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Insight into Unexplained Infertility: How Do Women Make Sense of Their Experience of
Unexplained Infertility Followed by Spontaneous Conception

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Master of philosophy

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2018

Table of Contents

Acknowledgments	4
Abstract	5
1 – Introduction	8
2 - Literature overview	11
2.1 - <i>Background</i>	11
2.2 – <i>Historical perspectives of infertility</i>	12
2.3 - <i>Spontaneous conception following cessation of assisted reproduction technology</i>	13
2.4 - <i>Effects of stress on the body</i>	15
2.5 - <i>Effects of stress and trauma on secondary infertility</i>	17
2.6 - <i>Role of self-compassion and mindfulness in the regulation of health</i>	18
3 - Methodology and research design	20
3.1 - <i>Epistemological approach</i>	20
3.2 - <i>Theoretical perspective</i>	21
3.3 - <i>Strategy and design</i>	21
3.4 - <i>Data collection</i>	23
3.5 - <i>Sampling and recruitment</i>	23
3.6 - <i>Interview structure</i>	25
3.7 - <i>Interview methods</i>	26
3.8 - <i>Description of participants</i> :.....	26
3.9 - <i>Participants’ profiles</i>	27

4 - Data analysis	29
4.1 – Introduction	29
4.2 - Overview of findings	31
4.3 - Emerging themes.....	38
4.3.1 – Theme 1 - Emotional well-being.....	38
4.3.2 – Theme 2: Attitudes and beliefs:	44
4.3.3 – Theme 3: Attitude to parenting and conception	48
4.3.4: Rituals: A powerful enabler for all participants:.....	56
4.4: Discussion	58
5 - Conclusion and significance	59
6 - Strengths and limitations	60
7 - Self-reflection and accountability:	61
8- Ethical considerations	62
9 – Appendices	64
APPENDICE 1 – PARTICIPANT INFORMATION SHEET.....	64
APPENDICE 2 – CONSENT FORM.....	67
10 – Bibliography	69

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Insight into Unexplained Infertility: How Do Women Make Sense of Their Experience of Unexplained Infertility Followed by Spontaneous Conception

Abstract

The causes of infertility are diverse and broadly fall under four categories: male, female, combined or unexplained (Wynter et al., 2013, p. 285). Treating infertility is usually associated with an often medically invasive procedure and fertility clinics have been expanding globally in the last thirty years (Krisak, 2013). Furthermore, medical research and treatment for this condition have allowed for considerable progress to be made, allowing a greater number of couples to have children despite their difficulty or inability to conceive at some time in their life (Bushnik, Cook, Hughes, & Tough, 2012). The focus of this study will be the psycho-socio-emotional aspects of unexplained infertility.

A qualitative approach was chosen to undertake this research, and the methodology best suited for this research was an Interpretative Phenomenological Analysis (IPA). IPA is the preferred methodology when studying a lived experience, especially when the research topic is emotional, such as infertility (Smith & Osborn, 2015). In this study, four women participants participated in an in-depth face to face interview during which they related their experience of unexplained infertility followed by spontaneous conception. All were encouraged to reflect on their experience by examining all aspects of that period in their lives. Physical health was explored, as well as work and family environment, psychological, social, emotional and spiritual well-being.

Information from diverse literature, as well as interviews with the participants for this research, describe the journey of infertility and treatment as emotionally difficult, and often accompanied by strong feelings such as fear, grief, anxiety or trauma. All participants described their In-Vitro Fertilisation (IVF) journey as a magnification of those already difficult feelings.

Although all participants noted that their reproductive health at the time was focussed solely on physical or medical aspects of their infertility, nonetheless all sought alternative therapies such as acupuncture or Chinese medicine too. In addition, they engaged in well-being

practices such as meditation, with the intention to increase their well-being or their chance of conception success. There was unanimity amongst participants that taking a holistic approach to the issue they were facing and taking a gentle approach towards the treatment or towards themselves allowed a path to pregnancy.

