What Behaviour Change Techniques are used in digital health lifestyle interventions with midlife women?

Background:

Lifestyle improvements can alleviate menopausal symptoms and health risks in midlife women

Digital health interventions measuring behaviour change in healthy eating and physical activity are feasible and acceptable among midlife women

What is the mechanism of action of most frequently used BCTs and how it's proposed to affect improvements in lifestyle behaviours in midlife women

A systematic review of behaviour change techniques in digital health interventions with midlife women.

A systematic search of online databases, resulting in 13 studies investigating 1308 midlife women

Studies on weight-loss (3), lifestyle factors (8), menopausal symptoms (4) as their primary aim. All studies used diet and/or exercise interventions.

Average age 52.25 ± 4.79 years (range 45.7 – 61.6). **Ethnicity** was 69% white, 23% Asian, and a mix of white and African American. **Length of studies** was 8 weeks to 12 months (median 12 weeks). **Locations:** USA, Australia, South Korea
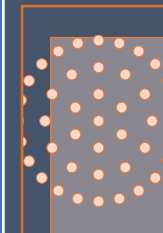
Key findings:

Extent of theory using the Theory Coding Scheme (TCS; Michie and Prestwich, 2010) was weak. Treatment fidelity using a 29-item checklist (Borrelli, 2011) was low across all five domains

Using the **Behaviour change Wheel** (BCW; Michie, Atkins and West, 2014), 50% of the interactions targeted **capability**; 42% **opportunity**, 8% **motivation** (**COM-B**). The **mechanism of action** was primarily using 'behavioural regulation'. **Intervention functions** had strong emphasis on 'enablement', 'training' and 'persuasion', while 'restriction' and 'modelling' were not used at all

Range of 6–21 BCTs (mean 13 ± 4.3; median 13), representing 6–23% (median 14%) of all the available 93 BCTs (BCTTv1; Michie et al., 2013)

Summary: Although the findings indicate which BCTs are more or less common in specific groups of interventions, the high level of heterogeneity in the design of the interventions and selection of specific BCTs suggests that the designs of these interventions cannot be generalised across different contexts. Instead, applying the principles underlying the design of these groups of interventions through systematically co-designing theory and evidence-based interventions with midlife women may be more efficacious.

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