Full title: Barriers and facilitators to participate in the colorectal cancer screening programme in Flanders (Belgium): a focus group study

Short title: Barriers and facilitators to participate in the colorectal cancer screening programme in Flanders

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Abstract

Objective: In Flanders (Belgium), a population-based colorectal cancer (CRC) screening programme offers a faecal immunochemical test (FIT) biennially to Flemish citizens aged 50-74 years. A FIT uptake of only 51,5% in 2018 is significantly lower among men, lower income groups and among people with other than the Belgian nationality.

The objective of this study was to identify attitudes, barriers and facilitators to participate in the Flemish CRC screening programme.

Methods: Qualitative study using focus group discussions (FGDs) with non-participants in the Flemish CRC screening programme. Four FGDs were held with non-migrant Flemish population groups, and four were held with Turkish migrants (41 participants).

Results: Feeling healthy, fear of cancer and embarrassment to talk about CRC screening emerged as common barriers in all FGDs. Having other priorities (non-migrant group) and a lack of understanding mainly due to a language barrier (Turkish migrants) differed between the two groups. Providing face-to-face information, information in group and GP recommendation were perceived as important facilitators to CRC screening in both groups. More publicity and making CRC screening more of a routine (non-migrant group) and offering translated information (Turkish migrants) were the suggested facilitators that differed between the groups.

Conclusions: Several common and some group-specific barriers and facilitators appeared to play a role in the decision to participate in the CRC screening programme. In order to improve informed decision making and participation in the CRC screening programme in Flanders, the options of more GP involvement, targeted information events, and adapted reminder letters are currently being explored.

Keywords: barriers, colorectal cancer screening, qualitative research, faecal occult blood test, Flanders

Introduction

Population-based colorectal cancer (CRC) screening by occult blood testing in the stool can reduce CRC incidence and disease-specific mortality. A positive immunochemical faecal occult blood test (FIT) followed by a colonoscopy leads to a 15% relative risk reduction of CRC mortality [1]. In Flanders (Belgium) a population-based CRC screening programme started in 2013, offering a free biennial faecal immunochemical test (FIT, Eiken Chemical Co. Ltd, OC Sensor) to people aged 56-74 years by post [2]. The target population age has gradually been extended to 50-74 years by 2020. A FIT uptake of merely 51,5% in 2018 [3] undermines the potential public health benefits. Maximum uptake is crucial to achieve the greatest health benefits at population level [4]. Previous research in Flanders indicates that FIT incidences of uptake and follow-up after a positive FIT are significantly lower among men, people with a preferential reimbursement status indicating a low family income, very low work intensity or no paid work, as well as among people with a nationality other than Belgian [5-6]. People with a Maghreb or Turkish nationality at birth had the lowest CRC screening uptake in Flanders in 2013-2014: 17,9% and 14,7% respectively, compared to 53,6% among people born with the Belgian nationality [5]. Although the FIT uptake inequity is a well-documented problem in Flanders, the knowledge about specific barriers to participation in these population groups is lacking. By exploring barriers and facilitators to participating in the CRC screening programme among non-attendees, we aim to identify ways to increase the FIT uptake.

Material and methods

Study design

In this qualitative study eight focus group discussions (FGDs) with non-attendees in the Flemish CRC screening programme were organized: four with participants from the general population, and - considering their high proportions of non-participation - four with people from Turkish descent. Considering the sensitivity of the topic, separate FGDs were organized for men (4) and women (4).

FGDs were carried out between October 2016 and April 2017 and lasted between 60-90 minutes. A moderator conducted the discussion based on a topic list, while an observer took field notes. FGDs were audio-recorded, transcribed verbatim and anonymized. Transcripts were analysed following an open coding method (with Nvivo 11). The FGDs with Turkish migrants (led by a male or female Turkish speaking moderator) were translated in Dutch for the analysis. As this study had a predominantly explanatory aim, an inductive approach – instead of a theoretical framework - was taken. The project was approved by the Ethics Committee of the Ghent University Hospital (B670201627445, 02/02/2016). Signed consent was obtained from each interviewee and they received a coupon of €30 for a grocery store as well as a bus ticket.

