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### Sequential Information Processing: The “Elevated First Response Effect” can contribute to exaggerated Intra-Individual variability in older adults

#### Abstract:

In this study we examined attention-related reaction time (RT) and intra-individual variability (IIV) in younger and older adults using an iPad-based visual search test, in which, for each trial, participants were required to sequentially press a series of on-screen stimuli numbered from 1 to 8. Although overall performance RT was significantly slower, with greater IIV for the older compared to the younger adult group, there was also a disproportionately slowed RT and greater IIV for the first item in the series compared to all other responses within the trial. When the response to the first stimulus was removed from statistical analysis, the significant age-related RT slowing effect remained, but IIV was no longer significantly greater for the older compared to the younger adults. This pattern of results reveals a dichotomy between the preservation of RT and IIV in aging, and one that is strongly related to research methodology. A finding that may account, at least in part, for the outcome heterogeneity in the study of IIV in aging.

#### Biography

**Nasreen Basoudan** is a distinguished academic and researcher at Swansea University, UK. With a profound passion for advancing knowledge in her field, she has significantly contributed to both research and education. Her expertise spans multiple disciplines, and she is renowned for her innovative approaches and dedication to excellence. Through her work, Nasreen Basoudan continues to inspire students and colleagues alike, leaving a lasting impact on the academic community at Swansea University and beyond.