

ORIGINAL ARTICLE

How can young women be encouraged to attend cervical cancer screening? Suggestions from face-to-face and internet focus group discussions with 30-year-old women in Stockholm, Sweden

KARIN BLOMBERG^{1,2,3}, CAROL TISHELMAN^{3,4}, BRITT-MARIE TERNESTEDT^{4,5}, SVEN TÖRNBERG⁶, AMY LEVÁL⁷ & CATARINA WIDMARK^{1,3}

¹Department NVS, Division of Nursing, Karolinska Institutet, Stockholm, Sweden, ²School of Health and Medical Sciences, Örebro University, Örebro, Sweden, ³Department LIME, Medical Management Centre, Karolinska Institutet, Stockholm, Sweden, ⁴Research and Development Unit, Stockholms Sjukhem Foundation, Stockholm, Sweden, ⁵Department of Palliative Care Research, Ersta Sköndal University College, Stockholm, Sweden, ⁶Cancer Screening Unit, Oncologic Centre, Karolinska University Hospital, Stockholm, Sweden and ⁷Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden

Abstract

Background. Cervical cancer screening (CCS) using Pap-smears has been carried out for decades and is still an essential tool for secondary cancer prevention. Focus has traditionally been on what *hinders* women's attendance, instead of researching this issue from a positive standpoint, i.e. what factors encourage women to take a Pap-smear? In this article, we therefore explore issues that 30-year-old women have addressed as encouraging CCS attendance, with particular focus on aspects susceptible to intervention. **Material and methods.** Through the population-based cervical cancer screening (PCCSP) registry in Stockholm, Sweden, a stratified random sampling technique was used to recruit women from the same birth cohort with varied CCS histories and results. Nine face-to-face focus groups discussions (FGDs) and 30 internet-based FGDs were conducted with a total of 138 women aged 30. Qualitative analysis was inspired by interpretative description, to generate clinically relevant and useful data. **Results.** In general, these women expressed positive views about the PCCSP as an existing service, regardless of screening history. They described a wide range of factors encompassing the entire screening trajectory from invitation through follow-up which could motivate young women to CCS participation, including social marketing. Many of the suggestions related to individualization of the PCCSP, as well as a need to understand the relationship between human papilloma virus (HPV) and cervical cancer. **Discussion.** These results are discussed in terms of the inherent tension between population-based public health initiatives and individually-oriented health care provision. Many suggestions given are already incorporated into the existing Stockholm-Gotland screening program, although this information may not reach women who need it. New research should test whether systematic information on HPV may provide a missing link in motivating young women to attend CCS, and which of their suggestions can serve to increase CCS participation.

Cervical cancer screening (CCS) using the Pap-smear has been carried out for decades and is still an essential tool for secondary cancer prevention, despite the advent of Human Papilloma Virus (HPV) vaccines for primary prevention [1]. As a consequence of the marketing of the HPV vaccination, much recent literature focuses on women's knowledge and attitudes to HPV and vaccines, with CCS receiving less attention, despite the decrease in attendance among younger women [2]. The perspectives of women already potentially exposed to HPV (i.e. those with

sexual experience) who will not receive maximum benefit from the existing vaccines and for whom continued CCS attendance will be particularly necessary are still lacking. For these women, the most central factor in preventing cervical cancer remains screening attendance [3].

Numerous factors have been implicated in relation to non-attendance in CCS, including demographic factors like age [4], education [4], socioeconomic status [5], and in some cases, ethnic background [6]. Focus has traditionally been on what might be called

a 'pathogenic' approach, that is, factors that hinder attendance, instead of addressing this issue from a more positive, or 'salutogenic' [7] standpoint, i.e. what factors work to encourage women to take a Pap-smear. Byrne's critical review of healthcare avoidance [8] is indicative of this trend, as she considers a number of commonly used theoretical models to discuss individual intent to engage—or in this case—not engage in health care behaviors. Ackerson and Preston [9] shift focus by reviewing factors related to both positive and negative decisions about participation in cancer screening, examining decision-making on the individual level. Even in qualitative literature which purports to focus on a particular subjective perspective, much attention is given to the knowledge women lack [10,11], rather than how women *do* reason. In this article, we therefore present issues that women have addressed as encouraging attendance in a screening program, with particular focus on aspects that are susceptible to intervention from a population-based approach.

