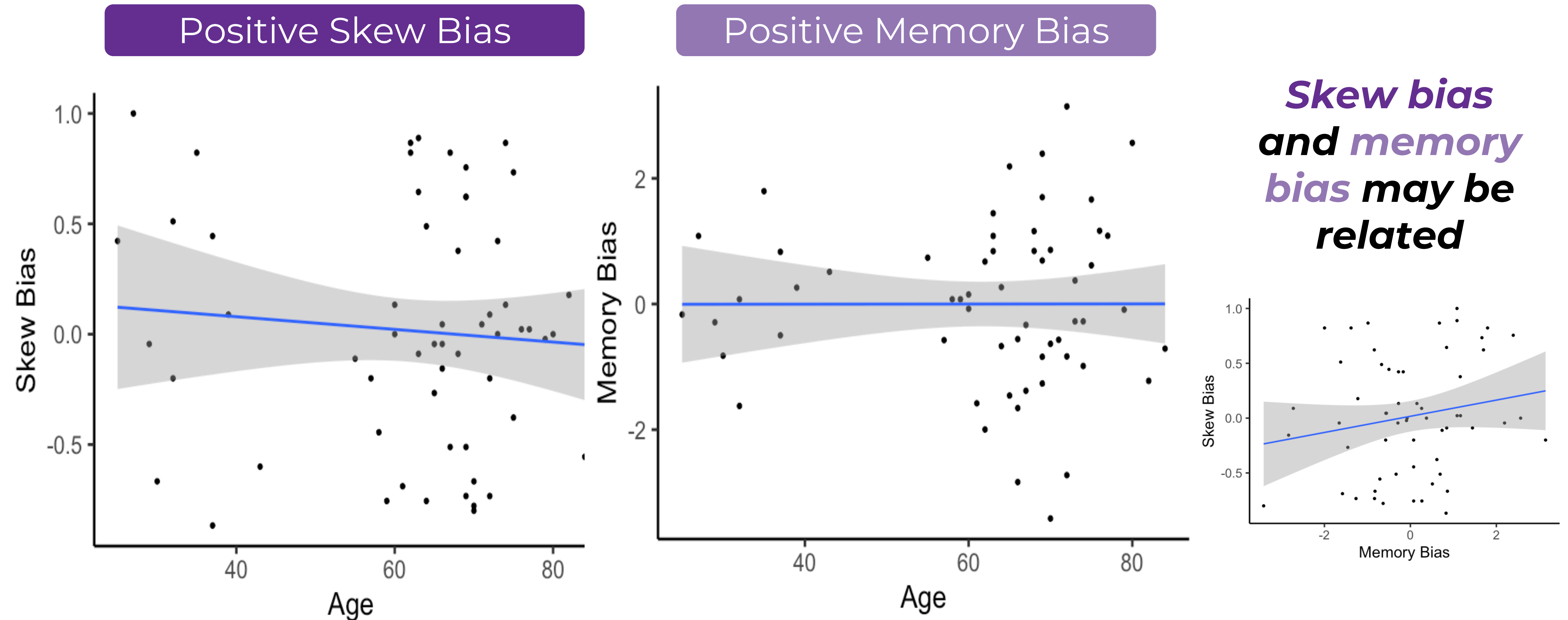
Background

- More than 20% of financial fraud schemes targeting older adults are *lottery scams*¹
- People across the lifespan prefer these 'positively-skewed' gambles², with older adults choosing them more than younger adults³
- This preference may be related to the *positivity effect*⁴



Does positive memory bias mediate the age-related differences in positive skew bias?

