




How do young men want to receive information about fertility? Young men's attitudes towards a fertility campaign targeting men in Copenhagen, Denmark

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STUDY QUESTION: What are young men's attitudes towards the Danish fertility campaign 'How's your sperm?' and how do they want to receive fertility information in the future?

SUMMARY ANSWER: The young men found that the campaign had limited impact because it was not relevant to their current life situation and they believed general fertility awareness should be a mandatory part of education, while more targeted information would be helpful through web-based venues when it was more relevant to their lives (e.g. when ready to have children).

WHAT IS KNOWN ALREADY: It is estimated that 16–26% of the Danish population who want children will experience infertility at some point in their lives. In Denmark, 25% of young healthy men have decreased sperm quality, and 20% of 50-year-old men are childless. Men play an important role in the fertility decision-making of couples, thus, it is important to target men and ensure that they have sufficient fertility knowledge. However, fertility awareness is limited among men and there have been few fertility awareness initiatives targeting men. In October 2018, the Municipality of Copenhagen launched the campaign 'How's your sperm?' as a tool to increase fertility knowledge among men. To identify potential barriers for the effect of fertility campaigns targeting men, evaluations of such campaigns are needed.

STUDY DESIGN, SIZE, DURATION: This study was a cross-sectional, qualitative study of six focus groups including a total of 27 currently childless young men from the Capital Region of Copenhagen, Denmark. Data collection took place between April and October 2019.

PARTICIPANTS/MATERIALS, SETTING, METHODS: The interviewed young men were currently childless and were all residents in the Capital Region of Copenhagen. They were between 23 and 32 years old with an average age of 26 years, and almost all were university students or had a university degree. The focus group discussions were audiotaped, anonymized and transcribed in full. Data were analyzed using qualitative content analysis.

MAIN RESULTS AND THE ROLE OF CHANCE: Overall, the campaign had limited influence on the young men because they believed the campaign was not relevant to their current life situation. Furthermore, the young men were confused about the aim and message of the campaign, as they thought it encouraged them to have their sperm quality tested. The young men also criticized the campaign for making a link between sperm quality and masculinity. They recognized the importance of knowledge about reproductive health but they wanted access to accurate information about fertility and risk factors for infertility. According to the young men, future initiatives should prioritize clear communication of accurate, reliable and understandable fertility information in web-based venues. In addition, the young

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men suggested that general fertility information should be a mandatory part of the (sexual) education curriculum in primary and secondary schools.

LIMITATIONS, REASONS FOR CAUTIONS: Participants were young and highly educated; thus the findings cannot be generalized to all men of a similar age group or to men at older ages.

WIDER IMPLICATIONS OF THE FINDINGS: Different strategies that are relevant to the lifespan are needed to increase fertility awareness in the male population. The young men's responses underscored that any fertility awareness strategy or campaign must convey respect for the individual's autonomy. The findings highlight that how information is communicated and the quality or type of information that is disseminated are both important in acceptability by target users.

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WHAT DOES THIS MEAN FOR PATIENTS?

In 2018, the Municipality of Copenhagen created the 'How's your sperm' campaign to raise men's fertility awareness, including the fact that 25% of adult men can experience problems with their fertility. In this study, six focus groups were held with 27 young men in Copenhagen to find out their reactions towards the 'How's your sperm' campaign and to see how they wanted to receive information about their fertility.

The young men thought the campaign was not relevant to them given they were not trying to have kids at the time. They also were unclear about the purpose and the content of the campaign and did not like the campaign's suggestion that fertility was linked to masculinity.

The young men thought it was important to learn about fertility, but at a time when it was more relevant, such as when trying to have a child with a partner. They preferred to seek out fertility information in private on the internet from reliable and trusted sources. The young men also thought that fertility information should be a topic in sexual education in primary and secondary school.

Introduction

It is estimated that 16–26% of the Danish population who want children will experience infertility at some point in their lives (Schmidt, 2006). In Denmark, 25% of young healthy men have decreased sperm quality to an extent where we expect prolonged waiting time to pregnancy and a further 15% have decreased sperm quality to an extent that they have a high risk of need for medically assisted reproduction if they want to have children (Jørgensen et al., 2012). As well, as in many other western countries, there is a tendency for people to postpone parenthood to a time when it can be difficult to have children due to infertility. Thus, the average age of first-time parents is at an all-time high among the Danish population. In 2019, on average, women were 29.5 years and men were 33.5 years when they had their first child (Statistics Denmark, 2019). Most men from the Nordic countries want two or three children (Lampic et al., 2006; Virtala et al., 2011; Sørensen et al., 2016; Vassard et al., 2016). However, the total fertility rate for men is 1.7 (Statistics Denmark, 2019), demonstrating that some Danish men do not achieve their desired number of children. A recent register-based study of four Nordic countries including Denmark found increased levels in childlessness in men at age 45, with the highest levels among the least educated (Jalovaara et al., 2019). We do not know the reason for childlessness (e.g. due to infertility or choice). Moreover, in Denmark, 20% of men are childless at age 50 (Statistics Denmark, 2019).

