CBIG-SCREEN Project | A collaborative approach to cervical cancer screening

The need for personalized screening in organized programs

Reaching the unreached population: Personalized communication strategies

Conflict of interest

CBIG-SCREEN Project

Nothing to disclose relevant to this presentation

Except that I am coordinating the H2020 funded CBIG-SCREEN project aimed at improving cervical cancer screening efficacy in vulnerable women.

Cervical cancer is not a disease of the past—it is a disease of the poor

Why do we need personalized communication strategies ?

- Cervical cancer (CC) incidence and mortality are highly sensitive to prevention and control efforts
  - regular Pap test screening ↘ cervix cancer incidence and mortality by at least 80% in an appropriate population of women
- Cultural and socio-economic diversity of the target groups ➔heterogeneous results across settings
- We need to:
  - Support women to make an informed choice about cervical screening.
  - respect their autonomy and acknowledge that screening can have harms and benefits
- More people have heard of HPV (introduction of the vaccine) but knowledge of some important aspects is still poor.
  - For example, in a study of 18–70 year olds in (UK, US and Australia)[1]:
    - 1/3 of women who had heard of HPV before did not know that "*condoms reduce the risk of getting HP*V"
    - 1/2 did not know that "*most sexually active people will get HPV at some point in their lives*"
    - Nearly all did not know that "*HPV usually doesn't need any treatment"*

Landy R, et al. *Int J Cancer 2020;**147:887-96.***
Marlow LA, et al. *Vaccine 2013;**31:763-9.***

Why do we need personalized communication strategies ?

- Reasons for not receiving timely screening, 2005 to 2019 study among women aged 30 to 65 years in the US
  - The most common reason across all groups was **lack of knowledge**
  - Decrease:
    - Lack of access (from 21.8% to 9.7%)
  - Increase:
    - Lack of knowledge (from 45.2% to 54.8%)
    - Not receiving recommendations from health care professionals (from 5.9% to 12.0%)

Suk R, et al. JAMA Netw Open 2022;**5:e2143582.**

Low socio-economic status and cervical cancer.

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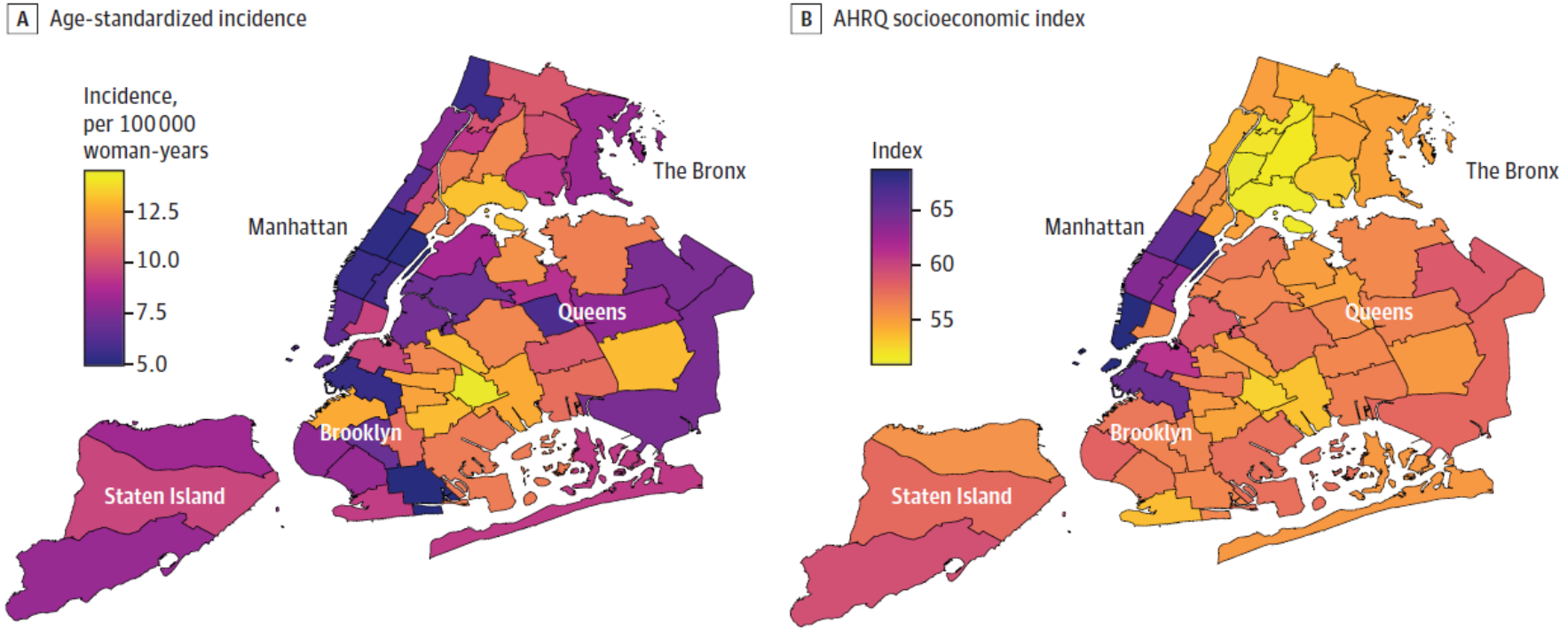
Figure 1. Maps of Cervical Cancer Incidence and Socioeconomic Status in New York City's Neighborhoods

