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Improving the food security status, dietary intake, and mental health among university students

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We previously reported that 28% of UK university students were food insecure, which is double the national average⁽¹⁾. Factors including poor access to nutritious food and low financial stability were significantly associated with increased food insecurity and poorer wellbeing (under submission). This pilot study aimed to conduct a short intervention to enhance food insecure university students' nutritious meal preparation skills when faced with limited finance and cooking facilities and to assess whether this improves mental wellbeing.

Food insecure UK university students, identified using the Household Food Insecurity Access Scale, were invited to take part in a 5-week study approved by the Faculty of Medicine and Health Sciences Ethics Committee at the University of Nottingham (FMHS 470-0322). During phase one of the study (two weeks), students engaged with resources to enhance financial budgeting, meal preparation, and food waste reduction skills. Phase two of the study (3 weeks) required students to practice the obtained skills using online resources. Participants completed a newly designed questionnaire prior to and post intervention to obtain sociodemographic information and assess food insecurity status, habitual food intake (3-day food diary), food literacy (Food Confidence and Behaviours Scale), and mental wellbeing (Warwick-Edinburgh Mental Wellbeing Scale). The online questionnaire was supported by focus group discussions. A paired T-test and thematic analysis were used to analyse quantitative and qualitative data respectfully.

Sixteen female food insecure UK University students participated in this study. Food security status improved in 62.5% of the participants from baseline to post-intervention. Mental wellbeing of the participants also improved significantly post-intervention compared to baseline ($p < 0.05$). Participants reported significant improvements in food literacy in both their abilities to cook nutritious food confidently and food preparation behaviours ($p < 0.001$). A significant increase in energy, protein, and fat intake was also reported post-intervention ($p \leq 0.001$). Baseline focus groups revealed that although inability to cook, lack of storage space, and lack of time were attributed to the development of food insecurity, the most common theme was lack of money or inability to budget. Interestingly, post-intervention students reported that having the ability to plan their meals during the intervention enabled them to stick to a budget without compromising the nutritional content.

This study confirmed that enhancing participants financial budgeting, meal preparation, and food waste reduction skills improves food security status and, in turn, may contribute to the improvement in mental wellbeing. Further studies are required to explore the long-term impact of this intervention.

Reference

1. GOV.UK (2021) *United Kingdom Food Security Report* [Available at: www.gov.uk].