Postponement of family formation may be a consequence of insufficient knowledge of infertility risk factors (Hammarberg et al., 2017a; Pedro et al., 2018). Preventative fertility interventions which intend to inform about the incidence and risk factors for infertility are essential

for women and men to be able to make well-informed decisions regarding their desires for family formation. Fertility awareness (FA) is a concept recently defined in the International Glossary on Infertility and Fertility Care as:

The understanding of reproduction, fecundity, fecundability, and related individual risk factors (e.g. advanced age, sexual health factors such as sexually transmitted infections, and life style factors such as smoking, obesity) and non-individual risk factors (e.g. environmental and work place factors); including the awareness of societal and cultural factors affecting options to meet reproductive family planning, as well as family building needs. (Zegers-Hochschild et al., 2017, p. 1793)

Studies show that FA is limited in the general population, and men especially have insufficient knowledge about both women's and men's limited fertility (Hammarberg et al., 2017a; Pedro et al., 2018; Sylvest et al., 2018b; Hviid Malling et al., 2020). Research shows that men play an important role in the timing of couples' childbearing (e.g. Dudgeon and Inhorn, 2004). Thus, there is a particular need for efforts to improve FA among men. In recent years, Denmark has focused on improving FA in the general population, and the Municipality of Copenhagen developed and launched two fertility campaigns in 2015 and 2018, respectively. The fertility campaign 'How's your sperm?' launched in 2018 targeted men aged 29–40 years. The campaign was disseminated within the Municipality of Copenhagen through a wide range of exposure channels (city space posters, bus advertising, free postcards, web advertising, a campaign website and an animated campaign video shown in cinemas, on citizen service screens and on social media). The campaign used different cartoon sperm characters (e.g. a happy sperm flexing muscles and a sad-looking older sperm walking

with a walker) and the main message was that 25% of men have decreased sperm quality. The campaign focused on age as a risk factor for decreased sperm quality. Viewers were referred to an external website with information where several risk factors for female and male infertility were described. Given that every fifth man does not become a father, the campaign encouraged men to not wait too long to have children if they wanted to have them naturally (Municipality of Copenhagen, 2018). The campaign is one of the only fertility campaigns worldwide that has exclusively targeted men. However, there is a lack of knowledge about how young men receive and reflect on such past campaigns, and how they wish to receive knowledge about fertility in the future. To optimize the effect of future fertility campaigns, this understanding is essential when developing fertility campaigns that are intended to prevent infertility.

The aim of this study was to explore young men's attitudes towards the Danish fertility campaign 'How's your sperm?', and how they want to receive fertility information in the future.

Materials and methods

Study design

This study was a cross-sectional, qualitative study of six focus groups with a total of 27 currently childless young men from the Capital Region of Copenhagen, Denmark.

Recruitment and participants

Eligible participants were young men, currently childless and residents in the Capital Region of Copenhagen. Initially, men aged 25–40 were recruited, but after the study start, due to recruitment challenges, the age inclusion criterion was expanded to include 23 and 24 year olds. Participants were not required to have remembered seeing the campaign when it was presented in October 2018. Participants were recruited through Facebook, LinkedIn and printed posters at educational institutions and some workplaces in Copenhagen, and through social networks as well as the snowball method (i.e. referring information to others). Those who were willing to participate were invited to visit a website where they registered using their contact information. Registered participants were contacted through e-mail by the researchers to schedule the focus group discussions. Four men did not respond to the email although they registered. Before the focus groups took place, all participants received a reminder email with practical information regarding the meeting.

