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Published in:
Health, Risk & Society

DOI:
[10.1080/13698575.2019.1602251](https://doi.org/10.1080/13698575.2019.1602251)

Publication date:
2019

Document version
Peer reviewed version

Citation for published version (APA):

Broholm-Jørgensen, M., Kampstrup-Larsen, N., Guassora, A. D., Reventlow, S., Dalton, S. O., & Tjørnhøj-Thomsen, T. (2019). 'It can't do any harm': A qualitative exploration of accounts of participation in preventive health checks. *Health, Risk & Society*, 21(1-2), 57-73. <https://doi.org/10.1080/13698575.2019.1602251>

‘It can’t do any harm’: A qualitative exploration of accounts of participation in preventive health checks

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Assessing and managing risk are central to participation in preventive health checks, as the purpose is to identify adverse health behaviours and risk factors. Drawing on the cultural theory of risk, we explore why people without formal education participate in preventive health checks and discuss how this is related to their understandings of risk and health. With this aim, we conducted semi-structured qualitative interviews with people without formal education who participated in the intervention study *Check-in*. *Check-in* evaluated the effect of an invitation of people aged 45-64 without formal education beyond lower secondary school (grades 7-9) to a prescheduled preventive health check in general practice. In this way, *Check-in* provided the empirical context of this study. Within our analysis we identified four participation styles representing different ways of participating in preventive health checks: 1) *selective participation*, 2) *participation to control uncertainty*, 3) *feeling an obligation to participate* and 4) *participation to change the healthcare system*. Across the participation styles, we found that participants attended the preventive health check for reasons other than getting help to change their health behaviour and that the accounts of participation were socially embedded. Participants ascribed and assessed risk and health in relation to their immediate network and everyday lives and thereby presented risk perceptions differently from the general preventive messages. From these findings we suggest that preventive health checks should be based on participants' context-dependent needs.

Keywords:

Risk, Prevention, Trust, User experience, Chronic illness, Uncertainty

Introduction

In this article we explore how people without formal education who participate in preventive health checks experience, perceive and make sense of these checks and in what way health checks are relevant to the participants' everyday lives. Studies exploring the characteristics of individuals participating in preventive health checks report an underrepresentation of socioeconomically disadvantaged groups. Participants in public health interventions tend to have higher educational levels, higher percentages of preventive services usage in the past, and better health status in general (Bender, Jorgensen, Helbech, Linneberg, & Pisinger, 2014; Bjerregaard, Maindal, Bruun, & Sandbaek, 2017; Dryden, Williams, McCowan, & Themessl-Huber, 2012; Krogsboll, Jorgensen, Gronhoj Larsen, & Gotzsche, 2012). Within public health research, low socioeconomic positions are often associated with adverse health behaviours, and some studies have found that people in this position may place less value on their health when compared to the general population (Christensen, Ekholm, Davidsen, & Juel, 2012; Dryden et al., 2012). Similarly, some studies point to lack of health knowledge as well as 'flawed' risk perceptions as constraints for participation in preventive health checks (Burgess et al., 2015; Dingoyan, Schulz, & Mosko, 2012; Dryden et al., 2012; Groenenberg et al., 2015), though more critical approaches to risk and uncertainty would understand these phenomena in terms of different risk logics and priorities (Desmond, Prost, & Wight, 2012; Montelius & Nygren, 2014).

Barriers to participation in preventive health checks are demonstrated in the studies referenced above. The origin of risk perceptions in relation to bodily and social experiences and the transformation of risk perceptions into behaviour have been explored (Crawshaw & Bunton, 2009; Zinn, 2008). However, these areas are relatively under-researched in relation to preventive initiatives (Andersen & Risor, 2014). While notions of causality have not been found to reflect complexities of health behaviour appropriately (Andersen & Risor, 2014), we seek to contextualise

‘participation’ in preventive health checks (Thirlaway & Heggs, 2005). Hence, with this article we explore why less socioeconomically advantaged individuals participate in preventive health checks and discuss how this is related to their understandings of risk and health.

