



ISPRO
Istituto per lo studio, la prevenzione
e la rete oncologica



ICSN2023

Testing behavioral economics messages to increase non-responders' participation in organized colorectal cancer-screening programs: a randomized controlled trial

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Nothing to declare

Agenda

Background

Behavioral Economics: a new
approach to participation

Study design

Results

Take home messages

Background

In Italy 21 Regions, 59 million inhabitants

The regional governments are in charge of implementing cervical, breast and colorectal cancer screening programs through local health authorities. However there is a national framework for screening governance.

The National Centre for Screening Monitoring is a network of regional screening reference centres appointed by the MoH to provide technical support in:

screening monitoring

implementations of screening information systems

National Prevention Plans screening indications

Italian guidelines productions

defining professional training

quality assurance initiatives and protocols implementations

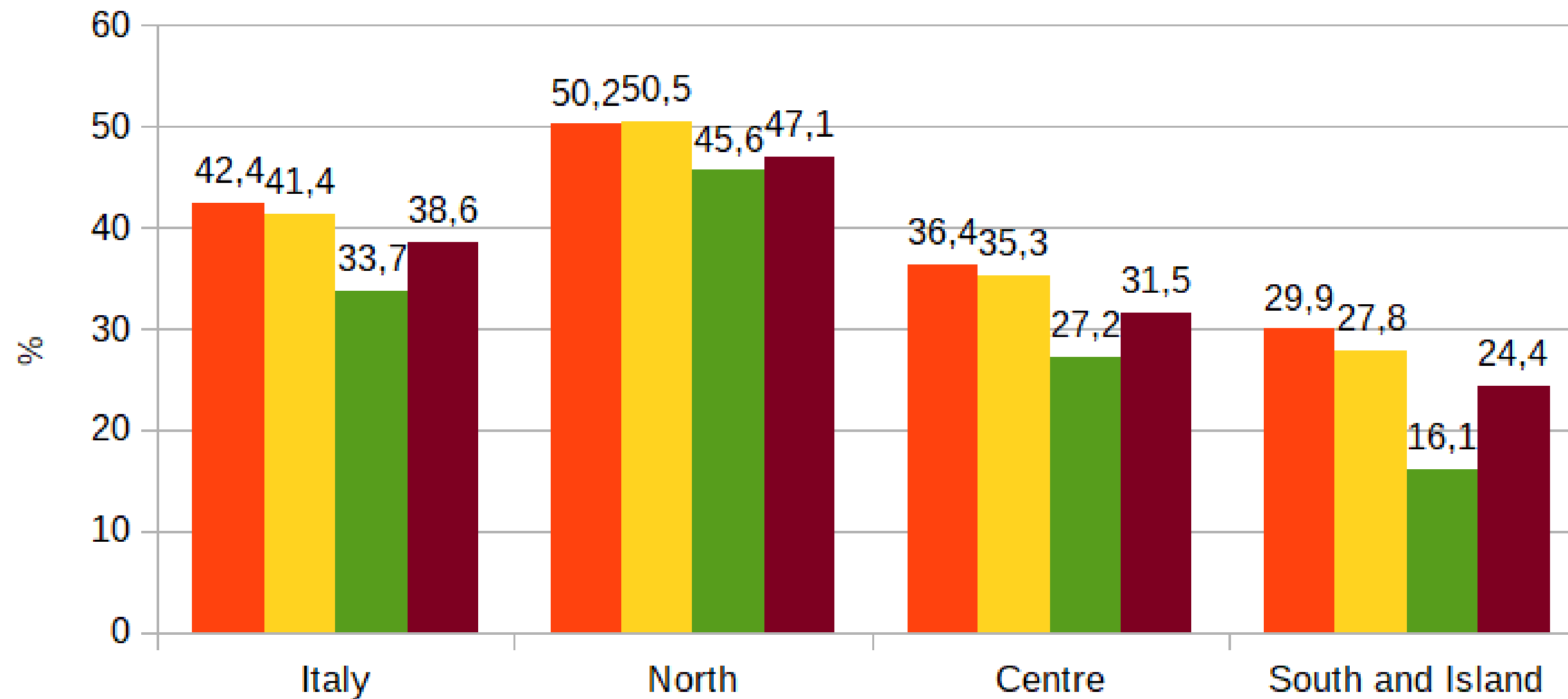
research promotion

outlining quality of information and communication

Background

CRC screening in Italy - Participation rate

2018-2021



Impact of screening programme using the faecal immunochemical test on stage of colorectal cancer: Results from the IMPATTO study



