

AB096. Neurophysiological measures of stigma stereotypes

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Background: The perceptions surrounding assistive technology have been shown to be increasingly stigmatizing in older adult populations. This stigmatization can lead individuals to the abandonment of the assistive device. Until now, the methods of identifying or predicting the stigma surrounding assistive technology has mostly been qualitative in nature. Here we present a novel quantitative and qualitative research study that uses neuro-cognitive (psychophysics and EEG) and eye tracking technology, in addition to a new questionnaire to investigate the stigma associated with assistive devices. Therefore, this approach plays a major role in understanding and predicting the neural and physiological correlates associated to stigma.

Methods: Thirty-four older adults (>50 years) took part in the study. To determine the psychophysiological predictors of stigma surrounding assistive technologies, we monitored brain activity using EEG, heart rate and eye movements using an eye-tracker while participants viewed a series of images containing either an older or younger individual in different social scenarios (e.g., talking to doctor, at coffee shop). In each scenario, the individual uses either no assistive device, a low stigmatizing device (e.g., iPad), or a high stigmatizing device (e.g., electronic magnifier).

Results: Here we present preliminary analysis of the eye movement data. Analysis shows that in comparison to images that contained a low stigmatizing device, in images that contain high stigmatizing devices, the latency to fixate the device is shorter, first fixation duration is longer, and the total number of fixations on the device are higher. The environment that the devices is used in has no effect on eye movement metrics.

Conclusions: Although the sample size is small, and based on a healthy older-adult population, these initial observations would indicate that latency to fixate and first fixation duration are predictors of stigma associated with assistive devices. Future research should expand this prediction to those actively using assistive devices, and how the measures predict abandonment over time.

Keywords: Assistive technology; stigma

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