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ORIGINAL ARTICLE

The needs of subfertile couples continuing to attempt natural conception: in-depth interviews

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STUDY QUESTION: What are the experiences and the support and sexual advice needs of subfertile couples continuing to attempt natural conception after the diagnostic fertility work-up?

SUMMARY ANSWER: Exploration of the experiences of couples showed that couples would have appreciated fertility clinic staff embedding expectant management into the fertility clinic trajectory, supportive staff with female and male patient interactions and advice on common experiences of peers and on managing their lifestyle, distress and subfertility-related sexual challenges.

WHAT IS KNOWN ALREADY: Dutch and British professional guidelines advise newly diagnosed subfertile couples with a 'good prognosis' to continue to attempt natural conception and do not require fertility clinic staff to interact with patients. Fertility clinic staff and subfertile couples struggle to follow these guidelines as they feel an urgent need for action. Subfertile couples might benefit from sexual advice, as subfertility is negatively associated with sexual functioning, which is important for natural conception.

STUDY DESIGN, SIZE, DURATION: Twelve one-time in-depth interviews (2015–2017) were conducted with 10 heterosexual couples and 2 women whose partners did not participate, then the interviews were subjected to inductive content analysis, reaching inductive thematic saturation.

PARTICIPANTS/MATERIALS, SETTING, METHODS: The 22 interviewees had experienced 3–18 months of expectant management after their diagnostic fertility work-up in a Belgian or a Dutch tertiary fertility clinic. The face-to-face in-depth interviews explored positive and negative experiences and unmet needs. The transcribed interviews were subjected to inductive content analysis, by two researchers discussing initial disagreements.

MAIN RESULTS AND THE ROLE OF CHANCE: Couples would appreciate fertility clinic staff embedding expectant management in the fertility clinic trajectory, by starting off with reassuring couples that their very thorough diagnostic fertility work-up demonstrated their good chance of natural conception, and by involving couples in deciding on the duration of expectant management and by planning the follow-up appointment after expectant management up front. Couples had encountered sexual challenges during expectant management and had an interest in sexual advice, focused on increasing pleasure and partner bonding and preventing the rise of dysfunctions. The couples agreed that a (secured) website with evidence-based, non-patronizing text and mixed media would be an appropriate format for a novel support programme. Couples were keen for interactions with fertility clinic staff which addressed both partners of subfertile couples. Couples also valued advice on managing their lifestyle and distress and would have liked information on the experiences of their peers.

LIMITATIONS, REASONS FOR CAUTION: Recall bias is plausible given the retrospective nature of this study. This explorative interview study was not designed for examining country or gender differences in experiences and needs but it did generate new findings on inter-country differences.

WIDER IMPLICATIONS OF THE FINDINGS: Rather than simply advising expectant management, fertility clinics are encouraged to offer couples who continue to attempt natural conception after their diagnostic fertility work-up, supportive patient–staff interactions with advice on common experiences of peers and on managing their lifestyle, distress and sexual challenges related to subfertility.

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WHAT DOES THIS MEAN FOR PATIENTS?

Some fertility clinics advise newly diagnosed subfertile couples with a 'good prognosis' to continue to attempt natural conception for 6–12 months (i.e. expectant management) and do not interact with patients during this period. This study investigated the needs of subfertile couples during expectant management. Twenty-two interviewees (Belgian or Dutch women or men) took part in an in-depth interview exploring their experiences and needs during expectant management. This study showed that couples would appreciate fertility clinic staff embedding expectant management in the fertility clinic trajectory by, for example, planning the follow-up appointment up front. Couples had encountered sexual challenges during expectant management and were open to receiving sexual advice. Couples would have also appreciated information on experiences of peers and advice on managing their lifestyle and distress. The couples agreed that a (secured) website would be an appropriate format for a novel support programme and were keen to interact with fertility clinic staff. In sum, the interviews showed the need for a novel health care programme for couples who continue to attempt natural conception, to replace the current expectant management of simply sending couples home. This health care programme should include multiple components, including sexual advice, to meet the variety of identified needs.