Massimo Vicentini ¹, Manuel Zorzi ², Emanuela Bovo², Pamela Mancuso¹, Marco Zappa³, Gianfranco Manneschi³, Lucia Mangone¹, and Paolo Giorgi Rossi¹, Colorectal Cancer Screening IMPATTO study working group[†]

Table 4. Comparison of different subgroups of cancers according to screening history: relative risk ratio (RRR) with 95% confidence intervals (95% CI) adjusted for sex, age, area and year of incidence, according to multinomial logistic regression

	Adjusted RRR (95% CI)		Adjusted RRR (95% CI)
Stage I vs. Stage II + III		Stage IV vs. Stage II + III	
Not-invited ¹	1	Not-invited ¹	1
Invited	2.04 (1.84–2.25)	Invited	0.77 (0.69–0.87)
Stage I vs. Stage II + III		Stage IV vs. Stage II + III	
Nonattendees ¹	1	Nonattendees ¹	1
Attendees	3.14 (2.74–3.71)	Attendees	0.46 (0.38–0.55)
Stage I vs. Stage II + III		Stage IV vs. Stage II + III	
Nonattendees ¹	1	Nonattendees ¹	1
Attendees I episode	3.31 (2.88–3.81)	Attendees I episode	0.48 (0.40–0.57)
Attendees following episode	1.68 (1.23–2.29)	Attendees following episode	0.32 (0.19–0.54)

¹Reference

Behavioral Economics: a new approach to participation

Nudges have been proposed to enhance cancer screening participation.

By implementing targeted, minor modifications to the decisions setting decision making may be predictably influenced.

A systematic review has shown their effectiveness and cost-neutrality.

Minority norms messages

MN messages provide individuals with a standard against which to compare their intention.

Individuals may underestimate the proportion of screening responders among their peers due to discrepancy between their perception of participation rates and actual rates.

Focusing on how their peers behave may align non respondents behaviour.

Normative feedback messages

F messages provide individuals with information about their past behaviour to positively impact their future behaviour.

They can increase awareness of one's behaviour relative to social norms and informing non participants that they have missed previous screening rounds may be a crucial step in changing their behaviour and increasing screening participation.

STUDY DESIGN

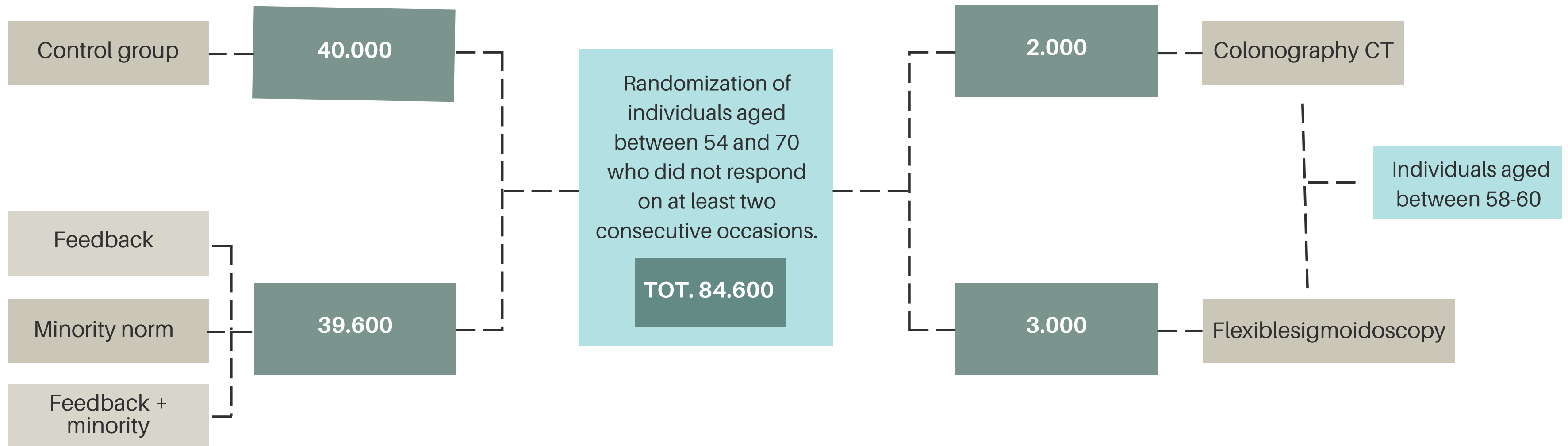
- Part of a larger project BESTcc - New strategies for prompting attendance in colorectal cancer screening programs in Tuscany and it was extended to Turin and Rome
- Randomized Controlled Trial

