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Influence of a Multimedia Fall Prevention Program for Seniors on Recognition of Fall Risks

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Objective: The Multimedia Fall Prevention (MFP) program utilizes situated cognition principles to address the needs of Seniors who have fallen or regularly lose their balance and frequently cannot identify the underlying causes. We examined the influence of MFP on ability to recognize fall-risks in novel situations.

Methods: In a randomized, double-blind trial 292 participants completed Standard (interview + follow-up interview + test) or Multimedia treatment (Standard + 1-2 multimedia sessions). Sessions included interactively viewing multimedia vignettes (20-30s.) with staff who did NOT participate in follow-up testing. The test procedure consisted of 10 brief (<10s.), novel scenes containing implicit or explicit fall-risks. These were administered in random order and fall-risks recognized in each scene were recorded (#Risks). A univariate, sequential analysis of variance was performed on #Risks recognized across 10 scenes as a function of: Gender, Age, Treatment (Standard or MFP) and Practice (1 or 2 MFP sessions); including all relevant interactions.

Results: No independent effects of Gender or Age were observed. Participants who experienced multimedia sessions (n=176) recognized significantly more fall-risks overall ($M_{\text{Standard}}=26.9$, $M_{\text{MFP}}=29.9$; $p=.001$) at follow-up. Individualization of the vignettes resulted in substantially improved risk recognition ($M_{\text{NotIndividualized}}=26.5$, $M_{\text{Individualized}}=34.5$; $p<.001$), as did addition of a practice session ($M_{\text{NoPractice}}=27.7$, $M_{\text{Practice}}=32.0$; $p=.026$). One interaction trend suggested that older participants did not benefit from practice when vignettes were individualized.

Conclusion: MFP provides a highly effective means to help Seniors identify aspects of their actions or environment that could cause a fall. This represents the foundation for establishing their personal fall prevention program.