The experience of women using a self-help coping intervention for oocyte retrieval(CIFOR): A qualitative study

Student:	Ida Bremer - Ophorst
Student number:	5682398
Master Program:	Clinical Health Science, Nurse Science Utrecht University

Version:	Final
Reference style:	Vancouver superscript
Date:	29th of June 2018
Supervisor:	Dr. H.D.L. Ockhuijsen
Course Lecturer:	Dr. J. de Man
Assessor:	Dr. I.E. Poslawsky - Uitewaal
Internship setting:	UMC Utrecht, Fertility clinic
Journal for publication:	Journal of Family Planning and Reproduction Health Care
Reporting criteria:	Coreq
Number of words:	3799
Abstract:	300
Dutch abstract:	299

Title: The experience of women using a self-help coping intervention for oocyte retrieval (CIFOR): a qualitative study

Abstract

Background: A treatment for infertility is in vitro fertilisation (IVF). The most painful part of in vitro fertilisation is the oocyte retrieval. The coping intervention for oocyte retrieval (CIFOR) was developed to deal with the stress and pain during an oocyte retrieval. CIFOR can give these women control over minor but important aspects of the oocyte retrieval procedure. A booklet has been produced with information about oocyte retrieval and potentially useful coping strategies to develop a personal coping plan for oocyte retrieval. This coping intervention requires further development. By using the Medical Research Counsel's (MRC) framework one can establish whether the intervention is feasible for Dutch women who undergo an oocyte retrieval.

Aim: To explore the experience of women who underwent an oocyte retrieval while using CIFOR.

Design: A generic qualitative study.

Method: Fifteen women who underwent a first, second, third or fourth IVF treatment participated in semi-structured interviews at an infertility clinic in the Netherlands. Background information about the IVF treatment was collected from medical files. Data was analysed using the Qualitative Analysis Guide of Leuven. To process the data MAXQDA 10 was used.

Results: This study identified five themes which are important in the experiences of women using CIFOR: 1) overall experience of CIFOR; 2) feasibility; 3) the need for information; 4) sense of control; and 5) partner's involvement.

Conclusion: This study showed that women tend to have a positive experience using CIFOR; and while it is valuable for the first oocyte retrieval, it is less useful for the second, third or fourth retrieval.

Implication of key findings: Future research will involve performing a pilot study according to the MRC framework with outcomes based on the patient's sense of control, ability to cope, coping strategies, anxiety and pain.

Keywords: In vitro fertilisation, oocyte retrieval, pain, anxiety, coping.

Titel: De ervaringen van vrouwen die een zelfhulp coping interventie voor een eicel punctie gebruiken

Samenvatting

Introductie: Een behandeling voor onvruchtbaarheid is In vitro fertilisatie (IVF). Het meest pijnlijke onderdeel van IVF is de eicelpunctie. De coping interventie voor een eicel punctie (CIFOR) is speciaal ontwikkeld om stress en pijn te hanteren tijdens een eicel punctie. CIFOR geeft vrouwen controle over kleine maar belangrijke aspecten van de eicel punctie. CIFOR bestaat uit een informatie brochure over de eicel punctie procedure en uit coping strategieën die mogelijk gebruikt kunnen worden door vrouwen. Deze zijn verwerkt in een persoonlijk coping plan. Deze coping interventie moet verder worden ontwikkeld. Door elementen van het Medical Research Counsel model (MRC) te gebruiken kan worden onderzocht of CIFOR toepasbaar is voor de Nederlands vrouw die een eicel punctie ondergaat.

Doel: Het exploreren van de ervaringen van vrouwen die een eicelpunctie ondergaan en CIFOR gebruiken.

Design: Een generieke kwalitatieve studie.

Methode: Vijftien vrouwen die een eerste, tweede, derde of vierde IVF behandelingen ondergaan hebben deelgenomen aan semi gestructureerde diepte interviews in een fertiliteit kliniek in Nederland. Achtergrond informatie met betrekking tot de IVF behandeling is verzameld uit patiënt dossiers. Gegevens zijn geanalyseerd me behulp van de Kwalitatieve Analyse Gids van Leuven. MAXQDA 10 is gebruikt om de gegevens te verwerken.

Resultaten: Deze studie heeft vijf thema's geïdentificeerd die belangrijk zijn voor vrouwen die een eicelpunctie ondergaan en CIFOR hebben gebruikt. 1)Algemene ervaring met CIFOR; 2)Haalbaarheid; 3)Informatie behoefte; 4)Gevoel van controle; 5)Betrokkenheid partner

Conclusie: Deze studie heeft laten zien dat vrouwen het gebruik van CIFOR positief hebben ervaren. Het lijkt van toegevoegde waarde voor een eerste eicelpunctie maar minder voor een tweede, derde of vierde eicelpunctie.

Aanbeveling: Toekomstig onderzoek zal gericht zijn op het uitvoeren van een pilot onderzoek conform het MRC model met uitkomstmaten zoals, controle, coping, coping strategieën, angst en pijn.

Kernwoorden: In vitro fertilisatie, eicel punctie, pijn, angst, coping.

