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## Scoping user needs for an online nutrition education resource for older adults

A. Turner<sup>1</sup>, V.M. Flood<sup>1,2</sup> and H.M. LaMonica<sup>3</sup>

<sup>1</sup>The University of Sydney, Faculty of Medicine and Health, Sydney School of Health Sciences, Sydney NSW 2050 Australia

<sup>2</sup>The University of Sydney, Faculty of Medicine and Health, University Centre for Rural Health, Lismore NSW 2480 Australia

<sup>3</sup>The University of Sydney, Faculty of Medicine and Health, Translational Research Collective, Sydney NSW 2050 Australia

As the global population continues to age, strategies that promote health and wellbeing among older adults are urgently required. This demographic faces an increasing burden of chronic diseases linked to inflammation<sup>(1)</sup>, often associated with diets that are energy dense and nutrient poor<sup>(2)</sup>. Importantly, the impact of these conditions can be minimised by adopting an anti-inflammatory dietary pattern, such as the Mediterranean diet<sup>(3)</sup>. While there are numerous predictors of behaviour and an individual's capacity for behaviour change, nutrition knowledge is a fundamental influencer of eating behaviours<sup>(4)</sup>. However, knowledge of anti-inflammatory diets generally and the Mediterranean diet specifically is lacking among older adults<sup>(5)</sup>, highlighting the need for effective educational programs targeting this group. Digital health technologies have the potential to provide cost-effective and accessible nutrition education, however, few technologies have been developed to meet older adults unique needs and preferences. To address this gap, this study aimed to explore the specific needs and design preferences of older adults for an online nutrition education resource. A total of 20 adults aged 55 years and older participated in one of four 2-hour participatory design workshops, where prompted discussion questions were used to explore their use of technology and scope their needs and preferences for an online nutrition education resource. All participants were regularly using a range of different devices (e.g., smartphones, tablets, and computers) and reported being comfortable doing so. Participants wanted a website that could be accessed across devices (i.e., desktop and mobile friendly) that provided practical nutrition advice, recipes, and information on the link between diet and disease. A number of design principles were identified as essential to optimise the user experience, including large and simple fonts, use of dark type on a light background, and clear categories for easy navigation. To enhance engagement, participants sought a personalised resource that could be adjusted to suit their needs, provided up-to-date information, and allowed for easy content sharing with others, such as by exporting information as a PDF. Participatory design methods offer new knowledge for developing and refining existing and future digital health technologies that are appropriate and useful for the target audience. Specifically, the older adult participants were motivated to access a user-friendly web-based nutrition resource provided it was able to be personalised to their health and nutrition needs, offered practical solutions such as adaptations to portion size or in relation to cost, and was easily shareable with others. Given the limited availability of online, self-directed and evidence-based nutrition education resources for older adults, these findings provide valuable insights to shape digital health resources that cater to the needs and preferences of this population and have the potential to support healthy eating habits and contribute to reducing diet-related chronic disease burden.

**Keywords:** ageing; technology; participatory design; Mediterranean diet

### Ethics Declaration

Yes

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