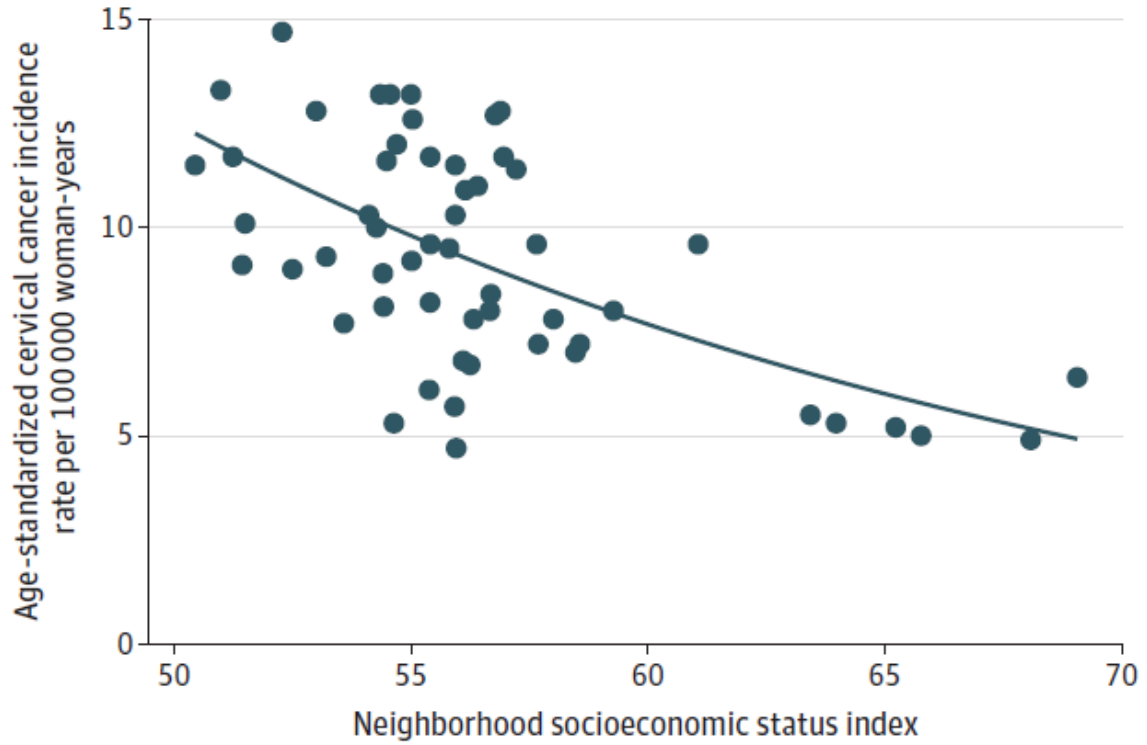


Heat maps of New York City neighborhoods show the age-standardized cervical cancer incidence rates (per 100 000 woman-years) (A) and the Agency for Healthcare Research and Quality (AHRQ) Socioeconomic Index (B) by neighborhood in New York City.

Cham S, et al *JAMA Oncol 2022;**8:159-61.***

Low socio-economic status and cervical cancer.