Introduction

Heterosexual couples are subfertile if they have not achieved a clinical pregnancy after at least 12 months of regular unprotected sexual intercourse (Gnoth *et al.*, 2005). A considerable proportion of subfertile couples (36–93%) have a 'good prognosis', namely at least 30% chance of conceiving naturally in the upcoming year (i.e. calculated by the Hunault prediction model) (Hunault *et al.*, 2004; van der Steeg *et al.*, 2007; Brandes *et al.*, 2011). In case of a good prognosis, 6 months of continuing to attempt natural conception after the diagnostic fertility workup are as effective and less costly as 6 months of IUIs with ovarian stimulation (Steures *et al.*, 2006; Custers *et al.*, 2012).

The Dutch and British professional guidelines, respectively, advise 6–12 and 24 months of expectant management in couples with a good prognosis (NVOG, 2010; NICE, 2017). Regrettably, <65% of couples adhere to at least 6 months of expectant management (van den Boogaard *et al.*, 2012; Kersten *et al.*, 2015). Patients turning to fertility clinics have an urge for action and seek information on how to help themselves conceive both during expectant management and in between fertility treatment cycles (Steures *et al.*, 2005; Porter and Bhattacharya, 2008; van den Boogaard *et al.*, 2011). Couples might be interested in sexual advice as subfertility can deteriorate the sexual functioning of men and women and decrease their intercourse frequency, which is important for their chance on natural conception (Takefman *et al.*, 1990; Wilcox *et al.*, 1995; Gao *et al.*, 2013; Perlis *et al.*, 2013; Mendonca *et al.*, 2017; Capogrosso *et al.*, 2021). Fertility clinic staff have shared that they do not have appropriate information material for couples starting expectant management and expectant management guidelines do not require fertility clinic staff to interact with patients during expectant management (Wischmann *et al.*, 2001; Anderson *et al.*, 2003; NVOG, 2010; van den Boogaard *et al.*, 2011; NICE, 2017).

Insight in the experiential knowledge of subfertile couples having continued to attempt natural conception is required for developing a health care programme that meets the needs of patients (Caron-Flinterman *et al.*, 2005; Craig *et al.*, 2006; Nilsen *et al.*, 2006). Sociologists and anthropologists have confirmed that identifying the information and interpersonal interaction needs of infertile couples is key for providing patient-centred care, which is better than clinical encounters infused with paternalism, although patient-centred care might also increase people's 'medical gaze' (Gerrits, 2014). The needs of subfertile couples during medically assisted reproduction have been studied elaborately (as reviewed by Dancet *et al.* (2010a) and studied in-depth by for example Dancet *et al.* (2011)). The needs of couples starting expectant management have also been studied (van den Boogaard, 2011, 2012). To the best of our knowledge, the needs of subfertile couples during expectant management had yet to be studied.

This study aimed to explore the experiences and the support and sexual advice needs of subfertile couples who have continued to attempt natural conception after the diagnostic fertility work-up.

Materials and methods

Study design

In this qualitative study, in-depth interviews explored the experiences and the support and sexual advice needs of subfertile couples continuing to attempt natural conception after the diagnostic fertility workup.

Setting and ethical approval

This study was conducted in two tertiary university fertility clinics from two different Dutch-speaking European countries, Belgium and the Netherlands. The Medical Ethics Committees of both the Leuven University hospital (23 July 2015; s57786) and the Amsterdam University Medical Centre, location AMC (28 January 2015) independently approved the study.

Eligibility criteria, sampling and recruitment

Eligible couples had continued to attempt natural conception after a thorough diagnostic fertility work-up (potentially entailing surgical diagnosis and treatment of endometriosis) for 3–12 months (ending no more than 1 year prior to the interview), as they had a good prognosis. Purposive sampling ensured that both couples who did and couples who did not conceive naturally were included (Giacomini and Cook, 2000). The sample size was not defined *a priori* but depended on when inductive thematic saturation was reached during the intertwined processes of data collection and data analysis (i.e. no new themes and sub-categories emerged when analysing the last two interviews; Saunders *et al.*, 2018).

