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## **Living through unsuccessful conception attempts: A grounded theory of resilience among women undergoing fertility treatment**

**Objective:** To provide a model of resilience among women undergoing fertility treatments, who experience repeated unsuccessful conception attempts. **Background:** Assisted reproductive treatment is emotionally and physically challenging. Women undergoing such treatments report experiencing high levels of anxiety and depression. There continues to be a lack of understanding of the process women go through to adapt to the challenges associated with fertility treatment, in order to continue to pursue their goal of pregnancy. **Method:** The study employed a qualitative Grounded Theory design.

Eleven women aged between 24 and 42 years took part in individual semi-structured interviews around their experiences of living through unsuccessful fertility treatment attempts. **Results:** Three core categories were identified; 'Appraisal'; 'Stepping away from treatment' and 'Building self up for the next attempt'. Following the failure of treatment, participants appraised their ability to carry on with further treatment attempts. Those who felt they had depleted their resources through the cycle of attempting pregnancy had taken a step back from the treatment cycle to reconnect with themselves and gather sufficient resources to attempt treatment again. During preparation for the next treatment, participants demonstrated their resilience by taking steps to build up their resources, such as nurturing their strength and taking control of their fertility experience. **Conclusions:** Women undergoing fertility treatment demonstrate their resilience through a variety of actions that enable them to continue to pursue their pregnancy goal. Clinical staff should be mindful of their clients' need to withdraw from the treatment cycle and offer support to enable them to do this.

**Key words:** Resilience; Assisted Reproductive Treatment; IVF; Women; Infertility

### **Introduction**

Infertility affects one in seven couples living in the UK (Human Fertilisation and Embryology Authority (HFEA), 2013). The desire to have a child and the difficulty achieving this goal is a highly distressing experience for both men and women (Thorn, 2009). However, women often report greater distress and poorer mental health than men (Greil, Slauson-Blevins, & McQuillan, 2010). It is not uncommon for women undergoing infertility treatment to report symptoms of anxiety, depression and isolation (Cousineau & Domar, 2007).

Couples in the UK who fail to conceive within a year are eligible for clinical investigations and infertility treatment (NICE, 2013). The process of going through fertility treatment is often challenging and impacts on both the woman's physical and mental health (Cousineau & Domar, 2007). Further, the success rates of fertility treatments remain relatively low (HFEA, 2013), making the outcome of such treatments uncertain. However, despite these adverse circumstances, women experiencing fertility difficulties repeatedly continue to seek out assisted reproductive treatments.

The ability to overcome an adverse experience and maintain relatively stable levels of functioning has been defined as resilience (Bonanno, 2004). Several studies have highlighted that resilience is associated with positive mental health outcomes among couples with fertility difficulties. Its presence was found to be negatively associated with infertility specific distress, general distress, and depression (Sexton et al., 2010; Chochovski, Moss, & Charman, 2013), and positively associated with post-traumatic growth (PTG) (Yu et al., 2014), marital satisfaction (Ganth, Thiyagarajan, & Nigesh, 2013), and quality of life

(Herrmann et al., 2011). Chochovski et al. (2013) found that resilience was associated with lower depression shortly after a negative in vitro fertilisation (IVF) treatment outcome. Action-focused coping skills, such as taking part in self-care activities, were found to correlate with resilience (Sexton et al., 2010) and mediate the relationship between resilience and PTG (Yu et al., 2014). Resilience was also found to mediate the effects of social support on psychological distress (Mousavi, Karimi, Kokabi, & Piryaei, 2013).

Despite the reported benefits of resilience, there continues to be a lack of theoretical understating of how resilience manifests among women going through fertility treatments. To date only one model has been put forward to explain the process of resilience within infertility. The Infertility Resilience Model (IRM) (Ridenour, Yorganson & Peterson, 2009) defines resilience as an interaction between the individual experiences, external influences, and the couple's perception of their situation, which results in an acceptance of one's infertility. The IRM is a broad framework and therefore does not specifically provide a theoretical explanation of how an individual adapts to the adverse experience of repeated failed fertility treatment attempts.

This study aims to fill this gap in literature and contribute to the theoretical understanding of the process of resilience among women undergoing assisted reproductive treatment. For the purpose of this research, resilience has been defined as the process by which women who have chosen to seek fertility treatment adapt to its challenges and find the strength to face it in an attempt to achieve pregnancy.

## **Method**

### ***Methodology***

A qualitative design using a Grounded Theory (GT) method was used (Corbin & Strauss, 2008), to generate an explanatory theory of resilience among women facing repeated unsuccessful fertility treatment attempts.

### ***Procedure***

University ethical approval was obtained. Participants received information about the study prior to giving consent to participate, and were informed of their right to withdraw at any point during the study. All participants were given verbal and written debrief, in which they received information about the study and links to sources of support.