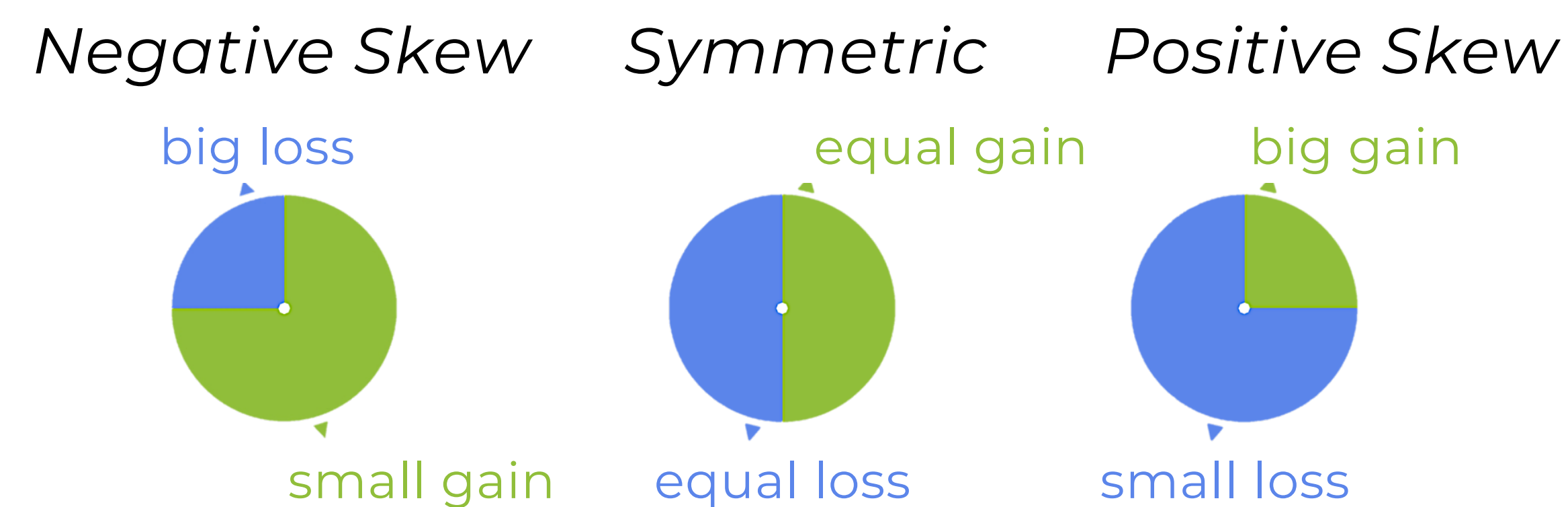
Results



No evidence of age-related positive skew bias

No evidence of age-related positive memory bias

Method



Positive Skew Bias

$$\text{Acceptance Rate} = \frac{\# \text{ of gambles accepted}}{\text{total gambles}}$$