Risk in preventive health checks

Access to examine participation in preventive health checks was gained through our involvement in researching the intervention *Check-in*, which was conducted at the University of Southern Denmark’s National Institute of Public Health from 2013 to 2016. *Check-in* evaluated the effect of an invitation of people aged 45-64 without formal education beyond lower secondary school (grades 7-9) to a prescheduled preventive health check in general practice. By addressing the social gradient in participation in preventive health checks, *Check-in* aimed to improve the underrepresentation of less socioeconomically advantaged groups in preventive initiatives with the purpose of preventing development of chronic disease (Kamstrup-Larsen et al., Forthcoming). In the intervention, people with no formal education beyond lower secondary school, which corresponds to the mandatory nine years of schooling in Denmark, were categorised as having low socioeconomic positions (SEP). By this definition, the target group of *Check-in* equated with low socioeconomic status as commonly understood in Denmark.

Check-in was designed as a multi-component intervention which consisted of 1) an invitation to a preventive health check by participating general practitioners (GPs), 2) a health check at the GPs’ surgeries and 3) a health consultation at the GPs’ surgeries. Based on the Health Belief Model (Champion VL SC, 2008), *Check-in* assumed that health checks would reduce the risk of developing chronic diseases and identify treatable diseases at an early stage (Kamstrup-Larsen et al., Forthcoming). Furthermore, information about and awareness of adverse health behaviour and

risk factors provided by GPs at the health checks were assumed to facilitate motivation to change health behaviour and thereby prevent development of disease (Krogsboll et al., 2012; Skaaby, Jørgensen, & Linneberg, 2017). Within family medicine, it is generally accepted that GPs play an important role in recruiting and motivating people to change their health behaviour (Balint, 1988). As a result, the *Check-in* intervention placed GPs as key figures in recruiting and motivating people in the target group of this study to change adverse health behaviour. Exploring the *Check-in* participants' accounts of their attendance in preventive health checks, we found that these assumptions were challenged.

In this article, the term 'participants' refers to the individuals who participated in *Check-in* and this will be used in the following sections.

Theoretical framework

Since the purpose of preventive health checks is to identify adverse health behaviour and risk factors (Krogsboll et al., 2012), the notion of risk is central to this study. In this article, we differentiate between the participants being categorised as at risk in the intervention and their experience of risk in everyday life. The participants' understandings of risk and the notion of risk presented in *Check-in* differ, and this affects participation in preventive health checks. In this study, we explore the participants' accounts of risk in relation to their participation in preventive health checks.

In defining risk we draw on anthropologist Susan Whyte's (2005) notion of managing uncertainties in order to explore the influence of social experiences on the accounts of risk of chronic disease among *Check-in* participants. Exploring uncertainties related to well-being in Uganda, Whyte demonstrates that people actively attempt to manage uncertainties in their lives by linking social

and moral concerns to uncertainty (2005). According to Whyte (2005), the notion of risk includes uncertainties in people's everyday lives, and the means of managing uncertainty are socially embedded (Whyte, 2005). When we explore how the participants conceptualise and manage risk, we include their experiences and pay particular attention to their everyday lives. Moreover, we apply philosopher and ethnographer Annemarie Mol's approach to social context as we consider the ways in which the participants' immediate network influence their participation in preventive health checks (2010). In Mol's view, people are first and foremost related; they are members of families, have colleagues and live in areas where certain traditions and values precede and influence actions (Mol, 2010). Using the concept of *the logic of care*, Mol proposes that decisions in the clinical encounter should be based on people's context-dependent needs for care. Emphasising that people are not autonomous individuals, Mol argues that people's values, needs and perspectives are influenced by their social relationships (2010). Following Mol, we argue that participants' accounts of risk are highly contextual, and different views on risk and health contribute to and emphasise different reactions and/or actions, such as participation in preventive health checks.

By drawing on the work of Whyte (2005) and Mol (2010), we explore how social experiences and everyday lives of people without formal education influence their understandings and management of risk to understand their accounts of participating in *Check-in*.

Method and materials

When looking at the accounts people without formal education gave of participating in preventive health checks, we took an explorative approach that involved examining the participants' understandings and experiences of risk and health (Mason, 2018). Qualitative research methods are best suited for exploring informants' perspectives, experiences and reasoning, allowing the informants' accounts to direct the course of the investigation within the area of interest (Malterud,

2001; Mason, 2018). Therefore, we decided to conduct semi-structured qualitative interviews with participants attending preventive health checks in relation to *Check-in*, in order to gain information on the participants' conceptualisations of risk, as well as insights into their personal stories and experiences of health and risk.

