How normal is normal? Examining overall battery performance in relation to Orientation Log (O-Log) scores

Jessica Robbins, Shepherd Center
The Orientation Log (O-Log) is a useful screening instrument used to assess patient orientation to place, time, and situation. The scores range from 0-30 (Dongwook, LoGalbo, Baños, & Novack, 2004), with a cut-off score of 25 (Novack, Dowler, Bush, Glen, & Schneider, 2000). When comparing the O-Log to other measures of orientation, there was adequate correlation to GCS (Novack et al., 2000) and GOAT (Frey, Rojas, Anderson, & Arciniegas, 2007), along with excellent correlation with MMSE (Penna and Novack, 2007). The O-Log is commonly used to track recovery and progress in post-acute rehabilitation (Alderson & Novack, 2002). The literature utilizing the O-Log uses a cut-off score of 25 as an adequate level of orientation. However, research assessing whether varying levels of orientation have an impact on overall test battery mean (OTBM) has not been conducted.

35 inpatients at a rehabilitation hospital were assessed.

Demographic data:
- Age: M= 41.51, SD=18.77; Education: M=13.23, SD=2.78
- Race: 77% Caucasian, 20% African American, 3% other
- Gender: 77% Male
- Participants divided into groups based on O-Log score at time of testing
  - Group 1: O-Log 20-24 (n=4)
  - Group 2: O-Log 25-26 (n=5)
  - Group 3: O-Log 27-28 (n=8)
  - Group 4: O-Log 29-30 (n=18)
- Tests administered included included attention, memory, and executive functioning measures.
- Examined differences of OTBM between groups.

Conclusions/Future Directions
- Much of the research utilizing the O-Log as a measure of orientation uses the cut-off score of 25 as an adequate level of orientation, despite not being fully oriented.
- Nonsignificant differences of OTBM between O-Log scores ranging from 25+ indicate full orientation is not required for NP testing.
- The steady increase in OTBM as O-Log scores increase, orientation could be viewed as range that predicts neurocognitive outcome.
- By comparing OTBM across ranges of scores on the O-Log, scores of 20-24 were significantly lower than higher scores (29-30), but scores of 25-28 were not significantly different than higher scores within the normal range or lower scores. This suggests that a score of 25 is a reasonable cut-off score associated with an adequate level of orientation as it serves as a midpoint between lower and near perfect scores.
- Scores below a cut-off score of 25 perform worse on neuropsychological testing. Although individuals below the cut-off are able to be tested, it may not be an optimal measure of current neurocognitive status. To ensure accurate results, level of orientation should be considered.

References

Contact Information: Joseph C. Murthy, MA  joe.murthy@shepherd.org