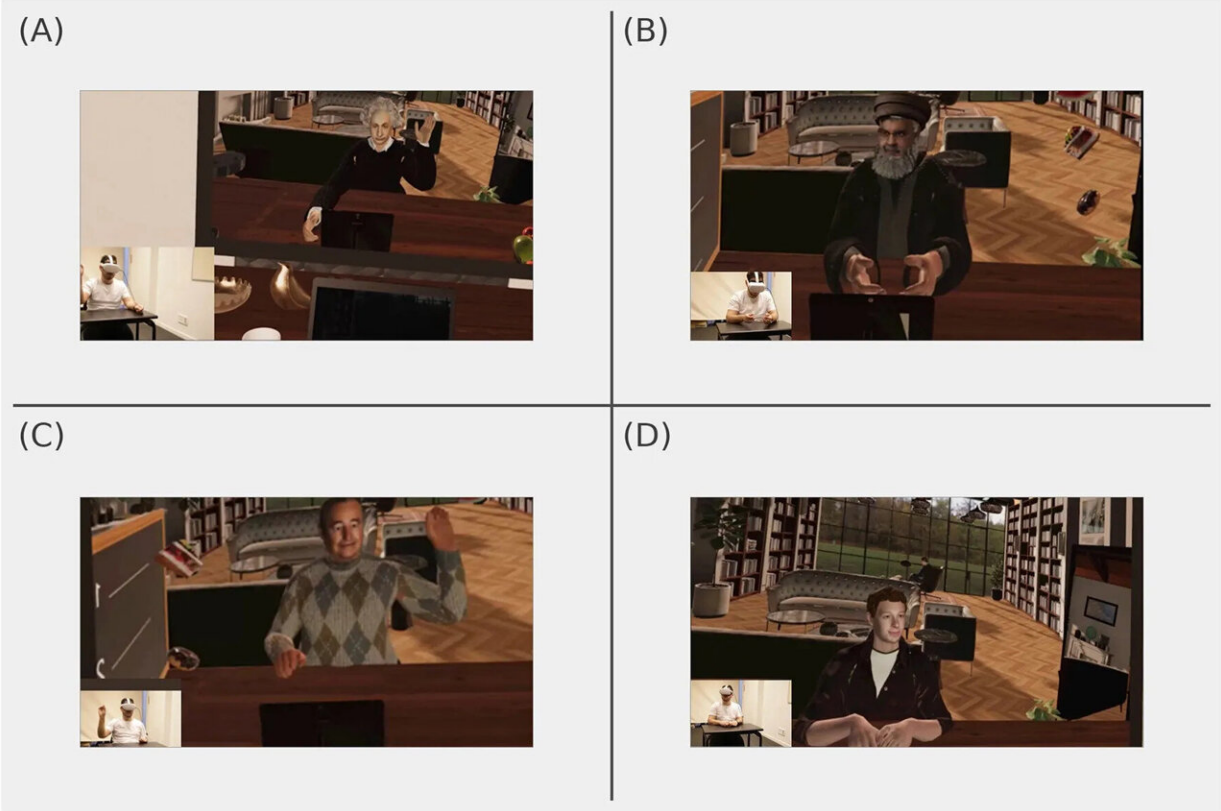
Becoming Einstein in virtual reality may help reduce age bias at work

July 1 2026, by Sayan Tribedi



An illustration of the embodiment in the four conditions. (A) Einstein. (B) Nasrallah. (C) Neutral adult. (D) Neutral young person. Credit: *Frontiers in Psychology* (2026). DOI: 10.3389/fpsyg.2026.1868756

Imagine technology that could let you walk in someone else's shoes,

changing not just your perspective, but your deepest, most automatic biases. For years, researchers have explored virtual reality's potential to foster empathy and reduce prejudice, but the question remained: Could it truly shift ingrained attitudes, such as ageism?

A new virtual reality experiment put this to the test, with surprising results. Young men who "became" Albert Einstein in a simulation emerged with significantly less hidden bias against older people and automatically linked old age to fewer negative traits. This finding hints that VR could become a radical new tool to fight age prejudice, though the trial also revealed some unexpected side effects that underscore the complexity of human perception. The work is published in the journal *Frontiers in Psychology*.

Virtual Einstein: Reality check

Age discrimination is no abstract problem. In the U.S., an estimated 64% of workers age 50 and older say they have witnessed or experienced age bias on the job, estimated to cost roughly $63 billion a year in economic losses. Yet most anti-ageism training changes only what people say, not their gut reactions. VR offers a fresh approach.

In this study, 107 Israeli men, ages 20–30, were tested on their implicit age bias and then took a short VR session. Each man "became" one of four avatars in a neutral office scenario: Albert Einstein (a positive older icon), Hassan Nasrallah (a negative older figure), a generic older adult, or a generic young adult.

After a few minutes in the virtual scenario, the researchers retook each person's bias test. The change was striking. Participants in the Einstein avatar became far more positive toward old age. As the paper reports, "Einstein's embodiment produced a significant medium-to-large reduction in implicit ageism" (effect size $d \approx 0.65$). The neutral older-

avatar group saw a smaller but still significant benefit (d≈0.36), whereas playing an average young person made almost no difference.