ELIGIBLE SUBJECTS

- 54-70 y old individuals who had not responded to CRC screening invitations on at least two consecutive occasions and had never undergone a FIT screening.
- Exclusion criteria: a personal history of CRC, adenomas, inflammatory bowel disease; colonoscopy in the past 5 years.

OUTCOME MEASURE

Participation was measured as the percentage of individuals who returned the fecal sample within 90 days after sending the reminder letter.





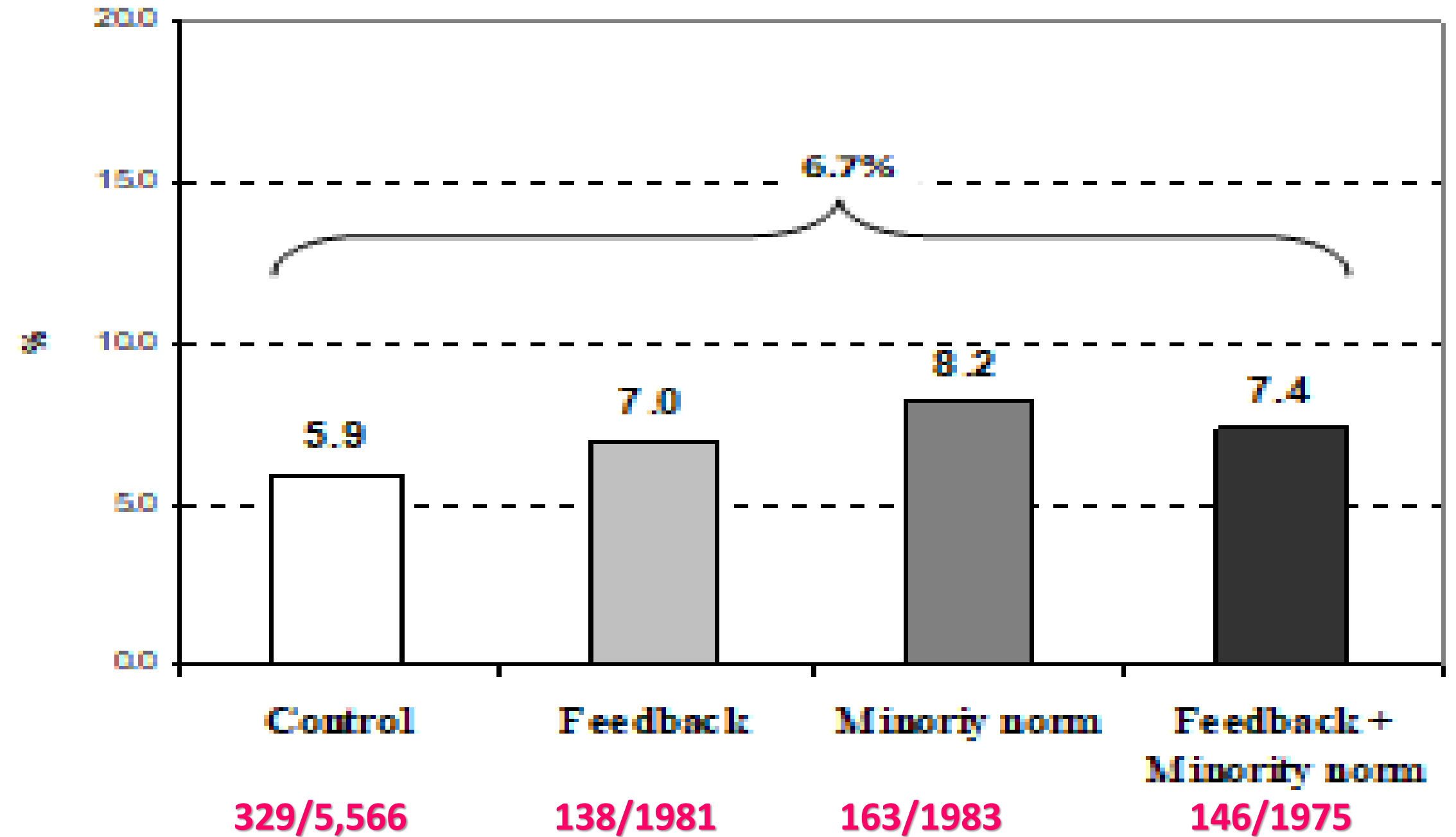
Feedback	<p>Unfortunately, you have not responded to previous invitations. However, you should know that you can still do so. We hope that you can participate this time because it is never too late to take care of your health by preventing bowel cancer.</p>
Minority norm	<p>In many areas, 6 out of 10 people invited to participate in the screening program accept the invitation. You are part of the minority who do not participate. We hope that this time you will join the group of people who respond to our invitation because it is never too late to take care of your health by doing bowel cancer prevention.</p>
Feedback + Minority norm	<p>In many areas, 6 out of 10 people invited to participate in the prevention program accept the invitation. You are in the minority who do not participate. Unfortunately, you have not responded to previous invitations, but we hope that this time you will join the group of people who respond to our invitation because it is never too late to take care of your health by doing bowel cancer prevention.</p>