Figure 2. Association Between Neighborhood Socioeconomic Status and Cervical Cancer Rates



Each point corresponds to a neighborhood, and the line is the estimated age-standardized cervical cancer rate from a bivariable Poisson regression model

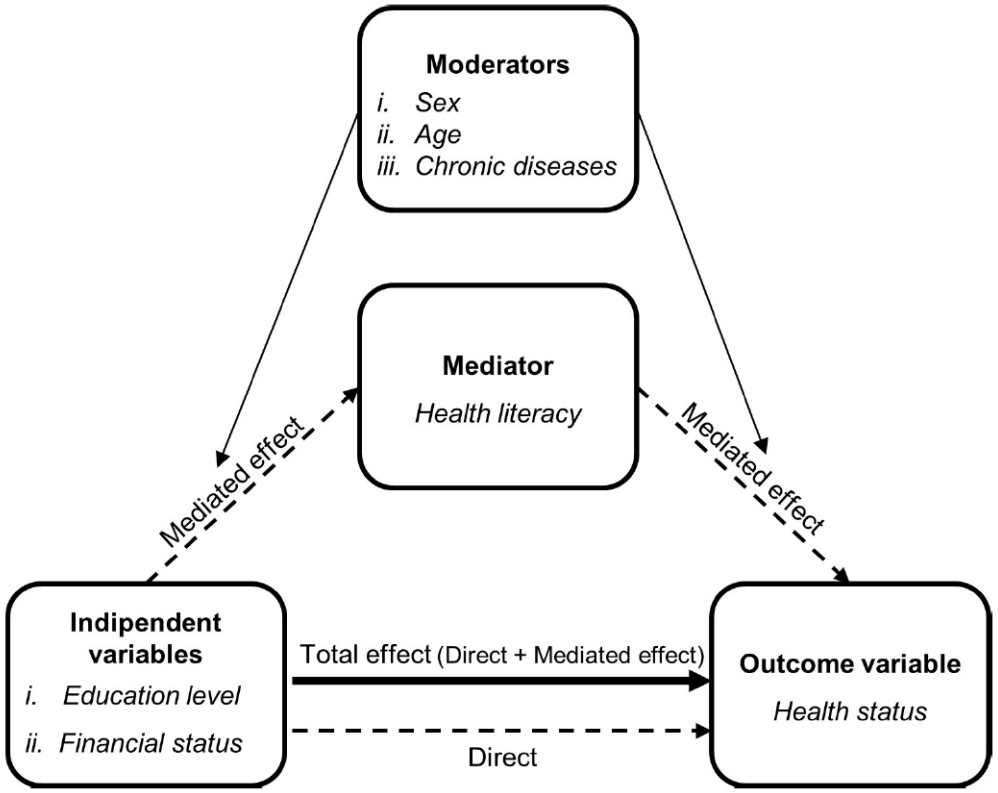
Cham S, et al *JAMA Oncol 2022;**8:159-61.***

Mediators between SES and cervical cancer

SES Status	Cervical cancer screening OR (95%CI)	P value
Own Education		
College/university/postgraduate	4.18 (2.44 to 7.15)	<0,00
Secondary/high school	2.24 (1.52 to 3.30)	0,09
Primary school	1.34 (0.84 to 2.14)	0,02
No formal education	Ref.	Ref.

Akinyemiju T et al.BMJ Open 2016;**6:e012753.**

Mediators between SES and cervical cancer



Conceptual model of health literacy as a mediator of the association between socio-economic factors and health status.