Background

Salutogenesis as a conceptual framework

The term 'salutogenesis' was coined by the American-Israeli medical sociologist, Aaron Antonovsky [7], in an effort to complement the 'pathogenic' or problem-orientation which permeates most of health care research with a more positive orientation. Antonovsky proposed that a 'Sense of Coherence' in an individual, societal and cultural context may be one key in answering questions related to prediction of positive, rather than negative outcomes. The key features of the Sense of Coherence include an emotional component, *meaningfulness*; a cognitive component, *comprehensibility*; and an instrumental component, *manageability*. Antonovsky defined meaningfulness as a motivational element, a sense that something is worth commitment and engagement. Comprehensibility relates to stimuli from internal and external environments making cognitive sense, while manageability is said to be the extent to which resources are available which are adequate to meet the demands of a situation. While Antonovsky's work is often used on an individual level, it should be recognized that he was a sociologist, intent on looking at structures and resources, rather than a psychologist focusing on individual attributes only. We suggest here that it is possible to use the key concepts of Antonovsky's salutogenic perspective to better understand ways of encouraging population-based screening attendance from an organizational, rather than individual perspective.

Study specific background

In Stockholm, Sweden, women between 23–60 years are invited to take a cost-free Pap-smear at regular intervals within a population-based cervical cancer screening program (PCCSP) coordinated by the regional Oncologic Centre. All women residing in the Stockholm region should receive a letter with an appointment time, place, and information (including a web-link to more detailed information) about the cost-free Pap-test, which is taken by midwives at local antenatal clinics. These midwives receive information from the Oncologic Centre as to how many women should be called in their catchment area. The staff at each local clinic then decides on the necessary allocation and internal organization of resources. In general, midwives allocate CCS a few hours at specific time-points each week; only a Pap-smear is taken in this vertical screening program, without time for other examinations or consultations. The participants in the screening program are generally called at intervals during the time allotted for the PCCSP. The women do not have to confirm whether they are coming, and more women than are possible to examine in the time period allotted are called to compensate for the high attrition rate. Pap-smears taken outside the PCCSP are described as either medically motivated 'indicated' testing or as 'opportunistic' screening. The latter often involves a Pap-smear taken in combination with a routine gynecological check-up by a private gynecologist, at extra cost for the woman. Women with an abnormal Pap-smear are referred directly to one of the gynecological outpatient clinics for medical follow-up.

In Sweden, other organized efforts to care for women's sexual and reproductive health take place at antenatal clinics with no out-of-pocket cost. These efforts include ante- and postnatal care and family planning. Another type of facility providing cost-free reproductive health care are youth clinics offering sexual counseling and education, contraceptives, and services to prevent and treat sexually transmitted infections for teenagers up to approximately age 20.

Methods

In this study, we explored how 30-year-old women reason about participation and non-participation in CCS and the PCCSP through a series of traditional face-to-face focus group discussions (FGDs) [12] and internet-based FGDs. We chose to conduct FGDs as this data collection method aims to facilitate individual's exploration and clarification of their views through group interaction in a manner not possible in one-to-one interviews [13]. Fern [14] argues that potentially sensitive issues may be better investigated

in a group, which is in line with our prior experiences of conducting FGDs with women [15,16].

When initially recruiting participants for face-to-face FGDs [12], we found that while many women expressed interest in participating, their actual attendance in FGDs was hindered by a variety of practical and logistical obstacles inherent in their life situations. We therefore adapted the research design in an effort to better accommodate the lives of women today by designing a study using internet-based FGDs. The studies were approved by the relevant research ethics committee (Dnr 2005/1052-31/3 and 2007/882-32).

Sample and data collection

A random stratified sampling strategy was used to recruit 30-year-old women via the CCS administrative registry, which contains population-based information including personal ID number, home address, invitations to screening and morphology results, with information on cervical cytology tests taken within the PCCSP and through most indicated and opportunistic CCS. Through this registry, it was possible to identify women with varied screening histories and varied results from the Pap-smear. In the face-to-face FGDs which took place in 2005, all participants were born in 1975, and should have received their first invitation to the PCCSP in 1998 at age 23, with invitations also in 2001 and 2004. For the internet-based FGDs in 2008, all participants were born in 1978 with first PCCSP invitation in 2001, and invitations in 2004 and 2007. To achieve heterogeneity between FGD groups while maintaining a degree of homogeneity within each FGD, we divided the population into different strata based on screening history (see Table I). Each FGD was homogeneous in that women were the same age with the same registered screening history. A total of 38 women participated in nine face-to-face FGDs, with between two and seven women in each; one individual interview was conducted with a woman who was the only attendee of a planned FGD. One hundred women participated in 30 internet FGDs, with two to six women in each.

