Purpose It is clear that the aging populations around the world represent a major increase in both the economic and social costs of dementia care for future societies, particularly given the absence of a curative treatment for the disease[1]. Many authors agree that preventative strategies offer the most promise in tackling this escalating problem[1,2]. Some studies have shown a negative association between level of education and the risk of developing clinical dementia or cognitive decline in late life[3]. One explanation is that extra 'brain reserve' may allow for normal cognitive functioning despite the existence of the disease pathology and that cognitive stimulation may bring about extra reserve through a process known as 'cognitive plasticity'[4]. However, evidence for a causal relationship is lacking with mere associations shown thus far. This project aims to develop and validate a suite of 'brain training' applications for the iPhone that will permit a subsequent clinical trial which aims to definitively establish whether or not brain training acts to prevent dementia or cognitive decline. A user-centred development process is being undertaken using focus group methodology to uncover the motivational factors that influence user acceptance for mobile digital game technologies. Results from the first focus group are presented. **Method** Seven participants took part; 6 female and 1 male. The majority of participants (5 of 7) fell into the 60 – 64 age category. The focus group was split into three sub-sessions; an introductory session, a transitional session, where the participants were given hands-on experience with current commercially available brain training software, and a following session in which key questions were asked. **Results & Discussion** The top three motivational factors were: usefulness, i.e. the need for the games to provide some practical benefits; challenge, i.e. games that are neither too easy nor too hard and; familiarity, i.e. the need for the games to be recognizable to the users and/or based on their own interests. The top three de-motivational factors were: usability issues, i.e. difficulties interacting with technology in general; social isolation, i.e. negative perceptions of computer technology in general, and; a lack of familiarity, i.e. a lack of experience with digital puzzle games and/or technology. Results may be relevant to issues of technology acceptance in general amongst the older generation. The output of further focus groups will be used to inform the design phase and to construct a measurement tool with which to gauge user satisfaction with the software. Finally, the software will be validated against standardized neuropsychological tests in preparation for a longitudinal clinical trial.

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