Data were gathered through semi-structured interviews, which were conducted separately for each participant and lasted between 55 and 95 minutes. Participants were given a choice of a face-to-face or a telephone interview. Two participants were interviewed in person and nine over the telephone. All interviews were audio recorded and subsequently transcribed.

The research questions and aims served as a basis for the development of a flexible interview guide. Participants were asked about their everyday life in the context of having difficulties conceiving, and their experiences of living through unsuccessful assisted reproductive treatments. At the end of the interview, participants were asked to reflect more broadly on their coping with previous adverse experiences, to ensure they were reminded of their strengths and resources.

## ***Participants***

Eleven women aged 24 to 42 years took part in this study (Table 1). Participants were recruited online through various fertility websites and Facebook groups. Women were included in the study if they identified themselves as having fertility difficulties and were seeking medical treatment to help them achieve pregnancy. Women were excluded from the study if they identified themselves as attempting to conceive without any medical interventions or were no longer pursuing pregnancy.

Purposive sampling was used for the first three participants. Subsequent participants were selected using theoretical sampling, which relies on concurrent data analysis and collection (Corbin & Strauss, 2008). This involved seeking participants who were at different stages of their fertility journey, those who had previous success with fertility treatments and participants having varying treatment options.

## ***Analysis***

The data were analysed using procedures associated with the Grounded Theory method, such as open coding, focused coding, axial coding and theoretical coding (Corbin & Strauss, 2008; Charmaz, 2006; Urquhart, 2013). Constant comparisons were made between the sets of data throughout the analysis, to find conceptual similarities and differences between the codes and categories (Corbin & Strauss, 2008). Memos were utilised throughout the research to guide the process of data collection, theoretical sampling and theoretical coding (Corbin & Strauss, 2008). The coding and data collection was ended when theoretical sufficiency was met, whereby the existing categories coped adequately with new data in such way that they no longer needed to be extended or modified (Dey, 1999).

## **Findings**

### ***Overview of the Model***

Participants' resilience in the journey to achieving pregnancy was characterised by a series of linked coping strategies, centred on the repeated '*appraisal*' of one's strength and resources in the context of failed treatment attempts (Figure 1). When faced with a conception failure, participants experienced a depletion (i.e. felt distress and despair) which prompted them to evaluate their intentions to carry on trying to achieve pregnancy. Participants who viewed themselves as having depleted their resources through the experience of failed treatment attempts, '*stepped away from the treatment*' in order to reconnect with aspects of their lives which may have been lost in the cycle of attempting pregnancy. This allowed them to restore their resources and attempt pregnancy through the path of fertility treatments again. At this stage, participants demonstrated their resilience through their ability to '*build themselves up*' in an effort to get ready for the next treatment attempt. The following section elaborates further on the three core categories.

### ***Appraisal***

The high levels of distress experienced following the failure of a treatment and conception attempt prompted participants to appraise their ability and intent to attempt conception again. Participants' decision to carry on with the treatment was determined by their appraisal of a range of factors, such as the likelihood and benefits of achieving a treatment success, and the costs of the treatment to their emotional health, financial security, or wider life goals.

Although only one participant achieved pregnancy through IVF, other participants also deemed their previous attempts as having been partially successful. The view that something had been achieved in the previous attempts made participants appraise their chances of a future pregnancy more favourably and as such they decided to pursue further treatments.

Melanie: 'We've had 3 IVFs now but only one failure but if we'd have 3 IVFs and 3 failures then that's a different thing isn't it. [...] See, so in that sense I can't say I've had 3 failed IVF attempts. I've have one failed IVF attempt, so no I wouldn't give up'

Participants reported being driven towards further attempts by an internal force. Some of the factors feeding into this force were the want to experience a pregnancy or a feeling that the time to have children was running out.

Hannah: 'Some people are a lot more accepting and think "OK what are our other options?" you know "We can adopt". I just kind of really desperately want to become pregnant.'

However, some participants reached a point where they felt the process of fertility treatment had too many emotional and practical costs. They questioned whether they had the ability and sufficient resources (practical, emotional and physical) to continue with further attempts.

Lucy: 'You're then saying to yourself "Well, the chances of me getting pregnant naturally are sort of slim to none", you know, "so if I don't do it I give up. If I do do it, I'm borrowing money I don't have." [...] I'm not sure I would want to do that, because for me at least the process is so physically demanding, so emotionally demanding. I wouldn't want to do it again.'

### ***Stepping away from treatment***

Some participants have made the decision to temporarily step away from the cycle of attempting pregnancy, when they felt they had reached a limit where they had exhausted their emotional and practical resources or felt as though they had lost themselves.