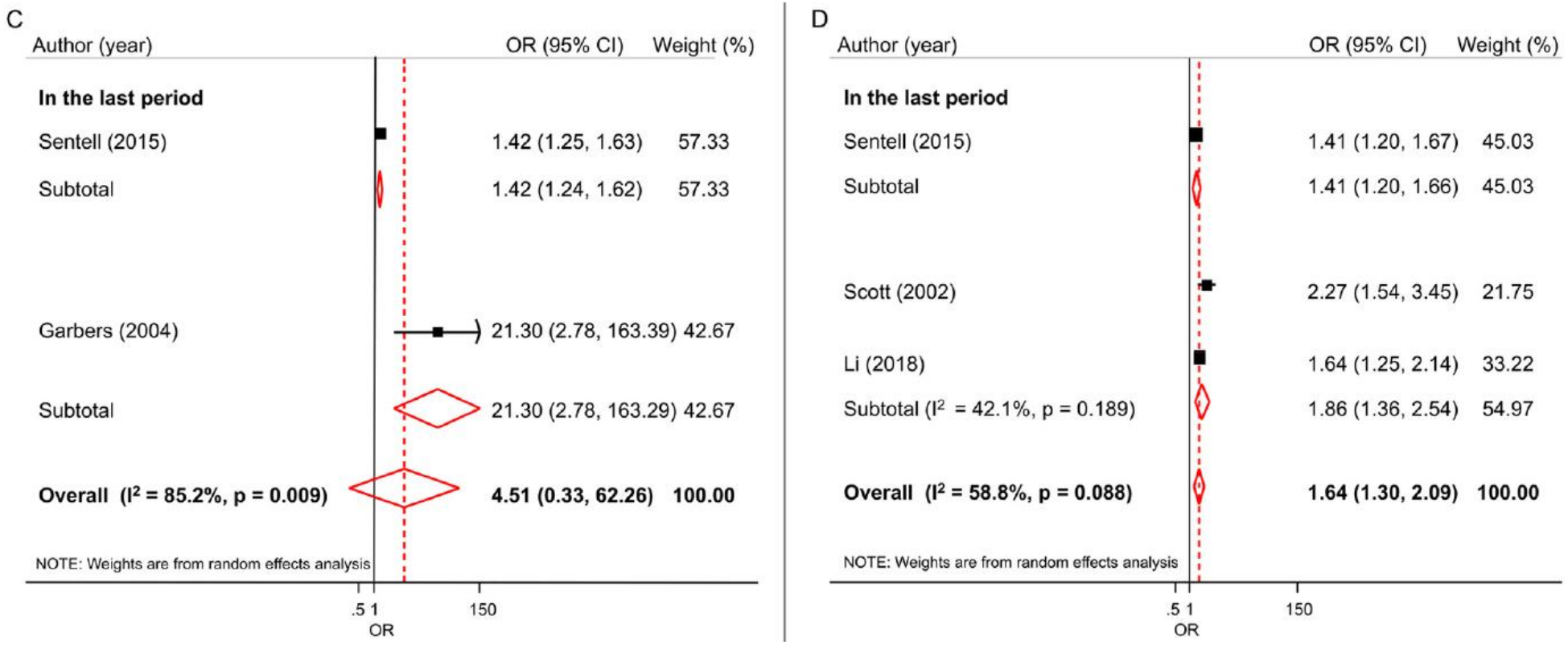
Lastrucci V et al. PLoS One 2019;14:e0227007.

Why do we need personalized communication strategies ?

- Patient-level barriers include socioeconomic, cultural, and psychosocial factors
- Unequal distribution of barriers ➔ higher cancer mortality and morbidity rates registered in disadvantaged people
- Health literacy (HL) ➔ a predictor of an individual's health status