The face-to-face FGDs followed standard procedures and have been described in detail elsewhere [12]. Each internet FGD was held for approximately two hours in a 'real time' chat room arranged via a web platform. Participants were able to use a computer at a place of their choice, using first name or pseudonym. All FGDs were led by two experienced moderators, who were loosely guided by a set of topics to be addressed, including: experiences of the PCCSP and/or Pap-smears taken in other settings, factors which can promote women to attend CCS/PCCSP,

and reasoning about cervical cancer, its causes, and prevention. Each participant was assigned a color code to make it easier to follow the discussion and to visualize group interaction (see also [16]).

Analysis

Analysis was inspired by interpretative description, to generate clinically relevant and useful data [17]. The first analysis was conducted by five members of the research team, who jointly abstracted relevant data on factors women described as promoting screening attendance, from written copies of 15 internet-based FGDs from different strata, and suggested a preliminary categorization scheme. Continued analysis of all 30 internet-based FGDs was led by the first author (KB). After completing this categorization, KB conducted a secondary analysis of the nine face-to-face FGDs focusing on factors promoting CCS attendance.

Results

The employment background of participating women is shown in Table I. Approximately 1/3 of the women in both types of FGDs had children, with 25 of the 38 women in face-to-face FGDs and 64 women in the internet FGDs reporting that they lived in partnerships/marriages.

In general, these women expressed positive views about the PCCSP as an existing service, regardless of their screening history. This was the case even in situations in which women described having had prior negative experiences with the PCCSP, other forms of CCS, or gynecological examinations. As Tables II and III illustrate, suggestions offered about how to encourage attendance featured all aspects of screening, as well as ways to better inform the general public. All suggestions derived from these FGDs are presented here, whether or not these suggestions are already implemented in the existing PCCSP in the Stockholm region.

The letter of invitation was described as a key in motivating women to attend PCCSP, even by those who had not attended in the past. Many suggestions were offered about both the form (Table II) and content (Table III) of the invitation. It is interesting to note that these women, most of whom had been unaware of the relationship between HPV and cervical cancer prior to the FGD, felt that this information would be important in increasing motivation to participate in the PCCSP. Specific suggestions of how to best formulate information varied among women, with women who had not previously participated in PCCSP advocating the use of "fear propaganda" in terms of "numbers, in black and white" to catalyze

Table I. Focus group composition.

Strata	PCCSP participation	Face-to-face (FF) FGD ID No.	No. of women in face-to-face FGD	Internet-based (IB) FGD ID No.	No. of women in internet-based FGD	Occupational background*
Pilot focus group	Varied participation in PCCSP	FGD FF pilot	3	FGD IB pilot	4	Professionals (1), associate professionals (1), service workers (1), student (2), unknown (2)
I	Never attended PCCSP	–	–	IB I:1 IB I:2 IB I:3 IB I:4 IB I:5 IB I:6 IB I:7 IB I:8	3 3 4 3 2 2 3 1	Manager (1), professionals (6), associate professionals (2), service workers (5), clerk (1), student (2), unemployed (2), unknown (2)
II	Participated in PCCSP on one-two occasions, but not in response to the most recent invitation	FF II:1 FF II:2 FF II:3	3 7 3	IB II:1 IB II:2 IB II:3 IB II:4	3 3 2 4	Professional (13), associate professionals (2), service workers (5), clerk (1), student (4)
III	Participated in PCCSP all three time points	FF III:1 FF III:2	2 3	IB III:1 IB III:2 IB III:3 IB III:4	2 3 5 3	Professionals (7), service workers (4), craft workers (2), clerk (1), student (1), unemployed (1), unknown (2)
IV	Received an abnormal Pap smear from PCCSP which required medical follow-up	FF IV:1 FF IV:2 Individual interview (Ind.int.)	6 5 1	IB IV:1 IB IV:2 IB IV:3 IB IV:4 IB IV:5 IB IV:6 IB IV:7	4 4 2 4 5 2 4	Professionals (12), associate professor (6), service workers (5), clerk (3), armed forces (1), student (6), unknown (4)
V	Never attended PCCSP, but have two or more Pap smears registered by a private gynaecologist	FF V:1	5	IB V:1 IB V:2 IB V:3 IB V:4 IB V:5 IB V:6	6 3 4 3 5 4	Manager (2), professionals (12), associate professionals (7), service workers (3), craft workers (1), clerk (2), student (3)
Total			38		100	

*Occupational background classified according to Statistics Sweden http://www.scb.se/Grupp/Hitta_statistik/Forsta_Statistik/Klassifikation/_Dokument/MISbil4.doc.

women into attending screening. While not all women in the FGDs actively endorsed this, none argued that this might have the opposite effect by discouraging attendance.