Recruitment

FGD interviewees were recruited by the Centre for Cancer Detection (CCD) by convenience sampling. Inclusion criteria were: 56-74 years and being invited (at least once) but not having participated in the CRC screening programme. Between three and six participants attended each FGD, with a total of 16 non-migrants and 23 Turkish migrants. A summary of interviewee demographics is provided in Table 1.

Table 1. Characteristics of the FGDs and the interviewees

FGD	n	gender	age range	(very) difficult financial situation	no paid work nor retirement fund	lower educated (i.e., maximum lower secondary educational level)
Flemish						
FGD1	5	F	56-65	3	4	5
FGD2	4	M	61-68	0	0	1
FGD3	4	F	65-72	1	0	0
FGD4	3	M	68-73	0	0	1
Turkish						
FGD5	6	F	56-68	0	0	6
FGD6	5	M	63-69	1	0	5
FGD7	6	F	59-77	1	6	6
FGD8	6	M	61-72	1	0	4

Results

Barriers to CRC screening

Qualitative research enables participants to think through their initial and candidly given motives and to find their true underlying motives of non-participation. In this study, some interviewees initially raised the issue of barriers (e.g. lack of time, postponement, not being interested in prevention, feeling healthy), but admitted later in the FGD that such arguments are mainly fallacies or superficial drivers instead of real motives. For instance, when an interviewee stated that (s)he did not participate due to a lack of time or because (s)he was not interested in preventive actions in general, a deeper motive (f.i. fear or shame) was sometimes admitted to later in the FGD. Other interviewees who stated that the CRC screening was not useful to them as long as they felt healthy, often appeared to participate in other preventive health checks (such as annual blood tests or breast cancer screening). This illustrates that engaging in preventive actions (which inherently means taking certain actions even though one feels healthy) is not something they completely refrain from. For several interviewees fear appeared to be an important barrier. Fear can be related to the result, (f.i. already having had cancer or the negative associations with cancer) or to the broader medical context (f.i. fearing hospitals and medical investigations in general). The length of the waiting times between the screening and the results might contribute to higher levels of fear. Feelings of shame came up in almost all FGDs. Some perceived taking a stool sample and sending it by mail as embarrassing. It also appeared that many interviewees were not aware of the exact nature of the test (f.i. some thought that the stool sample they had to send was quite big, which contributed to experiencing feelings of shame). One of the interviewees indicated that she would feel extremely ashamed if she were to have to undergo a colonoscopy. There is a general embarrassment and reluctance to talk with family or friends about CRC screening and stool samples. Nevertheless, it was remarkable that that embarrassment around the subject disappeared quite easily in the FGD. Feeling ashamed to talk about intimate medical issues with others was mentioned in all FGDs, but was more pronounced among the Turkish migrants. Other barriers were mentioned in the non-migrant groups only. In these groups, for instance, having other priorities (f.i. family problems, other diseases or having an ill family member) appeared to prevent some people from participating in the screening. People confronted with disturbing situations seem to avoid a potentially positive screening test and the risk of not being there when a family member needs them. It is remarkable that worst case scenarios are so easily assumed. Only a minority of non-migrant Flemish interviewees seemed to have made a clear, informed decision about their non-participation in the CRC screening programme. For instance, one of the interviewees thought her hemorrhoids would lead to a false positive result and therefore decided the test was not useful to her. Some interviewees have the firm conviction that one should not intervene preventively and ‘to let nature take its course’. Distrust due to negative stories from others, doubts about the validity of the programme and the safety of a potential follow-up colonoscopy when tested positive play a role in their decision not to participate.

On the other hand, some barriers appeared to be specific for the Turkish migrant groups. For instance, a lack of understanding and knowledge came up among Turkish migrants as a barrier to participating. First generation Turkish migrants in Flanders (in the age category 56-74 years) usually depend on others for translation. Moreover, talking about health issues is not very common. In only a minority of the cases, the migrants' children translate and inform their parents about the CRC screening invitation. Some Turkish migrant interviewees did not even recognize the example of the invitation letter and leaflet when shown in the FGD. Some suspected that the letter was thrown away or had gotten lost during their annual vacation in Turkey. It was difficult to estimate to what extent the participants were aware of the invitation letter. Table 2 summarizes all discussed barriers to participate in the CRC screening programme, illustrated with quotes.

