

Nearly one-third of patients with TBI have marginal or inadequate health literacy

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Credit: Wikimedia Commons

Low health literacy is a problem for a substantial proportion of people

with moderate to severe traumatic brain injury (TBI), [according](#) to research published in *The Journal of Head Trauma Rehabilitation (JHTR)*.

Angelle M. Sander, Ph.D., FACRM, Professor in the H. Ben Taub Department of Physical Medicine and Rehabilitation at Baylor College of Medicine and Director of TIRR Memorial Hermann's Brain Injury Research Center, and co-authors explain that Healthy People 2030 describes personal [health literacy](#) as an individual's ability to find, understand, and use information about health and [health services](#) to make well-informed health decisions for themselves and/or others.

They emphasize that health literacy can impact the comprehension, assimilation, and utilization of health care education and recommendations, and they urge clinicians to attend to health literacy when providing education and recommendations to individuals with TBI.

Nationwide study made use of a multimedia self-response tool

As part of a national multicenter study, the researchers surveyed 205 individuals with complicated mild, moderate, or severe TBI, 1 to 30 years post-injury. The Health Literacy Assessment Using Talking Touchscreen Technology (HealthLiTT), which incorporates sight, sound, and touch, was administered as an [online survey](#) to assess health literacy.

For each of the 14 questions, participants could read the item or touch a button to hear the question read aloud. For some questions, the participant viewed a related image or graph. To respond, participants pressed a button corresponding to the answer they believed was correct.

When a score of 55 was used as the cutoff, 31% of the sample demonstrated marginal/inadequate health literacy. "We are unable to determine whether the incidence of low health literacy in our sample was similar [to before the injury], a result of the injury, or due to injury-related impairments (e.g., memory changes) exacerbating preexisting low health literacy," the authors note. "Regardless, the percentage of our sample with low prose health literacy was considerably higher than estimates from the general (non-TBI) population."

Certain demographic factors, but not TBI severity, affected health literacy

Adequate health literacy was more likely among participants with more than a [high school education](#) than those with less formal education and among non-Hispanic white individuals compared with Hispanic and non-Hispanic Black individuals. There was no significant difference in the odds of having adequate health literacy for those with complicated mild/moderate injury compared to those with severe injury.

Dr. Sander and her colleagues note that education and race/ethnicity "may be serving as proxies for structural determinants of health, such as residential segregation influencing educational access and quality, educational exclusion, [social class](#), structural racism, and economic and political inequalities that have downstream effects on the individual and their life experiences."

To help patients with TBI better understand health-related information, the authors suggest:

- Ask patients their preferences for health information format (visual, verbal, or written)
- Provide frequent reminders of important health information and

related recommendations

- Ask patients to express their understanding of the recommendations in their own words
- Deliver supplemental instructions via the e-health portal when feasible
- Involve care partners in key discussions (eg, those about physical therapy instructions, medication adherence, and healthy lifestyle behaviors)
- Flag marginal/inadequate health literacy in the [electronic medical record](#) so other clinicians can adapt their treatment planning and patient education

In a companion study, led by Dr. Monique Pappadis at the University of Texas Medical Branch at Galveston, School of Public and Population Health, it was demonstrated that individuals with adequate health literacy had better physical and mental health outcomes.

More information: Monique R. Pappadis et al, The Relationship of Health Literacy to Health Outcomes Among Individuals With Traumatic Brain Injury: A Traumatic Brain Injury Model Systems Study, *Journal of Head Trauma Rehabilitation* (2023). [DOI: 10.1097/HTR.0000000000000912](#)

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