Gynaecologists informed 22 couples (10 Belgian and 12 Dutch couples) about the study during doctor–patient consultations (2015–2017). The researchers contacted 18 interested couples by telephone to detail the aim and organization of the interview and to (potentially) plan the interview (MacDougall and Fudge, 2001). Couples rather than individuals were recruited, but keen individuals whose partner was not willing or not able to participate were also accepted.

Data collection

The face-to-face interviews were conducted by two female interviewers, who were not involved in the fertility care of the interviewed couples. Couples could opt for being interviewed at home or at the clinic (van Teijlingen and Forrest, 2004). Before the start of the interview, couples filled out an informed consent form and a background questionnaire. As in other interviews on patients' perspective on care, the interviews started with an open-ended question about patients' experiences: 'What are your most positive and most negative experiences with being sent home for continuing to attempt natural conception?' (van Empel *et al.*, 2010; Dancet *et al.*, 2011). The subsequent open-ended question focussed more on unfulfilled needs by asking: 'In an ideal world, what could the clinic have offered you while continuing to attempt natural conception?'. Other than these two open-ended questions, the interviewers followed the storyline of the interviewees and asked probing questions based on a topic list (Supplementary File S1). The topic list was initially developed based on previous studies of subfertile patients continuing to attempt natural conception or going through medically assisted reproduction (Dancet *et al.*, 2010a, 2011, 2012; van den Boogaard *et al.*, 2011; Read *et al.*, 2014; Bokaie *et al.*, 2016; Zhuoran *et al.*, 2018). In between interviews, new topics were added to the topic list. The narratives of couples were, for example, followed up by asking in which format the requested additional advice or support could be offered or whether they would have appreciated sexual advice to deal with their experienced sexual challenges. In case couples did not bring up any sexual challenges themselves their need for sexual advice was explored. All interviews were digitally recorded (voice only) and transcribed verbatim.

Data analysis

Two researchers (F.D. and E.A.F.D.) subjected the interview transcripts to inductive content analysis (Pope and Mays, 1995; Graneheim and Lundman, 2004; Elo and Kyngas, 2008; Polit and Beck, 2008; Mortelmans, 2011). Content analysis allows finding prominent themes and categories, and patterns among them, in narrative data (Polit and Beck, 2008). An inductive approach allows moving from narratives of individuals towards a more generalizable categorization, in contrast with a deductive approach in which a predefined categorization matrix is retested on narratives (Graneheim and Lundman, 2004, Elo and Kyngas, 2008; Polit and Beck, 2008; Mortelmans, 2011). The two researchers first worked independently and then discussed any discrepancies in coding until consensus was met. In more detail, the researchers started by thoroughly reading each interview several times to acquire a sense of the whole (Graneheim and Lundman, 2004; Elo and Kyngas, 2008). Second, meaningful units of text, which provided an answer to the research question were selected (Graneheim and Lundman, 2004). Third, the meaningful units were grouped into (sub-)categories and overarching themes (Pope and Mays, 1995; Graneheim and Lundman, 2004). Fourth, each (sub-)category and theme were searched for in all interviews and all (sub-)categories and themes were compared until no new (sub-)categories or themes emerged (Graneheim and Lundman, 2004). Fifth, each (sub-)category and theme received a final 'code', which stayed as close as possible to the description of the participants (Elo and Kyngas, 2008). This analysis resulted in a coding tree including hierarchically organized and labelled overarching themes, categories and subcategories, all describing meaningful units of text. Sixth, the coding tree was checked against each interview to verify that it covered all data addressing the research question (Mortelmans, 2011). To enhance the credibility of our data analysis and the transferability of our findings, exemplifying interview quotations were included in our coding tree and throughout the description of our findings (Graneheim and Lundman, 2004; Polit and Beck, 2008).