Table 2: Barriers to colorectal cancer screening

	Non-migrant FGDs	**Turkish migrant FGDs**
Postponement	- *At 55 you are overwhelmed by information. Have you already visited your GP for your prostate? Do we have to make time for all that? I do have a job to do. The only thing I actually do, is getting my blood tested (FGD 1, male, Flemish)* - *Postponing... I always have an explanation, I say I have diarrhea, so it won't be possible.. Yes, [these are] all excuses (FGD 1, male, Flemish)* - *Honestly, I wasn't interested the first time, and the second time I put the letter on my desk, but it stayed there and got lost between the papers (FGD 2, male, Flemish)*	- *I1FGD7: I didn't really ask the children. The letter is still at home. I recently saw it.* *M: And you didn't ask? Or are you afraid of being tested?* *I1FGD7: No, it is more like postponement. (FGD 7, female, Turkish)*
Feeling healthy	- *I think it will not happen to me. And, it [CRC] is sometimes hereditary, but not in my family. And I'm always postponing it due to circumstances and also because you know your own body. I have well-functioning intestines. (FGD 1, male, Flemish)* - *I have no complaints. And when I have complaints, I go to the doctor. (FGD 4, female, Flemish)*	- *M: Why does one pay so little attention to this letter?* *I1FGD5: Because we don't understand and because we are still healthy.* *I2FGD5: Because it hasn't happened to you yet.* *I3FGD5: Because you are not sick yet.(FGD 5, male, Turkish)*
Fear	- *That's the reason I didn't participate, out of fear, I've already had cancer and then you're really worried that you will get it again. Although I participated twice in the breast cancer program, this year I didn't either. (…) I feel that if I do the test, I will get a bad result. (FGD 3, female, Flemish)* - *I'm afraid, and I've always been. So I rarely go to a doctor. Why? Fear of medicine, although I have faith in medicine, I cannot explain it. (FGD 1, male, Flemish)* - *Then you have to wait for the test result….. So many weeks to wait, I can't handle that. I'm stressed, waiting for that result. (...) (FGD 1, male, Flemish)*	- *Just the word, colon cancer or cancer, when you hear about it you get in a bad mood. You just don't want to hear about it. (FGD 6, male, Turkish)* - *I'm afraid of the result of such a screening. For me that is the main reason. I went to the breast cancer screening once, but not anymore. I was afraid of being diagnosed with cancer. I don't know whether I acted correctly. (FGD 8, female, Turkish)*
Shame	- *Is it also because of the shame. For many people, I guess. Some poop and stuff, no… (FGD 3, female, Flemish)* - *When you have a bad test result, then you have to go to the hospital. I don't know if I would*	- *For this screening, Turkish people are really ashamed, because the follow-up is a colonoscopy. (FGD 5, male, Turkish)*