When attending screening, information of relevance to the individual was said to be important in encouraging continued attendance. As shown in Table II, this was emphasized as important for women who had particular needs or prior negative health care experiences which could otherwise deter them from future screening attendance. It should be noted that these issues were raised by women in all FGD strata. The characteristics of the staff taking the Pap-smear and the nature of the encounter with them was also said to be of particular importance.

Women also had specific suggestions for ways to diminish the vulnerability, pain and discomfort which

could arise with screening. Sensitivity was said to be needed to compensate for lack of lubricant when taking a Pap-smear, and vulnerability was said to be offset by offering the women a cover instead of lying unclothed in stirrups. Acknowledgement that some women could find the examination and test painful was also said to be of importance in deciding to return for future screening.

These 30-year-old women expressed a strong sense of self-determination, and described flexibility and choice as important factors in facilitating screening attendance. The ability to decide the time and place for their Pap-smear was said to be important to ease PCCSP participation. Women also suggested that being able to decide which professional would take the test, and combining the Pap-smear with other examinations would encourage participation

Table II. Summary of factors described as encouraging CCS attendance.

Factors Described by FGD Attendees	Described in FGD ID Number
Factors related to invitation letter	
Invitation letter sent to home	FF* FGD pilot-V:1 IB** FGD pilot-V:6
Attractive layout that catches one's attention	IB FGD I:2, II:1, III:1, V:4
Invitation letter with information that is easy to understand	FF FGD II:1-2 IB FGD I:2,4,6, II:1,3, III:1, IV:2, V:1,3-4
An information folder sent with the invitation letter	IB FGD pilot, I:2,4, II:1,V:4-6
Reference or link to a website for more information	FF FGD pilot IB FGD I:2, V:1
Invitation by telephone instead of by letter	IB FGD I:3, II:1
Continued receipt of invitation letter regardless of whether or not one participated previously	IB FGD I:2, II:4, IV:5-6, V:5
Factors related to test-taking venue and screening organisation	
Possibility to choose test venue	FF FGD III:2, II:2, IV:Ind.int., V:1 IB FGD I:2-3,5, V:1,3-4,6
Special time for first time attendees	IB FGD IV:2
Drop-in Pap-smear clinic	IB FGD I:2-4, II:2, III:3, V:4,6
Possibility to take Pap-smear evening and weekends	FF FGD II:1-2 IB FGD I:2,5, II:4, III:3, V:2
Possible to have a personal appointment time	FF FGD pilot, II:2 IB FGD pilot, I:4-5, V:3-4
Short waiting times at the clinic	IB FGD III:1,V:4
Pap-smear taken in conjunction with other examinations (by midwife or gynecologist)	FF FGD pilot, III:1, II:3, V:1
Pap-smear taken in conjunction with mammography	IB FGD I:4-5, II:1,3-4, III:3, IV:4-5, V:1,3-6
Pap-smear taken when a woman so desires irregardless of time since last test	IB FGD IV:4 FF FGD pilot, II:1,3, V:1
Cost-free Pap-smear	IB FGD I:1 FF FGD pilot, III:1-2, II:1-3, V:1
Pap-smear with symbolic cost	IB FGD II:1,3, III:1,3, IV:1-2, V:6 FF FGD V:1
Factors related to screening staff	
Continuity of care in terms of midwife/gynecologist taking Pap-smear	FF FGD III:1, IV:1, V:1 IB FGD I:6, III:3 IV:2,V:1,3
Possibility to influence <i>who</i> takes the Pap-smear	FF FGD pilot, II:1-2 IB FGD pilot, I:5-6, II:2, IV:5,7, V:1,3,6
Possibility to discuss sexual/reproductive health issues	FF FGD II:2, III:2, V:1 IB FGD II:1, III:1,3, IV:2,5
Information about screening and Pap-smear available at test venue (see also Table IV)	FF FGD III:2, II:2, IV: 2, Ind.int., V:1
Information available for individual needs & situations. e.g. homo/bisexuality; history of cancer in the family, etc.	IB FGD I:4-5,7, II:4, III:1-3, IV:1-2,4-7, V:1,3,5
Competent, empathic and professional staff who take the Pap-smear	IB FGD I:3-4,7, II:2, III:1,3, IV:2, V:1-2
Assessment of and sensitivity to previous negative experiences, e.g. sexual violence, bad experiences related to previous gynaecological examination or testing	FF FGD pilot, III:1, II:1-2, IV:1-2 IB FGD I:7, II:2-4, III:1,3, IV:2,4-6, V:1,3
Sensitivity to cultural norms and values	FF FGD pilot, IV:Ind.int.
Sensitivity to women's feelings of vulnerability	IB FGD I:6-7, II:2,4, III:3, IV:2-3,5,V:2-3,5-6
Acknowledgement and prophylactic treatment of pain related to taking Pap-smear	IB FGD I:1-2,8 IB FGD pilot, I:3-6, II:3-4, III:1,3, V:3,5
Factors related to Pap-smear results	
Receive results of Pap-smear quickly	FF FGD II:3 IB FGD I:7, II:2-4, III:3, V:3
Receive both positive and negative Pap-smear results in writing	FF FGD, III:2, II:1 IB FGD I:2,7, IV:1,5,7, V:1,4
Routines for dealing with women's concern about abnormal smear results	FF FGD II:1 IB FGD IV:1 FF FGD IV:1-2 IB FGD IV:1,5,7
Possibility to discuss consequences of an abnormal Pap-smear result with a health care professional	FF FGD IV:2 IB FGD IV:1-5