*Marlow LA, et al. Vaccine 2013;**31:763-9.***

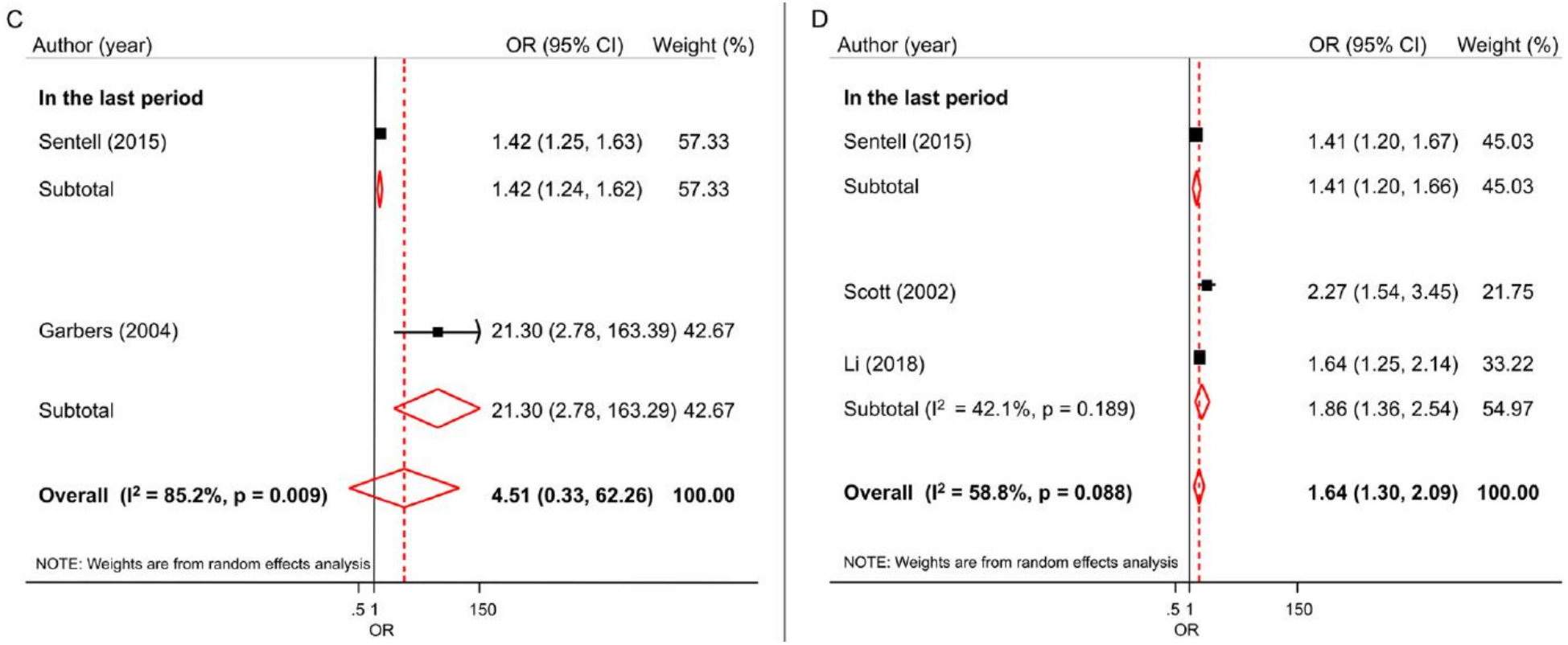
Health literacy as a determinant of adherence to screening



Adequate health literacy increases by 64% likelihood of CCS adherence

Baccolini V, *et al. Prev Med 2022;**155:106927.***

Health literacy as a determinant of adherence to screening



Adequate health literacy increases by 64% likelihood of CCS adherence

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Pooled Prevalence Estimates of Low Health Literacy in European Union Member States According to Different Assessment Methods

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Overall	Self-reported comprehension items		Reading or numeracy comprehension items		Word recognition items		Mixed method	
	N	PE (95% CI)	*N*	PE (95% CI)	*N*	PE (95% CI)	*N*	PE (95% CI)
	38	**0.42 (0.36–0.48)**	**29**	**0.42 (0.33–0.53)**	**23**	**0.27 (0.18–0.38)**	**9**	**0.48 (0.41–0.55)**
Austria							1	0.56 (0.53–0.59)
Belgium	1	0.41 (0.40–0.42)						
Bulgaria							1	0.62 (0.59–0.65)
Croatia			1	0.58 (0.48–0.67)				
Czech Republic	1	0.44 (0.35–0.53)						
Denmark	2	0.44 (0.32-0.58)	2	0.44 (0.35–0.54)				
Finland	1	0.36 (0.31–0.42)						
France	2	0.51 (0.34–0.67)						
Germany	12	0.44 (0.38–0.51)					1	0.46 (0.43–0.49)
Greece	1	0.54 (0.45–0.63)					1	0.45 (0.42–0.48)
Hungary			1	0.41 (0.35–0.46)				
Ireland	1	0.65 (0.46–0.81)	4	0.41 (0.21–0.65)	5	0.19 (0.17–0.22)	1	0.40 (0.37–0.43)
Italy	3	0.42 (0.33–0.51)	3	0.38 (0.35–0.41)	3	0.72 (0.32–0.93)	1	0.54 (0.51–0.57)
Lithuania	1	0.33 (0.30–0.36)						
Poland							1	0.45 (0.41–0.48)
Portugal	1	0.50 (0.48–0.52)	5	0.29 (0.06–0.73)	6	0.21 (0.08–0.46)		
Spain	3	0.71 (0.47–0.87)	1	0.43 (0.34–0.52)	2	0.33 (0.06–0.80)	1	0.58 (0.55–0.61)
Sweden	1	0.39 (0.36–0.43)	1	0.21 (0.14–0.30)				
The Netherlands	2	0.14 (0.12–0.15)	6	0.68 (0.53–0.79)	3	0.19 (0.16–0.23)	1	0.29 (0.26–0.32)
UK	4	0.16 (0.12–0.20)	5	0.28 (0.17–0.43)	4	0.21 (0.09–0.43)		
Refugees	2	0.65 (0.62–0.69)						

The Overall prevalence of low health literacy is 42% [36-48%]

Baccolini V, *et al. Prev Med 2022;**155:106927.***

Do we know, as HP, what the population is expecting ?