The first author, MBJ, who also took part in implementing *Check-in*, contacted participants invited to the health check by phone. Initially, we planned to interview 10-12 patients before they participated in the health check and 10-12 patients after the health check. However, as explained below, the number of interviews conducted before the prescheduled health checks was reduced due to the design of *Check-in*. All patients allocated to the intervention group in *Check-in* received a letter with an invitation to a prescheduled preventive health check at their GP via post. The letter was posted two weeks before the prescheduled date of the health check, which meant that in order to conduct interviews there were 14 days to obtain the correct phone numbers, contact the participants and settle on an appointment. This proved to be a very short time span and therefore only five interviews were completed before the health checks were completed. The recruitment of participants to interviews after the health check was unproblematic and 12 interviews were conducted after the health check.

Twenty interviews were initially arranged. Three of these were cancelled due to illness, which left a total of 17 participants. The characteristics of the interviewed participants were consistent with the assumptions about the target group in *Check-in* in relation to adverse health behaviour, as eight were smokers and 11 reported being overweight (see table 1).

The interview guide was inspired by existing knowledge about risk perspectives and management and structured around themes regarding participation in *Check-in*, health, risk and relationship to the GP. The interview guide was developed and adjusted continuously as emerging themes

appeared. This flexibility of the interview guide allowed for the participants' own conceptualisation and contextualisation of health, risk and participation.

Each interview lasted approximately one hour and took place either at MBJ's research institution, the participants' workplace or in their home, depending on the participants' preferences. Through the process of collecting empirical material reflective notes were written down in a log book (Borkan, 1999). The log book was consulted to support recollections of, for example, the conditions surrounding the interviews, analytical ideas and emerging themes.

Interviews were conducted, digitally recorded and transcribed verbatim by the first author, who also translated the excerpts presented in this article. All participants were given pseudonyms to protect their identity. The analysis was based on 188 pages of transcribed interviews and log book notes.

All participants provided written informed consent in relation to *Check-in* before taking part in the interview. The study was approved by the Danish National Data Protection Board (permission 2015-57-0008, acadre no. 16/100534).

Analysis

The analysis was inspired by the characteristics of abductive analysis presented by Tavory and Timmermans (2014), and involved an iterative process of moving back and forth between theoretical concepts and empirical material (Tavory & Timmermans, 2014). The initial cross-sectional coding of the empirical material was based on existing knowledge about risk perspectives and management, which had also inspired the interview guide and was carried out using Nvivo. Additional sub-themes emerged as patterns were identified and explored across the empirical material (Mason, 2018). Coding within the theme of *participation*, an '*empirical surprise*' (Tavory

& Timmermans, 2014, p. 123) emerged as several of the participants stated that participating in preventive health checks could not do any harm and thus, was of no relevance to them. This guided our analytical attention to how participants reasoned about their participation. In the further analytical process, we revisited the empirical material and identified similarities and differences that represented ways of participating in preventive health checks, which we discussed and refined in relation to the theories on risk perception and management discussed above (Halkier, 2011; Tavory & Timmermans, 2014). This process resulted in a typology of four participation styles: 1) *selective participation*, 2) *participation to control uncertainty*, 3) *feeling an obligation to participate* and 4) *participation to change the healthcare system*.

To account for complexity and flexibility in participation, we stress that the descriptions of the various participation styles are tentative. This means that while several participants might display one participation style, one participant could also represent several participation styles at the same time (Halkier, 2011). Different quotes from the same participant were presented in different participation styles to illustrate the multiple ways of participating in a preventive health check.

Strengths and limitations

Recruitment of participants to the qualitative interviews proved more difficult than expected. We believe that these difficulties add important information about recruitment of people within our target group. Our findings in this study reveal that participants distinguish between being contacted by their GP and by a research institution; thus, the fact that the first author, who represented an unfamiliar research institution, contacted the participants could explain some of the recruitment difficulties. One repercussion could be that the participants in the interviews were those who were most knowledgeable and attentive to prevention (Dahl et al., 2017). However, there was great

diversity in relation to gender, age, occupational status, general health and relationship with the GP among the interviewees. This suggests maximum variation among those who participated in the preventive health check. We therefore believe that this did not influence the findings related to the four participation styles.

