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RESEARCH ARTICLE

REVISED Determinants of screening participation of disadvantaged populations in France: a qualitative study

[version 4; peer review: 1 approved, 2 approved with reservations, 1 not approved]

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Abstract

Background

People from deprived backgrounds and people with disability have generally limited access to health screening. This study aimed to identify the factors influencing access to recommended screenings for these disadvantaged groups, to inform development of tailored screening support.

Methods

Thirty semi-structured interviews were conducted with 18 participants from deprived backgrounds and 12 participants with disability. A content analysis using an analytical framework was performed. Barriers and facilitators to screening participation were categorized into four domains: individual, social, healthcare system/healthcare professional, and screening procedure.

Results

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Most barriers and facilitators pertained to the individual or healthcare system/healthcare professional domains. In the individual domain, fear could have a negative influence on screening participation in both groups. In the social domain, social influences (i.e. having children, knowing people suffering from the disease) were reported as facilitating screening. People with disability reported to be more influenced by factors related to the healthcare domain (i.e. perceived risk; recommendation from a healthcare professional or an educator).

Conclusion

Our results highlight the need to better consider the environmental factors of individuals, in particular the potential influence of relatives and healthcare professionals, to improve their participation in screening.

Keywords
disadvantaged population, deprivation, disability, health, screening, qualitative study

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REVISED **Amendments from Version 3**

Based on reviewers feedback, the manuscript was revised to improve clarity and grammatical accuracy, strengthen the theoretical and policy context, and provide greater detail on participant recruitment and sampling. The introduction and discussion were expanded to address concepts like health literacy, trauma-informed practice and psychological safety. Transferability, demographic skewing, and the intersectionality of deprivation and disability were discussed. Additional details were provided on the study setting and recruitment process.

Any further responses from the reviewers can be found at the end of the article

Background

Screening is a secondary prevention practice that consists of early detection of diseases or risk factors for diseases with the aim of improving their prognosis.[1] In France as in many other developed countries, several screenings are recommended for the general population or for specific population subgroups. In France, screening programs are organized for particular cancers (i.e. colorectal cancer, breast cancer and cervical cancer) and free-access screening centers are dedicated to sexually transmitted infections and viral hepatitis. Depending on individual characteristics, health authorities recommend several screening procedures, such as for: cancers (colorectal cancer, breast cancer, cervical cancer); infectious diseases (HIV, Hepatitis C, syphilis, chlamydia infection); or cardio-metabolic problems (abdominal aortic aneurysm, diabetes, dyslipidemia, tobacco use, obesity).

The Convention on the Rights of Persons with Disabilities states that people with disabilities should be provided "with the same range, quality and standard of free or affordable health care and programmes as provided to other persons" (article 25). However, an American study found that people with disability were less likely to receive a recommendation for a cancer screening test.[9] This result is consistent with another study on screening for breast and colon cancer conducted in the UK.[10] In France, people living with a disability have also a lower participation rate in cancer screening compared to the general population.[11]

Strong social inequalities in health exist regarding access to recommended screenings, especially for the most disadvantaged people, as highlighted by a study conducted in France.[2] Figures on screening uptake within different French areas are scarce to illustrate screening disparities, but for example, data on cervical cancer screening shows that about 60% of under screened women lived in deprived areas.[3] Similarly, a French study exploring the social and territorial inequalities in breast and cervical cancers screening concluded that the more deprived the area of residence, the lower the screening uptakes.[4] Individuals with a low socio-economic level were less likely to be tested for cardiovascular disease risk according to a study conducted in the United Kingdom (UK),[5] for colorectal cancer according to a Spanish study[6] or for cervical cancer according to a Swedish study.[7] A study conducted in the UK also revealed socio-economic and demographic inequalities in screening for aortic aneurysms in men.[8]

The term "disadvantaged populations" used throughout this article includes people facing deprivation (e.g. with a low socio-economic background) and people with a disability (physical, psychic or intellectual).

Behavioural science has been increasingly used to develop health behaviour change interventions over the last decades. To develop evidence-based interventions, it is necessary to identify factors influencing the behaviour that needs to be changed.[40] According to a framework developed to explore health screening in men,[12] barriers and facilitators to screening participation can be related to four domains (individual, social, healthcare system, screening procedure domains). In this framework, the individual domain includes the knowledge, perceptions and emotions of the individuals; the social domain reflects the influence of their social environment regarding screening; the healthcare system include factors related to the access to screening and the influence of healthcare professionals; and the screening procedure factors concern the technical features of screening tests. Pertaining to all these domains, health literacy is a core concept to explain health disparities, as a low level of health literacy is generally observed in people with disability and in people facing deprivation.[51,52] A meta-analysis exploring the association between adherence to cancer screening programs and health literacy concluded that health literacy is critical for an effective cancer prevention.[50]

Previous studies conducted in France and internationally have explored barriers and facilitators of screening uptake.[13–15] However, they have generally focused on screening for a particular condition (e.g., breast cancer screening). Thus, instead of a vertical disease-oriented approach common in evidence generation, it should be beneficial for preventive practice to adopt a more horizontal person-centred approach.[16] An umbrella review conducted with this approach and based on the framework aforementioned[12] synthetized the existing literature on determinants to screening participation. Results showed that across conditions, screening participation was higher when the quality of patient-provider

communication was better and when patients had adequate knowledge and positive beliefs about screening. Major barriers commonly cited were experiencing fear –of the discomfort of the testing procedure, of knowing the results or of having the disease-, feeling embarrassed, ashamed or stigmatized, and facing difficulties to access the procedure.[17] However, little is known about the particular knowledge, views and perceptions of people with a low-socio-economic background[18] or with disability[19] across screening conditions. The aims of this study were 1) to explore how people from deprived backgrounds or with disability experience the various recommended screenings, 2) to identify and classify the main barriers and facilitators to their participation in screening procedures by domain (individual, social, healthcare system, screening procedure domains), and to outline which domains have the most potential for intervention development.

Methods

The COnsolidated criteria for REporting Qualitative research (COREQ) checklist was used to guide the reporting of the study.[20] The COREQ checklist is available as extended data I.