*FF FGD = face-to-face focus group discussion.

**IB FGD = internet-based focus group discussion.

Table III. Suggestions for content of information.

Suggestions by FGD Attendees	Described in FGD ID Number
Information in invitation letter	
Purpose of Pap-smear screening	FF* FGD II:1, IV:1-2 IB** FGD pilot, I:1-2,4,6, V:4
Cervical cancer as caused by a sexually transmitted infection	FF FGD IV:2 IB FGD II:1,3, IV:5,7, V:2,4-5
Multiple sexual partners increase risk for cell changes and cervical cancer	IB FGD II:1
The consequences of cell changes and cervical cancer	FF FGD III:2, IV:2 IB FGD I:2,4,6, V:4-5
Health risks involved in non-participation	IB FGD I:1,5, V:4
How does non-response to one invitation affect future screening invitations?	FF FGD pilot
Planned intervals between screening invitations	FF FGD pilot IB FGD I:4, V:5-6
Personal information at test-taking venue	
Purpose of the Pap-smear	FF FGD II:2 IB FGD I:3, II:4, IV:2, V:1
How the smear is taken	FF FGD III:1, II:2, V:1 IB FGD I:3,7, II:4, III:2, IV:2, V:3,5
Possibility of experiencing pain during test	IB FGD I:3,7, II:4
About relationship to HPV and how it is transmitted	FF FGD pilot, IV:Ind.int. IB FGD I:4,6, II:1,4, III:3, IV:3-5, V:1
About other sexually-transmitted diseases	IB FGD II:4
How a woman can protect herself sexually-transmitted diseases and from cell changes	FF FGD II:2, III:2, IV:Ind.int. IB FGD I:6, II:4
How common an abnormal Pap-smear result is and what it means	FF FGD III:1-2, II:2-3, IV:2, V:1 IB FGD I:3, III:1, IV:1-3,5,7, V:1,4-5
Possibility to receive extra information when taking a Pap-smear for the first time	IB FGD I:5, IV:2, V:1,5
Information related to an abnormal Pap-smear	
What an abnormal Pap-smear involves	FF FGD IV:1-2 IB FGD IV:1-7
Information about follow-up of an abnormal Pap-smear	FF FGD IV:1-2 IB FGD IV:1-7
How and when a woman with an abnormal Pap-smear will be invited to future screening	FF FGD IV:1-2 IB FGD IV:3,5-7
Suggested sources of trustworthy information	
Information from health care professionals, hospitals or county council	IB FGD I:4, II:2,4, III:3, IV:1-2, V:1-2,4
Information and support from parents	IB FGD I:6, IV:2, V:1,6
An internet site with a possibility for questions	IB FGD I:2, II:4, IV:4, V:3
Open house held by organisations working with issues of sexuality/sexual health	IB FGD II:4
More information and debate in mass media	FF FGD IV:2, V:1 IB FGD I:4, II:2-4, V:4
Mass media coverage/stories of celebrities with experience of cell changes/cervical cancer	IB FGD I:2
Information in schools	FF FGD II:1, IV:1-2, V:1,5 IB FGD I:2-3, II:1,3-4, III:4, IV:1-2,5-7, V:1-2
Education/information at youth and family planning clinics	FF FGD IV:2 IB FGD II:1,3-4, IV:2, V:1,5
Facility comparable to 'youth clinics' but for young adults	IB FGD II:1

