

Application of Intervention Mapping in Weight Management: A Scoping Review

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ADMINISTRATIVE INFORMATION

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Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 9 September 2026 and was last updated on 9 September 2026.

INTRODUCTION

Review question / Objective This scoping review systematically maps the application of IM in weight management, characterizes included studies, identifies research trends, and provides evidence-based guidance for future interventions.

Rationale Obesity has evolved into a global public health challenge, affecting over one billion adults worldwide in 2022. Projections indicate that by 2035, 54% of adults will be overweight or obese by 2035. Effective weight management requires systematic, theory-driven approaches. Intervention Mapping (IM), a six-step framework, guides the development, implementation, and evaluation of complex health promotion interventions.

Condition being studied Obesity has evolved into a global public health challenge, affecting over one billion adults worldwide in 2022. Projections indicate that by 2035, 54% of adults will be

overweight or obese by 2035. Effective weight management requires systematic, theory-driven approaches. Intervention Mapping (IM), a six-step framework, guides the development, implementation, and evaluation of complex health promotion interventions.

Objective: This scoping review systematically maps the application of IM in weight management, characterizes included studies, identifies research trends, and provides evidence-based guidance for future interventions.

METHODS

Search strategy “Obesity”, “Overweight”, “Obesity Management”, “Weight Loss”, “Weight Reduction Programs”, “Body Weight Maintenance” and “Intervention Mapping”. The PubMed , Web of Science Core Collection , Embase and Cochrane Library databases were searched without language restrictions , with the last search updated on March,2025.

Participant or population (1)Participants: healthcare professionals (e.g., researchers, managers, clinicians, nurses), patients, caregivers, consumers, or individuals from various weight management populations (e.g., children, adolescents, adults, retirees, construction workers, office workers); studies targeting weight management, obesity prevention, or overweight intervention were eligible.

Intervention (2)Intervention: explicit use of at least one step of the Intervention Mapping (IM)framework to develop, implement, or evaluate an intervention. Type #1 studies reported the full six-step IM process or several planning steps (e.g., intervention design, methods papers); Type #2 studies reported implementation and/or evaluation steps (e.g., effect evaluation, process evaluation, randomized controlled trials).

Comparator (3)Comparison: defined according to study type. Type #1 studies (descriptive studies such as qualitative, case, or mixed-methods studies) required no control group; Type #2 studies required comparisons with usual care, no intervention (control), or another type of intervention.

Study designs to be included No publication type limitations were applied (e.g., reviews were included).

Eligibility criteria Based on the PICO (Participants, Intervention, Comparison, Outcomes) framework, studies were included if they met all of the following criteria: (1)Participants: healthcare professionals (e.g., researchers, managers, clinicians, nurses), patients, caregivers, consumers, or individuals from various weight management populations (e.g., children, adolescents, adults, retirees, construction workers, office workers); studies targeting weight management, obesity prevention, or overweight intervention were eligible. (2)Intervention: explicit use of at least one step of the Intervention Mapping (IM) framework to develop, implement, or evaluate an intervention. Type #1 studies reported the full six-step IM process or several planning steps (e.g., intervention design, methods papers); Type #2 studies reported implementation and/or evaluation steps (e.g., effect evaluation, process evaluation, randomized controlled trials). (3)Comparison: defined according to study type. Type #1 studies (descriptive studies such as qualitative, case, or mixed-methods studies) required no control group; Type #2 studies required comparisons with usual care, no intervention (control), or another type of intervention.

(4)Outcomes:comprised four dimensions: weight-related metrics, energy balance-related behaviors, behavioral determinants, and intervention development and implementation outcomes. Weight-related metrics included body weight, body mass index (BMI), waist circumference, BMI z-score, and other anthropometric measures. Energy balance-relatedbehaviors included dietary intake, physical activity, sedentary behavior, sleep, and otherrelated behaviors. Behavioral determinants included knowledge, attitude, self-efficacy, intention, habit, and other psychosocial determinants. Intervention development andimplementation outcomes included IM steps completed, implementation fidelity, processevaluation, and other implementation-related outcomes.Regarding study design, alloriginal research was considered eligible, whereas editorials, letters, commentaries, conference abstracts, and similar non- original articles were excluded. Additionally, onlyarticles published in English were included.

Information sources PubMed, Embase, Web of Science Core Collection, Cochrane Library.

Main outcome(s) The PubMed , Web of Science Core Collection , Embase and Cochrane Library databases were searched without language restrictions , with the last search updated on March, 2025.

Quality assessment / Risk of bias analysis This study employed a scoping review methodology, and given the heterogeneity of included study designs, no quality assessment.

Strategy of data synthesis This study employed a scoping review methodology, and given the heterogeneity of included study designs, no quantitative synthesis of results was undertaken.

Subgroup analysis This study employed a scoping review methodology, and given the heterogeneity of included study designs, no quantitative synthesis of results was undertaken.

Sensitivity analysis This study employed a scoping review methodology, and given the heterogeneity of included study designs, no quantitative synthesis of results was undertaken.

Language restriction Without language restriction.

Country(ies) involved China.

Keywords Intervention Mapping; weight management; obesity; scoping review; health promotion.

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