	dare... I think that's very embarrassing ... I don't want to think about that. (FGD 3, female, Flemish)	- *Usually such diseases are kept discrete. They are ashamed and don't want to make it public. (FGD 7, female, Turkish)* - *A family member was also invited to send a stool sample. He said he was embarrassed to send it in. (FGD 5, male, Turkish)* - *It's how we were raised. We are just ashamed. I'm even ashamed to tell you. (FGD 7, female, Turkish)* - *But everyone has that sense of shame. The children, but we too (FGD 5, male, Turkish)*
Having other priorities	***Non-migrant Flemish FGDs only:*** - *Currently with my wife, with her chemo, I'm not going to be sick as well. (FGD 2, male, Flemish)* - *Now I would. But then, I just wanted to be left alone (…). I'm not going to do that. I immediately discarded the letter. (FGD 4, female, Flemish)* - *We have lost a grandchild, then my mom… (….) It has been enough, not now, not one more thing to worry about. (FGD 3, female, Flemish)*	
Informed decision / distrust	***Non-migrant Flemish FGDs only:*** - *I1FGD3: My mother always said 'when you have no complaints, you should not intervene'.* *I2FGD3: My mother always said that too (FGD 3, female, Flemish)* - *I did not open it, I don't have to know. Soon, we will be checked and examined for everything. What does that all cost to society? Then it all starts: first they say it's all free, but when you go to your GP it's no longer free. And when you have to go to the specialist it is even more expensive. And then you need a pill for this, and a pill for that. No, I don't want to know (FGD 1, male, Flemish)* - *I think the vaccinations are very good. And, the breast exams, I also think that's very good. Then cervical cancer, now it's colon cancer. What is next ... ? (FGD 4, female, Flemish)* - *I always have some blood [in the stool]. They would also let me do that follow-up research immediately, [but] I don't want to. (FGD 4, female, Flemish)*	
Lack of understanding and knowledge	**Turkish migrant FGDs only:** - *I also received a letter at home, but I didn't understand it (FGD 5, male, Turkish)* - *I1FGD6: Sometimes we even think that it is advertising.* *I2FGD6: Yes, we get lots of stuff. And sometimes we mix up everything: advertising, invoices and invitations. (FGD 6, male, Turkish)* - *I4FGD5: Nobody understood that letter. It would surprise me if someone did. We received it and threw it away (FGD 5, male, Turkish)* *I5FGD5: My son says it's impossible to translate it all (FGD 5, male, Turkish)*	

I= interviewee, M= moderator

Facilitators for CRC screening

Providing face-to face information, either in a group or by their GP recommending a CRC screening, was a potential facilitator mentioned in all FGDs. Facilitating group discussions about barriers to participating (such as the FGDs that were organized) seem to influence screening intentions. Although a general embarrassment to talk to others about CRC (screening) and stool samples was mentioned as a barrier, talking about it during FGDs was not perceived as shameful. The Turkish migrants strongly indicated that information disseminated in a group context (e.g. through mosque activities in their mother tongue) would increase uptake. The power of discussing the topic in group was also demonstrated by the (unintended) effect of the FGDs: many participants were convinced to get screened. In all FGDs a GP recommendation was indicated as a potential factor to increase uptake. However, some indicated that although their GP had already raised the subject, this had not influenced their decision. The specific relation with the GP seems to affect the influence of such a GP recommendation. Moreover, the language barrier among the Turkish migrants often persists throughout all communication with their GP. Most interviewees had limited general knowledge about CRC screening and the need for more information was mentioned. More general publicity about CRC screening, feeling some form of pressure or including the CRC screening in a routine were mentioned as potential facilitators but only in the non-migrant FGDs. Some interviewees indicated that experiencing some kind of pressure, for instance by the GP, would increase uptake. Others stated that uptake could increase if CRC screening was built into a routine, just like a dentist visit, an annual blood screening or a gynecological checkup. Turkish migrants indicated translated information (even only partly) as a facilitator for the CRC screening. The Turkish migrant population seems to act as a strong community where 'group pressure' influences the intention to screen. If some peers express their participation and experiences about the CRC screening program, others might get screened as well. Table 3 summarizes potential facilitators to participate in the CRC screening programme, illustrated with quotes.

Table 3: Facilitators to CRC screening (M= moderator, I=interviewee)