Data collection

We conducted a qualitative study with semi-structured interviews. The interview guide included questions on health perception, screening perception, screening experience, factors motivating and hindering participation, and expectations towards screening procedures. Participants from deprived backgrounds or with disability were recruited via two public and four associative organizations providing social care services in the Rhone district. A convenience sampling type was used. The interviewers were given access to the facilities used by the partner organizations and could approach potential participants during regular activities (e.g. food distribution). Sometimes, specific participants were identified by a healthcare professional or a social worker, and they were contacted directly by the research team if they gave their approval beforehand. People were eligible to participate if they were aged between 18 and 74 years; and if they were identified by the partner organizations as being from a deprived background (e.g. low socio-economic status, eligibility to receive subsidies from the government) or living with a physical, psychic or intellectual disability. Exclusion criteria were as follows: people who were not competent French speakers and/or did not comprehend spoken or written French; people suffering from a serious disease (e.g. cancer being treated). Interviews were conducted face-to-face by two female researchers experienced in qualitative methods (ALB - PhD and AA – master's student), in the partner organizations' facilities or in another place at the convenience of the participants. The interviewer and the interviewee were alone. Interviewers had no prior relationships with participants. Participants were informed in written and verbally about the aim of the research, the data collection and analysis, and they were asked to sign an informed consent. Participants answered a brief socio-demographic questionnaire before the interview. A list of recommended screenings was presented to participants (available as extended data II) to help them identify which procedures they might have heard about or participated in. Interviews were recorded with participants' consent. The level of social deprivation was assessed using the EPICES questionnaire,[21] with a score ranging from 0 (no social deprivation) to 100 (maximum social deprivation) and a deprivation threshold set at 30. Both groups had average scores around 41.

The interviews were conducted between May and July 2019. A framework analysis was then performed on the corpus of transcribed interviews. The study was approved by the French Institute of Medical Research and Health (INSERM) Ethics Committee (CD/EB 19-020) on the 19th of February 2019. Data collection started on the 17th of May 2019. Written informed consent was taken from all the participants. The study was conducted in accordance with the relevant guidelines and regulations in the Declaration of Helsinki.

Data analysis

A content analysis using an analytical framework was performed on verbatim transcripts using NVIVO software (NVivo QSR International v.10).[22] A structure of inductively- and deductively-derived themes was employed. The analysis was independently conducted by two researchers (ALB, AA) before being compared to resolve any disagreement. It focused on barriers and facilitators to screening participation, which were categorized in four domains, based on the framework of Teo *et al.* in 2016 on barriers and facilitators to health screening in men[12]: individual domain (e.g. attitudes, emotions), social domain (e.g. family and peer influence), health system/healthcare professional domain (e.g. accessibility, communication with healthcare professionals) and screening procedure domain (e.g. nature of screening procedure). This framework was chosen to guide the qualitative analysis considering that it covers all the screening domains of interest. Barriers and facilitators were identified and labelled within these categories inductively.

Validity procedures

The design of the study was created in accordance with recommendations about validity of results.[23] More precisely, credibility was satisfied by recruiting participants through various organisations to achieve a diverse sample, and by the prior conduction of a systematic review about barriers and facilitators to participation in health screening across

conditions.[17] Authenticity was satisfied by the achievement of interviews until the data collected was judged to be adequate in both amount and variety to answer the research question. Concerning transferability, the interview process has been detailed, and the interview topic guide (in French) is available upon request. Finally, concerning confirmability, two researchers individually coded the framework analysis.

Results

Sample

In total, 30 semi-structured interviews were conducted with 18 participants from deprived backgrounds and 12 participants with disability (20 women and 10 men, with an average age of 45 years). Interviews lasted between 15 minutes and 1 hour. Characteristics of participants are presented in Table 1. A majority of participants was unemployed. All participants had a referent general practitioner (GP). Most of them had already participated in at least one screening.

Screening experience

Most participants from deprived backgrounds (n = 11) and 5 participants with disability mentioned that they had accessed to screening after having received a recommendation from a healthcare professional and/or from assistants or educators for people living in foster home.

Table 1. Characteristics of the sample.

	Deprived population n = 18	Disabled population n = 12	Total n = 30
Sex			
Male	3	7	10
Female	15	5	20
Average age	43.1	48.0	45.3
Family status			
Married/In a relationship	10	3	13
Single	3	7	10
Divorced/Separated	5	2	7
Widowed	0	0	0
Socio-professional category			
Farmer	0	0	0
Artisan, trader or entrepreneur	0	0	0
Senior executive or intellectual profession	0	1	1
Intermediate occupation	0	0	0
Liberal profession	0	0	0
Employed	0	2	2
Worker	0	0	0
Retired	2	3	5
Unemployed	16	6	22
Work or worked in the health field	7	3	10
Have a referent GP*	18	12	30
History of screening	16	12	28
Current chronic disease	5	9	14
Previous serious condition	3	2	5
Family history of serious condition	9	10	19
Average EPICES score**	41.1	40.6	40.9

*GP: general practitioner.
**EPICES score: questionnaire to assess the level of social deprivation.

Table 2. **Barriers and facilitators to screening participation by domain and by population.**

Factors **Barriers** ☐ **Facilitators** ☐	**Population from deprived background (N=18)**	**Population with disability (N=12)**	**Examples of quotes**
INDIVIDUAL DOMAIN			
No barrier	5	7	"*I don't see what could prevent me to get screened. I don't think about something logical*" (man, with disability, 32 yrs)
Fear of screening	5	3	"*Well, we are always afraid, I will not say the opposite [laughs]. Yes, we are afraid of certain things."* (woman, deprived background, 42 yrs) *"That's because I'm afraid of the result. Even though I know there's a ninety-nine percent chance that I have nothing, there's always that little risk, so I prefer not to go."*(man, with disability, 34 yrs)
Lack of time (e.g. caring responsibilities, other priorities)	3	-	"*No I don't have time, it's important, but I don't have time, the doctor already gave me recommendation for the breast, I tried to find the time to go, but no I don't have time.*" (woman from deprived background)
Taking care of own health	7	3	"*It is better to know what you have and also not to let it drag and become very serious."* (woman, deprived background, 34 yrs) *"I get screened because I don't want to suffer"* (man with disability, 51 yrs)
Wanting to know	5	1	"*Yes it's always good [to get screened], we have nothing to lose on the contrary. So frankly it's always good for us, knowing what we already have*". (woman from disadvantaged background, 37)
Fear of disease as a motivator	4	-	"*What encourages me to get screened? Well, you could say that I'm someone who's afraid of catching something*" (woman from deprived background)
SOCIAL DOMAIN			
Social influences	9	3	"*Honestly, I think that if I had not had a lot of people who had become ill around me, maybe I would not feel concerned by the screening question."* (woman from deprived background, 34 yrs) *"Now that I have a little girl, I think I'm more aware about my health, because I know I'm not alone now, there's someone who depends on me. And I think it's really important for me to take care of my health. Because of her."*(woman from deprived background, 31 yrs)
To meet a new partner (specific for HIV screening)	-	4	"*Well, if we have sexual intercourse, I want to know if the person is sick. Because I don't want to have this [HIV]."* (man with disability, 36 yrs)

