Title: Leveraging AI in Social Marketing: Exploring AI in healthy eating and exercise behaviour

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Introduction and Background

Obesity is a widespread and complex public health and social problem.

Associated with an increased risk of chronic diseases including cardiovascular disease, type 2 diabetes, and certain cancers (UK Government, 2024).

In 2022, 2.5 billion adults were overweight globally, with 890 million living with obesity, i.e., 1 in 8 people (WHO, 2025).
1in 4 in the UK (NHS, 2025).

Despite medical and behaviour change interventions, by both public and private sectors to promote healthier lifestyles, obesity remains persistently widespread in society.

The social Problem

❖ Obesity is a complex condition influenced by factors such as poor diet, lack of physical activity, genetics, certain medical conditions, and some medications (NHS, 2025, WHO, 2025).

❖ While underlying health issues may contribute, maintaining a healthy, low-calorie diet and regular exercise remains one of the effective approaches to managing obesity (NHS, 2025).

❖ This study adopts a social marketing perspective and focuses on healthy eating and exercise as behaviour change interventions to promote health and wellbeing.
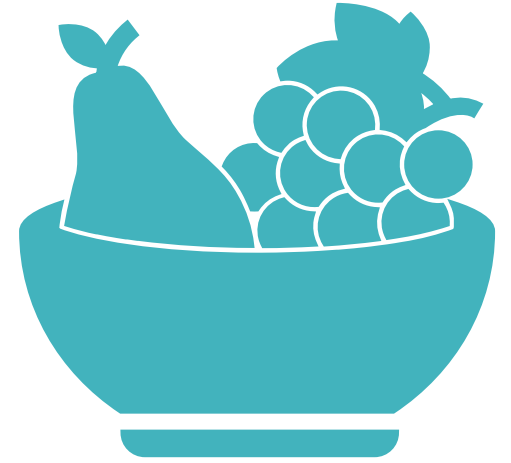
Growing interest in digital Interventions

❖ Artificial intelligence (AI) is escalating in transforming contemporary commercial marketing and central to personalised marketing (Fu et al., 2023; Anshu & Sharma, 2024).

❖ Beyond commercial contexts, AI is increasingly being explored for its potential to address social challenges.

❖ Drawing from Andreasen's (1994) conceptualisation of social marketing as the adaptation of commercial marketing techniques to influence voluntary behaviour change that is beneficial to individuals and society, this study examines the role of AI in promoting health-related behaviour change.

Research Gap

Despite growing research interest in AI, there are also critical gaps in understanding how AI can be sustainably and ethically integrated into social marketing to maximise impact (Evans et al., 2024).

The ethical implications of AI, including issues of trust, privacy, and dehumanisation remain a concern (Lobschat et al., 2021; Hassan et al., 2024).

Research questions

+ This study seeks to address the gap by analysing organic user discourse to provide insights into user perceptions and engagement with AI in health and wellbeing.

The following research questions are asked:

+ 1.   What are users' perceptions and experiences of AI-driven tools (e.g., chatbots, health apps) in supporting healthy eating and exercise related behaviour change?

+ 2.   What personal, behavioural, and environmental factors do users express regarding the integration of AI into health and exercise related behaviour interventions?

Behavior

Person/
Cognitive
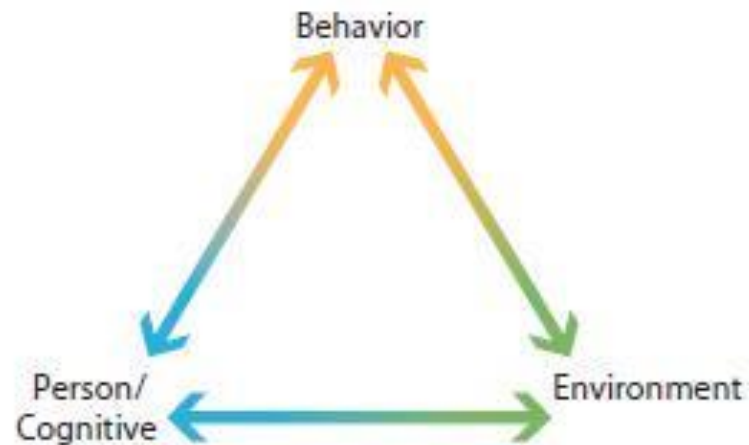
Environment

**BANDURA'S SOCIAL
COGNITIVE THEORY**

Bandura's social cognitive theory emphasizes
reciprocal influences of behavior, environment,
and person/cognitive factors.

Theoretical Framework

+ The social cognitive theory is grounded in a triadic reciprocal determinism in which behaviour, personal factors and the environment all work and interact as determinants of each other (Bandura,1989).

+ These three components continuously influence one another in shaping human adaptation and change (Bandura, 2006).

SCT dimensions

Personal factors include self-efficacy, outcome expectations, and knowledge.

Environment factors include socio-structural factors that either facilitate or hinder behaviour change (Bandura, 2004). These factors include observational learning, normative beliefs, and social support

Behavioural factors include behavioural capability (knowledge and skills), goal setting, intentions, and reinforcement (Bandura, 2004)

Data Collection and Analysis

Netnographic approach to observe online textual discourse non-intrusively. Netnography, developed by Kozinets (2010).

The subreddit r/ChatGPT was used, as it had relevant posts spanning from May 2023 to May 2025.

The search used the keywords "AI use for weight loss". Two relevant posts were identified, generating a total of 314 comments (125 and 189, respectively).

Netnographic data posts, comments, and interactions were coded and managed using NVivo software.