The results of the study revealed a shift in participant's situations which created circumstances where spontaneous conception could occur after infertility. These shifts were in the domain of emotional well-being, attitude towards conception and attitude towards treatment. The shift from negative to positive situation were all accompanied with a ritual that symbolically confirmed the change of mindset.

These results offer an insight into the role well-being played in the ability to conceive a child for all participants. They present an opportunity for further research in this field, to develop deeper understanding into unexplained infertility and integrate the findings in a new medico-psychotherapeutic approach integrating physical and emotional well-being.

I, Fabienne Michea, hereby declare that this thesis is my own work and contains no material which has been accepted for the award of any other degree or diploma in any other institution or university.

To the best of my knowledge, this thesis contains no material previously published or written by another person except where due reference is made in the text of the thesis.

I declare that there is no conflict of interest.

Fabienne Michea

October 2018.

1 – Introduction

This study is concerned with the phenomenon of spontaneous conception following unexplained infertility. It has been observed that a natural conception can occur after couples cease trying to proactively conceive, with most of the pregnancies occurring within two to three years of cessation of treatment (Soave, Lo Monte, & Marci, 2012).

The occurrence of couples conceiving after ceasing treatment suggests that in some cases, the potential to conceive cannot be dismissed. This phenomenon indicates that for some, unexplained infertility could be a temporary condition and regardless of medical testing, it may remain unexplained (Hennelly, Harrison, Kelly, Jacob, & Barrett, 2000). It is possible that what prevents a pregnancy at one stage is a short-term condition that can dissipate. Potentially, this condition could be related to physical or psychological health, or both (Woodson, 2008). Very little is known about the link between psychological well-being and reproductive health. This research focuses on gaining a better understanding of the phenomenon of spontaneous conception that follows the decision of a couple to stop pursuing any avenue to parent a child. The aim of this research is to explore non-medical factors that could prevent conception at one time and allow it at another.

The role that psychological well-being can play on general health is now under study for numerous conditions. It is interesting to note that researchers studying chronic illnesses that are still unexplained, such as Irritable Bowel Syndrome or Chronic Fatigue Syndrome, now turn to neuro-psycho-immunology to better understand the conditions. A study by Levy, Cain, Jarrett, and Heitkemper (1997) reported a correlation between stress and aggravation of patients' condition. This is a phenomenon known as somatization, where psychological discomfort is manifested into physical symptoms.

Establishing the role of somatization in unexplained infertility is still in its infancy. Yet stress is almost always present in the lives of couples newly diagnosed with infertility. Being given a diagnosis of infertility is described as stressful and devastating (Krisak, 2013). Infertility treatments add even more strain at a time where both partners feel very vulnerable. Krisak describes fertility treatments as 'an emotional rollercoaster' (p. xi). This feeling is shared by many affected by infertility. Partners undergo procedures that are invasive and sometimes physically uncomfortable or painful. They are usually followed by an anxious wait

where the couples often experience some form of anxiety before they discover the outcome of the treatment.

Infertility treatments put a lot of emotional, physical and financial stress on couples. The estimated costs of In Vitro Fertilisation (IVF) are approximately AU\$9290 as of 1/04/2017 with an estimated out of pocket cost of AU\$4502 for the first cycle and AU\$3946 for subsequent cycles in the same calendar year (IVF Australia, 2018).

While a diagnosis of infertility is always a painful and stressful experience, unexplained infertility is a more complex issue within the field of infertility. Although studies expanding knowledge in this field have flourished, the understanding of unexplained infertility is still limited, and specialists are currently unable to agree upon the exact causes (Batstra, van de Wiel, & Schuiling, 2002). This is partly due to the fact that the reproductive system is complex and not yet fully understood. Sometimes, a condition is known to affect fertility, but no test is yet available to assess its presence in patients (Hart, 2003). This research suggests that looking into the emotional health of couples affected by unexplained infertility could open new ways of understanding it better.

