

Study finds older adults less distracted by negative information

August 12 2019

A new study shows that compared to younger adults, older adults are less distracted by negative information—even in the earliest stages of attention.

USC researchers looked at "emotion-induced blindness," which refers to distractions caused by emotionally arousing stimuli. In four experiments using a quickly presented sequence of images, they examined how older adults prioritize emotional information. They found both younger and older adults demonstrated emotion-induced blindness, but older adults were more distracted by positive information and less distracted by negative information. The results were published today in *Emotion*.

"What makes our new findings striking is that we found evidence of the positivity effect at such an early, attentional level," said lead author Briana Kennedy, a postdoctoral scholar in the Emotion & Cognition Lab at the USC Leonard Davis School of Gerontology.

"Older and younger adults were distracted differently by the same negative images that appeared for only a fraction of a second," Kennedy explained. "Older adults seem to view their world with a filter that cares less about negative information than younger adults—to the point that, without even having time to think about and reflect on what they are seeing, they give less attention to it."

The positivity effect in early attention

Studies have shown that compared with younger adults, older adults tend to favor positive information more than negative information in their attention and memory. What has remained unclear about this long-observed "positivity effect" is at which stage it impacts cognitive processing and its influence on processing other stimuli appearing around the same time.

Participants in the USC study were shown a rapidly displayed series of landscape images and given the task to correctly identify the direction of one rotated picture. Those images were punctuated with irrelevant positive or negative images that appeared soon before the rotated picture. The positive images included babies or happy couples while the negative images included disturbing or threatening situations like a man approaching a woman with a knife.

Both older and younger adults were less accurate in identifying the rotated landscape image after these "emotional distractors." However, compared to younger adults, older adults were less distracted by negative and more distracted by positive images, suggesting that a selective bias toward positive information occurs early in older adults' visual processing.

"The exciting thing about this effect is how quickly the images are presented—it's only hundreds of milliseconds that these images are on the screen," Kennedy said. "This allowed us to measure the early levels of cognition and see how something that's emotional can disrupt our perception and awareness of things that come after it."

In previous studies on emotion, which involved mostly slower-paced attention and memory tasks, older adults saw and remembered positive images better and negative images worse. The researchers wanted to see if that happens in early attention and found that even when images were presented quickly, older adults were more distracted by positive rather

than negative images.

"These older adults don't really have time to reflect and think too much about something being positive or negative when they're seeing them flash so quickly on the screen," Kennedy explained. "Older adults have a sort of active filter when they're looking at things—prioritizing things that are positive and deprioritizing things that are negative compared to younger adults."

Research on "distraction by emotion" can help older and younger adults

Researchers say the most obvious implications of the research involve learning how to best communicate information to older adults. Kennedy noted that using positive imagery may lead to more successful advertising campaigns targeting an increasingly aging populace.

"Whereas younger adults may give special attention to information that has a negative spin, older adults may instead reserve their prioritized attention for something more positive," she said. "By understanding how older adults change their priority for emotion, we may better understand the way the brain—particularly our attention—changes with age."

The study authors believe their results may aid in understanding what strategies older adults are utilizing to prioritize positive and deprioritize negative, ultimately leading to more [effective treatment](#) for people struggling with post-[traumatic stress disorder](#) (PTSD) or anxiety.

"If we can better understand older adults' filter or priority mechanism for things that are positive—that also cares less about things that are negative—that might eventually help identify strategies that other people can use to overcome negative experiences," Kennedy said.

More information: *Emotion* (2019). [DOI: 10.1037/emo0000643](https://doi.org/10.1037/emo0000643)

Provided by University of Southern California

Citation: Study finds older adults less distracted by negative information (2019, August 12)
retrieved 6 May 2024 from

<https://medicalxpress.com/news/2019-08-older-adults-distracted-negative.html>

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