

Are nutrition and physical activity chatbots feasible and acceptable to adolescents? A systematic scoping review

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BACKGROUND

Improving nutrition and physical activity behaviours requires age-appropriate support



Chatbots have potential to deliver support to improve health behaviours among adolescents

AIM

To evaluate the feasibility and acceptability of chatbots in nutrition and physical activity interventions among adolescents

METHODS

→ 6 databases searched Mar-Apr 2022

→ Inclusion Criteria

- 10-19 years
- No chronic disease(s)
- Assessed chatbot interventions to improve nutrition and/or physical activity

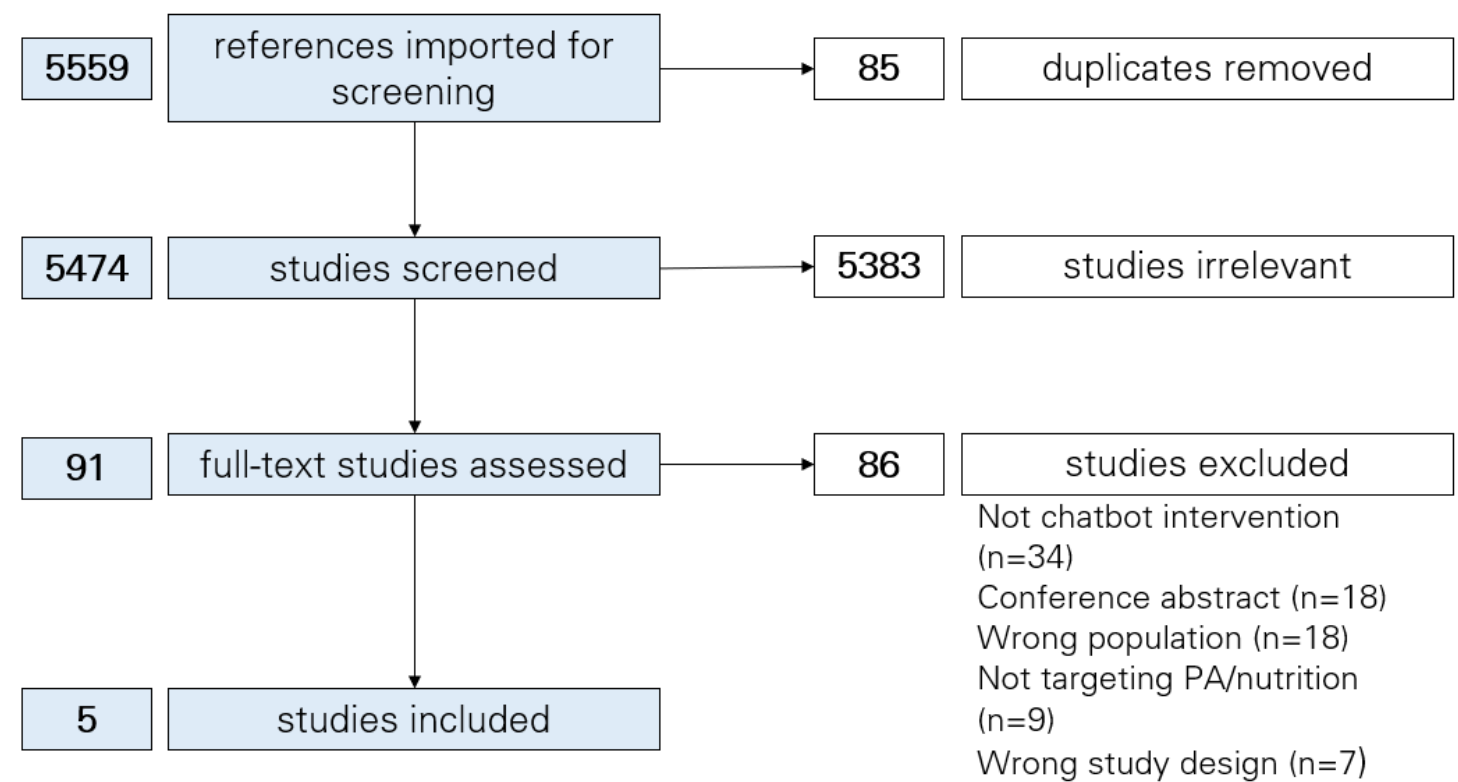


→ Screening + data extraction by 2 reviewers

→ Narrative data synthesis

→ Adolescent consultation with youth advisory group

RESULTS



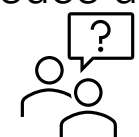
Feasibility and Acceptability

- Data varied across studies
- Usage rates >50% in 3/5 studies
- 3 studies reported health outcomes with only 1 showing positive effects

Adolescent Consultation

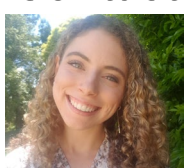
Concerns around:

- Misleading or harmful information
- Ethical issues around data privacy



First Author, Year, Country	Lee, 2017, Korea	Padman, 2017, India	Pyky, 2017, Finland	Stasinaki, 2021, Switzerland	Maenhout, 2021, Belgium
Chatbot name	"Diet A"	"Fooya!"	"MOPOrtal"	"PathMate2"	Self-regulation app
Focus	Nutrition	Nutrition	Physical Activity	Physical Activity	Combination
Intervention Delivery	Mobile application	Mobile application	Mobile service	Mobile application	Mobile application
Conversational agent	X		X	X	X
Gamification		X	X	X	
Personalised feedback	X		X	X	X
Monitored behaviour change	X		X	X	X

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CONCLUSIONS

Insufficient evidence on feasibility and acceptability of chatbots among adolescents with low usage rates and non-significant effects

Co-design with adolescents may enhance feasibility and acceptability