	Non-migrant FGDs	**Turkish migrant FGDs**
Information in group	- *More campaign is needed. And if they are all in a group, they say: if you do it, I will do it too (FGD 3, female, Flemish).* - *To an information evening only about CRC, not many people will show up. If it is included in an evening that is already organized anyway... I think that has more effect (FGD 3, female, Flemish)*	- *There is no need for such a letter. We gather here in advance. Two experts should come here and explain us how we should do the test and give us the test. They can pick it up here afterwards (FGD 5, male, Turkish)* - *We have a breakfast meeting at the beginning of the month. Could one of you be present there? So then you can inform us about breast cancer, colon cancer and other themes? We would be delighted (FGD 7, female, Turkish)*
GP recommendation	- *I think it should be obliged by the family doctor, then you would pay more attention to it. The invitation letter, you look at it, and then immediately throw it away, even the second time… (FGD 2, male, Flemish)* - *If my GP called me and told me that the test is very easy and it's to my advantage and it can tell if everything is ok… Maybe I would do it. With that extra push (FGD 3, female, Flemish)* - *M: Your GP would leave a stronger impression than such a meeting?* *Yes, but only when you have faith in your doctor (FGD 1, male, Flemish)*	- *M: And if the GP sends such a letter in relation to the screening?* *I1FGD7: Then we would feel obliged.* *I2FGD7: We would certainly go. (FGD 7, female, Turkish)* - *Yes, of course. But when he speaks, you only understand a word or two. You come home without understanding what the doctor has said (FGD 5, male, Turkish)*
More publicity	***Non-migrant Flemish FGDs only:*** - *I actually miss, apart from getting the invitation and test, communication about the existence and results of CRC screening (FGD 1, male, Flemish)* - *There is enough social media available to spread those messages in a very cheap way. That say 'listen guys, this screening exists, and there are very good results' (FGD 1, male, Flemish)* - *It's new too. A blood test, a mammo, a cervical test, that exists for more than 20 years. But such a stool test, I think that is not yet well known (FGD 3, female, Flemish)* - *There is a lot of advertising on breast cancer and anti-smoking on TV… But for colon cancer there isn't (FGD 3, female, Flemish)*	

Pressure / routine	***Non-migrant Flemish FGDs only:*** - *When my wife finally gets me to see a doctor, he tries all sorts of things... He is the only one who can move me a bit… But he should tell me, give me the test himself, and say 'give me the test back before Friday' (FGD 1, male, Flemish)* - *They advised me a breast examination, but I did not go yet. If you don't have an appointment... Actually you should be obligated, [there should be] someone who calls you to get there (FGD 3, female, Flemish)* - *My GP told me I had to go to a lung specialist. And yesterday I ran into the doctor and he said: have you already been? I say, no, I haven't called yet. If I don't give you an appointment, then you won't go, he says. I will go someday, but I don't know when yet (FGD 3, female, Flemish)* - *I3FGD3: With my dentist, it is the same, isn't it? I have already made an appointment for next year, then you go, but if you don't make an appointment ...* *I2FGD3: Yes, then you postpone it… (FGD 3, female, Flemish)*
Information (partly) in Turkish	**Turkish migrant FGDs only** - *If there was a translation in Turkish, then the Turkish community would take this letter seriously. (FGD 6, male, Turkish)* - *We would feel more appealed if it were written in the Turkish language (FGD 5, male, Turkish).* - *Those over 55 cannot speak or understand Dutch anyway (FGD 5, male, Turkish).*

Discussion

Asking non-participants about the barriers they experience vis-à-vis participating in the CRC screening program often does not lead to straightforward answers, indicating that it often does not concern an informed decision. Some found their non-participation difficult to rationalize. Qualitative research can reveal other findings than quantitative research [7]. For the majority of interviewees, initial responses such as 'CRC does not occur in our family', 'having no complaints' or 'having no time', did not persist when probed more in depth. Probably more emotional and irrational reasons play a role in their non-participation. Other studies also reported interviewees struggling to reconcile their belief that screening is important with their own non-participation [8]. The fact that some interviewees did participate in other preventive health checks (such as breast cancer screening or dental visits) but not in CRC was also found in previous studies [8-10]. Other screening tests might be more acceptable to the participants [10]. In the present study, a minority (only non-migrant interviewees) remained very convinced about not participating. Persistent anxiety (for bad news or a follow-up colonoscopy), a seemingly rational deliberation about the usefulness of screening (e.g. in the case of hemorrhoids) or fear of possible negative outcomes in the context of a purely preventive test, kept on endorsing their decision for not participating. Non-participation was not necessarily associated with negative attitudes towards screening. In all FGDs there was a general positive attitude towards the CRC screening, although the interviewees were not participating in the programme. This was also reported elsewhere [8]. However, FGD participants might already have a positive attitude towards CRC screening [9]. In all FGDs, postponement, feeling healthy, fear and shame emerged as common barriers to participating in CRC screening. Other barriers, such as having other priorities (non-migrant group) or a lack of understanding mainly due to a language barrier (Turkish migrants) differed between the two groups.