$$\text{Skew Bias Score} = \text{positive} - \text{negative acceptance rate}$$

Positive Memory Bias

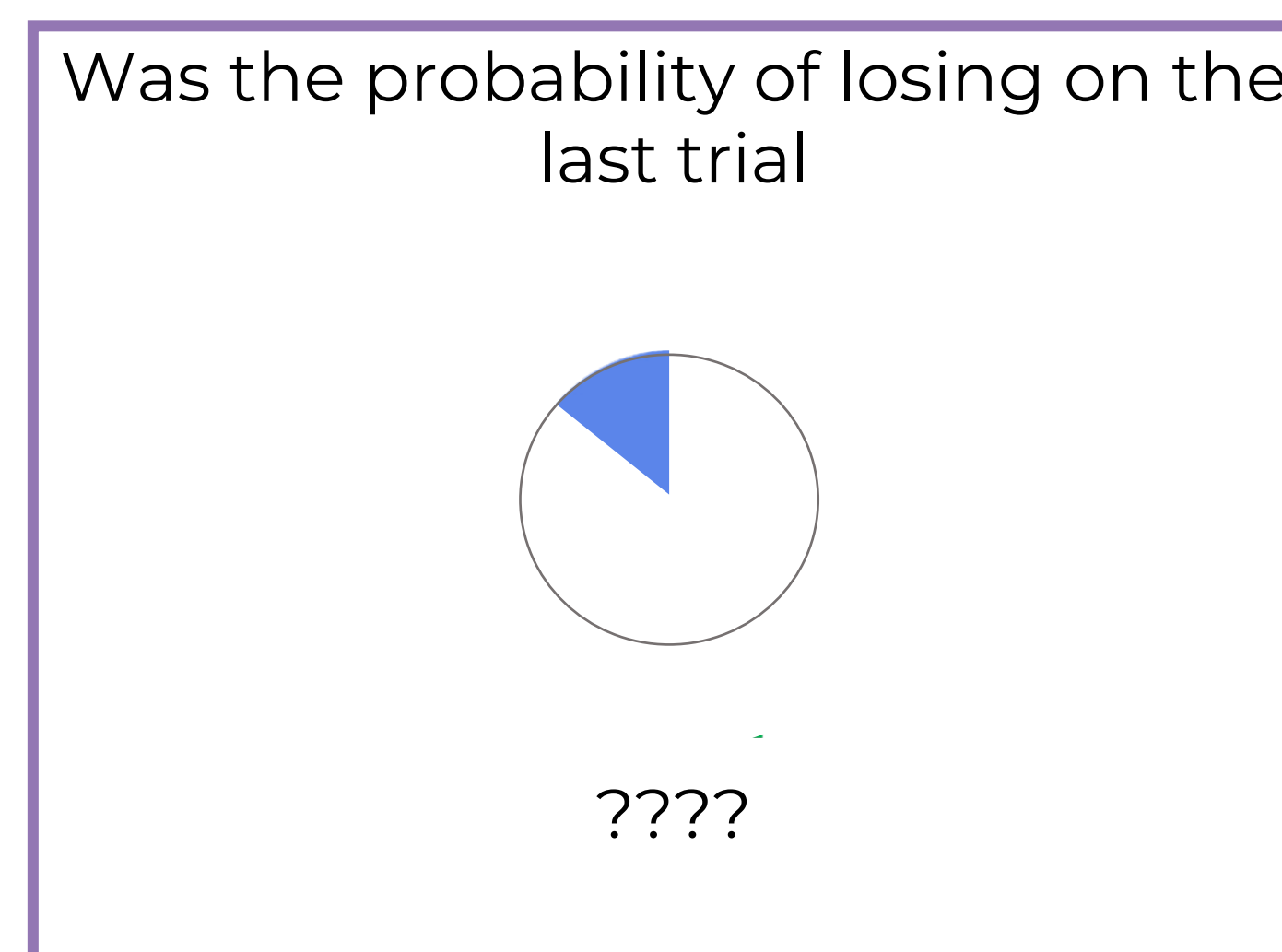
$$\text{Sensitivity Index } (d') = z(\text{hit rate}) - z(\text{false alarm rate})$$

$$\text{Memory Bias Score} = \text{positive } d' - \text{negative } d'$$

Gambling Trials



Memory Trials



Age by Decade	25-29	30-39	40-49	50-59	60-69	70-79	80-85
# Tested	3	7	1	4	24	17	3
# Total Needed	20	40	40	40	40	40	20

N = 59 of 220 total participants (ages 25-85)

Conclusions

- Neither age-related positive skew bias nor age-related positive memory bias trends have emerged in our preliminary sample
- However, overall skew bias and memory bias may be related
- We need to further investigate the absence of bias in our sample

References

¹Burnes, D., Henderson, C. R., Sheppard, C., Zhao, R., Pillemer, K., Lachs, M.S. (2017). Prevalence of financial fraud and scams among older adults in the United States: A systematic review and meta-analysis. *American Journal of Public Health, 107*(18), e13-e21.

²Wu, C.C., Bossaerts, P., Knutson, B. (2011). The affective impact of financial skewness on neural activity and choice. *PLoS One, 6*(2), e16838.

³Seaman, K.L., Leong, J.K., Wu, C.C., Knutson, B., Samanez-Larkin, G.R. (2017). Individual differences in skewed financial risk-taking across the adult life span. *Cognitive, Affective, and Behavioral Neuroscience, 17*(6), 1232-1241.

⁴Carstensen, L.L., Mikels, J.A. (2005). At the intersection of emotion and cognition: Aging and the positivity effect. *Current Directions in Psychological Science, 14*(3), 117-121.