

Digital nudging for adherence to colonoscopy screening: a study based on the MINDSPACE framework

Submission date 15/01/2026	Recruitment status Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 04/02/2026	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 19/01/2026	Condition category Cancer	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific, Principal investigator, Public

Contact name

Prof Yan Wei

Contact details

Fudan University
Shanghai
China
200032
+86 (0)18930749707
yanwei@fudan.edu.cn

Type(s)

Public

Contact name

Mr Haichuan Guo

Contact details

Fudan University
Shanghai
China
200032

+86 (0)18669462376
24211020126@m.fudan.edu.cn

Additional identifiers

Study information

Scientific Title

Design and effectiveness evaluation of a digital nudging tool for improving colorectal cancer screening adherence among community residents: a case study of Shanghai, China

Study objectives

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 13/01/2026, Ethics Committee of the School of Public Health (Fudan University, Shanghai, 200032, China; +86 (0)21 5423 7148; gwkyb@fudan.edu.cn), ref: H2026009

Primary study design

Interventional

Allocation

Randomized controlled trial

Masking

Blinded (masking used)

Control

Placebo

Assignment

Cluster

Purpose

Diagnostic, Health services research

Study type(s)

Health condition(s) or problem(s) studied

Colorectal cancer

Interventions

Study sites were randomly assigned to either a digital decision aid intervention group or a usual care control group. The intervention consisted of two components:

1. Training for Healthcare Providers: Medical staff in the intervention group received a 4–5 hour training session on using the decision aid and related clinician-patient communication skills prior to implementation.

2. Digital Decision Aid Implementation: The digital tool was used during outpatient colorectal cancer screening consultations to support the pre-colonoscopy decision-making process. Its primary content involved educating residents about colorectal cancer and colonoscopy screening.

Intervention Type

Behavioural

Primary outcome(s)

1. Decision whether to undergo colonoscopy screening measured using telephone follow-up survey at 3 months post-intervention

Key secondary outcome(s)

1. Residents' knowledge and cognitive level, using a question-and-answer scale designed by the research team at baseline, immediately post-intervention, and 3 months post-intervention. Residents need to judge whether 10 descriptions about colorectal cancer and cancer screening diagnosis are correct, and their knowledge level will be determined based on the accuracy rate.
2. Decision conflict level, measured using the Chinese version of the Decisional Conflict Scale at baseline, immediately post-intervention, and 3 months post-intervention
3. Decision self-confidence, measured using the Chinese version of the Decision Self-Efficacy scale at baseline, immediately post-intervention, and 3 months post-intervention
4. Decision regret degree, measured using the Chinese version of the Decision Regret Scale at at 3 months post-intervention
5. Residents' satisfaction with the intervention tools, measured using the Chinese version of the Decision Preparation scale at 3 months post-intervention
6. Diagnostic preference, measured using a self-designed scale at baseline, immediately post-intervention, and 3 months post-intervention
7. Residents' expectations regarding shared decision-making measured using the Chinese version of the shared decision-making scale 9-item Shared Decision Making Questionnaire (SDM-Q-9) at baseline and 3 months post-intervention

Completion date

31/12/2026

Eligibility

Key inclusion criteria

1. Permanent residents of Shanghai (including individuals with local household registration and non-local residents who have lived in Shanghai for over 6 months).
2. Individuals eligible according to the Shanghai Community Colorectal Cancer Screening Implementation Plan.
3. Individuals enrolled in any of Shanghai's basic medical insurance or healthcare security schemes.

Healthy volunteers allowed

Yes

Age group

Mixed

Lower age limit

50 years

Upper age limit

100 years

Sex

All

Total final enrolment

0

Key exclusion criteria

1. Individuals who have previously undergone colonoscopy and were confirmed to be at no risk for colorectal cancer.
2. Individuals whose health status is unsuitable for colonoscopy.
3. Individuals with cognitive impairment that prevents participation in follow-up and questionnaire surveys.
4. Individuals with a confirmed diagnosis of colorectal cancer.
5. Individuals with a confirmed diagnosis of other high-risk diseases where the mortality risk is too high for them to be suitable for colonoscopy screening.

Date of first enrolment

01/03/2026

Date of final enrolment

31/08/2026

Locations

Countries of recruitment

China

Sponsor information

Organisation

National Health Commission of the People's Republic of China

Funder(s)

Funder type

Funder Name

National Health Commission of the People's Republic of China

Alternative Name(s)

National Health Commission of the PRC, National Health Commission, , , , NHC

Funding Body Type

Government organisation

Funding Body Subtype

National government

Location

China

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available