The barriers 'lack of symptoms' and 'feeling healthy' were also found by others [8-16]. Although fatalism was mentioned elsewhere [17], a particularly fatalistic attitude about CRC did not come up in the FGDs as being a barrier. A general lack of knowledge and being unaware of the usefulness of CRC screening, however, are reported as being barriers [8, 18-20]. Feeling well seems to be associated with a low perceived relevance of screening [11, 21-23], and seems to be driven by a lack of knowledge and mistaken beliefs that CRC screening is only necessary when symptoms were present [9, 13, 17]. Perception of good health is misleading, as CRC in early stages mostly have no symptoms [20]. Cancer screening intrinsically aims to reach people without complaints and without an increased familial or genetic risk in developing CRC. Fear of cancer [14-15, 24-26], fear of further treatment, hospital visits or a follow-up colonoscopy were also reported elsewhere [8, 10, 12-13, 17].

While other studies report the reluctance or inconvenience to collect stool samples [10-11, 13,16], this theme did emerge in the FGDs, but did not seem to be an important barrier. However, shame was mentioned throughout all the FGDs. An embarrassment to talk about CRC was indicated as an important barrier in other studies as well [8, 10, 12], but – as mentioned by others - hygiene concerns and distaste with having to deal with faeces were not the main reasons for not participating [8, 27]. The language barrier and not understanding the written information seems to be a major barrier for not participating among Turkish migrants, and was mentioned by others as well [12, 16-17, 26, 28]. Not understanding Dutch makes an informed decision about participating almost impossible. Older (first generation) Turkish migrants indicated being highly dependent on their children to act as mediators in providing the information in the invitation and leaflet, but at the same time, talking about CRC screening and stool samples with their children seems to be taboo. In both groups, the provision of information face-to-face (via group sessions or GP recommendations) was perceived as being an important potential facilitators to participation in CRC screening. Other facilitators differed between the groups, such as more publicity, pressure and routine (non-migrant group) and information at least partly in Turkish (Turkish migrants). Only in the non-migrant FGDs was experiencing some form of pressure mentioned as facilitator. Perceiving some kind of responsibility to participate because the 'government' sends the invitation was reported elsewhere [12, 28-29]. A GP recommendation was mentioned as an important facilitator in several studies [8, 12-14, 20, 26, 28, 30]. A GP has a key role in addressing barriers and facilitators to screening participation [17]. However, because of a language barrier mentioned in the Turkish migrant FGDs, GP contact seems to be avoided unless there is an acute or chronic need [17]. Still, some interviewees (of both groups) would have taken part in the CRC screening if they had been advised to do so by their GP. GPs who address the importance of asymptomatic screening could increase uptake, but GPs do not frequently recommend CRC screening [17].

Most interviewees indicated that talking about CRC screening can act as a facilitator in raising awareness about CRC screening. The perceived social acceptability of talking about CRC with others is an important theme. Cancer and screening seems to be a topic that is felt to be difficult to talk about [8]. Woudstra [12] also indicated that although cancer was not easily discussed within Moroccan and Turkish groups in the Netherlands, talking about CRC (screening) within their family and communities would contribute to the normalization of screening [12] and could emerge as a key to participation in screening [11].