Finally, we assessed whether this qualitative study on the real-life experiences of a condition and medical approach served to generate new findings on differences in experiences between subgroups of patients (Gameiro *et al.*, 2016), more specifically, Belgian versus Dutch patients and female versus male patients. Regarding potential inter-country differences, first, needs explicitly shared by at least three interviewees from one country and by none of the interviewees from the other country were identified. Second, these needs were appraised in the context of what was explicitly shared on related needs by interviewees of both countries. Regarding potential gender differences, needs on which at least one interviewed couple disagreed were appraised to find out whether they were explicitly confirmed by men and/or by women in other interviews.

Results

Participants

Twelve interviews were conducted based on gynaecologists informing 22 heterosexual couples about the study (participation rate: 12/22

among women and 10/22 among men). The 10 couples opting out from participation mainly referred to time constraints and only 2 couples said they were not interested in the topic. The interviews lasted 55–125 min and were conducted at home (n = 7/12) or at the clinic (n = 5/12). Inductive thematic saturation was reached by the 10th interview and was confirmed by the last two interviews. The background of the 22 interviewees, including 10 heterosexual couples and the 2 women taking part without their partner is described in Table I. The Dutch (n = 11) and Belgian (n = 11) interviewees were on average 33 years old. A minority of the interviewees (27%) had a Master's degree. At the time of the interview, the interviewees had tried to conceive for a median duration of 36 months (range 24–60) and had continued to attempt natural conception after the diagnostic fertility workup for a median duration of 8 months (range 3–18). All interviewees had timed intercourse, with agenda keeping, ovulation tests and/or temperature charts. At the time of the interview, 4 interviewees (2 couples) were pregnant (natural conception) and the 18 other interviewees had started medically assisted reproduction.

Table I Background of 22 interviewees, including 10 heterosexual couples and 2 women.

Characteristics		22 interviewees
Country of residence, n/N (%)	Belgium	11/22 (50%)
	The Netherlands	11/22 (50%)
Age (mean of women and men ± SD in years)		33 ± 5
Master's degree, n/N (%)		6/22 (27%)
Have children, n/N (%)		4/22 (17%)
Duration of subfertility (median; range in months)		36 (24–60)
Duration of expectant management (median; range in months)		8 (3–18)
Performed timed intercourse during expectant management, n/N (%)	Agenda	9//22 (41%)
	Ovulation tests	11/22 (50%)
	Temperature charts	11/22 (50%)
Were pregnant after natural conception at the time of the interview, n/N (%)		4/22 (17%)
Had started medically assisted reproduction at the time of the interview, n/N (%)		18/22 (45%)

The needs of subfertile couples continuing to attempt natural conception

Figure 1 outlines the six identified overall needs of subfertile couples continuing to attempt natural conception. Supplementary Table SI presents the coding tree, detailing for all (sub)categories per overall need, in how many interviews of both countries it was explicitly mentioned and providing exemplifying interview quotations. Quotations are identified by the country (B/NL), interview number (IV1-12) and gender (M, F) of the interviewee.

Need for expectant management to be embedded in the fertility clinic trajectory

Couples would appreciate being able to discuss the thorough nature of their unpleasant diagnosis of unexplained subfertility, their personal good natural conception prognosis and the duration of expectant management with their doctor. Couples had an urge for action, which increased over time and shared that having faith became more difficult as time passed, as exemplified by: '*I started off quite carefree actually. But when you are confronted with a lack of success after four months, your faith fades away*' [NL, IV2, F]. Couples suggested that planning the follow-up appointments after expectant management up front would be reassuring. Interestingly, couples noted that 'expectant management' is an inappropriate term as conception requires action from them.