Suzanne: 'I know some women go on and on and have fertility treatment and IVF ten times over. How they manage that I do not know, your mind and body, but there's got to be point when it just says "I just can't take no more".'

Participants shared that at this point they made the decisions to take a break from the treatment, put themselves first, and take the opportunity to reconnect with their 'normal' lives that did not centre on fertility.

Lucy: 'I started doing yoga, I started doing signing, and it's just good because rather than spending hours trying to research my cure for myself, somehow, through sort of looking at stuff online, reading papers, whatever, I'm practising my singing and practising my yoga, and I'm enjoying those things'

This allowed the participants to regain some of the strength that they had lost in the cycle of conception attempts, which made them feel ready to consider facing the cycle of fertility treatment again.

Julia: ‘After we finished the Clomid, because we sort of felt a bit exhausted after it really, and a bit despondent and we just felt we needed time together. And it did do us good... took a week away.’

Participants described this stage as that of a preparation for entering the treatment cycle again. Some participants spoke of using this time to access professional support or to active their support networks.

Maria: ‘I am warning everybody around me “be prepared in the March” [...] I could probably even put it on my Facebook status, so you are more prepared about what’s coming’.

### *Building self up for the next attempt*

Participants who made the decision to carry on with attempting pregnancy entered a stage in which they prepared and built themselves up for the next attempt. This was done through a set of actions such as taking control, finding ways to nurture their own strength and actively working towards their pregnancy.

#### *Taking Control*

After the experience of a failed conception attempt, participants became aware that health care professionals could not ensure the success of all treatment attempts. This made the participants reclaim some of the control, which they gave to the professionals in the initial stages of their treatment. By doing so, participants hoped to find the answers their doctors were unable to provide.

Maria: ‘If you compare the first meeting we had with the doctor the way we, the way I spoke and asked the things and if you compare the way I go in and the terms I use, it’s like a professional talking. [...] with the time and information on Google you start to know so much [...] You don’t trust anyone any more you think you know the best.’

Participants identified that by taking control they were able to refocus on their goal of achieving pregnancy, and as such it allowed them to let go of the despair they felt after the conception failure.

Hannah: ‘I think that’s the only thing that can pull you through is the next... moving onto the next thing.’

#### *Nurturing own Strength*

In the preparation for the next treatment, participants considered what strategies have helped them get through previous experiences of adversity. This allowed the participants to cope with the adversity of a failed treatment and the waiting period between treatments in a way that was personally meaningful.

Jane: ‘Rather than focus on something bad, whether it be difficulty at work or an argument or whatever it is, I try to weight it up a bit and think about how important it really is.’

Melanie: 'I am a doer [...] I just move on a look at it positive and learn from it. So this is ongoing with the IVF, I am looking, learning, asking questions, I'm still learning erm but yeah I'd say that is what I do in life'

Participants also prepared for any potential pitfalls that could arise along their fertility journey. This enabled them to set relevant support in place or take steps, which buffered the impact of the distress.

Julia: 'I feel like I'm always trying to be sort of one step ahead of the game, prepare myself, because I think the thought of failure as well is quite a hard thought of how I'm going to feel if it fails and how I'm going to cope with that [...] the knowledge of other options that are available if it does fail helps me to feel a bit better about it.'

Many participants reported drawing on the support they received. This enabled them to maintain the emotional strength and positivity needed to carry on with the treatment attempts, and to share some of the burden of fertility treatments.

Rachel: 'It's just knowing that you have that support behind you, and somebody who's pretty much feeling everything that you're feeling. It's good to know that, that you're not alone with it.'

Sophie: 'I've always spoke to somebody around me that I know will just listen to me [...] they've given me that morale boost and put me back into my mental happy positive state'

However, some participants felt they had to cut off from others to maintain their emotional strength, potentially at a price to their wider support network.

Julia: 'I've felt as though I haven't wanted to be in the same environment as my sister-in-law, especially when she was late pregnancy and just recently when the baby's been born, because I've found it quite difficult to be around her'

### *Doing 'Something'*

Participants spoke about the need to actively take steps in an attempt to move closer to their goal of pregnancy. Women prioritised the treatment over other aspects of their lives and searched for alternative methods that could aid their fertility. Although participants were aware that some alternative treatments had limited effectiveness, it was the act of trying to do something, which was seen as important. Through 'doing something' participants were able to reduce their feelings of being stuck in the limbo of infertility and were able to hold onto the hope that the next time will be successful.

Katherine: 'I think you get a step closer to trying to solve your fertility issues erm because sometimes you do need that help from the doctor, you do need drug treatment to help you. I think if you didn't go you would be stuck in limbo as kind of I am now'

The attempts to 'do "something"' were viewed as the participants' attempt to gain a sense of control over the uncontrollable process of fertility treatment and conception.