Findings

We found that patterns of participation in the empirical material were segmented into four typologies that highlighted different participation styles: 1) *selective participation*, 2) *participation to control uncertainty*, 3) *feeling an obligation to participate* and 4) *participation to change the healthcare system*. In the following section, we describe the four participation styles in more detail.

Selective participation

The main characteristic for *selective participation* was that participants chose to participate either due to a specific health topic or participated in spite of one. An example of this was participation despite the prospect of discussing smoking cessation.

Frank: Well, I'll handle [smoking] myself. I have to die of something; that's how it is. You can't avoid death. You can postpone it a bit, but really, it might as well be the proverbial roof tile.

By using the Danish saying, which equates to being hit by lightning, Frank shared his understanding that there are no guarantees in life but death and thus presented the risk of smoking in terms of mortality. Smoking had not affected Frank's daily life, and he did not connect smoking with illness. Like Frank, other participants who smoked stated that they did not give the risks of smoking much

thought in everyday life. With the exception of his educational level and smoking habits, Frank did not match the statistical expectations of *Check-in's* target group. Among other things, Frank enjoyed roller-skating and mountain biking, meditated and practised a Buddhist lifestyle and did not eat fatty foods. Frank described knowing about the negative consequences of smoking and still stated that he enjoyed smoking and did not intend to stop.

Sophie who, like Frank, attended the health check knowing that she would be advised to stop smoking, revealed that her attitude towards the risk of smoking would change only if her everyday life was affected by smoking.

Sophie: If smoking makes me ill, then of course I'll stop that very day, but as long as everything is the way it is, then...

Although smoking was associated with illness and mortality, the participants who smoked were not willing to give up the enjoyment of smoking in order to reduce the risk of chronic disease prospectively. Instead several mentioned that they would stop smoking if they got ill.

Frank's participation also represented another dimension of *selective participation*, as he attended the health check for a single reason: his blood pressure. The concern about blood pressure originated from Frank experiencing a very high resting heart rate which led to sick leave from his job. Other participants also explained that changes and critical events in their everyday lives made them aware of the importance of managing risk.

Thus, these 'selective' participants appeared well-informed about health and the risks involved in adverse health behaviour; nonetheless, they based their assessment of the relevance of the risk on their life-situated reasoning.

Participation to manage uncertainty

Overall, accounts of risk presented in the *participation to manage uncertainty* style coincided with the idea of prevention in *Check-in*. Participation was generally driven by an ongoing search for information about the risk of chronic diseases as a way to assess certainty of potential risks. Several participants associated preventive health checks with the detection of hidden risks. An example of this is Morgan, who said the following:

Morgan: The blood samples tell you everything, more or less. A great deal could, after all, be detected before it gets worse.

Aiming to manage uncertainty about risks by participating in preventive health checks often implied an expectation of discovering something unknown, hidden or invisible.

Sophie: [...] I have become more attentive to all those hidden things that may be in the body without one knowing about it.

Sophie is just one example of a participant who was motivated by different participation styles at the same time. Sophie's view on early detection of chronic disease was shaped, among other things, by her brother suffering a brain aneurysm. After her brother's death, Sophie's understanding of prevention changed and spurred her to have her own blood pressure checked. This is one example of a critical event in a participant's immediate network that brought their attention to the hidden risks of certain behaviours. Attending preventive health checks was thus a means for participants to gain certainty about potential risks. Gaining knowledge about risks was perceived as confirmation that participants were not at risk of disease.

Ella: It was very nice to attend the health check and be told that everything was A-OK (laughs).

Several participants expressed a sense of security after the health check, though none of the participants who represented this participation style presented symptoms or signs of illness. In this way, we found that participants attended *Check-in* to manage uncertainties about chronic disease and to get justification to continue leading the same lifestyle as before.