Data collection

A semi-structured interview guide was used in all six focus groups. The interview guide aimed to examine the young men's attitudes towards the fertility campaign 'How's your sperm?', the topic of infertility and how the young men wished to receive information about fertility. The interview guide consisted of seven topics. The first and second topic included questions regarding the participants' initial thoughts about the campaign and their perceptions of the goal of the campaign and the intended target group. The third topic regarded the young men's interest in the campaign and whether or not the campaign as well as fertility information in general was relevant to them according to their life

situation. For the fourth topic, the interview guide included questions concerning the young men's thoughts about decreased sperm quality and their attitudes towards the fertility information presented on this topic in the campaign. The fifth topic regarded the young men's intentions to act upon the campaign. The sixth and seventh topics concerned questions about other fertility interventions in Denmark and the young men's needs and desires for fertility information and how they wanted fertility information to be disseminated in the future. Participants were also encouraged to discuss their perception of previous fertility initiatives they were able to remember. The interview guide was thoroughly prepared in collaboration with the co-authors. Three men in the target group age were asked about terminology and topics in the interview guide. The feedback indicated they were appropriate.

The focus group discussions were facilitated by two Public Health researchers (ASNB and ALNG) who conducted the focus group interviews alternately as moderator and observer. Participants provided written informed consent to participate in the study, which was emailed to the participants after the interviews for their records. At the beginning of each focus group, the participants were informed about each interviewer's background, the purpose of the study and how a focus group is conducted. Each focus group started with viewing the campaign video and other campaign materials, followed by a discussion of the topics in the interview guide. A brochure on sperm quality was provided for all participants to take home with them.

Data collection took place between April and October 2019. The researchers assessed that data saturation was achieved through six focus groups. Data saturation involves collecting data until no new themes or information emerges from each interview. This method is used to ensure trustworthiness of the data collection and analysis in qualitative research (Saunders et al., 2018). Four focus groups took place at the University of Copenhagen and two focus groups took place in private homes. The interviews lasted on average 62 min (range 53–67 min). A moderator and an observer were used in all focus groups to facilitate the discussion while capturing non-verbal communication and interaction (i.e. field notes).

Prior to data collection, the intention was to form homogeneous focus groups in relation to age and length of education to examine any differences between young men's considerations about preventive fertility interventions in these groups (e.g. lower education versus higher education or age ≥ 29 vs < 29). Due to logistic difficulties and recruitment challenges, this segmentation was not possible.

Data management and analysis

The focus group discussions were audiotaped and transcribed. NVivo version 12 was used to track the data analysis process. The transcripts were anonymized using pseudonyms for the participants' names, starting with the Letter A from focus Group 1, Letter B from focus Group 2 and so on (e.g. Espen, focus Group 5). Data from all focus group discussions were combined and analyzed using qualitative content analysis following the method by Graneheim and Lundman (2004). The content analysis involved: (i) coding of meaning units (i.e. relevant constellations of words or statements), (ii) organization of codes into subcategories, (iii) organization of subcategories into categories and (iv) division of categories into organizing themes. Finally, an overall theme was created for the full analysis (Graneheim and Lundman, 2004). Two of the researchers (ASNB and ALNG) categorized and

analyzed the data separately at each stage. They compared their categorizations and achieved consensus through discussion. During the analysis process, the context of the meaning units were kept in mind by returning to the larger transcript at several time points. To ensure trustworthiness of the findings, all levels of coding and thematic development were initially discussed between two researchers (ASNB and ALNG). Preliminary themes were discussed with co-authors and finalized after discussion.

Ethical approval

As no personal identifying data about participants were provided, according to Danish law, the study was not required to gain permission from a scientific ethics committee. The university's rules regarding data protection were followed and data was stored as requested by the Danish Data Protection Agency, University of Copenhagen.

Results

The participants were all currently childless and residents in the Capital Region of Copenhagen. The young men were between 23 and 32 years old (average age 26 years). There were 13 students while 14 had completed their studies, with almost all of those having a university degree. The main findings from the qualitative content analysis reflect how the young men received the information from the campaign and which thoughts and associations they had when they viewed the campaign. The overall theme for the findings was 'Men's attitudes towards fertility initiatives targeting men'. The subthemes were: 'Reflection on risk of decreased sperm quality', 'The impact of current relevance', 'Political agenda and public interference in private life', 'Campaign dissemination and communication', and 'Future focus of fertility initiatives'. See Fig. 1 for thematic map. The subthemes are described below and illustrative quotations are provided with the study participant's pseudonym and age.