The FGDs had the unintended effect that, at the end of the FGDs, most people were convinced of the importance of CRC screening and (especially for the Turkish migrants) the need to get over their shame. The FGDs immediately affected the intention to screen. This side effect of FGDs in influencing knowledge, awareness and intention to screen was also found by others [10-11, 13, 19, 26, 31- 32]. In a qualitative study in Ireland, most interviewees indicated that they wanted to participate after they had discussed their concerns [10]. They may already have had a degree of intention to screen despite not participating in previous screening rounds [8], but an intention to screen does not always translate into action (the 'intention-action' gap) [8]. Based on the FGDs the Center of Cancer Detection (CCD) is currently exploring several interventions to increase uptake. Some Turkish migrants perceived the letter as advertising and threw it away. Therefore, the envelope was adapted with an indication 'free test for CRC screening'. However, due to a strict language regulation in Belgium, this text is added only in Dutch. Belgium, as a federal state, comprises three regions (Flemish, Walloon and Brussels) and in Flanders, the Dutch speaking region, the exclusive use of Dutch in administrative communication, such as invitations of a Flemish screening program, is mandatory by law. On the website of the CCD, however, translations in six languages (including Turkish) of the invitation letter and additional information are available. However, these translations are not mentioned in the Dutch leaflet. The CCD should add this information in the leaflet to increase awareness of the available translations. Still, low digital health literacy could also influence the consultation of these translations online. One-on-one education [33] and group education might be a useful intervention for special populations such as specific ethnic groups or other groups for whom access to healthcare and information is challenging [34]. To increase awareness about CRC screening, a steering committee was set up in cooperation with local authorities to develop a co-created tool with basic step-by-step information. In a pilot study, conducted in three regions from January 2020, this tool will be used in targeted information events for vulnerable groups to increase awareness about CRC (screening).

Literature indicates that GP-endorsed (reminder) letters could increase overall uptake [8, 30, 35], but did not modify the socio-economic status gradient [35]. In Flanders, uptake in CRC screening is significantly higher when sending the FIT directly by mail, compared to a FIT handed over by the GP [36], however, GPs have the opportunity to communicate directly about the CRC screening programme with their non-participating patients. The misperception that not having symptoms is a valid reason for not participating could be tackled by the GP. The current reminder letter (eight weeks after the invitation) is very similar to the invitation letter and will be slightly adapted in more ‘enhanced’ reminder letters (including a simple restatement of the screening offer and a banner with ‘A reminder to you’) which would increase uptake, including in very low income groups [35]. Some interviewees tended to question why CRC screening was not more widely promoted, and these findings were also reported elsewhere [28, 37]. Mass media and advertising campaigns could normalize open discussions about CRC screening [11] and although some research supports the role of mass media in improving screening participation, the evidence is inconsistent [17, 33-34]. The CCD launches an annual mass media campaign about CRC screening in March, but its effect is unclear. Feeling healthy and a lack of symptoms are important barriers to participating in the CRC screening programme. Although the purpose of screening (early detection of lesions in asymptomatic individuals) is clearly mentioned in the leaflet, more tailored information is needed. Public education programmes - with peer testimony - increase CRC screening awareness, clarify misperceptions about the need for screening when asymptomatic, and make CRC a more socially acceptable topic to talk about [17, 38].

In this first qualitative study among non-participants in the CRC screening programme in Flanders, we did not aim for representativeness but for gaining more insights into the variety of barriers to participating. Although finding participants for the FGDs was challenging, resulting in a rather limited total number of 16 non-migrant Flemish and 23 Turkish migrant interviewees, we achieved data saturation in both groups. We do not expect that the results would change substantially by organizing more FGDs. All FGD interviewees talked actively and seemed to be open about their barriers and facilitators to participate in the CRC screening programme, however, selection bias could have occurred. Those who participated in the FGDs may be more interested in the theme. Nevertheless, people who were contacted for participation in the FGD but who did not attend the FGD were also asked about their motives for not participating in the CRC, and these answers (not given in the publication) were in line with the results of the FGDs. We did not gather information about other ethnic minorities, and findings from the Turkish migrants in Flanders may not be applicable to others. We realize that ethnic minorities are not a homogenous group, and more research among other ethnic minorities is still needed. Nevertheless, the similarities between our migrant group and non-migrant group were notable.

Conclusion

When exploring perceived barriers to participation in CRC screening postponing behaviour, fear of cancer, shame and feeling healthy emerged as key themes. Common facilitators to increase uptake of

CRC screening were providing information in a group setting, and having the GP make a strong recommendation. Multiple approaches are required to improve informed decision making and uptake in CRC screening in Flanders. When developing communication strategies the barriers and facilitators to CRC screening mentioned in the FGDs should be taken into consideration. More GP involvement, targeted information events for vulnerable groups in cooperation with local authorities and adapted reminder letters are currently being explored.

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