Contrary to the assumptions about the target group in *Check-in*, participants who attended the health check to manage uncertainty saw their GP or other medical specialist regularly and were well-informed about their health and potential risks. Peter, for instance, who had been diagnosed with diabetes mellitus (T2D), went to diabetes check-ups every third month, which is standard for diabetes treatment in Denmark. Besides participating in *Check-in*, Peter participated in two additional research projects. After being diagnosed with T2D three years earlier, Peter changed his lifestyle: he started exercising and changed his diet. Although identified as a person who was in an at-risk category, Peter did not need help to change his health behaviour.

Attending the health check was expressed as a way to validate a current lifestyle and manage uncertainties about the risks of chronic illness.

Feeling an obligation to participate

This participation style was characterised by a feeling of obligation to reciprocate the support given by a GP. Most of the participants in this category reported having a lasting, trusting relationship with their GP, which gave rise to the feeling that reciprocating the GP's support was necessary.

These participants stated that seeing their own GP in a familiar place increased their willingness to participate in the health check. They distinguished between being invited by their GP and receiving an invitation from a research institution

Interviewer: Why? What is the difference [between receiving an invitation from the GP and from a research institution]?

Kent: Well, I don't know, it is like, I think... that it maybe...maybe it doesn't concern [the researchers] somehow. I think that's how most people see it. When it's your own [GP], then you feel, OK, this is relevant for the GP to know about me. Maybe he can use the information.

Former clinical encounters with the GP also seemed to influence participants' attendance. Ella had experienced help and support from her GP in connection with a depressive episode. She appreciated her GP's flexibility and how the GP always found time for her, which led her to express a desire to reciprocate the support by attending the health check.

Ella: I say [the GP] helps me, so why shouldn't I attend such a [health check].

Ella stated that she wanted to participate in the health check as a way of repaying the help she received and show gratitude. A relationship of trust and reciprocity between physician and participant thus seemed to motivate some participants to take part in the health check, which suggests that GPs could play an important role in recruitment to preventive health checks. The importance of GPs in recruitment was expected in *Check-in*, though reciprocating support by participating in the health check did not mean that the participants were prepared to change their behaviour. Ella, for instance, did not intend to adhere to any advice given on behaviour change. On the contrary, she emphasised that she did not want the GP or anyone else to interfere with her lifestyle.

The GP's roles in recruiting participants to *Check-in* seemed to influence some participants' attendance. However, participation in the health check did not necessarily result in changes of behaviour.

Participation to change the healthcare system

An obligation to contribute to improving the healthcare system characterised the *participation to change the healthcare system* style. This obligation led to a feeling of responsibility towards the healthcare system.

Kim: The way I feel about the healthcare system is that if it addresses itself to me I actually feel an obligation to respond. [...] I think we owe it to humanity to change. And to develop.

Contrary to *Feeling an obligation to participate* due to trust in the GP, willingness to participate in *Check-in* seemed to increase when the health check was part of a research study. Participation, therefore, was driven by a commitment to help other people (including doctors and researchers) and improve the healthcare system.

Hans: I like to help, so other people can be helped. That's my attitude: if I can help other people, help doctors and researchers, then I do it.

In contrast to those participants who felt an obligation towards their GP, several of the participants who participated in *Check-in* to help change the healthcare system expressed mistrust in their relationship with their GP. They attended the preventive health check despite the lack of trust in the clinical encounter. As an example, Kim described receiving moral lectures about his unemployment status when attending his GP.

Kim: Well, I can't bear a GP like Doctor X who sits and gives me moral lectures about how it's not okay for me to be on benefits and how I should be working, that's for sure. That's definitely a misinterpretation by the GP to act that way. No doubt about that. The patient doesn't get anything out of that, on the contrary, it'll only result in some kind of resentment. That's almost inevitable.

According to Kim, GPs should not ask about the patient's private affairs, such as their social relationship or employment status, but only focus on the patient's needs. However, Kim responded positively to the idea of inviting less socioeconomically advantaged individuals to attend preventive health checks. Even though he was a former substance abuser, formerly homeless and an ex-convict, Kim did not identify himself as member of this vulnerable group and he did not believe that behavioural change was relevant for him personally. Instead, he hoped that the intervention would change the way the healthcare sector in Denmark contacted socially marginalised individuals. This suggests that even though Kim experienced resentment in his relationship with the GP, he felt an obligation to help the healthcare system and society in general.

