

Passive virtual reality more sickness-inducing than active play

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Passive watching of a virtual reality game caused relatively severe cybersickness. In contrast, active playing of the game led to diminishing cybersickness, according to a study published in the journal

Cyberpsychology, Behavior, and Social Networking.

Virtual reality [sickness](#), or cybersickness, is a significant obstacle to being able to sustain the feeling of presence in the virtual reality experience.

Upyong Hong, Ph.D., from Konkuk University, and coauthors, investigated whether the degree of cybersickness varies depending on how the virtual reality content is experienced, and whether specific eye movement characteristics are associated with changes in cybersickness. The investigators collected and analyzed eye-tracking data.

Eye movement patterns changed depending on the different levels of cybersickness. Eye movements became more restricted as cybersickness increased. The investigators concluded that "more active eye movements reduced cybersickness. Thus, the restricted eye movements in the passive watching mode can be considered the cause of the higher level of cybersickness."

"As more of our time is spent in virtual worlds, it becomes ever more important to enhance methods of detecting and quantifying cybersickness. This in turn allows us to develop techniques to prevent or mitigate its detrimental effects on the user's sense of presence," says Editor-in-Chief Brenda K. Wiederhold, Ph.D., MBA, BCB, BCN, Interactive Media Institute, San Diego, California and Virtual Reality Medical Institute, Brussels, Belgium.

More information: Yunju Nam et al, Eye Movement Patterns Reflecting Cybersickness: Evidence from Different Experience Modes of a Virtual Reality Game, *Cyberpsychology, Behavior, and Social Networking* (2021). [DOI: 10.1089/cyber.2021.0167](https://doi.org/10.1089/cyber.2021.0167)

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