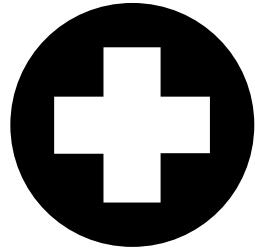




DIGITAL HEALTH PROMOTION POSTER

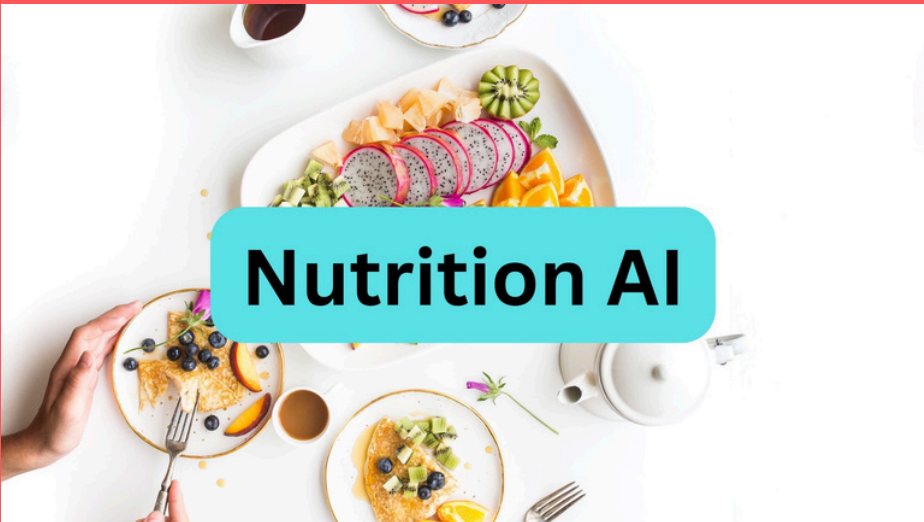


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ASSIGNMENT TITLE: COMPONENT 2 – DIGITAL HEALTH PROMOTION POSTER

BACKGROUND

Obesity is a major global public health concern, affecting over 1 billion people worldwide (WHO, 2024). In the UK, 26% of adults are classified as obese, contributing to rising rates of type 2 diabetes, cardiovascular disease, and premature mortality (NHS Digital, 2023). Public health interventions are essential to reduce disease burden and improve population wellbeing. Previous interventions include non-digital approaches such as community weight-management programmes and dietician-led counselling (Public Health England, 2021),as well as digital interventions like MyFitnessPal and NHS Weight Loss Plan apps (Chen et al., 2023). This poster focuses on NutriGuide AI, an AI-driven personalised nutrition app designed to support healthier eating and reduce obesity.



HEALTH PROMOTION VALUES & PRINCIPLES

Health promotion is guided by values such as equity, empowerment, participation, holistic wellbeing, and social justice (WHO, 1986; Tannahill, 2008). Principles include enabling individuals to take control of their health, addressing wider determinants, and reducing inequalities. NutriGuide AI aligns with these principles by offering personalised nutrition guidance, promoting self-efficacy, and supporting informed decision-making. Its accessible mobile platform enables wider reach, while culturally-inclusive food databases help reduce digital health inequality. By integrating behaviour-centred nudges and community support features, NutriGuide AI empowers users to adopt sustainable dietary habits and participate actively in their health journey.



BEHAVIOURAL CHANGE



The poster applies the COM-B Model (Capability, Opportunity, Motivation – Behaviour) developed by Michie et al. (2011). COM-B proposes that behaviour change occurs when individuals have the capability (knowledge and skills), opportunity (environmental and social support), and motivation (internal drive) to act. NutriGuide AI enhances psychological capability by providing real-time nutritional feedback and personalised meal suggestions. It increases opportunity through reminders, community groups, and integration with daily routines. Motivation is strengthened through gamification, progress tracking, and AI-driven nudges that reinforce healthy choices. The theory is widely used in digital health interventions because it supports structured, evidence-based design and addresses multiple determinants of behaviour. Applying COM-B ensures NutriGuide AI is not merely informational but actively facilitates sustained dietary behaviour change.

EXPECTED OUTCOME

Using the COM-B model is expected to produce measurable improvements in dietary behaviour, self-efficacy, and long-term weight management. Evidence shows that digital interventions grounded in behavioural theory achieve greater engagement and sustained behaviour change (Bianchi & Hall, 2023; Patel & Jones, 2022). NutriGuide AI's personalised nudges and reduced cognitive burden (via image-based food scanning) are expected to increase adherence compared to traditional calorie-tracking apps. However, outcomes may vary depending on digital literacy, socioeconomic status, and cultural relevance. Addressing these factors is essential to ensure equitable health benefits and reduce digital health inequalities.



CONCLUSION

NutriGuide AI demonstrates how AI-driven digital tools can support public health goals by promoting healthier eating and reducing obesity risk. Its integration of behavioural theory, personalisation, and community support aligns with modern health promotion principles. The intervention has implications for policy, including the need for digital inclusion strategies and ethical AI governance. For education, it highlights the importance of digital literacy and behaviour-change training for health professionals. For research, it emphasises the need for long-term evaluations of AI-based interventions and their impact on health inequalities. NutriGuide AI represents a promising direction for future digital public health innovation.

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