Reflections on risk of decreased sperm quality

Reflecting on the campaign's focus on the risk of decreased sperm quality in 25% of men, the participants thought it would be unnatural to discuss this topic among friends as it was a taboo subject. Some of the young men explained that if they had decreased sperm quality, it would feel like a personal failure. Overall, the young men considered their own sperm quality to be rather sufficient at this age. Therefore, most of the participants believed the campaign did not apply to them because they did not think themselves as a part of the 25% with decreased sperm quality which made them feel that the campaign was less appealing.

Well, it's [the campaign] pretty easy to push away; it's not me [a part of the 25%], after all (Frederik, 26)

Nonetheless, while believing their personal risk to be low, many of the young men acknowledged that if they did have decreased sperm quality, they preferred not to know because then they would have to deal with its consequences.

You shouldn't underrate the power of repression. I would rather postpone the [sperm quality] test as long as possible. If it's not necessary to know right now, shut it out. Knowing is potentially unpleasant. I do not want to address it. Not before I absolutely have to. (Bertram, 26)

The impact of current relevance

The majority of the participants perceived that the campaign had limited impact on them because family formation was not relevant to their current life situation. Moreover, they considered that they would not take notice of fertility information until they were actually about to start a family. All of the participants wished to have children at some point in the future. Most wanted children around the age of 30. They had certain priorities for themselves before they wished to start a family, e.g. completed education, being in their first job for a couple of years, travelling and feeling ready to start a family. In general, the young men had doubts as to whether knowledge of infertility risk factors would change their priority of achieving their checklist before having children (i.e. having children sooner).

Such a campaign does not have a huge effect on me now, no matter how well I know about the risk factors, because it's not going to change my current behaviour, because I'm not planning on having children yet. (Dion, 27)

Most of the young men did not have great concerns about experiencing infertility in the future which was why they considered the campaign less relevant.

Political agenda and public interference in private life

The fact that the campaign was created by a municipality made the young men sceptical towards the intentions behind the campaign and made them question whether the campaign had a political agenda. In particular, they questioned whether the aim of the campaign was to raise awareness and simply inform people about the incidence of decreased sperm quality or whether the aim was to increase the fertility rate in the Capital Region of Copenhagen. Some of the young men perceived that, through the campaign, the municipality was interfering in their private life regarding the rather personal issues of family formation and infertility. Some felt the campaign violated their self-determination regarding their decision of when to start a family.

What bothers me the most is that the Municipality of Copenhagen cares [about my fertility] and tells me what to do right in my life. (Frank, 24)

Most of the young men believed the campaign was a scare campaign rather than an educational campaign. In particular, the campaign's call-of-action: 'Get started in time if you want to have children' was perceived as a way to push them to have children. They felt provoked by this language and felt that there was an unnecessary pressure put on their shoulders to become a parent soon.

Campaign dissemination and communication

Regarding the campaign's content, the young men shared that they were confused about the aim and message of the campaign. They were unclear about the campaign's call to action (if there was meant to be one), as they wondered whether the campaign was encouraging



Figure 1. Results of qualitative content analysis.

men to have their sperm quality tested or to have children while their sperm quality was good.

I don't understand the campaign: whether it's about you need to get started on having children or whether you need to find out if you have poor sperm quality? (Elias, 29)

In addition, the participants suggested that the campaign information was difficult to understand, primarily because they had doubts about what decreased sperm quality actually meant and whether the information was accurate.

It doesn't say much because 25% have decreased sperm quality, but what does it mean? How much? What are the consequences? How the hell do you relate to that? What does decreased sperm quality even mean? (Benjamin, 27)

They wanted to know how the 25% had been calculated. Who was included in this group and what was the age range? In regards to how the campaign communicated its message, the young men identified the slogan, images and animations as problematic. For example, they criticized the sperm cell images with muscles suggesting a link between sperm quality and masculinity.

The young men agreed that raising awareness about men's fertility and the risk of reduced sperm quality was important. However, they believed that clear communication of accurate, reliable and understandable information was essential in the success of a fertility campaign.

Future focus of fertility initiatives

According to the participants, future initiatives should prioritize dissemination of fertility information based on accurate statistical facts. They

believed future campaigns should be more educational and provide advice of how to optimize fertility, especially because some changes to lifestyle factors can make a difference (e.g. stopping smoking), although infertility is caused by complicated factors. The young men believed that infertility is an issue experienced by a couple, thus they thought fertility initiatives should also be targeted to couples.