Key findings expressed by women from our qualitative survey in the Réunion Island:

- **knowledge** on disease, as well as screening practices and recommendations, **is minimal and insufficient**.
- High Knowledge levels on CC **amongst women who had a relative or close friend who had had HPV or CC**
- Erroneous knowledge: CC of genetic or family origin
- Only 2/3 of women knew pap-smear is for CCS
- The majority felt that they had **not been adequately informed about the purpose of undergoing a smear test**
- Most of the women said they paid particular attention to **reminders from health professionals and to screening invitations received through the post**
- reminder letters can act as a trigger **even for women who are illiterate and/or have difficulty communicating in French**

Pourette D, *et al. Cancers (Basel) 2022;**14.***

How can we increase health literacy?

1.Ask open-ended questions to assess the patient's understanding of written materials, including prescription labels.

1.Use the Teach Back communication method to determine if a patient has understood your instructions and can repeat the information in their own words.

2.Use "Show Back" when teaching a patient to use a device or perform a particular task, to demonstrate correct use.

3.Hand your patient written material upside down while discussing it, and observe whether they turn it right side up.

4.Use simple language. Avoid complicated medical terminology or jargon. Use common, simple words to be as clear as possible and minimize the risk of misunderstanding. For example:

- Say "swallow" instead of "take"
- Say "harmful" instead of "adverse"
- Say "fats" instead of "lipids"
- Say "lasting a short time, but often causing a serious problem" instead of "acute"

5.Speak more slowly when providing instructions. Be respectful and clear without being patronizing.

6.Use graphics and pictures instead of long written instructions.

7.Provide information at an appropriate grade level.

The use of social media to promote cervical cancer screening.

Analysis of The #Smearforsmear campaign:

The use of social media to promote cervical cancer screening.

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Independent factors influencing the emission of sensitizing tweets.

Message of tweet, variables	Adjusted OR (95% CI)	*P* value
Sensitizing tweet		
Woman who experienced an abnormal smear test	13.5 (3.1-58.4)	<0,001
Nonhealth or nonmedia company	0.6 (0.4-0.81)	.002
Directly encouraging people to go for a smear test		
Female gender	6,0 (2.6-13.7)	<0,001
Nonhealth or nonmass media company	0.5 (0.3-0.7)	.001
Evocation of the importance of smear test without any precision		
Woman who experienced an abnormal smear test	7.4 (2.3-23.4)	<0,001
Selfie	2.2 (1.2-4.0)	.001
Reminder of the preventive aspect of smear test		
Woman who experienced an abnormal smear test	4.2 (1.7-10.3)	.001
Marketing activity	0.4 (0.2-0.8)	.001
Reminder of the mortal or morbid aspect of cervical cancer		
Woman who experienced an abnormal smear test	6.4 (1.0-38.8)	<0,001
United Kingdom	2.3 (1.1-4.8)	0.03

*Lenoir P, et al. J Med Internet Res 2017;**19:e344.***

The use of social media to promote cervical cancer screening.

Key elements to be considered for social media campaign:

- **Gender:** content on YouTube may have reached more men, but Facebook content may have reached more women.
- **Match the media with the targeted audience (by gender, ethnicity subgroups) and adapt the wording**. Media used: Twitter (57%), followed by Facebook (35%), YouTube (13%), Instagram (9%), and Snapchat (4%).
- **Make sure to really promote cancer prevention**: 2013 Canadian November campaign, 84% tweets on non-health topics (moustache growing), and 16% on health topics; only 0.6% of tweets analyzed were about cancer
- **Measure exposure of the campain**: is for CCS
- **Monitor level of engagement:**
  - low and medium (likes, retweets), and role of influencers
  - High: improved screening intention or attendance

Plackett R, *et al.. J Med Internet Res 2020;**22:e21582.***

The use of social media to promote cervical cancer screening.