Introduction

In Europe it is estimated that one or two women out of 100 between the ages of 20 and 44 cannot become pregnant with their first child.[1]

One treatment for infertility is in vitro fertilisation also called test tube fertilisation. It is a reproduction technique whereby one or more oocytes are fertilized with sperm cells outside the body. The resulting embryo or embryos are then placed into the uterus.[2, 3] The most painful part of IVF is the oocyte retrieval. A cohort study of women receiving IVF or Intracytoplasmic sperm injection shows that 6.9% of 743 women found it to be very or extremely painful.[4] Many women reported the oocyte retrieval during an IVF treatment as a stressful and emotionally difficult experience.[5] Several psychological factors such as anxiety, side effects of hormonal treatment, previous negative experiences with gynaecological examinations and perceived lack of control may be related to pain.[4] Anxiety, for example, has been described as being associated with a lower pain threshold, and the feeling of being in control associated with the ability to cope with pain more efficiently.[6]

Several studies have been done relating to different methods of pain relief during oocyte retrieval such as conscious sedation, analgesia,[7,8] electro acupuncture, and paracervical block.[7] They concluded that no method was superior to the others, and no consensus for optimal pain relief during oocyte retrieval was found. It was advised that pain relief should be individualised because non-physical factors, such as motivation, the ability to cope and the medical team's support, likely influence the experience of pain.[7]

As far as known, no published research on coping and psychological interventions for oocyte retrieval is existent. In one relevant unpublished study from Canada, a psychologist developed an intervention which was based on a mixed-method study[9] to help patients cope with oocyte retrieval, the coping intervention for oocyte retrieval (CIFOR). Subsequently a pilot study was done to examine the effect of CIFOR on 96 anxious women undergoing their first oocyte retrieval. It was concluded that the given information regarding possible outcomes, such as the amount of oocytes, the level of pain, and quality versus quantity of the oocytes, was beneficial and allowed them to cope more. Women experienced the given information as very helpful. CIFOR is based on the stress and coping strategies of Lazarus and Folkman.[10] They define coping as a constant changing of cognitive and behavioural efforts to manage specific situations which are a burden for a person. Patients have limited control during oocyte retrieval because of restrictions on movement, the unknown length of the procedure and uncertain procedural outcomes. It was expected that if patients were given control over minor but seemingly important aspects of the oocyte retrieval, they would cope better with the procedure.

In the Netherlands CIFOR never been used, therefore, it is important to gain an understanding of the experience of Dutch women who have undergone an oocyte retrieval using this coping intervention. This a complex process whereby the elements regarding the MRC, such as the development and feasibility of the coping intervention must carefully considered.[11] This coping intervention require further modelling and development before it can be implemented in the future and before determining whether such intervention is feasible and useable for Dutch women who undergo an oocyte retrieval.

Aim

The aim of this study is to explore the experiences of women who underwent an oocyte retrieval while using CIFOR.

Method

Design

The primary purpose of this research was to explore how women who underwent an oocyte retrieval experience using a coping intervention. A generic qualitative research design was used.[11] It focused on how people interpret their experiences and what meaning they attribute to their experiences.[12] [13] This study was conducted between February and June 2018 at a fertility clinic in the Netherlands.

Sample

To gain insight into different perspectives and identification and to obtain a wide selection of informative cases,[14] a purposeful sample of women with maximum variation was selected by the researcher from the medical files of a fertility clinic at the University Medical Centre. The sample included women who were undergoing their first, second, third or fourth IVF treatment, differed in age, and had varying quantity of follicles and children. Women were excluded if they did not speak Dutch, or if they underwent an oocyte retrieval for social and medical freezing and donation. Participation in this study could be viewed as a burden by women who receiving treatment which may leave them infertile. Women who volunteer to donate oocytes may have a different experience because less depends on this procedure for them personally. This may influence the results of the research.

Intervention

A booklet has been produced for CIFOR which provides information about oocyte retrieval and potentially useful coping strategies (Fig.1). Patients are encouraged to read this and develop their own personal coping plan for oocyte retrieval (Fig. 2). This personal coping

plan consists of four main categories: sense of control, distractions, self-talk and environment.

Data collection

A member of the treatment team contacted the selected women by telephone. Women who wanted to participate received verbal and written information concerning the coping intervention from the researcher. In the subsequent days leading up to the oocyte retrieval, the women could read the information and fill out the personal coping plan. On the day of the oocyte retrieval, the plan was handed to the attending physician and nurse who ensured that the coping plan was executed correctly during the procedure. In total, 15 women agreed to participate in the study. The size of the sample was based on data saturation. This meant that data saturation was reached when there was sufficient information to replicate the study, no new information was obtained, and coding was no longer feasible.[15] Semi-structured interviews were performed 15 minutes after the oocyte retrieval procedure, before the women received information about the amount of oocytes collected and semen quality. Therefore, the interviews were not influenced by the patients' positive or negative reactions to this information. Interviews have been digitally recorded and a full transcription has been made. A pre-prepared interview guide was created and consisted of three main topics: experience of oocyte retrieval, experience of using CIFOR and experiences of physician or nurse support. All interviews started with the open-ended question "Describe your experience of the oocyte retrieval procedure" This was followed by a question asking how they experienced the use of CIFOR, including the following questions: 'What do you think of the information brochure, coping strategies and coping plan, and how did you use these before and during the oocyte retrieval?' (Fig. 3). A visual analogue scale (VAS) was used to determine pain and anxiety rates by the researcher.[16] Information about characteristics including age, diagnosis, number of children, quantity of follicles and education was collected from medical files and from semi-structured interviews.