Table 2. *Continued*

Factors Barriers ☐ Facilitators ☐	Population from deprived background (N=18)	Population with disability (N=12)	Examples of quotes
HEALTHCARE SYSTEM/HEALTHCARE PROFESSIONAL			
Not experiencing symptoms	4	-	*"I don't think I'll do anything until I know, before I get hurt."*(woman, deprived background, 36 yrs)
Do not feel concerned/at risk	4	4	"*[Regarding sexual infections] It depends if we trust. I trust my husband, so for my part, there is no problem. The same for chlamydia I think.*" (woman from deprived background, 34 yrs)
Fatigue if too many medical procedures or addition of a supplementary constraint	3	2	"*No, I'm not going to live like this, as I lived all my youth already, to undergo investigations, with pipes in the mouth, in the lungs. I did enough when I was young, when I will be old, I don't want this anymore*". (woman from deprived background, 74 yrs) « *My life is hard enough as it is so I don't want to stress myself out with other things.* » (man with disability, 34 yrs)
Feeling concerned (at risk)	7	3	"*I talk more [about screening] to the doctor because it's true that when we get older, well, it's true, we want to know.*"(woman from deprived background, 42 yrs) "*The prostate, I'm fifty-one years old, soon fifty-two, so you have to do all the assessments. And then a blood test too, because that's how you can detect it early on if you have cancer. Especially since in my family, there are four people who died from cancer. So we are subject to this.*" (man with disability, 51 yrs)
Recommendation from a healthcare professional	4	5	"*It was my general practitioner who prescribed my blood test. He had offered me a blood test for blood sugar and to check if I had diabetes or not. And everything was fine with the result.*" (woman with disability, 46 yrs)
Screening seen as inevitable when followed up for a disease/ medical procedure	4	3	"*Systematically, for each operation, they do it to you [blood testing]. Even if you are negative and you tell them, they make you do it again.*" (woman with disability 34 yrs) "*There are some [screenings] that I did because it was an obligation, during pregnancies, it was compulsory, everything that is HIV is forced, and other diseases that we are forced to do also.*"(woman from disadvantaged background, 42 yrs)
Trust in healthcare professionals	-	4	"*I trust the medical profession. So if there is a screening to do, I do it.*" (man with disability, 51 yrs)

Table 2. *Continued*

Factors Barriers ☐ Facilitators ☐	Population from deprived background (N=18)	Population with disability (N=12)	Examples of quotes
SCREENING PROCEDURES DOMAIN			
Screening procedure difficult to access/perform	-	3	*"I haven't done it [screening for cervical cancer] these days because I have a very narrow cervix and you can't remove the smear, it's very complicated."* (woman with disability, 46 yrs) *"I'm in an electric chair, and if the elevator doesn't work … I'm staying at home, so I can't go to the laboratory. But what I can do, it happened to me, I cancel the appointment. I ask the doctor to make a prescription to bring the laboratory to my house. And there you go. That happened to me once."* (man with disability, 51 yrs)

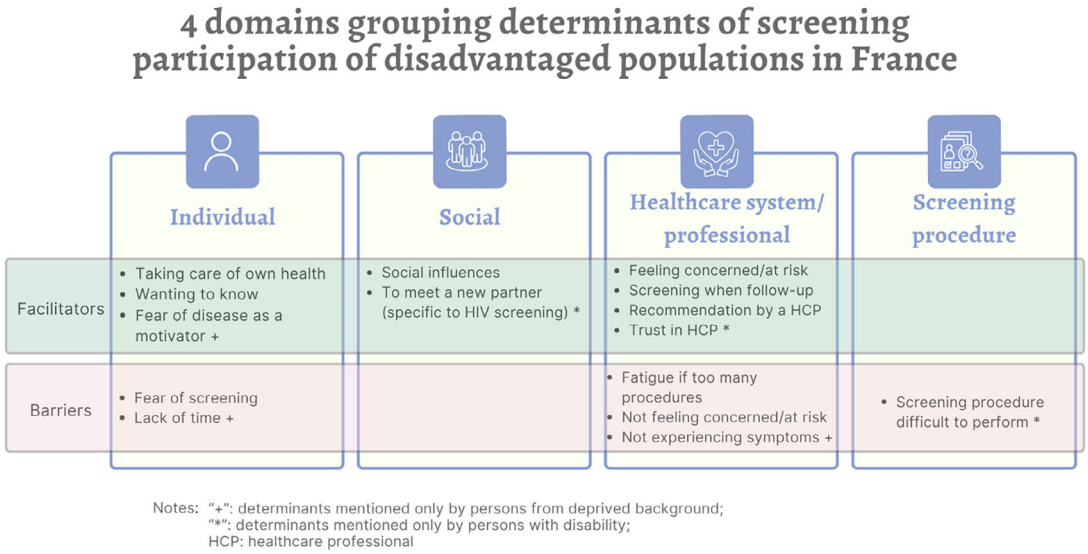

Figure 1. Model illustrating the findings.

On the contrary, 7 participants from deprived backgrounds and 4 participants with disability said they participated in screening procedures at their own initiative.

Six participants from deprived background stated that they had never received any screening recommendation from a healthcare professional.

Main barriers and facilitators to screening participation

Main barriers and facilitators to screening participation are presented by domain (individual, social, healthcare system/ healthcare professional, screening procedure) with illustrative quotes in Table 2, for both groups. A model illustrating the findings is presented in Figure 1.

Participants from deprived backgrounds cited more barriers to screening participation (n=6) than participants with disability (n=4). Conversely, people with disability cited more facilitators (n=8) than those from deprived background

(n=7). Most barriers and facilitators to screening participation were related to the individual domain and to the healthcare system/healthcare professional (or educator) domain.

In the individual domain, *fear* was reported to have a negative influence on screening participation for both groups, but *fear* could be also a *motivator* for people from deprived backgrounds. Another barrier mentioned only by participants from deprived backgrounds was *lack of time.* Some participants from both groups outlined that they faced *no barrier* to screening participation. *Taking care of one's own health* and *wanting to know* were two facilitators cited by both groups.

The social domain included only facilitators. Half of the deprived background group and a few participants with disability mentioned *social influences* as a facilitator, through awareness from others' experiences, or through the willingness to stay in good health to be able to take care of relatives. *To meet a new partner (specific for HIV screening)* was reported as a facilitator only for participants with disability.

In the healthcare domain, participants from deprived backgrounds reported *not experiencing symptoms*, *not feeling concerned or at risk*, and *fatigue if too many medical procedures or addition of a supplementary constraint* as barriers. Participants with disability also reported two of these barriers: *fatigue if too many medical procedures or addition of a supplementary constraint* and *not feeling concerned or at risk.* By contrast, *feeling concerned or at risk*, a *recommendation from a healthcare professional (or educator)*, and *screening seen as inevitable when being followed up for a disease or before a medical procedure* were reported as facilitators by both groups. Two participants with disability highlighted the fact that they did not really have the choice to participate or not in screening (blood tests) because it was part of a care protocol related to their disability. *Trust in healthcare professionals* was only mentioned by participants with disability as a facilitator.

