

## A Two-Week and Six-Month Stability of Cancer Health Literacy Classification Using the CHLT-6

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**Abstract :** Health literacy has been shown to predict a variety of health outcomes. Reliable identification of persons with limited cancer health literacy (LCHL) has been proved questionable with existing instruments using an arbitrary cut point along a continuum. The CHLT-6, however, uses a latent mixture modeling approach to identify persons with LCHL. The purpose of this study was to estimate two-week and six-month stability of identifying persons with LCHL using the CHLT-6 with a discrete latent variable approach as the underlying measurement structure. Using a test-retest design, the CHLT-6 was administered to cancer patients with two-week (N=98) and six-month (N=51) intervals. The two-week and six-month latent test-retest agreements were 89% and 88%, respectively. The chance-corrected latent agreements estimated from Dumenci's latent kappa were 0.62 (95% CI: 0.41 - 0.82) and .47 (95% CI: 0.14 - 0.80) for the two-week and six-month intervals, respectively. High levels of latent test-retest agreement between limited and adequate categories of cancer health literacy construct, coupled with moderate to good levels of change-corrected latent agreements indicated that the CHLT-6 classification of limited versus adequate cancer health literacy is relatively stable over time. In conclusion, the measurement structure underlying the instrument allows for estimating classification errors circumventing limitations due to arbitrary approaches adopted by all other instruments. The CHLT-6 can be used to identify persons with LCHL in oncology clinics and intervention studies to accurately estimate treatment effectiveness.

**Keywords :** limited cancer health literacy, the CHLT-6, discrete latent variable modeling, latent agreement

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