

## The Effect of Health Literacy and Numeracy on Interest in Research Participation

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**Background:** There is much attention to recruitment of diverse populations in research, but little is known about the influence of health literacy and numeracy skills. We sought to determine if health literacy and numeracy affect individuals' interest to participate in research studies.

**Methods:** This study pooled data from 3 large surveys conducted by the Mid-South Clinical Data Research Network, with a total of 15,973 unique participants. The survey domains included demographic items, 3-item Brief Health Literacy Screen (range 3-15), and 3-item Subjective Numeracy Scale (range 3-18). The outcome was a 7-item instrument assessing participant's interest in different types of research, including taking surveys, giving a blood sample, participating via phone/internet, meeting at local community centers, involving family, or staying overnight at a hospital.

**Results:** Participants were predominately female (65.5%), White (81.3%), around 52.8 (SD±16.5) years old, and had relatively good health literacy ( $M=13.5$  ( $SD \pm 2.1$ )) and numeracy ( $M=14.3$  ( $SD \pm 3.6$ )) skills. Linear regression models, adjusted for demographic characteristics, revealed that lower health literacy and numeracy skills were each independently associated with less interest in research participation ( $\beta$  0.140 (95% CI 0.108, 0.171),  $p<0.0001$ ), ( $\beta$  0.106 (95% CI 0.088, 0.125),  $p<0.0001$ ), respectively). Prior research participation was associated with higher interest in research ( $\beta$  1.209 (95% CI 1.080, 1.332),  $p<0.0001$ ).

**Conclusion:** Individuals with lower health literacy or numeracy scores were less interested in participating in research studies. Additional work is needed to elucidate reasons for this finding and to determine strategies to engage these vulnerable populations.