Finally, the screening procedure domain was only mentioned as a barrier for participants with disability as they could face *practical difficulties to access or perform screening procedures* (e.g. being in a wheelchair).

Discussion

Summary of results and comparison with other studies

This qualitative study collected the experiences, barriers and facilitators of all recommended screenings for people from deprived backgrounds and people with disability. Most barriers and facilitators to screening participation were related to the individual domain and to the healthcare system/healthcare professional (or educator) domain. The social domain included only facilitators (e.g. social influences). Participants with disability seemed to be more influenced by factors related to healthcare system/healthcare professionals. Finally, the screening procedure domain was only mentioned as a barrier for participants with disability.

Population from deprived background. In the individual domain, fear was often mentioned by participants from deprived backgrounds. A distinction can be made between a fear of the results of the test (i.e. diagnosis, consequences of a disease) and a fear of the screening procedure (i.e. painful test).[17] In accordance with our findings, the review of Young *et al.* in 2018[24] about cancer screening attendance in the UK showed that fear was described as being both a motivator and a barrier to screening participation. Worries about the consequences of an asymptomatic infection was also mentioned as a facilitator to chlamydia testing in a systematic review.[25] In our qualitative study, wanting to know one's own health status was described as a facilitator by several participants from deprived background. This facilitator was also found in systematic reviews about HIV screening[26] and about cervical cancer screening.[27,28]

Participants from deprived backgrounds seemed to be strongly influenced by their social interactions, especially through experiences from others or social responsibility to stay healthy to take care of family members. A mixed-method study performed in Bulgaria and Romania about barriers and women attitudes toward cervical cancer screening highlighted the importance of women's perceptions of what other women in their social networks were doing and their attitudes toward screening.[29] The influences arising from family and close friends were also described as being of major importance in relation to women's participation in mammography screening in a Greek qualitative study.[30]

Interactions with healthcare professionals seem to be an important component of screening decisions. A Canadian qualitative study similarly mentioned the important role of trust in physicians in homeless women's decision-making about breast and cervical cancer screening.[31] Consistent with our findings, receiving a physician's recommendation for screening was reported in a systematic review as a facilitator for both breast and cervical cancer screening for indigenous populations.[32]

Population with disability. Our results revealed that more than half of the participants with disability did not report experiencing any barrier to screening participation. In the individual domain, fear was the only barrier mentioned. In line with our results, feelings of anxiety and fear about cancer screening programmes were expressed by women with a learning disability according to a systematic review about cancer screening in UK.[33]

According to our results, social interactions have a positive influence on screening participation for people with disability, and particularly regarding HIV screening. For example, some participants with disability expressed a willingness to have a HIV test in the context of a new (potential) partner. Similarly, testing to protect a partner or because a partner was HIV-positive or at high-risk was a facilitator also reported in a systematic review about barriers and facilitators to HIV testing.[26]

Findings suggest that participants with disability have more links with the medical community and healthcare professionals, and this may have a positive impact on their screening practices. Nevertheless, the notion of free and informed consent can be questioned in such a context. Indeed, two participants expressed a perception of imposed screening (blood tests) as part of another medical procedure. This specific context places screening as an inevitable step to access other care, whereas informed consent should be checked for each separate procedure. Likewise, it is possible that people with disability, often confronted with medical procedures, are more inclined to agree to participate in screening (or quite simply not to ask questions) because they are used to having medical procedures.

According to our results, difficulties in accessing or performing the screening procedure was the only barrier in the screening procedure domain. Similar findings were found in systematic reviews[34,35] about barriers and facilitators to cancer screening for adults with a physical disability, in which a lack of access to screening was outlined.

In our study, already having too many medical investigations or addition of a new constraint were mentioned as barriers by people with disability but also by people from deprived backgrounds. Interestingly, a review examining cancer screening participation for adults with a physical disability identified a barrier which was unique to disabled women: their perspective that having to address their pre-existing conditions was enough to deal with.[35] These common results for different populations might reflect a thin separation between our two groups: people from deprived backgrounds can also face important health issues, and participants with disability can also have a low socio-economic level. These two groups are more vulnerable in terms of health, health literacy and healthcare access.[52] The intersectionality between deprivation and disability must be acknowledged as these two factors can reinforce one another. For example, people with a disability can have difficulties securing employment and then be more likely to experience deprivation.

Strengths and limitations

This study helps to understand the perspectives on screening of two understudied populations - people from deprived background and people with disability. In addition, by studying various recommended screening procedures at the same time, this research considers a horizontal approach to participation in screening, which differs from the vertical approaches usually addressed in the literature (i.e. focusing on a single screening condition). This qualitative study presents also several limitations that should be highlighted. First, the number of participants was limited, due to the difficulties to have access to disadvantaged populations. The participants do not represent a broad range of socio-demographic characteristics and the demographic skewing of participants may limit the generalization of the findings. However, interviews were conducted until reaching data saturation in both groups. Second, all interviews were conducted in the same metropolitan area. It is possible that variations in findings could be found with participants from other areas. Similarly, only French speakers were included and data on ethnicity was not collected. Third, participants were recruited from charities and non-profit organizations, implying that they were in contact with those structures. Consequently, we did not have access to people living in more isolated contexts, who might face different barriers to accessing care and participating in screening. In addition, 28 out of 30 study participants had already participated in at least one screening. However, it is likely that only a few or none of them had participated to all screenings recommended to them. Fourth, the level of health literacy was not assessed during the interviews. Fifth, the framework underpinning the study was previously applied mainly to the exploration of health screening practices among men. This may limit the transferability of the study findings. Finally, there was no public and patients involvement in the study design nor in the interpretation of the study results.

Implications and perspectives

An integrated, horizontal, person-centred screening participation approach could be applied to screening recommendations for disadvantaged populations. According to clinical practice guidelines, healthcare professionals should recommend all screening procedures relevant to their patients, according to their profile.[36,37] Previous work showed the value of adopting a common approach across screening conditions.[17,38,39] Identifying the recurrent barriers to screening across

conditions can serve as a basis for intervention development to support shared decision-making, and has also the potential to be used for training primary care professionals.[17] The concepts of psychological safety and trauma-informed practice (i.e. understanding of how trauma impacts a person's life and behavior) can be mobilised to reinforce the adoption of a patient- centred approach for vulnerable patients. In the clinician – patient relationship, these concepts emphasise safety, trust and transparency, empowerment and choice, and humility and responsiveness.[53]

At a societal level, horizontal screening campaigns have already been developed in France such as the one encouraging people over 16 year who are far from the health system and in a precarious situation to attend a free and personalized preventive health exam. Including occupational medicine for short-term contracted workers or in public services (e.g. unemployment, social welfare) in these campaigns could be an effective way of reaching disadvantaged populations.