Messages tested within specific FGs and collocated among the top of the invitation letter

MAIN RESULTS

A total of 11505 subjects were invited (randomized 3:1:1:1)

Florence, Rome, and Turin





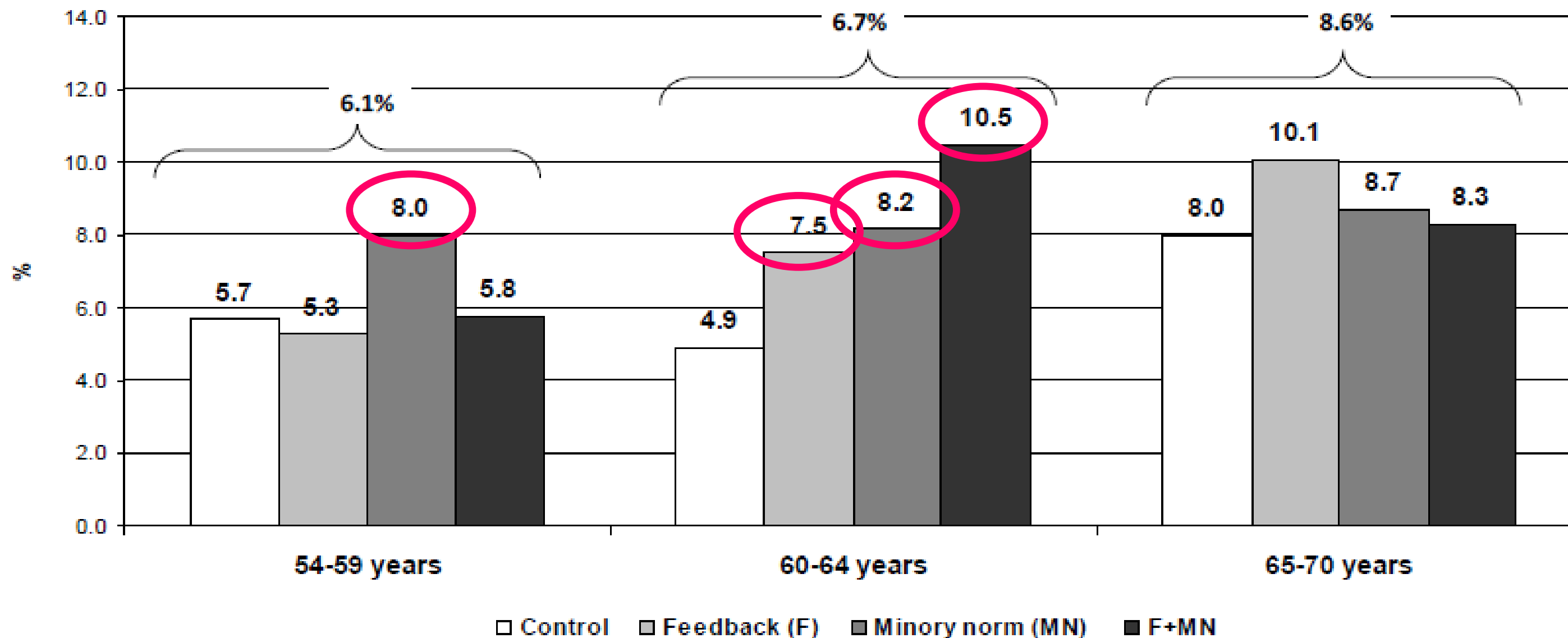
MAIN RESULTS

	N	(%)	Unadjusted model		Adjusted model	
			OR	(95% CI)	<u>aOR</u>	(95% CI)
Overall	776	(6.7)				
Condition						
Control	329	(5.9)	Ref.		Ref.	
Feedback	138	(7.0)	1.19	(0.97 – 1.46)	1.15	(0.94-1.42)
Minority norm	163	(8.2)	1.43	(1.17 – 1.73)**	1.38	(1.13-1.68)**
Feedback +	146	(7.4)	1.27	(1.04 – 1.56)*	1.23	(1.00– 1.50)



MAIN RESULTS

Figure 4. Screening uptake according to experimental conditions and age-groups.



	Model 1: 54-59 years				Model 2: 60-64 years				Model 3: 65-70 years			
	N	(%)	aOR	(95% CI)	N	(%)	aOR	(95% CI)	N	(%)	aOR	(95% CI)
Overall	380	(6.1)			196	(6.7)			199	(8.6)		
Condition												
Control	169	(5.7)	Ref.		77	(4.9)	Ref.		83	(8.0)	Ref.	
Feedback	55	(5.3)	0.94	(0.69 – 1.29)	37	(7.5)	1.60	(1.06 – 2.41)*	46	(10.1)	1.15	(0.78 – 1.70)
Minority norm	91	(8.0)	1.52	(1.16 – 1.98)*	35	(8.2)	1.57	(1.03 – 2.39)*	37	(8.7)	0.98	(0.65 – 1.49)
Feedback + minority	65	(5.8)	1.08	(0.80 – 1.46)	47	(10.5)	1.99	(1.35 – 2.92)**	33	(8.3)	0.94	(0.61 – 1.44)

Take home messages

BE is a promising field of interest for improving participation in organized colorectal cancer screening in particular when addressed to individuals who had never undergone a CRC screening test despite being invited to join the programme for two consecutive rounds

Take home messages

In our study only information about gender, age and place of birth are available and other socio-economic variables could influence the participants' perception of the BE messages.

Future studies need to explore the specific barriers and decision-making processes related to CRC screening in older age group in comparison to the younger ones.

The study is still ongoing to involve a higher numbers of individuals from rural and urban areas in the Tuscany Region.



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Carlo Senore
Diego Baiocchi
Marco Zappa
Francesca Battisti
Grazia Grazzini
Gessica Martello

**Thank for your
attention**