*FF FGD= face-to-face focus group discussion.

**IB FGD= internet-based focus group discussion.

(Table II). There was no consensus among women about the importance of continuity in terms of the caregiver involved in screening, although continuity was valued by women with all types of screening histories. The sex of the person taking the test was not consistently said to be important in promoting screening attendance, perhaps because the midwives taking the Pap-smear in the PCCSP are almost always women.

A critical point and particular focus for suggestions was the first occasion for screening. In one FGD with women who had had abnormal results from PCCSP, it was suggested that a special appointment for first-time attendees with more time and support made available would promote attendance even in the future. The situation of first-time attendees was even addressed in other FGDs in all strata, although without specific suggestions.

Contradictory suggestions regarding the out-of-pocket cost of screening were made, with a majority of women emphasizing the importance of the PCCSP being cost-free. On the other hand, women in one FGD who had screened privately with an out-of-pocket cost suggested that a symbolic cost would serve to emphasize the value of the PCCSP. Women with experience of an abnormal Pap-smear could react to such discussion, arguing that the cost of the Pap-smear does not matter, *“it is worth it”*.

It is not surprising that suggestions about the form and content of information on abnormal Pap-smear results came from women who had experienced this (Table III). They requested information about how this test result would affect future PCCSP invitations. A need for clear routines for women who were concerned about their test results was expressed; again, legitimization of the worry that could arise was said to be important, if women were to continue medical follow-up and attend PCCSP in the future. A specific suggestion was that women could be given the name and telephone number of a professional to contact with her questions, prior to the appointment for medical follow-up.

Factors that were described as encouraging PCCSP attendance included social marketing, with mass medial information and publicity addressing cervical cancer and the importance of screening, as seen in Table III. Publicity about celebrities with relevant experiences was named as a way to put screening, dysplasia, and cervical cancer into a context with which women could relate—*“giving it a face”*. Information early on, starting in school, was said to be of great consequence, with the school nurse named as having a central function. It was also suggested that midwives could be invited into the school setting to provide early information on the topic, with this having the additional benefit of reaching male students who were said to have a shared responsibility in the sexual transmission of HPV.

While it was unsurprising that women described health professionals as trustworthy sources of information, the mention of the important role of parents in informing and supporting screening participation was less expected in this age group. It was unclear as to whether this related only to the mother-daughter relationship or if it was part of a general process of socialization into healthy behaviors grounded in the family of origin.

Discussion

We suggest here that Antonovsky's salutogenic perspective [7] might be used as an analytical tool to better understand women's experiences of PCCSP.

Issues related to meaningfulness, comprehensibility, and manageability of the situation were found to be central in women's discussions about their decisions about participation in PCCSP. One unexpected result of these FGD studies was that the PCCSP was nearly always described in positive terms, with the letter of invitation seeming to play an important function, and be perceived as meaningful even for women who chose not to attend. This is in clear contrast to literature arguing that women who do not attend are less positive to screening [18]. Women in this study described a wide range of factors encompassing the entire screening trajectory which can be related to these key salutogenic concepts, and which might encourage young women to participate in screening. Several of these factors (e.g. invitation and reminder letters sent directly to participant's home through a computerized system for calling, registration and follow-up, information available at screening venue, etc.) are already in place in the PCCSP in the Stockholm region, although it is unclear as to whether these women were aware of these features of the program. Other features, e.g. a website link to information and the possibility to change screening venue also exist, but may demand proactive behavior on the part of the woman to access or even be aware of—this appears to be the case even though the web-link to more detailed information is included in the invitation letter. Even in out-reach CCS programs deemed to be well-functioning such as the Stockholm PCCSP [19], there can be difficulties in disseminating information so that it both reaches and is taken in by the women who most need it. This was expressed as problematic even in this sample, with an over-representation of relatively well-educated women who actively chose to participate in our research. These difficulties may in part be related to the life situation of 30-year-old women, who do not experience themselves as at high risk for cell changes or cervical cancer and do not highly prioritize screening [12].