On the basis of our findings, we suggest several ways of improving screening participation for populations with disability and from deprived background. Our results can be mapped to the Behaviour Change Wheel and associated Behaviour Change Techniques.[40,41] Those techniques could be used to promote several screening procedures that are recommended for a same patient. For example, a woman aged 60 can be invited simultaneously for cervical cancer screening, breast cancer screening, osteoporosis testing and infectious disease screening. First, developing an intervention based on social opportunity seems to be relevant to build on the potential influence of relatives and friends that could help to improve screening participation across conditions. For example, using social support (e.g. encouragements from people who have already participated in screening), or using modelling (a role model) when developing awareness campaigns could be effective strategies.[42] Adopting a community-based perspective based on a comprehensive approach including education and navigation seems also relevant to improve screening uptake.[43] Second, increasing psychological capability by shaping knowledge could be also relevant for intervention development and could be applied to all recommended screenings. For example, outlining the benefits of screening for health preservation in clinical practice and awareness campaigns could be beneficial, as participants outlined willingness to take care of their own health. Third, interventions should focus on social environment and healthcare providers to increase motivation to participate in screening across conditions, since the main facilitators found in this study were related to those domains. Decision aids or shared decision making tools should rely on education and social support to encourage people to participate in all recommended screenings, according to their health and psycho-social profile. Indeed, having a long-term relationship with a primary care clinician and sharing decisions were identified as key factors to increase colorectal cancer screening uptake in a randomized controlled trial designed to test engaging underserved populations in preventive care through online material.[44] In Denmark, a decision aid tool successfully increased colorectal cancer screening uptake and positive screening attitudes among a lower educated population.[45] Fourth, increasing the physical capability using environmental restructuring (changing the context) is a key implication from our results. Accessibility to screening procedures should be improved for disadvantaged populations, especially for disabled people. For example, general health checks in adult primary care may help in this regard.[46]

Finally, further research should explore more deeply the effects of fear on screening practices through various perspectives. For example, the regulatory focus theory proposed by Higgins[47] could be tested by developing different messages about screening, highlighting either gain or loss associated with screening participation (i.e. to avoid a disease vs. to promote health). In addition, future research should investigate the interactions between factors related to the individual, and to the social and healthcare professional/educator domains. For example, both family, friends and healthcare professionals, as trusting persons, can provide information and reassurance to people confronted to fear of screening, and thus can have a positive influence on screening participation.

Conclusion

This qualitative study explored the views and perspectives on screening programs of two understudied populations: people from deprived background and people with disability. Findings highlight the importance of the social environment and healthcare professionals to improve screening participation. Further research should focus on developing relevant and accessible communication and decision making tools to improve screening awareness, motivation and accessibility for disadvantaged populations.

Data availability

Underlying data

The datasets used and analysed during the current study cannot be shared openly due to data protection requirements in effect in France at the time of data collection. This research was conducted in accordance with GDPR regulations. According to the CNIL (French data protection authority), the authors are not allowed to reuse the data or transfer the data to someone outside the research team if participants had not been informed. When invited to take part in the study, participants only gave their consent for their data to be used for the purpose of the analysis performed by the study team

and did not give their consent for further use. The data are archived electronically and access may be granted upon reasonable request to the corresponding author.

Extended data

Zenodo: Appendices - Determinants of screening participation of disadvantaged populations in France: a qualitative study – OpenResearchEurope, https://doi.org/10.5281/zenodo.10890080.[48]

Data are available under the terms of the Creative Commons Zero "No rights reserved" data waiver (CC0 1.0 Public domain dedication).

Acknowledgements

The authors thank the Fondation du Risque and the Chaire Prevent'Horizon for funding the study and the non-profit organizations partners for their help with the recruitment. They are also very grateful to all study participants for their involvement during the interviews.

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Open Peer Review

Current Peer Review Status: ✗ ✓ ? ?

Version 3

Reviewer Report 14 July 2026

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Angela Hassiotis
[1] Division of Psychiatry, University College London, London, England, UK
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This study is one of the outputs from an EU Horizon 2020 and describes research that took place some years ago now. It is a qualitative project that engaged 30 participants from disadvantaged backgrounds in interviews about their participation in national screening programs about a variety of disorders in France. However, some of the findings and challenges are likely to have wider resonance.

The authors have already responded to two rounds of revisions and in my view, they have already covered the points raised by the other reviewers adequately.

My questions relate to the sample as follows:
1. Where in France were these participants drawn from?
2. What methods were used in order to identify and recruit them?
3. The abstract, results section, it states that “People with disability reported to be more influenced by factors related to the healthcare domain” however, no specifics are given as to what those factors were in contrast to the individual and social domains. This would also need to be revised to add some indicative factors.

Other than that, I do not have further comments.

Is the work clearly and accurately presented and does it engage with the current literature?
Yes

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Partly

Are all the source data and materials underlying the results available?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Not applicable

Are the conclusions drawn adequately supported by the results?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Applied health research using mixed methods

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 07 Oct 2026

Alice Le Bonniec

The authors are very grateful to the reviewers for their feedback and suggestions to improve the manuscript. Details of the changes made to the manuscript are listed below:

This study is one of the outputs from an EU Horizon 2020 and describes research that took place some years ago now. It is a qualitative project that engaged 30 participants from disadvantaged backgrounds in interviews about their participation in national screening programs about a variety of disorders in France. However, some of the findings and challenges are likely to have wider resonance. The authors have already responded to two rounds of revisions and in my view, they have already covered the points raised by the other reviewers adequately. My questions relate to the sample as follows:

1. Where in France were these participants drawn from?

Response: The study was conducted in the Rhone district in France. Participants from deprived backgrounds or with disability were recruited via two public and four associative organizations providing social care services in this district.

2. What methods were used in order to identify and recruit them?

Response: More information has been added: “A convenience sampling type was used. The interviewers were given access to the facilities used by the partner organizations and could approach potential participants during regular activities (e.g. food distribution). Sometimes, specific participants were identified by a healthcare professional or a social worker, and they were contacted directly by the research team if they gave their approval beforehand.”

1. The abstract, results section, it states that “People with disability reported to be more influenced by factors related to the healthcare domain” however, no specifics are given as to what those factors were in contrast to the individual and social domains. This would also need to be revised to add some indicative factors.

Response: We added the following indicative factors: “perceived risk; recommendation from

a healthcare professional or an educator".

Other than that, I do not have further comments.

Competing Interests: No competing interests were disclosed.

Reviewer Report 10 June 2026

https://doi.org/10.21956/openreseurope.25034.r75212

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?

Hollyanna Wilson
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Overall, this is a well-written manuscript that has the potential to benefit a wide range of healthcare professionals and services through its indexing. The adoption of a horizontal, person-centred approach to this topic represents a novel and welcome contribution to the literature. However, it should be acknowledged that the framework underpinning the study was applied exclusively to the exploration of health screening practices among men. This limitation warrants explicit discussion, including consideration of the relative paucity of research in this area relating to women's health and the implications this may have for the transferability of findings.