Kim: There are many alcoholics and drug addicts where I live. I can tell that many of them are critically ill, and they should probably go to the GP more often than they do. So in that sense it would be great if the healthcare system contacted them more often [...] You could make an enquiry and ask the GPs: 'How many of your alcoholic patients contact you?' [...] Maybe this procedure should be turned around, so you contact them since they don't visit their GP very often.

In this participation style, participating in the preventive health check was guided by a hope of changing the healthcare system and a feeling of obligation to others.

Discussion

Similarities such as social influences on assessment and management of risk were apparent across the participation styles. In the following section, we organise the discussion around the similarities that accompany the differences of the various participation styles that is *social influences*, *risk perceptions* and *implications for practice*.

Social influences

In this study, we repeatedly found that accounts of participation in preventive health checks were affected by the participants' social relationships as well as events that occurred in the participants' everyday lives. Uncertainty has been found to be negotiated and assessed in relation to social contexts (Thirlaway & Heggs, 2005; Whyte, 2005). As we show, the participants' immediate social relations influenced whether and how they experienced uncertainties about health and risk, for example when illness in the close family was the main reason for health behaviour changes.

Related to this finding, Kaltsa, Holloway, and Cox (2013) found that family and close friends influenced women's mammography screening behaviour. Furthermore, in a study of pharmaceutical use in Maputo, Mozambique, Rodrigues (2016) showed that communities' and social networks' experiences with healthcare were an important factor when individuals evaluated and chose between different therapeutic resources. In line with this, we argue that decisions about participation were not made in social isolation but involved people's immediate networks and everyday lives. Thus, the everyday lives of people without formal education play a role in their management of uncertainties and decisions about whether or not to participate in preventive health checks. Participation in preventive health checks is therefore sensitive to participants' social experiences, networks and life situation.

The existing literature indicates that relationships of trust between physician and patient are associated with positive health outcomes (Balint, 1988; Frenkel, Gross, Popper Giveon, Sapire, & Hermoni, 2015; Guassora & Gannik, 2010; Høybye & Tjørnhøj-Thomsen, 2014; Lucassen & Olesen, 2016; Luijks et al., 2012). We found that GPs played an important role in recruiting people without formal education to preventive health checks. In our study of GPs' perspectives on

retaining patients for preventive health checks, Broholm-Jørgensen, Guassora, Reventlow, Dalton, and Tjørnhøj-Thomsen (2017) showed that GPs applied different dimensions of respect to establish or maintain trust in the physician-patient relationship. In the above-mentioned study, we demonstrated that respect could create trust in the doctor-patient relationship, which could lead patients to reciprocate by returning to the clinic and changing their health behaviours (Broholm-Jørgensen et al., 2017). Our findings in the present study support this dimension of reciprocity in the clinical encounter, based on the participants' feeling of obligation to repay the help given and show gratitude to GPs. We found that when it came to prevention and lifestyle advice, trust in the clinical encounter was not necessarily a motivational factor for behavioural change, and the dimension of reciprocity did not involve adherence to lifestyle advice. This means that the participants' assessment of risk was balanced according to their social experiences and everyday lives regardless of a relationship of trust between GP and patient.

Risk perceptions

The participants in our study did not match the assumptions of the target group identified by *Check-In* with regard to their understanding of and attitude towards health. On the contrary, participants appeared knowledgeable and reflective when it came to assessing potential risks, and applied knowledge of prevention to validate their participation. In line with Whyte (2005), we found that the participants' accounts of risk and health were embedded in their general life situations and pointed to critical events in their lives or immediate social networks as the main sources of changes in their views of risk. Several other studies indicate that social contexts, such as the illness histories of family members, influence assessment of risk (Damman, Bogaerts, van den Haak, & Timmermans, 2017; Kirkegaard, Edwards, Risor, & Thomsen, 2013; Willadsen et al., 2018). In line

with Mol's (2010) *logic of care*, which proposes collaborative decisions on treatment between doctors and patients, these studies suggest that it is necessary to include patients' social context and everyday lives in treatment. As an example, Kirkegaard et al. (2013) suggest that GPs address patients' socially embedded interpretations of high cholesterol and risk of cardiovascular disease as a treatment option in a study of risk interpretations among patients with high cholesterol in Denmark. We interpret our findings in this study to support this concept, as motivation to change health behaviour was not found to be based on expert advice but rather on experiences arising from the participants' everyday lives.