Need for advice on sexual factors

Sexual challenges and advice needs were brought up by the interviewees in half of the interviews. In the other half, interviewees willingly shared their perspective after the interviewer brought up the topic. Couples had changed their sex life; they timed intercourse, increased intercourse frequency during the fertile window, placed a pillow under the woman's bottom during intercourse, raised the woman's legs in the air after intercourse and strived for the woman to orgasm after ejaculation. Some couples looked forward to starting fertility treatment because of the negative impact of trying to conceive naturally on their sexual pleasure. The interest of couples in sexual advice from fertility clinic staff had increased over the months of expectant management.

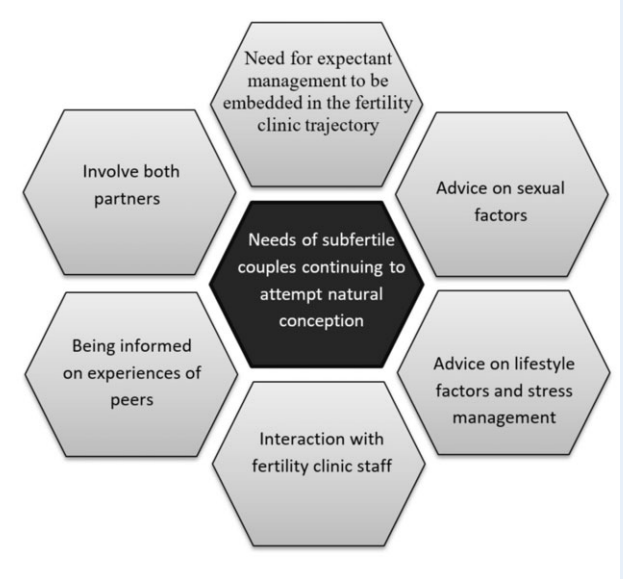

Figure 1. The six identified needs of couples continuing to attempt natural conception.

Regarding tone, couples would appreciate the sexual advice to be introduced as aiming to improve sexual pleasure and prevent subfertility-related sexual problems in order to increase their chance of pregnancy rather than being introduced as aiming to treat presumed sexual dysfunctions. Couples would like the sexual advice to be evidence-based and to be endorsed by fertility clinic staff while also being humoristic and non-committal as they dreaded a scholastic or patronizing tone. Interviewees considered it acceptable that the

intimacy of suggested exercises would increase over time as long as adherence to previous exercises was not tested.

Regarding content, couples would like five specific sexual advice needs to be covered. First, couples valued being informed that decreased sexual pleasure is common in couples dealing with subfertility. Second, couples needed fertility clinic staff to invalidate myths (e.g. on the need to raise their legs in the air after sex), as adapting their sexual behaviour based on myths decreased their sexual pleasure: '*I think that it [acting as you normally do, not adapting sexual positions] keeps your sex life more fun and exciting*' [N, IV11, M]. Third, couples attached importance to fertility clinic staff educating them on the fertile window while simultaneously informing them that timing causes distress and decreases sexual pleasure during the fertile window or even during the entire cycle: '*Because sometimes you can have like borderline rapes. When you're not in the mood, that you feel like you still have got to do it*' [B, IV8, M]. Whereas timing increased intercourse frequency during the fertile window, it decreased it outside of the fertile window. Couples were unsure whether being advised to increase intercourse frequency throughout their entire cycle would have affected their sexual pleasure and intercourse frequency differently than timing intercourse. Fourth, couples had tried to maintain sexual pleasure and would have appreciated advice on how to focus on pleasure rather than on getting pregnant. The couples did not agree whether advice on focussing on sexual pleasure should include (women-friendly) erotic content. Fifth, couples were interested in partner bonding exercises since the focus on getting pregnant also impacted their relationship.

Regarding format, couples valued concise and affordable sexual advice. All couples agreed that a (secured) website would be an appropriate platform for providing sexual advice: '*For some people, talking about that [sexuality] is, understandably, taboo. So if such a thing [sexual advice] would be on a website then you can read it in private*' [NL, IV9, F]. Couples disagreed on whether couple-to-sexologist or group sessions were interesting and appropriate for providing sexual advice. Other sexual advice formats suggested by a minority of couples were a folder and a postal tool-kit. Finally, couples would like textual advice to be supplemented with mixed media (i.e. drawings rather than photos, different types of videos): '*If it would be purely text based, it would bore me and I would be tempted to ignore it. If it would, in contrast, include movies and images it would be different*' [B, IV7, F].