The researcher has witnessed the studied phenomenon on numerous occasions, both in professional settings and in social situations. The researcher's social work and counselling background motivated this research study. The initial opportunity to reflect on this phenomenon occurred while the researcher was employed as an adoption and permanent care worker. In this position, the researcher's duties included conducting a thorough assessment of prospective adoptive couples, during which infertility was discussed at length to assess their readiness to parent a non-biological child. At the time of placement, the agency requested social workers to strongly recommend contraception for twelve months for couples with unexplained infertility. This decision was based on the agency witnessing many couples conceive spontaneously after the placement of a child. The close arrivals of an adoptive and biological child posed great challenges for the majority of couples. This measure was put in place to protect them and the adopted child.

Following this experience, the researcher worked in a social work position in the neurosurgery and thoracic units of the Royal Children's Hospital in Melbourne. This experience offered an exposure into the phenomenon of somatisation. The effects of stress and well-being on aggravation or reduction of symptoms were regularly displayed, either with

patients or their family. Somatisations could be in a mild or moderate form, such as a mother's long-term amenorrhea following the accidental death of her child. The most extreme form of somatisation known to this unit was a condition anecdotally called 'sympathy cancer' amongst oncologists. This described a situation where a parent was diagnosed with the same brain tumour that had claimed their child's life.

These experiences have supported the researcher in developing an interest in the connection between physical and mental health. This study seeks to examine whether consideration of both physical and emotional health could lead to a better understanding of the phenomenon of spontaneous conception that can follow unexplained infertility.

The data collected in this research offers a unique understanding of the conditions that can either inhibit or support a spontaneous conception. This understanding may lead to a new evidence based psychotherapeutic approach for couples experiencing infertility, which takes into account the medico-psycho-social contexts of each patient. There is a paucity of literature on a possible link between unexplained infertility and psycho-emotional health. It is interesting to note that the few articles accessed exploring the psychological aspects of infertility were related to secondary infertility. The aim of this study is to establish if there is a link between emotional wellbeing and reproductive health. The basic assumption is that physical and emotional health are linked. A medical condition can have some effects on one's emotional wellbeing, and in turn, emotional well-being can have effects on physical functioning (Chung, Symons, Gilliam, & Kaminski, 2010; Levy et al., 1997; Utz, Caserta, & Lund, 2012). The overarching aim of this research was to explore the perceived factors that made conception impossible at one time in a couple's life and possible at another. The research questions are presented as follows:

- How do women affected by unexplained infertility followed by spontaneous conception explain their experience?
- What non-medical factors do they associate with this experience?
- To what extent are psychological and emotional circumstances associated with the inability to conceive a child?

In order to address these research questions, a qualitative approach was considered best suited to address the complexity and depth of information and data obtained through a personal one to one interviewing technique utilized in IPA. The focus of this research is on

understanding rather than on quantifying a phenomenon. Its aim is exploratory (new features of data are drawn from the raw information itself and not driven by theory) as opposed to confirmatory (hypothesis driven) which requires a quantitative approach (Punch, 2014). This particular research study is concerned with how women explain their experience of spontaneous conception despite their previous inability to have a child whilst actively trying to conceive. The changes, whether due to a subtle change or a more sudden shift will be analysed in this research. The data the researcher will draw on is the lived experience of participants, as well as the knowledge drawn from the literature.

2 - Literature overview

2.1 - Background

The rate of infertility reported from different sources varies, depending on the definition used and the geographic location. From a biomedical perspective, infertility is defined as ‘the inability to conceive a child after twelve months of regular and unprotected sexual intercourse’ (Wynter et al., 2013, p. 471). Demographers define infertility as ‘the inability of a non-contracepting sexually active woman to have a live-birth over a period of five to seven years.’ (Larsen, 2000, p. 285). Depending on the definition being used, recorded rates of infertility vary greatly. This research will be referring to infertility as the inability to achieve a pregnancy within twelve months of regular and unprotected intercourse.