Why only target the campaign to men or women; why not target the campaign to the couple? (Espen, 29)

Regarding how to disseminate information in future initiatives, some of the suggestions provided by the young men included providing information in the advertisement before movies in cinemas or the use of non-traditional channels such as TV-series and comedians would be beneficial. Overall, they preferred that fertility initiatives should be included on web-based venues such as websites which they already use in their everyday life. The young men underscored that infertility is a private issue and, therefore, searching information at home through online sources was favourable. They also believed that future fertility campaigns such as 'How's your sperm?' should apply a combination of components (such as an evidence-based campaign website, campaign video, web-advertising and social media) and should be developed with the help of target users.

Finally, the young men suggested that FA should be a mandatory part of the education in primary and secondary school to provide men and women with a general understanding about fertility, while more targeted information would be helpful when it was more relevant to their lives (e.g. when ready to have children).

Why don't we know anything about this? Why should it be a campaign, why shouldn't it be something we learn in school? (...) I think it should be a part of

our education programme: from primary school to the university. We should learn more about sex and family formation. (Andreas, 23)

Discussion

The 'How's your sperm?' campaign in Denmark is one of the only fertility awareness campaigns that has exclusively targeted men. This study explored young men's attitudes and reactions towards this campaign and how they wish to receive knowledge about fertility. It is important to understand men's perspectives given that men's preferences matter when it comes to couple's fertility decision-making (Dudgeon and Inhorn, 2004) and that evidence shows gaps in men's fertility knowledge (Hammarberg et al., 2017a; Pedro et al., 2018).

The young men's responses highlight that fertility awareness interventions should use a combination of strategies that are targeted in different formats at different stages in the lifespan depending on what is most relevant and effective. For example, consistent with previous studies and commentary on men and women's attitudes towards fertility awareness (Harper et al., 2017; Pedro et al., 2018; Boivin et al., 2019; Hviid Malling et al., 2020), the young men in this study believed that fertility information should be provided in sexual education in primary and secondary schools. The young men wished for fertility information to be a natural part of their education that is provided to all students, rather than having to seek out the information themselves. The young men saw this as creating a general knowledge base and increasing awareness of the fertility lifespan (i.e. that one cannot wait to conceive forever) and risks to fertility (e.g. smoking, over-weight, drugs) through a normal part of the school curriculum. They believed that with this knowledge base, they would be more open to receiving or seeking targeted information when they were closer to being ready to conceive and better aware of the general risks to fertility that were relevant throughout their lifespan. In school, there is a focus on having a healthy life overall and making choices about healthy living, which could include promoting behaviours that could be preventative measures against fertility problems. Additionally, evidence shows that adolescents in upper secondary school want fertility information to be delivered repeatedly and through different sources, as they have difficulties relating to fertility information at this current stage of their life (Ekstrand Ragnar et al., 2018). Future efforts are needed to educate teachers on how to implement this information into their curriculum and to provide an opportunity for students to co-create FA strategies to have the most impact and effect.

The young men's responses underscored that as adults, they viewed fertility as a private issue, and, therefore, at this stage of their lives, searching for information through online sources was favourable. Previous studies have also found that men prefer to receive fertility information online (Daniluk and Koert, 2013; Hammarberg et al., 2017b). Taken together, these findings demonstrate that there is a preference for general fertility information provided in school and specific information available later that is specific to their life stage and needs. Future research is needed to explore and develop the most effective formats for interventions that are tailored to life stage by involving target users as co-creators.

How information was communicated was as important as the quality and type of information provided in the campaign. The young men

in the study wanted information to be communicated clearly and based on statistical facts. For example, they reacted negatively to what they perceived as the campaign's suggestion that men's sperm quality was associated with their masculinity through the use of cartoon sperm characters in the campaign. Other research has shown that young men view the link between reduced fertility and masculinity negatively and that being diagnosed with male factor infertility frequently has a negative impact of the men's sense of masculinity (Sylvest et al., 2014, 2018a; Harlow et al., 2020). It may be that a fertility campaign is not an appropriate format to convey complex fertility information to men. But regardless of the complexity, the young men in the study wanted the information to be accurate, reliable and understandable.

When viewing the campaign, the young men believed that the 25% chance of decreased sperm quality did not apply to them and that their sperm quality would be sufficient at this stage. Many said they would prefer not to know if their fertility had declined before it was necessary (i.e. before they started trying to conceive with a partner). Future research is needed to better understand how different interventions should be conducted to increase awareness of susceptibility to fertility problems in younger men without causing alarm or avoidance.