Need for advice on lifestyle factors and stress management

Couples attached importance to tips on how to self-manage their lifestyle in order to possibly increase their chance of pregnancy. Surprisingly, even adopting non-evidence based lifestyle changes made couples feel in control: '*I was simultaneously thinking: that [camomile tea] does not work at all, and there is no harm in trying*' [B, IV5, F]. All couples had to some extent adapted their lifestyle by taking vitamins, reducing alcohol intake, stopping smoking, exercising and/or eating healthier. Couples had sought strategies for managing distress, including exercise, yoga, mindfulness or going to the spa: '*I try to exercise regularly, that helps me to relax. And sometimes I add some yoga or something*' [NL, IV9, F]. Some couples had turned to complementary and alternative medicine (i.e. osteopathy, acupuncture and/or herbs), hoping to feel in control and to increase their chance of pregnancy.

Need for interaction with fertility clinic staff

All couples would have appreciated interaction with fertility clinic staff. Couples, however, disagreed on whether they or the fertility clinic staff should initiate the interaction. Couples would like the fertility clinic staff member, or coach, interacting with them to be available and to have optimal communication and support skills. Couples shared that they would value the experience and multidisciplinary network of this potential coach rather than expecting the coach to have a specific educational background: '*Because it can, for example, be someone who is a sexologist, but it can also be a nurse who has already spoken to many people going through these types of trajectories*' [NL, IV4, F]. All but one couple would have like a fixed and known contact person and would have wanted the interaction to go via email: '*Email is just, we think it is, easily accessible*' [NL, IV9, M]. Couples disagreed about whether face-to-face interaction was interesting and a minority of couples suggested webcam interaction or offering a choice menu of interaction formats. Couples did not agree on the importance of a separate session for emotional support and of cycle monitoring at the clinic.

Need to be informed on experiences of peers

Couples shared that insight into common experiences of couples confronted with fertility problems would make them feel less lonely. Couples would value reading success stories '*I consciously tried to search for success stories to see that it is possible, to have faith*' [B, IV6, F]. Couples would have appreciated knowing whether dealing with unhelpful comments or pregnancies of family, friends and colleagues and deciding to whom to disclose their fertility problems was also a challenging experience for other couples. Some, but not all couples, would like to exchange experiences with peers: '*I think I would speak very freely in such a context*' [NL, IV11, M]. Some couples suggested face-to-face sessions and/or web-based formats, including a forum or chat sessions on a secured website, for voluntary interactions with peers. All couples agreed that interaction between peers would benefit from moderation by a fertility clinic staff member '*Well my experience is that a professional joining [during interaction between peers] never hurts*' [NL, IV10, F].

Need to involve both partners

One woman and two men explicitly stated that they valued fertility clinic staff involving both partners: '*If you know beforehand that it [educational programme] is meant for couples, men will more easily be convinced to take part*' [B, IV7, M]. Interviewees, however, also attached importance to the opportunity of partners to individually read information and to interact individually with staff. Within each couple, one partner, most commonly the woman (n = 10) but in some couples the man (n = 2), took up a more leading role regarding seeking self-management strategies and help.

Differences in needs between Belgian and Dutch patients

Six needs were explicitly mentioned by at least three interviewees from one country and by none from the other country. Four of them, nevertheless, did not seem to suggest inter-country difference, given perspectives shared on related needs. Dutch patients did seem to attach more importance to advice being concise, as this was explicitly shared by three Dutch interviewees and by none of the Belgian

interviewees. Dutch patients also seemed more likely to have changed their physical activity level during expectant management as this was explicitly shared by three Dutch interviewees and by none of the Belgian interviewees.

