

Evaluating the Impact of "Snakes and Ladders for a Healthy Brain" Game on Dementia Awareness and Behavioural Intentions in Public Engagement Activities

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The aim of this study was to assess the effectiveness of the modified "Snakes and Ladders for a Healthy Brain" game in raising awareness of dementia risk factors and influencing behavioural intentions to reduce dementia risks. Specifically, the study sought to determine the game’s impact on participants' knowledge of modifiable dementia risk factors, their intended health behaviours, and their preferences for follow-up support.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
Dementia is a growing concern worldwide, with increasing rates of incidence as the population ages (Livingston et al., 2020). Many risk factors for dementia are modifiable, and preventative measures can significantly delay or reduce the onset of cognitive decline. However, awareness of these risk factors is often limited among the general public. The modified version of the classic "Snakes and Ladders" game, titled "Snakes and Ladders for a Healthy Brain," was developed to address this gap in awareness. The game uses ladders to represent protective factors against dementia, such as physical exercise, a healthy diet, and cognitive engagement, while snakes symbolize risk factors such as poor sleep, stress, and social isolation.	A total of 85 participants engaged with the "Snakes and Ladders for a Healthy Brain" game during public events. Following participation, a questionnaire was distributed to assess their prior knowledge of dementia risk factors, changes in awareness due to the game, and their behavioural intentions to reduce dementia risk.. The questionnaire included questions on familiarity with the game, risk factors learned, intended lifestyle changes, and preferences for follow-up support. Responses were analysed to determine the game’s effectiveness in raising awareness and influencing behavioural intentions.	The game significantly increased participants' awareness of modifiable risks. Participants identified stress (46%), gum disease (41%), and exposure to chemicals (40%) as key risk factors they learned about through the game. A majority (61%) of participants indicated that they planned to increase physical exercise, while 56% intended to improve their diet. Additionally, 44% of participants were motivated to engage in more social activities and mental exercises. A significant proportion of participants (39%) indicated interest in receiving nutrition and diet planning advice, as well as educational workshops on dementia and healthy living. Additionally, 39% expressed interest in physical activity programmes (e.g., walking groups, fitness classes) and cognitive training (e.g., memory games, problem-solving exercises). The majority of respondents were aged 31-50 (64%), and a large portion had higher levels of formal education (60% had post-graduate studies).	The study concluded that the "Snakes and Ladders for a Healthy Brain" game is an effective tool for raising awareness of modifiable dementia risk factors and encouraging positive behavioural intentions. The game successfully highlighted both common and lesser-known risks, such as stress and gum disease, and motivated participants to consider lifestyle changes such as increasing physical activity, improving diet, and engaging in more social activities. Although only 11% of participants indicated an intention to seek professional advice, a significant portion of participants expressed interest in additional resources to support behaviour change. Despite the positive outcomes, the study found that sustained education and support are needed to facilitate real-world changes. While the game effectively engaged participants and sparked interest in preventive measures, follow-up support is essential to ensure lasting behaviour change.	Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S., et al. (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. <i>Lancet</i>, 396(10248), 413–446. Livingston, G., Huntley, J., Liu, K.Y., Costafreda, S.G., Selbæk, G., Alladi, S., et al. (2024). Dementia prevention, intervention, and care: 2024 report of the Lancet Standing Commission. <i>Lancet</i>, 404(10294), 879-909. CONTACT Contact Modestos.Vasilelis@uhs.nhs.uk  ALZHEIMER'S ASSOCIATION 