Women in these FGDs expressed a desire for an individualization of many aspects of the PCCSP, e.g. time-point and place for screening. There is an innate tension between the public health perspective underlying a population-based screening program and individually-oriented health care provision, (see also [20]) although as noted, there is a degree of flexibility in the PCCSP that women may not recognize. On the other hand, it is natural that subjective judgments of quality vary between those responsible for the screening organization and the women participating—e.g. waiting times can be short from an organizational perspective based on 'clock time', but experienced as unbearably long for an anxious woman in 'embodied time' [21].

This tension between public health and individual perspectives was also expressed in terms of the need for individualized or situation-specific information to help women overcome obstacles to attendance such as previous negative experiences, fears and discomfort. It should be recognized that these FGDs may not necessarily represent the population in terms of socio-economic background and other variables. It is still noteworthy that it was not uncommon in the relatively anonymous internet FGDs for women to tell stories of past sexual violence or discuss their homo/bisexuality, which never occurred in the face-to-face FGDs. It may be a sign of vulnerability that these women were particularly clear about the need for more individualized information and sensitivity when at the screening venue. The important role of the individual health care professional was emphasized by these women, as well as by researchers in Sweden [22] and internationally [23].

There have been numerous interventions to increase CCS participation, although heterogeneity hinders drawing clear conclusions about the success of most forms of intervention [24]. A Cochrane review of literature through 2000 found most conclusive data about the value of invitations to screening [24], although even other approaches may be advantageous. Interventions found to increase CCS participation include invitations/campaigns specifically directed to non-attendees [25], and reminders by letter or telephone [26]. Mass media campaigns have also been found to be successful in increasing participation [27]. Several of these interventions are similar to suggestions by the women in the FGDs. Oscarsson et al. [28] also emphasized the importance of choice, in a intervention aimed at encouraging women without a recent Pap-smear to attend CCS by addressing issues they ranked as important—many of which are also similar to those suggested by the women in the FGDs. While the intervention arm had higher levels of CCS attendance, Oscarsson et al. conclude that the most highly resistant women still did not attend screening. It should be remembered that the economic cost-benefit ratio may prohibit many interventions from being feasible for a PCCSP.

The importance of early socialization into screening for continued participation in the PCCSP was remarked on by women in the FGDs, and has even been addressed by Forss et al. [29]. Despite this, there appears to be a lack of literature about first-time participants, as noted by Duggal et al. [30]. In 2001 Duggal et al. [30] repeated their 1994 survey of women called to CCS for the first-time, finding that women in 2001 reported more difficulty understanding the invitation than those in 1994. This can be considered in relation to the

international problem of decreasing number of women under 35 years old who participate in CCS [2]. This is an important issue given the risk for a further decrease in CCS participation following the introduction of vaccination programs for HPV in young women. As our data is in line with other researchers [26] who suggest that a combination of interventions may have the most powerful effect on encouraging CCS participation, it should be considered which combination of interventions might best facilitate first-time participation in CCS.

In this context, it is of particular interest that several women said that information about the relationship between HPV and cervical cancer would be important in motivating them to participate in the PCCSP. This is not presently part of the PCCSP information in the invitation letter or at the screening venue, although such information is available through the web-link in the invitation letter. The research and clinical literature is not in consensus on this point, with several sources discussing HPV information as potentially frightening and thus possibly dissuading CCS participation [11,31]. Armstrong and Murphy [32] conclude from their explorative study of women's understandings of CCS information that if women lacked crucial information, e.g. about the role of HPV in cervical cell changes or cancer development, they were unable to integrate their lay and contextual understandings with professional understandings. This negatively affected their participation in CCS. New research should therefore test whether systematic information on HPV may provide a missing link in motivating young women to attend CCS, and which of their suggestions can serve to increase CCS participation.

In summary, these women suggest relatively minor changes in the PCCSP which would serve to heighten a sense of meaningfulness, by better providing relevant motivation to attend screening; by filling gaps which do not foster making cognitive sense of information—both that provided and not provided by the health care system; and improving practical aspects to ease manageability in the busy lives young women lead today.

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