Few participants in this study attended the health check due to signs or symptoms of chronic disease; instead, several participants believed that the health check could detect hidden illness in their bodies, and awareness of potential hidden risks partly influenced participants to attend preventive health checks. Following Whyte (2005), we argue that participation in a preventive health check can be seen as an attempt to manage uncertainties about risks of chronic diseases, as participants in the study reported that they attended the health check to validate their health status and current lifestyle. Other studies have shown that screenings confirmed participants' feelings about being healthy and therefore could produce a sense of false security (Nielsen, Dyhr, Lauritzen, & Malterud, 2009; Sachs, 1995). Similarly, a British study exploring individuals' decisions to participate in health checks found that the reasons for participating included potential reassurance that the participants were not at risk of chronic disease (Burgess et al., 2015). Additionally, a recent study by Offersen, Risør, Vedsted, and Andersen (2016) demonstrated that awareness of potential illness was part of peoples' everyday lives and that a health check could bring life to a potential illness as a risk. While we find that some participants attended the health check to confirm their health and thereby their current lifestyle, the health check did not bring life to a potential risk but

instead produced a sense of security and control. Thus, awareness of potential hidden risks influenced the participants to attend the preventive health checks.

In *Check-in*, categorising people without formal education as at-risk was based on research showing that adverse health behaviours such as smoking, excessive alcohol consumption and physical inactivity were more frequent among less socioeconomically advantaged individuals. Overall, the characteristics of the participants matched the general assumptions about the target group's health behaviour in relation to smoking status and being overweight (see table 1). However, contrary to the assumptions of *Check-in*, we find that the participants actively assessed risks and health in relation to the general prevention messages. We also show that the participants' assessments of risk and health were influenced by multiple sources, including social experiences in everyday life and general preventive advice.

Implications for practice

In this study we aimed to contribute to understandings of how preventive health checks were meaningful to participants, and in this way contributed to knowledge of recruitment of less socioeconomically advantaged individuals to preventive initiatives. While several participants showed no interest in receiving help to change their health behaviour, they found participation in the health check relevant for different reasons. Whether the reasons were managing uncertainty, maintaining a trusting social relationship or changing the healthcare system in order to help other people, attendance was meaningful to them. This study adds to the existing research and shows that people without formal education are motivated to attend health checks when invited by their GP. It should be noted that these individuals seemed to ascribe other meanings to participation than those presented in general preventive health messages. Examining how dominant health promotion

discourses were appropriated by patients from higher middle class and lower working class, Merrild, Andersen, Risør, and Vedsted (2017) show that while patients from both social classes accepted and actively engaged in health promotion and illness prevention messages in different ways, the approach of patients from the lower working class to health promotion differed due to struggles with social concerns and the presence of multiple chronic conditions. This suggests that understandings and practices of risk are influenced by the context and circumstances that frame the possibilities of action, such as age, the context of the message itself and socioeconomic position (Merrild et al., 2017; Thirlaway & Heggs, 2005). It also supports how we interpret the participants' accounts of risk as influenced by several sources besides the general preventive health message.

An ongoing debate exists about the risks (i.e. the risk of performing unnecessary or even harmful examinations, over-diagnosis and over-treatment) of preventive health checks and screening programmes (Brodersen et al., 2018; Solbjør, Forsmo, Skolbekken, Siersma, & Brodersen, 2018). Some studies have demonstrated that screenings could produce a sense of false security (Nielsen et al., 2009; Sachs, 1995). Furthermore, two studies examining women's experiences of being recalled after a routine preventive mammography (Solbjør, Forsmo, Skolbekken, & Saetnan, 2011) and women diagnosed with interval breast cancer (Solbjør, Skolbekken, Saetnan, Hagen, & Forsmo, 2012) found that, while these groups of women had different and versatile experiences, overall, both studies indicate that preventive health checks and screening programmes could create uncertainties in peoples' lives by among other things generating distress, anxiety and doubts about mammography screenings. The question that remains is whether the *Check-in* health check reinforced existing uncertainties about illness or created new ones. Even though the participants in this study did not indicate concerns or distress about errors or over-diagnosis, the above question is beyond the scope of this study. Further qualitative investigations are needed to understand how participants in preventive health checks experience and manage uncertainties about risk.