Difference in needs between male and female patients

At least one interviewed couple disagreed on nine specific needs (Supplementary Table SII). Nevertheless, no indication of a gender difference in perspective was found as at least one interviewed woman and one interviewed man explicitly shared their interest in these nine needs.

Discussion

Previous studies have examined the perspective of couples on starting expectant management (van den Boogaard, 2011, 2012), but to our knowledge, no study has explored the experiences and needs of couples during expectant management. Besides being thoroughly informed prior to the start of expectant management, couples would like fertility clinic staff to embed the period of continuing to attempt natural conception in the fertility clinic trajectory, for example by planning follow-up appointments up front. In addition, subfertile men and women value supportive clinic staff–patient interactions and advice on common experiences of peers and on managing their lifestyle, distress and subfertility-related sexual challenges whilst continuing to attempt natural conception.

Reflection on the findings

Previous qualitative studies had already reported on the negative impact of the 'duty' of attempting natural conception on subfertile couple's sexual functioning, which is aggravated further by timing intercourse (Jafarzadeh-Kenarsari *et al.*, 2015; Jones *et al.*, 2015; Zhuoran *et al.*, 2018). Timing intercourse proved not to increase natural pregnancy rates but rather increase distress levels (Manders *et al.*, 2015). Our qualitative study adds that subfertile couples are interested in sexual advice and exercises, other than timing intercourse, to try to manage this negative impact on their sexual health. Research from other fields showed that sexual advice can be expected to improve sexual desire, pleasure and/or satisfaction (Nathan and Joanning, 1985; Hurlbert *et al.*, 1993; Vural and Temel, 2009; Jones and McCabe, 2011; Barsky Reese *et al.*, 2014; Hucker and McCabe, 2015) and can even affect whether couples have intercourse (van Lankveld *et al.*, 2006). Sexual advice might deflect subfertile couples from the 'duty', and psychosexual education and communication exercises managed to increase the sexual satisfaction of subfertile couples (Vizheh *et al.*, 2013). The fact that both interviewed men and women were interested in sexual advice and exercises and wanted both partners to be involved is relevant. Partner participation increased the effectiveness of a sexual advice programme for female sexual dysfunction (Hurlbert *et al.*, 1993) and is expected to increase the adherence of subfertile couples to psychosocial interventions (Martins *et al.*, 2014; Luk and Loke, 2016; Best *et al.*, 2017).

It is important to note that the identified urge to feel in control makes couples continuing to attempt natural conception vulnerable for investing their financial means, efforts and time in non-evidence-based strategies. Adhering to myths in their sex life (e.g. lifting one's legs in the air after sex) might harm sexual functioning and vigilance is required for the safe use of complementary and alternative medicine (Weiss *et al.*, 2011; Clark *et al.*, 2013). Incorporating mindfulness exercises to help subfertile patients manage their distress seems interesting and is common for sexual advice programmes (Brotto *et al.*, 2008; Hucker and McCabe, 2015; Arora and Brotto, 2017).

Interestingly, the interviewed couples preferred the format of a web-based programme with digital interaction over face-to-face counselling and/or telephone interaction. This contrasts with the reported preference of patients going through medically assisted reproduction (Dancet *et al.*, 2011) and the fact that only professionals and not patients suggested to develop an informative website as a facilitator for implementing expectant management (van den Boogaard *et al.*, 2011, 2012). The newly identified interest of patients in a web-based programme could be due to the current study being conducted about a decade later than the former studies. This current study was conducted prior to the global coronavirus disease 2019 pandemic, which might have increased patients' interest in and openness for interacting digitally even further. This surprising interest in a web-based programme could also be partly due to the novel programme aiming to address the sensitive topic 'sexuality', as limited enthusiasm of fertility patients for couple-to-sexologist therapy sessions had previously been reported (Schmidt *et al.*, 2003).