Data analysis

The interviews were transcribed verbatim by the primary researcher and analysed using the Qualitative Analysis Guide of Leuven (QUAGOL) (Fig. 4).[17] This guide consists of 10 stages covering the preparation of the coding process and the actual coding process for which a qualitative software programme (MAXQDA 10) was used. The transcriptions were read and coded by the primary researcher and supervisor. Data collection and analysis is a cyclic process in which there is constant forward and backward movement between collection and analysis. As interviews progressed more concepts were identified. Our focus was on gaining in-depth information from women regarding their experience of the oocyte retrieval while

using CIFOR. To gain insight into the data, when the researcher and supervisor could not reach an agreement, essential and common concepts were discussed in the research group. To guarantee validity, short reports and observational memos were written regarding the interviewees and the contexts of each interview so that the researcher could comprehend the interview in its particular context.[17] The credibility is taken into account by making the findings compatible with the perceptions of the participants.[18] Two researchers were involved to confirm findings from two different perspectives and to reach conclusions.

Ethical consideration

The research proposal has been submitted to the Medical Research Ethical Committee of the University Medical Centre of Utrecht (UMCU) and is not subject to the Medical Research Involving Human Subjects Act. A consent form was signed by all research participants. Confidentiality of data and records was maintained by using numbers and fictional names. No one besides the research group has had access to the data. Data has been coded and stored on a secure computer; individual women are not able to be identified.

Results

Recruitment and socio-demographic characteristics

Twenty-five women were approached for this study between February and May 2018; 15 wanted to participate, gave their consent, and were interviewed. The interviews lasted between 26 and 39 minutes. All partners were present at the interviews. Data saturation was reached after 15 interviews. Some women did not participate due to the following reasons: they did not speak Dutch; they were experiencing emotional, relationship problems; they were not motivated; no added value; too spiritual intervention; or the treatment was postponed due to a lack of follicles.

The socio-demographic characteristics of the women who participated showed that maximum variation was achieved. This diversity is relevant to understanding the experiences of different women. The participants were between 20 and 41 years old (M = 33.0, SD = 5.73) (Table 1). Four women were undergoing their first IVF treatment, four women their second, six their third, and one her fourth. Seven women opted for IVF treatment because of pre-implanted genetic diagnosis (PGD), one had endometriosis, one had a tuba uterine anomaly, and partners of five of the women had azoospermia. The other women had unknown fertility problems. Six women had already had one child using IVF treatment. The level of education ranged from high school to university (Table 1).

Five themes emerged from the interviews: overall experience of CIFOR, feasibility, the need for information, sense of control, and partner's involvement. Each of these themes will be described and substantiated by quotes from the participants.(Table 2)

Theme 1 – Overall experience of CIFOR

This study found that all women were positive about using CIFOR. Most of the women who underwent an oocyte retrieval for the second, third or fourth time already had found a way to cope with the procedure and suggested that CIFOR was more valuable when preparing for the first oocyte retrieval. The women's experiences of pain and stress varied.

Overall, 12 of the 15 women who underwent an oocyte retrieval got through the oocyte retrieval well. They experienced less pain and were less anxious than in earlier treatments; for them the first puncture was not too painful, but three women underestimated how painful it would be.

Quote 1

Despite pain medication, there were various pain scores reported. On the pain VAS ranging from zero to ten, scores for local anaesthesia of the vagina were between one and seven, ovary puncture between one and nine, and suction of follicles between zero and seven. Most of the women found the follicle suction more painful than local anaesthesia. Local medication as well as a systemic anaesthetic injection like morphine were given to 12 women (Table 1). Eleven women gave ratings between two and nine indicating their anxiety using the VAS. Four women said they were relaxed and could not give a score for anxiety.

Quote 2

Theme 2 – Feasibility

All women were positive about CIFOR's feasibility. A majority were able to use CIFOR while preparing for and during the oocyte retrieval. Nurses discussed the coping plan with the women before the oocyte retrieval.

Quote 3, 4

There were three women who suggested that it might be better to link the information from the brochure to the coping plan more clearly.

Quote 5

The interval between when the women were given detailed verbal information and their oocyte retrieval process ranged from two to nine days (M = 6.5 SD = 2.45). This was enough time for the women to read and fill out the coping plan. The coping plan was filled out by 13

women at home. They brought this to the hospital, and 12 of them discussed it with the nurse present for the puncture.

Quotes 6

Only ones, the nurse did not discuss the plan with the participant, because the nurse was not aware of the study. One woman forgot to bring her coping plan, but told the nurse how she wanted to proceed. Another participant filled out the plan after the puncture, but had discussed her preferences with the nurse. One woman and her partner reported that filling out this coping plan caused them some choice of stress .

Quote 7

Others, especially women who were having their first oocyte retrieval, reported that filling out the coping plan was difficult because it is hard to determine which coping strategies one wants to use and which are feasible during the procedure.

Quote 8

Theme 3 – Need for information

This study found that the majority of the women were positive about the informative brochure and coping plan. The brochure was comprehensive and clear. Detailed information about the procedure was very helpful to read before the first oocyte retrieval. A small number of women became stressed as a result of the information.

Quote 9

Three out of four women who underwent their first IVF treatment found that using CIFOR was helpful in preparation. Some women read the brochure once or twice; one read it more frequently, up to 20 times. One had not realised what the puncture involved and even with the information she was not prepared; it was more painful than expected.

Quote 10

However, a few women were upset by the detailed information and thought the images were too confronting. While the information increased their anxiety about the puncture, for most of the women it reduced their stress because they knew what to expect.