According to Fertility Australia (Fertility Society of Australia, 2018), infertility affects approximately one in six couples. A Canadian study (Bushnik et al., 2012) shows that throughout the world, the demand for Assisted Reproductive Technology (ART) is increasing constantly. This study found that the prevalence of infertility tripled in Canada between 1984 and 2010, and demand for treatment increased steadily in developed countries during this period. This particular piece of research estimated the Canadian infertility rate at around 16% in 2010. Furthermore, in France, a study designed to estimate the frequency of involuntary infertility estimated the infertility rate at 24% (Slama et al., 2012).

2.2 – Historical perspectives of infertility

In the 1950s, the only cure available for infertility was Artificial Insemination with donated sperm. The causes and treatments of infertility were little understood (Hartshorne, 2008). The most important breakthrough was the first successful In Vitro Fertilisation in 1977, with the birth of the first IVF baby, Louise Brown, in 1978 in Britain. Since then, there has been significant biomedical advance in Assisted Reproduction Technologies and an increasing number of couples have access to medical treatment for infertility. Although it is difficult to have an exact rate of consultation for infertility, it is commonly estimated that half of the couples who experience infertility will seek medical treatment (Moreau, Bouyer, Ducot, Spira, & Slama, 2010).

Infertility is estimated to affect as many as 186 million people worldwide (Inhorn & Van Balen, 2015) with one in every four couples in developing countries found to be affected by infertility (World Health Organisation, 2018). In 2014, according to ANZARD (Australian New Zealand Assisted Reproduction Database), there were 12,875 live births in Australia from ART, and 1363 in New Zealand (Harris, Fitzgerald, Repon, & Macalsdowie, 2016). The total number of births in 2014 in Australia according to the Australian Bureau of Statistic was 299 697 (Australian Bureau of Statistics, 2018). Therefore, ART births represented 4.3% of all births in Australia in 2014 according to these figures.

Infertility is caused by either a male or a female factor, both partners, or it can be unexplained. It is estimated that there was no clear explanation for 10 to 30% of all infertile couples' failure to conceive (Aisenberg Romano et al., 2012). Further to this, a study by Ray, Shah, Gudi and Homburg (2012) showed that this had increased to 30 to 40%. The Australian New Zealand Assisted Reproduction Database recently released a report stating that the incidence of Unexplained Infertility has doubled in the past 20 years (Harris et al., 2016).

Scientists explain how fertility can remain unexplained partly due to the fact that knowledge of the reproductive system is far from complete. Some factors can be known but are still difficult or impossible to assess (Ray et al., 2012). Some fertility specialists do not exclude the effects of stress or trauma on infertility, observing that stress can affect a person's well-being with different levels of intensity and duration (Segerstrom & Miller, 2004), and that it interferes with the reproduction process, by weakening the reproduction hormones, but also

strengthening their inhibitors (Knight, 2016).

With the many medical advances in diagnosing and treating infertility, infertility has often become a medical issue in most of the western world (Inhorn & Balen, 2002). Although quite invasive and costly, IVF is an accepted treatment for unexplained infertility (Ray et al., 2012). Ray et al report the average success rate to be 28.2% in the UK. A lot of factors contribute to the success rate, including the cause of infertility and type of treatment, maternal age, the couple's lifestyle and the amount of cycles (Society for assisted reproductive technology, 2016). It is estimated that for those couples finishing a cycle of treatment, between 25 and 50% will be successful. But again, these figures depend on how success is defined (Ray et al., 2012). A Taiwanese team of researchers estimated the success rate to be 30-40% in 2006, based on the number of cycles started resulting in a live birth for that year (Lee et al., 2010).

Amongst couples who decide to cease treatment, some will spontaneously conceive a child, either after an unsuccessful treatment, or after giving birth to a child conceived with the assistance of fertility treatment.