Analysis of post:

Extract 1: Facebook – Post created by Local Authority Account 23rd January 2018
1. Cervical cancer prevention week 2018-a simple test really could
2. save your life…come on ladies no excuses #screeningsaveslives

Simple procedure which is positioned against the potential life-threatening nature of the disease:
claiming that there are no excuses, ➔ delegitimises any reasons why women may not be willing to be screened for cervical cancer

Analysis of post:

Extract 2 – Local authority post (Facebook) 23rd January 2018
1. Louise pledged her support for cervical screening: “Get over any
2. embarrassment, the nurse has seen it all before, the test is quick
3. and painless and could save your life.”
4. Pledge your support here. #screeningsaveslives #CCPW2

Personalization of the statement “Louise says…” and decreasing the credibility of classical objections:

- embarrassment over the intimacy of the procedure (lines 2-3)
- and fear of pain (line 3)

*McGeechan GJ et al. Psychol Health 2021;**36:290-306.***

The use of social media to promote cervical cancer screening.

Analysis of post missing the right audience:

Extract 3 – Post shared on twitter by the local authority account – 14th June 2018

1. Out of hours appointments are available in (place name), (place
2. name) and (place name) in the (locality). You can make the
3. appointments via your won [sic] GP. More info > [redacted]
4. #SmearTestsSavesLives

Non-attenders =

busy women who cannot make appointments during normal working instead of women are too embarrassed to attend cervical screening.

Intended target of the tweet =

- Women who have commitments or responsibilities ➔ marginalises women from socially deprived backgrounds who are more likely to work shifts rather than traditional office hours of 9-5 and who are also 80% more likely to be diagnosed with cervical.

- Women from socially deprived areas commonly state arranging child-care bigger practical barrier than the time of day that appointments are on offer.

*McGeechan GJ et al. Psychol Health 2021;**36:290-306.***

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Main criticisms

“othering” =

“**We**” the one who know that CCS saves life and attend it regularly speak to “**the other**” who have not understood its benefits

Denying the legitimacy of hesitancy=

‘Why wouldn’t you Take the Test???????’.

Placing the poster into a morally higher position than non-attenders

When linking of attending screening with rationality (using statistics)

Shaming non-attenders

They do not know what is good *“Well that’s the most ridiculous thing I have ever heard! No excuse, attend your smear, it will literally save your life! #reduceyourrisk.” #attendyoursmear”*

We spend money for them *“ Whilst I agree it’s good isn’t it also sad that a campaign which costs money, is the only way some women will go for their smear? I personally find it utterly bizarre that you wouldn’t have a smear, it might save your life!’*

*McGeechan GJ et al. Psychol Health 2021;**36:290-306.***

The use of social media to promote cervical cancer screening.

- Whilst health promotion campaigns should be designed to empower individuals to make informed choices, at times they can lead to stigmatisation of those who do not conform.

- Future campaigns should focus more on understanding the reasons why women do not attend without dismissing them

*McGeechan GJ et al. Psychol Health 2021;**36:290-306.***

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Miriam's worry: Doing HPV self-sampling properly

Most women worry that they will not be able to do HPV self-sampling properly or that they will miss something. Research has found that 99 out of 100 women are able to do self-sampling properly. You can do it.

Can we increase health literacy?

Targeted interventions aimed at increasing HL in people with a low level should be implemented

- enhance the capacity of healthcare systems and health professionals to customize patient health education and meet the population's needs

improve the ability of patients to communicate with the healthcare staff ➔ increase capacity to act on health information effectively

In conclusion

- Communications strategies should :
  - build on knowledge of the reasons for non-participation and consider women's life and health trajectories (especially sexual trauma) .
  - Understand women's expectations, which can sometimes be counter-intuitive (e.g. preferring to receive an invitation in the official language of the country, even if it is poorly understood, rather than in their own language).
  - Be co-constructed with those for whom they are intended
  - Allow for an informed and positive choice
  - Avoid paternalistic or stigmatising approaches
  - Be differentiated/adapted according to the medium used and its main audience (Facebook, Twitter, Youtube, TikTok, Instagram,...)
  - Take care of those who do not have access to or do not master the digital tools

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