Quote 11,12, 13

Theme 4 – Sense of control

The use of CIFOR gave women a sense of control, not only over the oocyte retrieval, but also over which coping strategies suited them and should be used. There was a variation in

the chosen coping strategies (Table 3). The majority of the women reported that the chosen coping strategies were the same as those used in daily life. Women did not choose new strategies.

Quote 14, 15

The women were aware of what they themselves could do when preparing for an oocyte retrieval. All coping strategies which were described gave women the realization that they had a choice whether or not to use them; this choice provided the women with a sense of control over the situation.

Quote 16

In total, 12 women indicated that they wanted to know when there might be pain during the puncture. They also wanted to look at the monitor to see what the physician was doing and when the suction of follicles started.

Quote 17, 18

In this study we found that seven of the women discussed whether they or the doctor should decide when to start the procedure. They found it difficult to choose when to start and thought the doctor should be in charge.

Quote 19

Theme 5 – Partner's involvement

Partners took a passive role in using CIFOR. For them, it was important to 'be there' to support their wives during the procedure. The brochure went unread by 13 partners either due to a lack of time or a lack of interest.

Quote 20, 21

However, all the partners had discussed the coping plan and strategies with their wives to varying degrees and were prepared to do what suited the women.

Quote 22

Discussion

This study has focussed on how women experience using CIFOR. Five themes have been uncovered: the overall experience of CIFOR, feasibility, the need for information, sense of control and partner's involvement.

The overall experience of CIFOR was positive. While the participants reported varying amounts of pain and anxiety concerning the oocyte retrieval, in general the experience was less painful than anticipated. Gerjevall's[19] study confirmed that most women tolerate pain well during the oocyte retrieval, but a small group experienced high levels of pain. It is unclear if CIFOR reduced pain and anxiety; therefore, future research into the effect of CIFOR on pain and anxiety is recommended.

The second theme is feasibility of CIFOR. This study showed that women find CIFOR to be feasible. Bowen said the feasibility of an intervention is based on whether it is appropriate for further testing.[20] This study has explored the demand for and the practicality of using CIFOR. According to the results, in general CIFOR is practical and easy to use; overall the participants experienced a positive effect. Women were interested and intended to use CIFOR when preparing for an oocyte retrieval. It was not considered a burden to complete the coping plan and use the coping strategies. Furthermore, it is in line with the proceedings of nurses and physicians which seeks to prepare and support women. A point of interest is that both women and partners needed time to read the brochure, and they suggested linking the information from the brochure in a better way to the coping plan.

This study has also showed that different patients require different amounts of information. Most women wanted information, but some found the information too detailed and became stressed. Little is known about fertility treatment and the need for information, but a study of Miller et al.[21] has confirmed that different people require varied information. She identified two psychological coping styles for dealing with cancer and other threats: monitoring and blunting. Monitors are concerned about risks regard to a health threat and attend to threatening information and blunters avoid threatening information. This study has showed that in general giving more information to monitors and less information to blunters is rational. A randomized control study about effects of an information brochure on undergoing a gastrointestinal endoscopy for the first time showed reduced anxiety by those who were high monitors.[22] Therefore, monitoring may be a strategy for coping with health threats or oocyte retrieval when individuals are positive about the outcome, but it can also increase anxiety. Another study[23] concluded that giving information about pain before IVF treatment might reduce women's anxiety about the level of pain they could expect. Professionals should evaluate each individual's need for information. As seen from the coping and stress model of Lazarus and Folkman,[24] information must to be tailored to the patient's own coping style.

Another theme that has emerged involves control. This study has showed that women have different preferences when it comes to control. Coping with a situation involves attempting to

control it by modifying the environment, changing the situation, or managing behaviour and emotions.[10] Coping intervention for oocyte retrieval is based on the stress and coping strategy of Lazarus and Folkman.[24] These experiences of control can be divided into objective and subjective control. Objective control refers to the actual controllability of outcomes. Subjective control refers to the perceived control or to the estimations of control available.[24] Women have limited control during the oocyte retrieval. By using CIFOR women were more aware of their opportunities and possible choices of different coping strategies, which allowed them to gain a sense of control during the process. In most cases the women chose coping strategies that were familiar to their daily lives. In the future, professionals could encourage and teach women to use new coping strategies as well.

Partner involvement is the last important theme. The partners were largely concerned with 'being there'. Most did not play an active role in using CIFOR. They thought it more applicable to the women undergoing the procedure. Some of the partners were not present during the explanation of the study. This could have influenced their involvement. Men experienced the IVF procedure in a different way. A study by Throsby[25] has showed that many men characterize their own approach to IVF as scientific. It is interesting that although the men in this study indicated a strong interest in technology, they were only passively involved in the process. She confirmed in her study that partners were largely interested in being present, doing what the women wanted, and providing emotional support. Similarly this research project; most partners did not feel the need to read the provided information, but they did want to be there for their partner and support them in their preferred way. To increase partner involvement, more information about CIFOR should be supplied. Playing a passive role in CIFOR does not say anything about how they experienced the whole IVF treatment together. Studies have shown that infertile couples endure the difficulty of infertility by sharing their thoughts and feelings and supporting each other.[26]

The overarching goal of using CIFOR should be to offer women who undergo an oocyte retrieval a tool that allows them to experience a sense of control by using appropriate coping strategies. Future research will involve performing a pilot study according to the MRC framework[11] with outcomes based on the patient's sense of control, ability to cope, and coping strategies. The important matter of whether CIFOR can reduce anxiety and pain will also be examined.