There are several areas where minor grammatical revisions are required, and some key terms would benefit from clearer definition. Structurally, however, the manuscript is coherent and well organised.
The principal area for further development relates to the integration of relevant theoretical frameworks and governance perspectives throughout the manuscript. Greater engagement with concepts such as behaviour change theory, health literacy, trauma-informed practice, and psychological safety would strengthen both the introduction and discussion sections. Similarly, consideration of relevant policy and governance frameworks, such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), would enhance the broader contextualisation of the findings.

The discussion would also benefit from further elaboration in several areas. A number of important points are raised but could be developed through deeper social, academic, and clinical commentary. Expanding these arguments would help to strengthen the manuscript's contribution to the field, maximise reader engagement, and increase its potential impact across research, policy, and practice contexts.

Specific points for revisions:
INTRODUCTION:

- Define/give examples to contextualise the terms 'underserved' (give definition/examples), 'socio-economic inequalities' (give examples) and 'disability' (?mental/intellectual/physical).
METHODS
- More information on recruitment needed, how was this done and please specify the sampling type e.g. convenience/purposive/self-selection
RESULTS
- Figure 1 is excellent - very accessible.
- Fix grammatical errors e.g. 'at the opposite'
DISCUSSION
- do not refer to individuals 'staying in good shape' - substitute for something like 'stay healthy/maintain good health'
- Comment on demographic skewing of participants in the context of generalisability issues
- Comment on the intersectionality between deprivation and disability - the paper presents them as mutually exclusive, comment on the implications for individuals with multiple co-occurring demographic risk factors
- communication and decision-making tools should be relevant and accessible - please use this term.

Is the work clearly and accurately presented and does it engage with the current literature?
Yes

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Yes

Are all the source data and materials underlying the results available?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Not applicable

Are the conclusions drawn adequately supported by the results?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Communication, intellectual disability, accessible information.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 07 Oct 2026
Alice Le Bonniec

The authors are very grateful to the two reviewers for their feedback and suggestions to improve the manuscript. Details of the changes made to the manuscript are listed below:

Overall, this is a well-written manuscript that has the potential to benefit a wide range of healthcare professionals and services through its indexing. The adoption of a horizontal, person-centred approach to this topic represents a novel and welcome contribution to the literature. However, it should be acknowledged that the framework underpinning the study was applied exclusively to the exploration of health screening practices among men. This limitation warrants explicit discussion, including consideration of the relative paucity of research in this area relating to women's health and the implications this may have for the transferability of findings.
Response: This limitation has been added in the strengths and limitations section: “the framework underpinning the study was previously applied mainly to the exploration of health screening practices among men. This may limit the transferability of the study findings”. However, our previous umbrella review exploring barriers and facilitators to participation in health screening revealed that the screening programmes that were the most studied in the literature were the ones for cervical and breast cancer (exclusively targeting women).

There are several areas where minor grammatical revisions are required, and some key terms would benefit from clearer definition. Structurally, however, the manuscript is coherent and well organised.
Response: A full revision of the manuscript has been conducted.

The principal area for further development relates to the integration of relevant theoretical frameworks and governance perspectives throughout the manuscript. Greater engagement with concepts such as behaviour change theory, health literacy, trauma-informed practice, and psychological safety would strengthen both the introduction and discussion sections. Similarly, consideration of relevant policy and governance frameworks, such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), would enhance the broader contextualisation of the findings.
Response: These suggestions have been added throughout the manuscript. We referred to the UNCRPD and introduced the concepts of behaviour change theory and health literacy in the introduction. We discussed trauma-informed practice and psychological safety in the “implications and perspectives” section.

The discussion would also benefit from further elaboration in several areas. A number of important points are raised but could be developed through deeper social, academic, and clinical commentary. Expanding these arguments would help to strengthen the manuscript's contribution to the field, maximise reader engagement, and increase its potential impact across research, policy, and practice contexts.
Response: We elaborated further in the introduction and discussion using the concepts suggested by the reviewer.

Specific points for revisions:
INTRODUCTION: - Define/give examples to contextualise the terms 'underserved' (give definition/examples), 'socio-economic inequalities' (give examples) and 'disability'

(mental/intellectual/physical).
Response: We clarified what was included in the term “disadvantaged populations” that is used throughout the manuscript. In the interest of accuracy, we kept the terms that were used by the authors of the studies when we referred to them. In Barré et al (2016), the term “deprived” was used, implying various factors such as the density of gynaecologists and deprivation of the municipality of residence, according to the European Deprivation Index. Lang et al (2016) and Buron et al (2017) estimated the level of “socioeconomic deprivation” using respectively the Indices of Multiple Deprivation (IMD) scores and a calculation of deprivation quintiles. Jacomelli et al (2016) used the Index of Multiple Deprivation to compare screening rates between the most versus the least “deprived areas”. Broberg et al (2018) used the broader terms “socioeconomic and demographic variables” that consider cohabiting status, disposable family income, employment status, unemployment benefits, social benefits and education level. We also specified that disability could be physical, psychic or intellectual.

METHODS - More information on recruitment needed, how was this done and please specify the sampling type e.g. convenience/purposive/self-selection
Response: More information has been added: “A convenience sampling type was used. The interviewers were given access to the facilities used by the partner organizations and could approach potential participants during activities (e.g. food distribution). Sometimes, specific participants were identified by a healthcare professional or a social worker, and they were contacted directly by the research team if they gave their approval beforehand.”

RESULTS - Figure 1 is excellent - very accessible. - Fix grammatical errors e.g. 'at the opposite'
Response: This error has been fixed, as well as other grammatical errors.

DISCUSSION - do not refer to individuals 'staying in good shape' - substitute for something like 'stay healthy/maintain good health'
Response: This has been corrected.
- Comment on demographic skewing of participants in the context of generalisability issues
Response: We added this point to the limitations of the study.
- Comment on the intersectionality between deprivation and disability
- the paper presents them as mutually exclusive, comment on the implications for individuals with multiple co-occurring demographic risk factors
Response: We fully agree with this suggestion and we have commented on that point in the discussion.
- communication and decision-making tools should be relevant and accessible - please use this term.
Response: The term “accessible” has been added in the conclusion.

Competing Interests: No competing interests were disclosed.