Finally, this explorative interview study was not designed for examining country or gender differences in experiences and needs but it did generate new findings on inter-country differences. Interestingly, no new findings on gender differences could be generated. The two differences in interests between Dutch and Belgian patients could be examined further by a quantitative survey among Belgian and Dutch patients. The explicitly stated interest in concise information of three Dutch interviewees is surprising as a study with fertility patients from the Netherlands and four other European countries found that patients agreed that information should be plentiful and detailed (Dancet *et al.*, 2012). The greater interest of Dutch patients, as compared to Belgian patients, in changing one's physical activity level could be related to more stimulation of physical activity from health insurance companies by reimbursing gym memberships besides cultural differences.

Strengths and limitations

This study relied on several strategies to increase the three aspects of trustworthiness of qualitative studies (Graneheim and Lundman, 2004). The credibility of the study was safeguarded by recruiting participants differing in duration of having continued to attempt natural conception and differing in whether they had conceived or not (Graneheim and Lundman, 2004). To enable credible, heart-to-heart discussions on the sensitive topics of sex and subfertility, we opted for interviewers who were not involved in the fertility care of the participants, a couple-based rather than group-based interview format, and the possibility for couples to be interviewed in their own homes (van Teijlingen and Forrest, 2004). Researcher triangulation, including a researcher experienced with qualitative analysis (E.A.F.D.) (Dancet *et al.*, 2010b, 2011, 2012; Hendriks *et al.*, 2014; de Groot *et al.*, 2016) helped to gain a more credible and deeper analysis of the data

(Graneheim and Lundman, 2004; Tong *et al.*, 2007). The dependability of the study was safeguarded by always using the same two open-ended questions and an updated topic list and by regular discussions among the researchers during the intertwined processes of data collection and analysis (Graneheim and Lundman, 2004; Thomas and Magilvy, 2011). The transferability of the findings was enhanced by continuing data collection until inductive thematic saturation occurred and by including participants from different countries (i.e. health care systems) and clinics (Graneheim and Lundman, 2004). To allow the reader to judge the transferability of the findings to his/her own setting, the characteristics of the interviewees were described in detail, and interview quotations were provided.

Three limitations of this study should be noted. First, selection bias may have occurred as we only included subfertile couples turning to a fertility clinic and feeling comfortable enough to share their experiences (Sica, 2006). Second, recall bias is inherent to interviewing participants retrospectively (Sica, 2006). We, nevertheless, restricted the duration between having continued to attempt natural conception and the interview to 1 year. Third, the couple-based format is likely to have prevented interviewees from sharing certain feelings. However, it did allow reporting on experiences shared by couples and enabled couples to reconstruct their memories together (Taylor and de Vocht, 2011).

Implications for clinical practice and research

The insights from this qualitative study in the experiences and needs of subfertile couples continuing to attempt natural conception were taken into account in the development of the web-based Pleasure&Pregnancy-programme by our group (Dreischor *et al.*, 2020). Given the diversity of the identified needs of couples, the Pleasure&Pregnancy-programme is a complex intervention consisting of a combination of multiple components (Craig *et al.*, 2006; Aarts *et al.*, 2012). The web-based Pleasure&Pregnancy-programme includes sexual advice and sensate focus, communication and mindfulness exercises, to meet the identified need of couples for sexual advice and feeling in control. To our knowledge, previous web-based sexual education programmes were not suitable for couples continuing to attempt natural conception, as they were developed for couples in which at least one partner has a sexual problem (Jones and McCabe, 2011; Schover *et al.*, 2012; Hucker and McCabe, 2015). Our group is currently evaluating the effect of this novel Pleasure&Pregnancy-programme on sexual functioning and ongoing pregnancy rates in a randomized controlled trial (Dancet *et al.*, 2019; trial registration number: NTR5709). It would be interesting to study the user experiences of couples with this novel web-based programme, in line with research from other fields (Hucker and McCabe, 2014).

Supplementary data

Supplementary data are available at *Human Reproduction Open* online.

Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

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Conflict of interest

None to declare.

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