The strength of this study is its use of maximum variations. Because of this diversity of the participating women, CIFOR can be widely used and the study provided different perspectives. Conducting in-depth interviews allowed for a deeper understanding of the participants' experiences. Holding an interview directly after the oocyte retrieval was an

advantage because the quantity of the oocytes and quality of sperm were unknown; therefore, the interview was not influenced by emotions. To guarantee validity and trustworthiness, two researchers were involved in the coding and the discussion of concepts and conclusions, and short interview reports were written concerning the contextual factors.

Some limitations need to be taken into account. Findings from qualitative studies such as this are not generalizable because of the small numbers of participating women and specific individual cases.[18] However, the results gave a reasonable reflection of the experiences. Another limitation is that although women were willing to participate, IVF treatment is an emotional procedure, and therefore in some cases participating in the study was viewed as an added burden. Some women experienced pain during the interviews. Moreover, some felt anxious about the results of the retrieved oocytes and the quality of the sperm. This could have influenced the interview, because the couples were distracted and tense. Coping intervention for oocyte retrieval was not always optimally used. To improve use and involvement of partners there should be more attention paid to explaining how to use CIFOR.

This study has showed that women had positive experiences using CIFOR and felt it was valuable during a first oocyte retrieval but less useful during a second, third, or fourth retrieval. This type of coping intervention is feasible in daily practice but practical adjustments must be made.

Reference list

1. World Health Organization. Global prevalence of infertility, infecundity and childlessness [Internet]. Sexual and Reproductive Health. 2012. Available from: http://www.who.int/reproductivehealth/topics/infertility/burden/en/

2. La A, Diaz D. In Vitro Fertilization [Internet]. july 2017. 1978. Available from: http://americanpregnancy.org/infertility/in-vitro-fertilization/

3. Barbieri E, Kashyap S, Chung PH. Infertility and In Vitro Fertilization [Internet]. Principles of Gender-Specific Medicine. 2010. p. 381–99. Available from: https://www.webmd.com/infertility-and-reproduction/guide/in-vitro-fertilization#2

4. Frederiksen Y, Mehlsen MY, Matthiesen SMS, Ingerslev HJ, Frederiksen Y, Mehlsen MY, et al. Predictors of pain during oocyte retrieval. 2017;8942(June):20–9.

5. Boivin J, Ph D. Stress level across stages of in vitro fertilization in subsequently pregnant and nonpregnant women * t. Fertil Steril [Internet]. 1995;64(4):802–10. Available from: http://dx.doi.org/10.1016/S0015-0282(16)57858-3

6. Gejervall A, Anna ES, Kia C, Bergh C. Pain aspects in oocyte aspiration for IVF. 2007;14(2).

7. Stener-victorin E. The pain-relieving effect of electro-acupuncture and conventional medical analgesic methods during oocyte retrieval : a systematic review of randomized controlled trials. 2005;20(2):339–49.

8. Kwan I, Bhattacharya S, Knox F, Mcneil A. Pain relief for women undergoing oocyte retrieval for assisted reproduction (Review). 2013;(1).

9. Christopher Newton. Assisting patients to manage Oocyte retrieval. In: Presentation American Society for reproductive Medicine Post graduate Program Denver. 2010.

10. Lazarus RS, Folkman S. Appraisal, and Coping. springer publishing company; 1984.

11. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions : The new Medical Research Council guidance §. Int J Nurs Stud [Internet]. 2013;50(5):587–92. Available from: http://dx.doi.org/10.1016/j.ijnurstu.2012.09.010

12. Kahlke RM. Generic Qualitative Approaches: Pitfalls and Benefits of Methodological Mixology. Int J Qual Methods [Internet]. 2014;13(1):37–52. Available from: http://journals.sagepub.com/doi/10.1177/160940691401300119

13. Merriam Sharan B. Qualitative research, a guide to design and implementation. Vol.

second edi. 2009.

14. Palinkas LA, Horwitz SM, Green CA, Wisdom JP, Duan N, Hoagwood K. Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. Adm Policy Ment Heal. 2015;42(5):2–4.

15. Fusch PI, Ness LR. Are We There Yet ? Data Saturation in Qualitative Research. 2015;20(9):1408–16.

16. Williamson A, Hoggart B. Pain: a review of three commonly used pain rating scales. J Clin Nurs. 2005;14(7):798–804.

17. Dierckx de Casterle B, Gastmans C, Bryon E, Denier Y. QUAGOL: A guide for qualitative data analysis. Int J Nurs Stud. 2012;49(3):360–71.

18. Holloway, Immy and Wheeler S. Qualitative Research in Nursing and Healthcare. 3th ed. Blackwell; 2010. 133 p.

19. Gejervalp A, Anna ES, Kia C, Bergh C. Pain aspects in oocyte aspiration for IVF. 2007;14(2).

20. Bowen DJ, Kreuter M, Spring B, Linnan L, Weiner D, Bakken S, et al. NIH Public Access. Am J Prev Med. 2010;36(5):452–7.

21. Miller SM. Monitoring versus blunting styles of coping with cancer influence the information patients want and need about their disease. Implications for cancer screening and management. Cancer [Internet]. 1995;76(2):167–77. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8625088

22. van Zuuren FJ, Grypdonck M, Crevits E, Walle C Vande, Defloor T. The effect of an information brochure on patients undergoing gastrointestinal endoscopy: A randomized controlled study. Patient Educ Couns. 2006;64(1–3):173–82.

