

Impact of Variations in Context and Format of Presentation on Accuracy of Identification of Alzheimer's Disease Symptoms

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Early identification of Alzheimer's disease (AD) provides the benefit of maximizing time for planning late-life care, medical preferences, and the use of pharmaceuticals to prolong interaction with family and friends. Medical professionals in some locations are working to build early-detection screening tools that can be administered electronically to their patients. Two factors that may influence the interpretation of the earliest signs must be considered in the development of AD screening measures: 1) context of symptoms (e.g., memory symptoms only, executive functioning symptoms only, combined memory and executive functioning symptoms) within which any particular symptom occurs and 2) format of presentation within daily life behavior (i.e., vignettes) rather than in a formal symptom list. The complexity of symptom context, especially in early stages of AD, contrasts with most informants' views of AD as a disease affecting memory alone. Executive functioning symptoms are challenging to identify as AD symptoms and are mislabeled as depression, personality, and normal aging. In this study, symptoms that were included in vignettes with only memory symptoms present were hypothesized to be attributed to AD more strongly than when those same symptoms were presented in vignettes with a combination of memory and executive functioning symptoms. Additionally, contextual cues may aid in or detract from identification of AD symptoms, leading to the hypothesis that when symptoms are presented in vignettes, they would be differentially identified as AD symptoms from when the same symptoms were presented in a list of negative neurological symptoms. Findings indicated that intensity of the symptoms is important in the identification of AD, and intensity differentially impacts symptoms of differing types and in differing contexts. Variations in intensity of memory symptoms have a much greater impact on observers' views of symptom consistency with AD than variations of intensity of executive functioning or combined symptoms. A finer-grained analysis showed that at low intensity, a combined presentation of symptoms, not memory symptoms alone, is necessary for the observer to associate the problem with AD. Additionally, added contextual information hinders observers from identifying AD symptoms as consistent with AD. Specific aspects of symptoms are important in the recognition of AD, in particular, the intensity of the symptom as well as its embeddedness in an emotionally-laden scenario. Knowledge of these factors in the development of electronically-based screening tools will contribute to their efficacy in early detection of AD.