Version 2

Reviewer Report 26 December 2025

https://doi.org/10.21956/openreseurope.23644.r64921

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Emma Parry
[1] Keele University, Keele, England, UK
[2] Keele University, Keele, England, UK
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The authors have largely addressed my comments. I would advise updating the model in Figure 1. I think this needs to be formatted better.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Primary care research, health inequalities, mixed methods

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

Reviewer Report 02 September 2025

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Emma Parry
[1] Keele University, Keele, England, UK
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[3] Keele University, Keele, England, UK
[4] Keele University, Keele, England, UK

The authors tackle an important topic, which is exploring how people from deprived backgrounds and who have a disability approach screening and facilitators and barriers to screening. As people from these groups are less likely to participate in screening programmes it is crucial to explore reasons behind this. The article is well written.

My comments/feedback are below:

Methods

- Did you use purposive sampling? Did the authors sample people who had and had not participated in screening
- The interviews were conducted in 2019, why have the results only been published now?
- Was PPI group involved? Was the PPI group involved in interpretation of results and triangulation of data?

Results

- The authors describe how many participants had been involved in screening. What type of screening had they participated in?

I am not sure I agree with the interpretation with regards to the subheadings given some of the text presented. I would advise the authors to either reconsider some of the subheadings or use different quotes to support them. For some of the points it would have been helpful for the authors to expand more on some of the quotes and to explore participants responses in further depth. A few examples are below:

- For the person who described not having the time to attend screening did they explain why this was? I am wondering given their socioeconomic position could they have been working 2 jobs, have caring responsibilities etc. I think this would have been important to explore further and present here in the results.
- I'm not sure I agree with labelling the of the "links with relatives and friends" subheading. For the person who described people around her who had become ill, surely she is describing here fear as a reason for screening?
- For the subheading of "Fatigue if too many medical procedures..." are the quotes also implying lack of knowledge of the positives for screening e.g. preventing disease before it becomes burdensome?
- I don't think the subheading "Being followed for a disease/medical procedure" is correct. Do the authors mean followed-up? Also, the language used by the 42 year old women is interesting, she uses the word "forced" which is powerful. The authors might want to consider updating this interpretation of this subheading.
- For the subheading "difficulties linked with disability" I'm not sure the participants are describing this. One participant is talking about how her cervix is narrow so I'm not sure how this is linked to disability.

I would caution the authors against making inferences based on frequency counts when analysing qualitive data, for example, comparing number of barriers between participants with disability and deprived backgrounds.

It would have been nice to have seen the results presented as a model at the end of the results section.

Further information could have been given on the types of disabilities participants experienced to provide context to their responses.

Discussion

The authors describe fear as a barrier to screening amongst deprived and disabled populations. It would be helpful to readers if the authors could expand on why they think fear is a barrier e.g. what are people fearful of?

One limitation of the study, not discussed here is the study was limited to French speaking

participants only. Also ethnicity of the participants is not reported. Surely this will have influenced findings?

I found the implications section generic and did not feel this really took into account the findings from the study, nor did it go beyond practical suggestions that are likely to already be in place.

Is the work clearly and accurately presented and does it engage with the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Partly

Are all the source data and materials underlying the results available?
Partly

If applicable, is the statistical analysis and its interpretation appropriate?
Partly

Are the conclusions drawn adequately supported by the results?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Primary care research, health inequalities, mixed methods

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 05 Nov 2025

Alice Le Bonniec

The authors are very grateful to the two reviewers for their feedback and suggestions to improve the manuscript. Details of the changes made to the manuscript are listed below:

Reviewer 2 The authors tackle an important topic, which is exploring how people from deprived backgrounds and who have a disability approach screening and facilitators and barriers to screening. As people from these groups are less likely to participate in screening programmes it is crucial to explore reasons behind this. The article is well written.
My comments/feedback are below:
Methods:
Did you use purposive sampling? Did the authors sample people who had and had not participated in screening

Response: The only eligibility criteria was related to the disadvantaged background of participants (experiencing deprivation or having a disability). We did not sample people who had and had not participated in screening. This is justified by the difficulty of findings volunteers in these hard-to-reach populations. Actually, 28 out of 30 study participants had already participated in at least one screening. However, it is likely that only a few or none of them had participated to all screening recommended to them (now added in the limitations section).

The interviews were conducted in 2019, why have the results only been published now?
Response: The results were already disseminated to a French audience, before making them available to a wider audience. As there is no staff working on this project anymore, the publication process relies on the authors availability which can be limited due to other work commitment, explaining that the manuscript was submitted in April 2024.

Was PPI group involved? Was the PPI group involved in interpretation of results and triangulation of data?
Response: No PPI group was involved in this study. This has been added to the limitations.

Results:
The authors describe how many participants had been involved in screening. What type of screening had they participated in? The participants took part in various screening procedures – the main screening procedures available in France were considered (please see appendix II for more details). The most frequent screening procedures reported by participants were cancer screening tests, diabetes tests and unspecified blood tests. I am not sure I agree with the interpretation with regards to the subheadings given some of the text presented. I would advise the authors to either reconsider some of the subheadings or use different quotes to support them. For some of the points it would have been helpful for the authors to expand more on some of the quotes and to explore participants responses in further depth. A few examples are below: For the person who described not having the time to attend screening did they explain why this was? I am wondering given their socioeconomic position could they have been working 2 jobs, have caring responsibilities etc. I think this would have been important to explore further and present here in the results.
Response: Regarding this specific interview, the participant expressed a lack of time due to her son being sick and needing frequent hospital appointments. We added some examples into brackets after the subheadings in Table 2 to illustrate the content of the interviews mentioning the lack of time as a barrier.

I'm not sure I agree with labelling the of the "links with relatives and friends" subheading. For the person who described people around her who had become ill, surely, she is describing here fear as a reason for screening?
Response: We replaced this subheading by "social influences" as it reflects more accurately the quotes. Regarding the person who described people around her who had become ill, we cannot infer that she expresses fear but this is, at least, an expression of concern.

For the subheading of "Fatigue if too many medical procedures..." are the quotes also implying lack of knowledge of the positives for screening e.g. preventing disease before it

becomes burdensome?
Response: It is possible but we cannot infer the lack of knowledge. Participants might be aware of the benefits of the screening procedures but still feel it is cumbersome to do them all.

I don't think the subheading "Being followed for a disease/medical procedure" is correct. Do the authors mean followed-up? Also, the language used by the 42 year old women is interesting, she uses the word "forced" which is powerful. The authors might want to consider updating this interpretation of this subheading.
Response: Thank you for noting that mistake. We replaced "follow" by "follow-up". We changed the subheading (now "Screening seen as inevitable when followed up for a disease/medical procedure") and added a sentence in the discussion about the "forced" screening procedures.

For the subheading "difficulties linked with disability" I'm not sure the participants are describing this. One participant is talking about how her cervix is narrow so I'm not sure how this is linked to disability.
Response: We replaced that subheading by "Screening procedure difficult to access/perform".

I would caution the authors against making inferences based on frequency counts when analysing qualitive data, for example, comparing number of barriers between participants with disability and deprived backgrounds. It would have been nice to have seen the results presented as a model at the end of the results section.
Response: We deleted the figure 1 (comparing number of barriers between the two populations) and replaced it by a model presenting the results.