23. Gejervall A. Women ' s experience of pain and pain relief in assisted reproductive technology. 2008.

24. Susan Folkman. The Oxford handbook of Stress, Health, and Coping. Nathan Peter.E, editor. Oxford Library of Psychology; 2011.

25. Throsby K, Gill R. "It's Different for Men." Men Masc [Internet]. 2004;6(4):330–48. Available from: http://journals.sagepub.com/doi/10.1177/1097184X03260958

26. Ying LY, Wu LH, Loke AY. The experience of Chinese couples undergoing in vitro fertilization treatment: Perception of the treatment process and partner support. PLoS

One. 2015;10(10):1–18.

1) A booklet with detailed information about the procedure,
    a. Procedural information
        - Step by step description of procedures
    b. Pain related information
        - Sensory: description of physical sensations
        - Evaluative: description of pain intensity ratings
    c. Outcome information
        - Average number of eggs retrieved (7-9)
        - 98% of women: at least one egg retrieved
        - Quality/maturity not quantity important

2) Information about different coping strategies to be used during oocyte retrieval
    - Progressive muscle relaxation(pelvic area and legs)
    - Deep breathing combined with counting and mental calming
    - White knuckling
    - Distraction techniques(positive imagery)
    - Distraction/affiliation(conversation with partner or nurse)
    - Active participation(watch monitor, initiate OR, signal breaks)
    - Positive reappraisal, positive affirmations
    - Partner's behaviour

3) Personal coping plan for oocyte retrieval

Fig. 1. Coping Intervention for Oocyte Retrieval (CIFOR)

Sense of Control			Distraction		
	Yes	**No**		**Yes**	**No**
I say when I am ready to start	❑	❑	Activities are practised at home	❑	❑
I ask for breaks during the puncture	❑	❑	Breathing exercise	❑	❑
			Relaxation exercise	❑	❑
I want to be told when to expect discomfort	❑	❑	White knuckling	❑	❑
I want to watch the monitor: the nurse explains what's there	❑	❑	Focus on picture or object in the room	❑	❑
			Talk about something positive	❑	❑
			Visualize a relaxing place	❑	❑
Self- Talk			**Environment**		
	Yes	**No**		**Yes**	**No**
Positive reminders about	❑	❑	Temperature (Blanket)	❑	❑
Procedure	❑	❑	Lighting	❑	❑
Outcome	❑	❑	Music	❑	❑

Fig. 2. Personal coping plan for women who undergo an oocyte retrieval

Time of Interview:

Date:

Location:

Interviewer:

Interviewee:

Short report of interview context:

Topics:

- Experience of oocyte retrieval
- Experience of using CIFOR
- Experiences support of doctor/nurse

Questions:

- Can you tell me how you experienced the oocyte retrieval?
  - Emotions
  - Procedure
  - Environment
  - Pain (Visual Analogic Scale)
  - Anxiety (Visual Analogic Scale)

  How did you prepare yourself on this oocyte retrieval?
- What was your experience by using the:
  - Booklet
  - coping strategies
  - coping plan

  Useful information (procedure, pain, coping strategies), User friendly, Missing information.
- Which coping strategies did you use ?
  - What effect did the used coping strategies have before and during the oocyte retrieval?

- Did you use the coping plan and how?
  - What was the effect of using the coping plan?

- Can you give advantages and/or disadvantages by using the:
  - Booklet
  - coping strategies
  - coping plan

- Do you have additions to improve this intervention?

- How did you experience the support of the nurse and physician during the oocyte retrieval?
  - Coping strategies
  - Coping plan

- How did you experience the information from the nurse about the intervention before oocyte retrieval?

- Was your partner involved by using this intervention and how could he support you during the oocyte retrieval?

- Do you think this intervention helped you reduces pain and anxiety for this oocyte retrieval procedure?
  - If Yes, Why?
  - If No, Why not?