Beth: 'You just control what you can control with it, so it's things like I know a lot of people take lots of vitamins and things because they think "it makes me think like I'm doing something positive so therefore I am in control of it".'

### *Holding onto Hope*

The steps taken in preparation for the next treatment or conception attempt were seen to feed into participants' hope that the next attempt will be successful and as such helped them to hold onto optimism. These feelings of hope and optimism in turn contributed to participants' ability to find the strength and motivation to prepare themselves for the next treatment attempts.

Beth: 'You plan your next move and I mean everybody who's been through this will say that it's that, that's why you keep going because if you're planning the next move, there is hope for the next time.'

### **Discussion**

This study offers a model of women's ability to continue with assisted reproductive treatments despite facing repeated treatment failures. The current model of resilience provides support to the concept of 'resilient reintegration' proposed by Richardson et al. (1990) whereby the experience of adversity may lead the individual to identify their resilient qualities. The participants in this study demonstrated this through their ability to recognize their own strength, the ability to rely on strategies which helped them get through previous experiences of adversity, and by taking control of their treatment.

Participants did report experiencing intense levels of distress and grief after having had a failed conception attempt. Grief responses to infertility and conception failures have been well documented (Hammer Burns & Covington, 2006; Lee et al., 2010). Although findings from previous research suggest that a failed conception attempt can lead to a prolonged phase of mourning and distress (Volgsten, Svanberg, & Olsson, 2010; Verhaak, Smeenk, van Minnen, Kremer, & Kraaimaat, 2005), participants in the current study were able to overcome this distress by taking active steps which directly contributed to and maintained their hope and optimism.

However, the current model also suggests that women's continuous efforts to build themselves up for further treatment may come at a cost to their wellbeing and practical resources (e.g. by investing their finances into redundant treatments or by cutting away from their support networks). Women who carry on with their attempts to conceive and are unable to continue to build themselves up for the next attempts may reach a point where they deplete their resources. This is supported by earlier research which suggests that the most common reasons for why women drop out of treatment is seeing the process as having too many physical and emotional costs (Hammarberg, Astbury, & Baker, 2001; Verberg et al., 2008). The current model suggests that it is at the stage of depletion that women step away from the treatment and use this time to re-connect with aspects of their lives that are separate from their fertility lives, which in turn allows them to rebuild their resources and attempt to become pregnant through treatment once more.

Clinicians may draw on this model to help their clients assess whether they have sufficient resources to continue with treatments and offer it as an explanation of why it may be beneficial to step away from the cycle of attempting pregnancy, in order to prevent further depletion in physical and mental wellbeing. Clinicians could also draw on this model to highlight the importance of maintaining a balance between fertility and non-fertility aspects of one's life in order to prevent the loss of resources to the cycle of fertility treatments and to sustain the ability to pursue one's pregnancy goal.

The model also highlights the importance of control in maintaining women's hope and optimism during the process of fertility treatments. Fertility services should aim to support



this by allowing women to take an active role in their treatment and be transparent in their decision making processes. Clinicians should be mindful of women's need to gain control over their treatment by seeking out various alternative methods, which may potentially place them in a vulnerable position of being exploited by services offering expensive and perhaps redundant treatments. Therefore, services should aim to offer women consultation about various evidence based alternative methods such as acupuncture (Clark, Will, Moravek & Fisseha, 2013).

Although an attempt was made to sample theoretically for cultural factors, participants were mainly white British English. Further qualitative research should aim to expand on the current model to account for the experiences of women from minority ethnic groups, deprived socio-economic areas, and non-western cultures. This would extend the understanding of how women, who are often underrepresented within infertility services and research (Greil et al., 2010) adapt to the adversity of infertility treatments, and aid clinicians in offering more culturally informed interventions. A further limitation of this study is its focus on only women who were actively attempting to become pregnant through fertility treatment. Therefore it is not clear how resilience manifests among women who have decided to permanently end fertility treatment and how they arrive at the decision to do so. Further research should explore the difference between the processes of temporarily and permanently stepping away from assisted reproductive treatment.

## **Conclusion**

Resilience in women experiencing repeated failed treatments is characterised by an ability to assess the capacity to continue with further conception attempts, and by withdrawing from the treatment cycle when the necessary resources have been depleted. Participants have demonstrated an ability to restore depleted resources by either reconnecting with themselves in areas of life that do not involve fertility issues or by taking control of their fertility experience. Further research should aim to explore resilience among women from minority ethnic groups and those who do not have access to publicly funded health care.

## **Disclosure statement**

No potential conflict of interest was reported by the authors.

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