Further information could have been given on the types of disabilities participants experienced to provide context to their responses.
Response: As stated in the data collection section, participants were included if they were living with a physical or mental/intellectual disability. More details on the disability of each participant were not collected in order to respect their privacy.

Discussion:
The authors describe fear as a barrier to screening amongst deprived and disabled populations. It would be helpful to readers if the authors could expand on why they think fear is a barrier e.g. what are people fearful of?
Response: We expended on that topic in the discussion: "A distinction can be made between a fear of the results of the test (i.e. diagnosis, consequences of a disease) and a fear of the screening procedure (i.e. painful test) (Le Bonniec et al, 2022)."

One limitation of the study not discussed here is the study was limited to French speaking participants only. Also ethnicity of the participants is not reported. Surely this will have influenced findings?
Response: We added these limitations.

I found the implications section generic and did not feel this really took into account the

findings from the study, nor did it go beyond practical suggestions that are likely to already be in place.
Response: We added more suggestions in this section. The horizontal approach taken in this research aims to go beyond what is already implemented in France. The next steps are still in progress through the Lianeli project that aims to develop a digital application for people to access tailored information about screening (more information here: https://lianeli.fr/). A recent publication (Meunier et al, 2024) as part of this project showed the complexity of implementing a horizontal approach without standardised information integrated in current practice tools.

Reference: Yves Meunier, P., Maiga, K., Maillet, D., Bochaton, T., De la Fournière, B., Delahaye, F., Dupont, C., Guillaud, O., Lamort-Bouché, M., Lina, B., Ray-Coquard, I., Péron, J. et Letrilliart, L. (2024). Recommandations de dépistage en France : une revue systématique. Santé Publique, . 36(5), 15-35. https://doi.org/10.3917/spub.245.0015.

Competing Interests: No competing interests were disclosed.

Reviewer Report 08 January 2025

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The authors conducted a qualitative study on barriers and facilitators of screening in general, in a sample of people living with disability and / or deprived.
While the article is well presented and easy to read, a number of improvements are needed before it could be officially index.
My first main concern is the lack of linkage between the statements in the introduction, about the low literacy level in deprived population and its impact on screening uptake, and the methodology. If my understanding is correct, the literacy level has not been questioned in the interview, which is a shortcoming. In the same vein, authors refer to 2 papers on the low screening uptake among very specific migrant categories (homeless or deprived migrants), who cumulate barriers to screening but are not representative of other categories of deprived / disabled population in France.
Introduction / context sections could therefore be improved by including more general figures on the lowest SES quartile of French population accessing screening, compared to the highest quartile or average.

My second main concern lies in the methodology. Authors used the framework by Teo and al in order to conduct their interviews (and therefore the framework analysis). While i would have liked to read more in detail on Teo's framework, i can't see specific questions on financial or geographical barriers (related to transportation for instance), that could be experienced by the specific populations under scrutiny.
The findings section could be improved by going deeper in the interpretations of interviews. For instance, the perception of "imposed screening" by the 2 women (disabled, 34yo and deprived, 42yo), merits greater attention.
The discussion should make the link with pre-existing horizontal screening campaigns such as the one organized by CPAM, especially targeting deprived population.
What about including occupational medicine for short-term contracted workers, or public services such as France Travail, or the CAF, or MDPH, in order to systematically reach the most deprived?

Is the work clearly and accurately presented and does it engage with the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
No

Are all the source data and materials underlying the results available?
No

If applicable, is the statistical analysis and its interpretation appropriate?
Partly

Are the conclusions drawn adequately supported by the results?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Health systems and policies; migrant health; health litteracy

I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Author Response 05 Nov 2025

Alice Le Bonniec

The authors are very grateful to the two reviewers for their feedback and suggestions to improve the manuscript. Details of the changes made to the manuscript are listed below:

The authors conducted a qualitative study on barriers and facilitators of screening in

general, in a sample of people living with disability and / or deprived.
While the article is well presented and easy to read, a number of improvements are needed before it could be officially index. My first main concern is the lack of linkage between the statements in the introduction, about the low literacy level in deprived population and its impact on screening uptake, and the methodology. If my understanding is correct, the literacy level has not been questioned in the interview, which is a shortcoming. In the same vein, authors refer to 2 papers on the low screening uptake among very specific migrant categories (homeless or deprived migrants), who cumulate barriers to screening but are not representative of other categories of deprived / disabled population in France.
Response: We deleted the sentence linking health literacy level and screening uptake. In addition, we replaced the citations related to migrants populations by another paper including wider deprived populations (Sassenou et al, 2025), and we now cite additional French studies including more representative populations (Barre et al 2017; Ouanhnon et al 2022). The fact that the level of health literacy was not assessed during the interviews was added as a limitation.

Introduction / context sections could therefore be improved by including more general figures on the lowest SES quartile of French population accessing screening, compared to the highest quartile or average.
Response: Figures on the participation in screening within different French areas are not always accessible to illustrate screening disparities but we added data on cervical and breast screening participation as an example (Barre et al, 2017; Ouanhnon et al, 2022).

My second main concern lies in the methodology. Authors used the framework by Teo and al in order to conduct their interviews (and therefore the framework analysis). While i would have liked to read more in detail on Teo's framework, i can't see specific questions on financial or geographical barriers (related to transportation for instance), that could be experienced by the specific populations under scrutiny.
Response: We added some examples for each domain of Teo's framework in the data analysis section. The framework was used to analyse the results of the interviews. This framework includes indeed the possible lack of income or personal insurance and the lack of personal transport. The semi-structured interviews were based on open-ended questions – e.g. "Is there anything that prevent you from participating in screening?". That way any potential barriers could be raised by participants. Financial aspects were not mentioned as a barrier by participants. This can be explained by the fact that screening is free of charge in France. Geographical factors did not appear as a barrier either – this is probably due to the fact that people included in the interviews were living in a big city with short distances to healthcare facilities and easy access to public transports.

The findings section could be improved by going deeper in the interpretations of interviews. For instance, the perception of "imposed screening" by the 2 women (disabled, 34yo and deprived, 42yo), merits greater attention.
Response: We elaborated on this point in the discussion: "Indeed, two participants expressed a perception of imposed screening (blood tests) as part of another medical procedure. This specific context places screening as an inevitable step to access other care, whereas informed consent should be checked for each separate procedure." The discussion should make the link with pre-existing horizontal screening campaigns such as the one

organized by CPAM, especially targeting deprived population.

What about including occupational medicine for short-term contracted workers, or public services such as France Travail, or the CAF, or MDPH, in order to systematically reach the most deprived?
Response: These elements have been added to the discussion.

Competing Interests: No competing interests were disclosed.