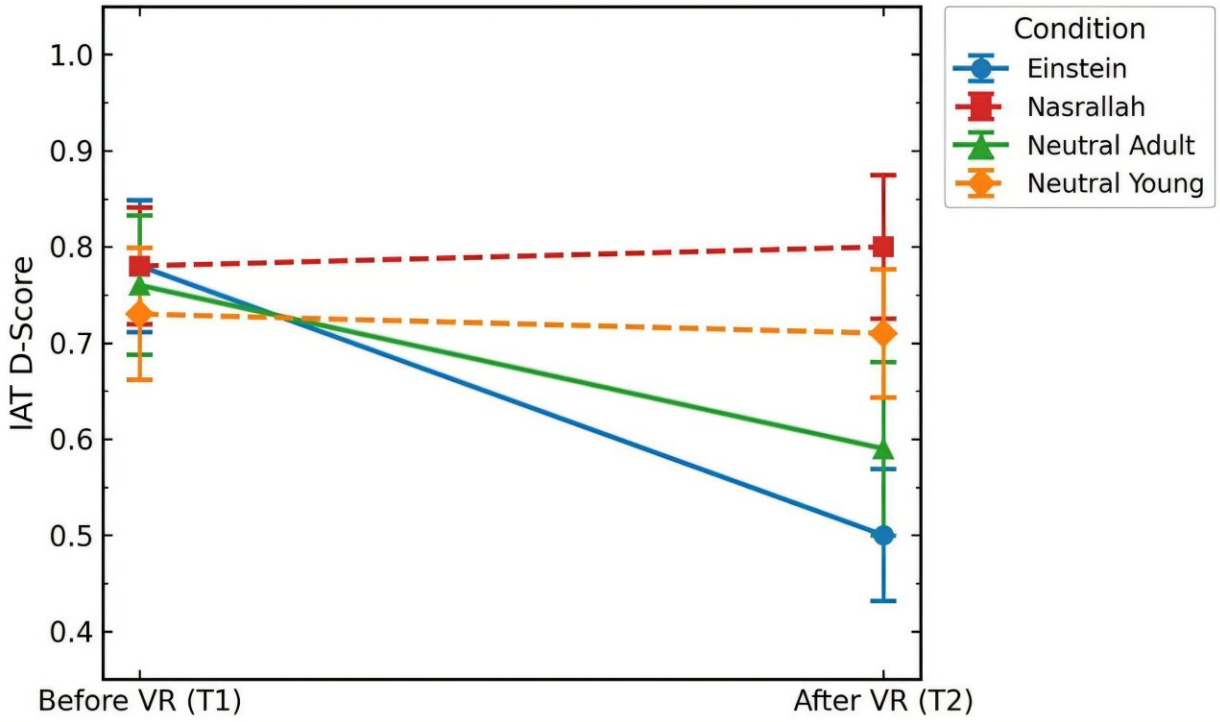
The dark side of VR role-play

What about the "bad guy" avatar? The team had expected that embodying Nasrallah would make ageism worse. Surprisingly, it did not: "Contrary to hypotheses, negative embodiment did not increase ageism," according to the paper. The Nasrallah group's bias score stayed about the same.

However, there was a catch. Those men reported feeling significantly lower self-esteem afterward (a medium drop) and even showed a slight increase in unrelated biases (for example, stronger gender–career stereotypes). In short, wearing the villainous avatar left participants rattled in other ways, even though it didn't raise their age bias.

This distinction between automatic, unconscious reactions and deliberate, conscious attitudes proved crucial. None of the avatars changed what the men explicitly said about older workers; everyone's survey ratings of seniors stayed essentially the same. This fits a common pattern in prejudice research: Implicit shifts don't always surface in conscious answers, suggesting that VR might be tapping into deeper, more automatic cognitive processes.

The team also ran a mock hiring test: After VR, each man evaluated a virtual 60-year-old job candidate. Those who had been Einstein, or even the neutral older avatar, were a bit more open to hiring the older applicant than those who embodied the young avatar, though the overall difference was small (not statistically significant). This suggests that while VR can influence underlying biases, translating those changes into overt behavioral shifts, especially in complex decision-making, might require more than a single session.



Changes in implicit ageism (age IAT D-score) by experimental condition and time. Error bars represent ±1 standard error of the mean (SEM). Credit: *Frontiers in Psychology* (2026). DOI: 10.3389/fpsyg.2026.1868756

Real-world impact: VR in the workplace?

This controlled experiment provides a proof of concept. As the authors conclude, the results "provide controlled evidence that embodiment in a positively valenced avatar can reduce implicit workplace ageism." In practice, one could design a brief VR exercise so that managers experience old age in a positive light. Importantly, even the plain older-adult avatar (no celebrity involved) produced some benefit, meaning trainers wouldn't necessarily need a famous face to see results.

Of course, there are limits. The volunteers were all young men in one country, and we don't know how long the bias drop lasts beyond the lab. More studies are needed—with women, different cultures, and follow-up tests days or weeks later—before we overhaul HR training. The authors also warn that very negative avatars might have unintended effects on mood, so such sessions should be carefully designed.

For now, however, the takeaway is intriguing: Walking in Einstein's shoes made these 20-somethings view seniors more positively. It shows how a few minutes in the right virtual skin can nudge hidden attitudes. As workforces age, even a brief VR empathy trip might start chipping away at stubborn age biases, one unbiased step at a time.

More information: Ronit Elyoseph et al, Can avatar affective valence determine whether virtual reality embodiment reduces implicit workplace ageism?, *Frontiers in Psychology* (2026). DOI: 10.3389/fpsyg.2026.1868756