

Supplementary file 3. Characteristics of the interventions and inequality indicators included in the analyses

First author (year)	Intervention components	Intervention duration	Intervention mode of delivery	Theoretical mechanism of action of the intervention	Inequality indicators
Alssafi (2018) ⁵²	Intervention components targeting awareness, social support, self-monitoring, self-regulation, self-efficacy	6 weeks	Fitbit and app	Social cognitive theory	Age, education
AlZuhaibi K. (2017) ⁵³	Dietary intake tracked with goal setting and feedback; step count with goal setting	5 weeks	App	NR	Gender
Carter (2013) ⁵⁴	Goal settings, self-monitoring and feedback, geographic tracking of progress, tailored text messages for encouragement to rehearse and reinforcement	6 months	App	NR	Age, gender, ethnicity, occupation
Carter (2017) ⁵⁵	Goal settings, self-monitoring and feedback, geographic tracking of progress, tailored text messages for encouragement to rehearse and reinforcement	6 months	App	NR	Age, gender, ethnicity, occupation, education
Chin (2016) ⁵⁶	N/A (the anonymous data was received from the app developers)	N/A (retrospective)	App	NR	Age, gender
Glenn (2019) ⁵⁷	Nutrition and exercise tracker focusing on mindfulness, sleep, stress, social engagement. Personal coach with experience in personal training, nutrition, nursing and social work was also included	16 weeks	App	NR	Gender
Klenk (2017) ⁵⁸	Running app with reminders sent in form of text messages	2 weeks	App and text messages	Self-determination theory	Age, gender
Kliemann (2019) ⁵⁹	Action planning, self-monitoring weight and adherence to tips, prompts to use app; enhanced app additionally included self-regulatory strategies for reducing unhealthy food cravings and lapses based on visual imagery and distraction, coping planning	3 months	App	Habit formation theory	Age, gender, ethnicity, education, employment
Martin (2015) ⁶⁰	Exercise tracker and text messaging	5 weeks	App, activity tracker (Fitbug)	NR	Age, gender, ethnicity, employment

Muralidharan (2019) ⁶¹	Video lessons, text messages, interactive texts, weekly coaching calls and emails	12 weeks	Orb), text messaging App	Not reported	Education level , profession
Patel (2019) ⁶²	Nutrition tracker	12 weeks	Smartphone app	Self-regulation theories (e.g., control theory, social cognitive theory)	Age, gender, ethnicity, education, employment, income, health literacy
Patel (2019) ^{b63}	Self-monitoring with app, in-app feedback, goal setting, reminders; simultaneous arm and sequential arm received email with tailored feedback, tailored weight loss goal; tailored calorie consumption goal, self-monitoring of body weight (not in app only arm), self-monitoring of dietary intake, facilitating mastery experience (sequential arm only), real-time feedback, out of app summary (not in app-only group), skills training via email (not in app only), action plans via email (not in app only), reminder of goals (not in app only), automated reminders	12 weeks	Smartphone app, email	NR	Ethnicity
Patel (2020) ⁶⁴	Nutrition tracker	12 weeks	Smartphone app	NR	Age, gender, ethnicity, education, employment, income, health literacy
Senecal (2020) ⁶⁵	MetaWell programme, app with healthy recipes and feedback on outcomes, smart scale, dietary replacement biscuits	42/60/90/120 days	Smartphone app, wireless scale and nutrition programme	NR	Age, gender
Stein (2017) ⁶⁶	Professional support provided by artificial intelligence, CBT (reflection, legitimisation, respects, support, partnership), feedback. Included lessons on self-monitoring, goal setting, and action planning. Included unlimited text-based quick	16 weeks	Smartphone app	NR	Age, gender

Svetkey (2015) 67	counselling sessions to help users achieve behaviour change goals Self-management, motivational enhancement, goal setting, self- monitoring, feedback. Personal coaching calls were also included	24 months	Smartphone app and smartphone app with personal coaching	Social cognitive theory, transtheoretical model	Age, gender, ethnicity
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Note: NR= Not reported.