Deductive analysis was then conducted using a Social Cognitive Theory (SCT) coding template (Bandura, 1986) applied to the inductive themes.

Findings
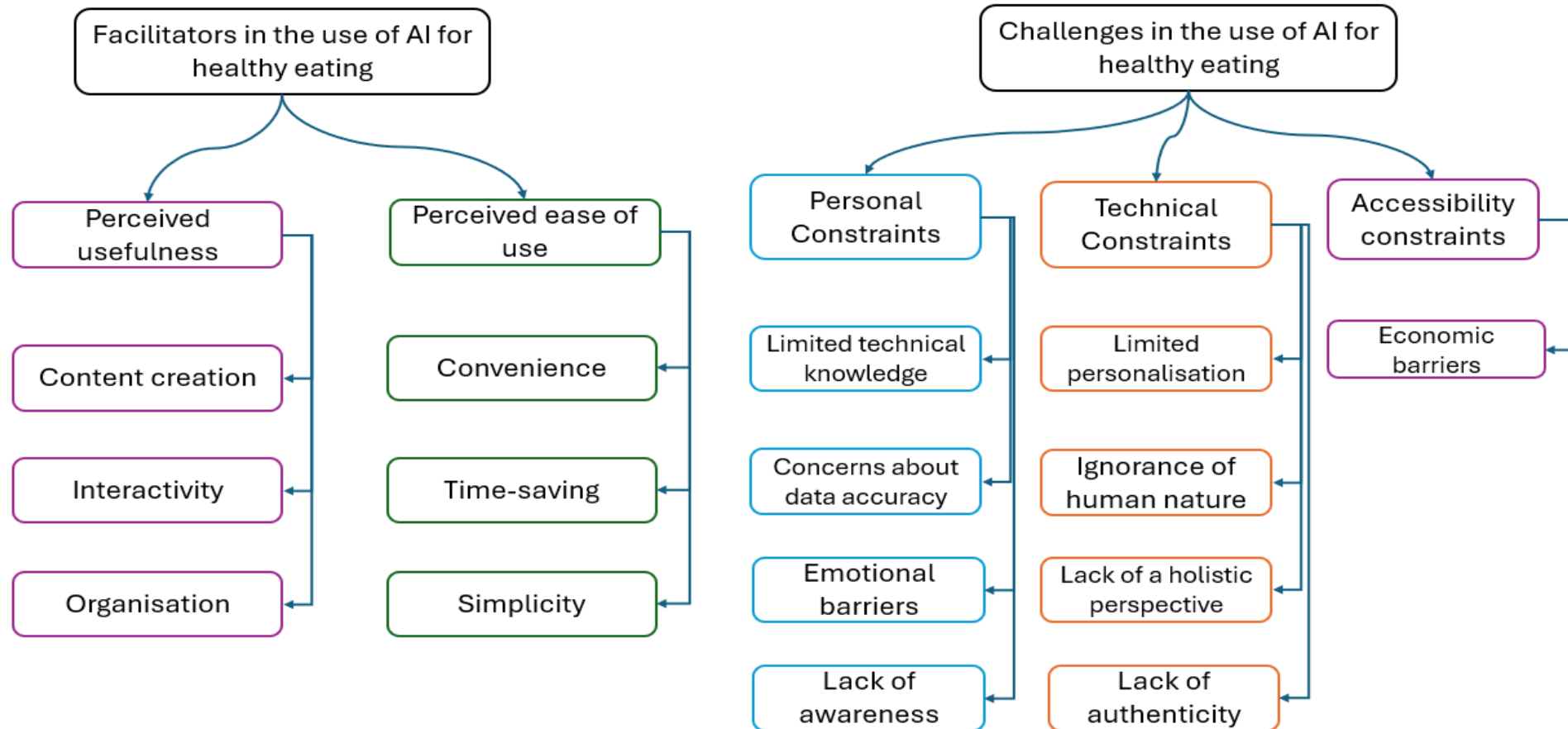
Discussion

Facilitators:

+ The findings align with prior studies that social support, ease of use, advanced understanding based on personal prompts and mostly accurate content creation are **facilitators** (Ramadan et al., 2024).

+ The current study also found that users appreciated **neutral and non-judgemental nature of the tool, convenience, the personalisation, emotional support and therapy, and customised suggestions and feedback.** This is in line with the previous studies results, on relatability to the interactivity feature of Gen-AI (Chomutare et al., 2022; Nadarzynski et al., 2021).

Discussion

Barriers:

- ❖ the lack of technical knowledge of users about which prompts they should enter to have effective responses.

- ❖ how to use specific features and the concerns about the data accuracy.

- ❖ AI is not capable enough to motivate the individuals as there is not any punishment or prompts from the app and the process starts with the user initiative although. Verstufy et al. (2016) claimed that appearance-focused and controlled eating regulation are less important than intrinsic motivation to regulate eating.

Contribution

❖ Both the methodological approach and the AI focus of this study contribute significant insight to the field of social marketing and development of theory.

❖ To inform practitioners in the development of more effective social marketing interventions that incorporate AI strategies which are customised to the preferences of the target audience and aligned with global health and well-being objectives.

Conclusion and Future research avenues

❖ Aligned with the Social Cognitive Theory, AI's nonjudgmental support can enhance social support and boost self-efficacy through personalised feedback addressing emotional and physiological states.

❖ However, the behavioural dimension particularly skills and capabilities remain underexplored, indicating a need for future research on effective integration of these elements within AI-driven interventions.

Thank you

Thank you

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