Fig. 3. Interview guide

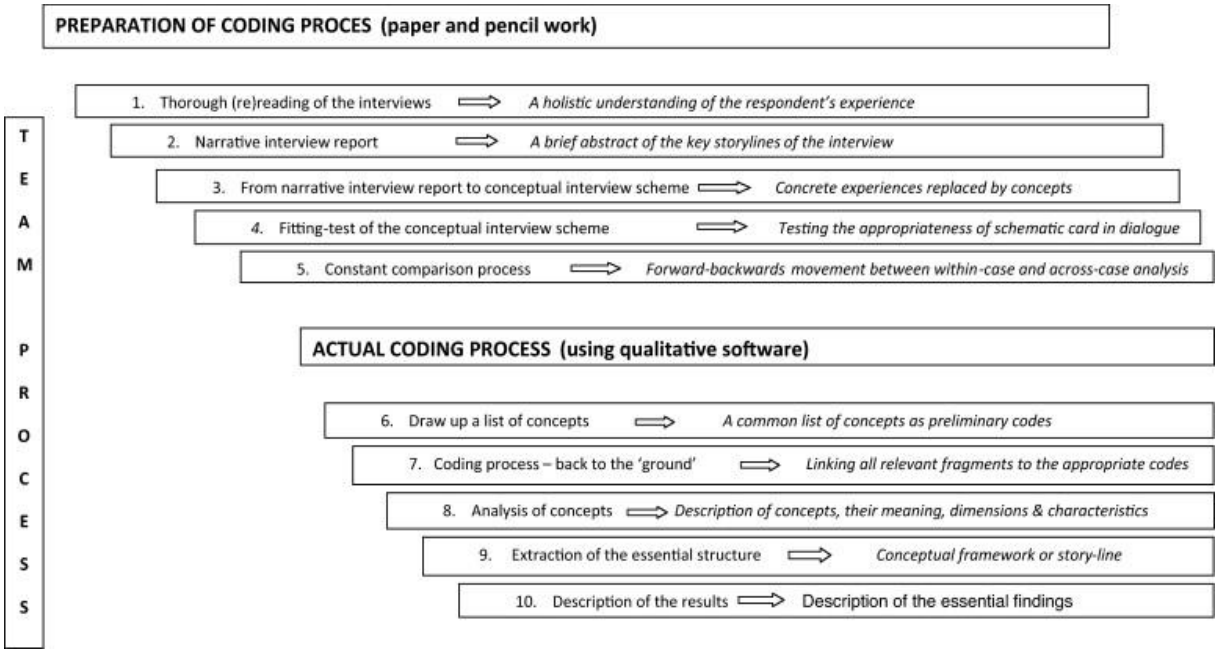

Fig. 4. Qualitative Analysis Guide of Leuven

Table 1

Socio Demographic Characteristics of participating women

Participant*	Age	Children	Diagnosis	No. of IVF treatments	Number of follicles	Anaesthesia	Pain/anxiety VAS score	Education
Marieke	35	1	PGD**	1	11	suppository, local anaesthesia	Analgesia Vagina 3-4, Ovary puncture 2, Anxiety 5	Unknown
Christa	40	1	Tuba anomaly	2	6	suppository, local and systemic anaesthesia	Ovary puncture 5, Pressure 8, Anxiety 8	University
Lynn	36	0	Azoospermia	3	11	suppository, local and systemic anaesthesia	Analgesia vagina 6-7, Ovary puncture 6-7 Suction 0, Anxiety cannot tell	University
Wendy	27	0	Endometriosis	1	13	suppository, local and systemic anaesthesia	Analgesia Vagina 5, Ovary puncture 9, Anxiety before 7, during 8	Lower secondary general
Benthe	27	0	Azoospermia	1	9	suppository, local anaesthesia	Analgesia Vagina 1, Ovary puncture 5-6, Suction 7, Anxiety 7	Higher vocational education
Julia	33	0	Azoospermia	1	12	suppository, local and systemic anaesthesia	Analgesia Vagina 2, Ovary puncture 4-5, Suction 4, moving echo 6, Anxiety before 4-5, during 2	University
Meral	20	0	Azoospermia	3	13	suppository, local and systemic anaesthesia	Analgesia Vagina 1, Suction 3, Anxiety before 7, during 7	Higher vocational education
Haife	30	0	PGD	3	17	suppository, local and systemic anaesthesia	Analgesia Vagina 8, Suction 7, Anxiety before 4, during 6	Intermediate vocational education, not finished yet
Valerie	32	0	PGD	2	11	suppository, local and systemic anaesthesia	Analgesia Vagina3, Ovary puncture 4, Suction 8, Anxiety	Higher vocational education

							before 7 during 7	
Xandra	28	0	PGD	2	11	suppository, local anaesthesia	Analgesia Vagina 1, Ovary puncture 2, Suction 4 , Anxiety before 3, during 2	Higher vocational education
Anne	38	1	Unknown fertility problem	2	13	suppository, local and systemic anaesthesia	Analgesia Vagina 4, Ovary puncture 3, Suction 2-5 anxiety cannot tell	Higher vocational education
Patricia	34	1	PGD	3	6	suppository, local and systemic anaesthesia	Analgesia Vagina 1, Ovary puncture 5, Suction 6, Anxiety before 9, during 5	Higher secondary general
Janet	41	0	PGD	3	3	suppository, local and systemic anaesthesia	Analgesia Vagina 2, Ovary puncture 2, Suction 8, Anxiety before 3, during 8	University
Sofie	34	1	Male factor	3	15	suppository, local and systemic anaesthesia	Analgesia Vagina 2, Ovary puncture 2, Suction 4, Anxiety cannot tell	Intermediate vocational education
Suzan	41	1	PGD	4	9	suppository, local and systemic anaesthesia	Analgesia Vagina 1, Ovary puncture 1, Suction 3 , Anxiety cannot tell	University