With the purpose of discovering risk before illness occurs, preventive health checks counter the logic of care presented by Mol (2010), as the participants' assessments of risk are based on their everyday lives and their motivation for changing their health behaviour depends on whether symptoms or signs of illness affect their quality of life. Providing information about risks that were neither perceived nor affected participants' lives directly seems counterproductive, as the general feeling of wellbeing was given more value. Along these lines, an overview of articles on living with risk and uncertainty concluded that, in general, individuals showed resistance to expert risk definitions (Alaszewski & Coxon, 2008). That general wellbeing was felt to be more important than expert advice was additionally demonstrated in a Danish study on female non-attenders in cardiovascular screening (Dahl et al., 2017). Nielsen, Dyhr, Lauritzen, and Malterud, moreover, pointed to people's '*pain limit*' in regard to alterations of their everyday lives (2005, p. 235) as they argued that participants' life circumstances, such as problems in the close family or at work, were competing factors when it came to potential lifestyle changes. While the vast majority of participants articulated a general prevention message about individual responsibility to manage and monitor one's own health (Lupton, 2013), almost none of the participants indicated an intention to change their adverse behaviour. We argue that this constitutes a 'preventive paradox' (Davison, Smith, & Frankel, 1991, p. 15) which adds information about why motivation to change behaviour is so difficult to achieve in general practice.

According to Mol (2010), good clinical care depends on differentiation and specification.

Therefore, the needs of different individuals must be considered. Some studies have proposed including patients in setting the agenda for the clinical encounter. This could involve collaborative decisions about treatment by including patients' context-dependent needs (Baker, O'Connell, & Platt, 2005; Kaltsa et al., 2013; Risor et al., 2013). However, a new study points to the difficulties of involving patients in decision making in general practice by demonstrating that multimorbid

patients' social situation partly determined whether the patients were involved in deciding on the treatment of their multiple health problems in clinical encounters (Guassora, Davidsen, Broholm-Jørgensen, Møller, & Reventlow, Forthcoming). Similarly, we find in a recent study that the length of the consultation as well as the social relationship between GPs and patients affected whether patients' needs were included in the GP's prioritisation of health problems (Broholm-Jørgensen et al., 2019). In this present study, we show that the participants' risk perceptions were balanced between the knowledge of health that was available to them and their social experiences and life situations. We demonstrate that this balance affected participants' actions in relation to their health behaviour. Based on our findings, we suggest that future public health interventions account for people's life situation and social experiences to achieve meaningfulness for the target group. While the paradox illustrated in this study indicates that the objective of the preventive health checks was not met, we suggest that preventive initiatives should be based on the individuals' context-dependent needs and not provided systematically.

Conclusion

In this article, we conceptualised four participation styles based on empirical material that illustrate the different accounts of participation provided by people without formal education who participated in preventive health checks. Across the participation styles, we found that participants attended the preventive health check for reasons other than getting help to change their health behaviour and that their accounts of their participation were socially embedded. The participants acted with reference to their current life situation and from an obligation towards other people. On this basis, we argue that decisions about participation in a preventive health check do not exist in a social vacuum but involve people's social relationships and experiences.

This study points to the importance of including the target group's experiences and reasoning in the development of public health interventions. Importantly, it also calls for caution regarding the ways in which target groups within public health interventions are defined and the assumptions made about their needs and abilities. Participants in this study presented knowledge about general preventive messages, and there were no indications of flawed risk perceptions.

However, their participation styles did reveal different assessments of potential risks, as social experiences and life situations were found to play an important role in the assessment of risk of chronic disease. Thus, we suggest that perception and assessment of risk include uncertainties in people's everyday lives. Although their assessment of risk might not coincide with the general prevention message, it is valid for the individual's quality of life.

This study shows that preventive initiatives are sensitive to the context of the participants, as socially embedded perceptions of risk and health influence the way preventive initiatives are perceived and acted upon. From these findings we suggest that preventive initiatives should be based on the individuals' context-dependent needs and not provided as systematic screenings.

Declaration of interest statement

The authors declare no conflicts of interest.

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