Interestingly, the men in this study reacted negatively to the campaign being funded by the Municipality of Copenhagen as they felt their autonomy was being threatened (i.e. by implying they should have children sooner than they were ready). Female focused fertility campaigns have been criticized in the media for suggesting that women should have children before they are ready due to declining fertility (Daniluk and Koert, 2015). This has been seen as a gendered experience (i.e. limited to women). But taken together, this suggests that fertility awareness campaigns must promote autonomy for both genders by providing options for family formation behaviour and timing, rather than prescriptions.

Multiple strategies at different stage of the lifespan are needed in order to promote informed fertility decision-making and prevent infertility at an individual level. The need to provide relevant knowledge at appropriate ages has been highlighted by other researchers (e.g. Vassard et al., 2016; Boivin et al., 2018; Sylvest et al., 2018c). Structural interventions and social norms such as family-friendly societies wherein men and women are supported to have children earlier in life are also needed (Nielsen et al., 2016).

Clinical implications for future fertility campaigns

The young men advised that future fertility campaigns specifically should target men and women (or couples) who are considering having children (e.g. 20–40 years), be educational, apply a combination of campaign components (such as an evidence-based campaign website, campaign video, web-advertising and social media), engage partners with high authority to create credibility (e.g. reputable and reliable information sources), and focus on increased target group involvement in feasibility studies. Campaigns should be developed based on theory and best practice for intervention development and be evidence driven.

Additionally, campaigns like 'How's your sperm' should aim to reach younger audiences (i.e. age 20 rather than starting at age 29). Health professionals skilled in intervention development and target users

should be involved in the development of future fertility campaigns and pilot testing should occur within the target group to adapt the content more specifically if needed to reach the desired audience. Young men in our study believed that they would not have decreased sperm quality and that if they did, they preferred not to know until it was necessary. To be effective, there needs to be additional research to explore this topic in detail with young men in order to deal with it in future campaigns.

Limitations

Despite the researchers' intention to compare attitudes across different educational backgrounds, recruitment challenges resulted in all of the participants recruited being highly educated; thus, the findings cannot be generalized to all men in a similar age group. Given that 23 of the 27 men were under age 29 (the start of the target age of the campaign) while four were age 29 or above (giving an overall average age of 26), we were unable to make comparisons by age. Selection bias is also a limitation. Whilst the male participants seemed open and forthcoming, we do not know if there was a social desirability effect due to the focus group format or the fact that the focus groups were facilitated by two female Public Health Science researchers. We did not collect relationship status information from participants so we do not know how attitudes differ between those in a relationship or those who are single. The 'How's your sperm?' campaign was promoted 6–11 months before the focus groups were conducted. Participants were shown the campaign in the focus groups to refresh their memories and elicit a current response, but they may not recall their initial reactions. That said, given that our aim was to elicit general reflections on the campaign rather than recall, we believed that any reaction (recalled, immediate) was important. Finally, we included men as young as 23 in our sample (average age = 26) because we wanted to explore young men's attitudes and reactions towards the campaign in particular. Given that the campaign was generally targeted to men age 29–40, it may be expected that the young men in our study felt the topic was less relevant to them at their stage of life. Despite the limited target group, given that the campaign was in public and men of all ages were exposed to it, our study's aim was to gather impressions and reflections on the campaign from a group of younger men and use the campaign as an opportunity to generate feedback on what would be useful in future campaigns that were relevant to them.

Conclusion

Research into the effectiveness of public health interventions to reduce infertility has been highlighted as one of the top ten priorities in infertility research (Duffy et al., 2021). We are learning through a growing body of research that men wish to receive fertility information, but, in future research, we need to explore in more detail when, by whom, and what format at particular life stages (e.g. secondary school) may be more appropriate for particular formats given their age and the relevance of fertility in their current lives. The young men's responses underscored that any fertility awareness strategy or campaign must convey respect for the individual's autonomy. The findings highlight that how information is communicated and the quality or type of

information that is disseminated are both important in its acceptability by target users.

Data availability

The data underlying this article cannot be shared publicly due to protection of the privacy of individuals who participated in the study, under agreement that their data would be anonymous and the transcripts would not be shared consistent with the ethical requirements for collection of interview data at the University of Copenhagen. The audio-recordings were destroyed on study completion in keeping with the requirements for the General Data Protection Regulation agreement.

Authors' roles

A.S.N.B., A.L.N.G., U.C. and L.S. conceived and designed the study. ASNB and ALNG acquisitioned the data. All authors contributed to analyzing and interpreting the data. All authors drafted or revised the article critically and approved the final version.

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