Note.* All names are fictional **PGD= Pre Implanted Genetic Diagnostic

Table 2

Quotes

	Participant	Quote
1.	*Benthe, 27, 1st IVF*	*'I have to say, I did not prepare myself very well … I thought those breathing exercises are nothing for me, because so far the examinations for the IVF treatment were quite easy to handle, but the oocyte retrieval was pretty painful.'*
2.	*Wendy, 27, 1st IVF*	*'I especially liked CIFOR because actually it is the most important part in your life ... That is how we experience it … and you actually give up the fact that you cannot get pregnant without help of the hospital and doctors or whatever you need and that is a big downer. By using this you can make it just a bit more personal.'*
3.	*Suzan, 41, 4th IVF*	*'To fill in the coping plan was not that difficult or special. Although, I became more aware of the possible coping strategies. I liked that. So I thought what can I do and what do I like and how can I get through this procedure…'*
4.	*Christa, 40, 2nd IVF*	*'It is just a piece of information like a childbirth plan. I was thinking about it like that and that's what made it positive for me. Normally, I am a person who goes on and on and is too busy, but now I was forced to take this step and think about it.'*
5.	*Meral, 20, 3rd IVF*	*'I have to fill out the coping plan, and it should match more with the information brochure. Here* (indicates to the coping plan) *it says breathing and relaxation exercise and in the brochure, it is written another way. Sometimes I wanted to know more about a strategy, and then I had to search for it in the brochure. I think it should be easier when you have got titles in the coping plan and brochure which are comparable with each other. Then it makes it easier to look back and fill everything out.'*
6.	*Benthe, 27, 1st IVF*	*'Yes, we went through it before start of the oocyte retrieval. Then we also discussed this and what I will arrange and that it will be all right. They both told me what they were doing and why, and it was what I expected.'*
7.	*Patricia, 34, 3rd IVF*	*'You've got a lot of choices and suddenly you've got to think about that. Some things we already do, but maybe you just think about it a little bit more and that's good too…'*
8.	*Wendy, 27, 1st IVF*	*'I found it difficult to fill out the plan because it is … well, I can say right now I do like to use that strategy and I suppose I will, but I might respond differently and say "just leave me alone.'*
9.	*Sofie, 34, 3rd IVF*	*'The general hospital brochure describes what you can expect, but this one was more detailed. It gave more information as to exactly what to expect. You are more prepared when the oocyte retrieval starts.'*

10.	*Sofie, 34, 3rd IVF*	*'I like the information brochure just because it gives detailed information about what you can expect during the puncture. It says what the physician and nurse are going to do, and I can say what I prefer'.*
11.	*Janet, 41, 3rd IVF*	*'Well, I think it is pleasant, because women can prepare themselves better. They can be mentally prepared and go through the steps of the puncture in their mind, and so they start the puncture more relaxed and with more control. They know what to expect. '*
12.	*Haife, 30, 3rd IVF*	*'The information brochure was too confronting for me and too detailed. I knew about it, but I did not want to see it. I wanted a bit more superficial information. The pictures gave me a negative experience. I did not like them.*
13.	*Suzan, 41, 4th IVF*	*'When I read the brochure, I got the feeling that I needed to do something; I needed to choose something. In my experience, it made things worse and made me more anxious. I had frightening thoughts. Do I need to do this or that, but finally I decided I mustn't do anything. I made my own plan. I can just hand over the situation. They'll take good care of me.'*
14.	*Patricia, 34, 3rd IVF*	*Mrs: 'And then you said "These are the things we always do."' Mr: 'Yes.' Mrs: 'How we would deal with that ourselves. Nothing strange, so … It is a little stressful to choose, but we filled it out as we were used to. Nothing changed, only a blanket.'*
15.	*Janet 41, 3rd IVF*	*'Yes, it is now a more reflective process, because otherwise it is only a physical experience. But now with all information it could be a conscious experience. I read the steps on paper and felt a kind of control about the process. I suggest that especially women undergoing their first oocyte retrieval should read this information brochure, because the first was the most nerve-racking for me. I didn't know how the procedure would go.'*
16.	*Wendy, 27, 1st IVF*	*'I have to say, using this coping plan calmed me. It was a very nice experience. It made the procedure more personal, and it was positive to have control in knowing I could say what I preferred.'*
17.	*Xandra, 28, 2nd IVF*	*'I really liked seeing when the needle went inside and seeing what was happening. I watched not only the monitor but everything around me, what the nurses were doing. At the moment the puncture became uncomfortable, I focused on the monitor and not on my pelvic floor.'*
18.	*Julia, 33, 1st IVF*	*'I also chose to watch the monitor, but actually I didn't do it because I was too busy with other things like handling the pain.'*
19.	*Wendy, 27, 1st IVF*	*'Since I know that I am going to postpone it, there must be someone who asks "Are you ready?" "Yes or no?" Then, the choice is still mine.'*

20.	*Xandra's partner, 28, 2nd IVF*	*'No, I didn't read the information brochure. I thought it was more for her.'*
21.	*Julia's partner, 33, 1st IVF*	*'I joked a bit, provided a bit of distraction and I said a couple of times "You are doing well" and that kind of thing. The best thing you can do is be there for her!'*
22.	*Meral's partner, 20, 3rd IVF*	*'I am here to give her support and give her positive energy and compliments.'*

Table 3

Results of the completed coping plan by the participating women

	Marieke	Christa	Lynn	Wendy	Benthe	Julia	Meral	Haife	Valerie	Xandra	Anne	Patricia	Janet	Sofie	Suzan	totaal
Sense of Controle																
I say when I am ready to start			1	1				1	1			1	1	1		7
I ask for breaks during the puncture			1					1					1	1		4
I want to be told when to expect discomfort		1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
I want to watch the monitor: the nurse explains what s|there		1	1	1	1	1	1		1	1	1	1	1		1	1	12
Distraction																
Activities are practised at home	1	1	1									1	1	1		5
Breathing exercise	1	1	1	1	1		1	1	1			1	1	1	1	11
Relaxation exercise									1			1	1	1		4
White knuckling					1		1	1					1	1	1	6
Focus on picture or object in the room								1			1			1	1	4
Talk about something positive								1	1	1	1		1	1	1	8
Visualize a relaxing place				1										1		2
Self-Talk																
Positive reminders about				1				1	1	1	1		1			6
Procedure			1						1	1	1		1			5
Outcome			1	1	1				1	1	1		1			7
Enviroment																
Temperature (Blanket)			1	1	1	1					1		1	1		7
Lighting				1										1	1	3
Music					1		1				1			1		4
Total		2	9	9	7	3	5	8	9	6	9	6	13	13	7	2