2.3 - Spontaneous conception following cessation of assisted reproduction technology

It is 'well established that spontaneous conception after infertility treatment occur even in cases of severe subfertility' (Kupka et al., 2003, p. 190). Infertile patients who conceive after successful or unsuccessful fertility treatments are known anecdotally to most fertility practitioners, however, data on this phenomenon is rare (Ludwig et al., 2008).

A Finish research study of spontaneous conception experienced by couples with unexplained infertility (Isaksson & Tiitinen, 2004) found 14% of couples with unexplained infertility conceive without treatment within one year, 35% within two years. The cumulative 5-year pregnancy rate without treatment was 80%. It is interesting to note that this study found that maternal age, duration of infertility and previous pregnancy history were all factors that improved the prognosis.

Amid all aspects of the infertility phenomenon, spontaneous conception is probably the most mysterious. Quantitative research has been conducted on this phenomenon, however,

there are still very few qualitative research articles available. The incidence of spontaneous conception following cessation of fertility treatment has been identified and quantified in recent years, and many research papers draw similar conclusions.

Marcus et al (2016) examined the occurrence of spontaneous conception following the cessation of successful or unsuccessful fertility treatment. A sample of 403 women was followed for a period of six years, during their fertility treatment and after they decided to stop it. 62% of the women receiving In Vitro Fertilisation /Intra Cytoplasmic Sperm Injection (IVF/ICSI) were successful at producing a live birth. It is interesting to note that amongst the patients with unsuccessful IVF/ICSI treatments, 24.5% conceived after ending treatment, with the majority of these births (87%) occurring within two years of cessation of treatment.

The most likely to conceive spontaneously after ceasing fertility treatment were couples with unexplained infertility. In their article, Marcus et al (2016) report 160 out of the 403 participants had unexplained infertility. This group produced 91 live births following ART and 30 live births after cessation of ART. This research by Marcus et al (2016) also found that the length of infertility prior to consulting for fertility treatment had some significance, and couples who consulted within two years of difficulties to conceive had a higher chance of having a spontaneous conception.

An Australian research study shows that ‘one in five women who give birth after ART subsequently conceive spontaneously’ (Wynter et al., 2013, p. 471). A German study (Ludwig et al., 2008) followed 899 couples who successfully conceived a child through ICSI for 4 to 6 years after the birth. The results show that even though 10% of the couples were using contraception following the ICSI birth, 20% went on to experience a spontaneous conception. 74.5% of these pregnancies were conceived within two years after delivery of the first baby. The study also showed the younger the mother was, the more chance the couple had to conceive naturally. In their conclusion, Ludwig et al state it is important to ‘counsel patients about the possibility of spontaneous conception, and the necessity to use contraception despite their history of subfertility’ (2008, p. 403), as the unplanned spontaneous conception of additional children can have unforeseen difficulties, especially in the case of multiple births following ICSI treatments.

A retrospective research study analysing spontaneous conception after successful IVF/ICSI treatment reached similar conclusions (Hennelly et al., 2000). One in five (20.7%) respondents

conceived spontaneously after their first successful ART. Women who were younger, with shorter and unexplained infertility, were more likely to experience SC. This research also recommends that contraceptive advice may need to be provided to couples after ART treatments. Out of all pregnancies having occurred since the birth of a child conceived with ART, 61% of these spontaneous conceptions were reported to be unexpected (Wynter et al., 2013). It is suggested that 'spontaneous conception could be related to stress relief after the decision to abandon the therapy or the placebo effect' (Soave et al., 2012, p. 512).

In summary, most recent research estimates the rate of spontaneous conception after ART at about 20%. If one in five couples are reported to conceive after stopping infertility treatment, it is reasonable to assume that infertility can be a temporary condition for some couples, who can be unable to conceive at one particular time but may subsequently be able to have children.

Although the reasons haven't been identified clearly, the literature around the effects psychological health can have on medical health can give an indication of whether stress and negative emotions could impact the ability to conceive.

2.4 - Effects of stress on the body

Perceived situations such as life-threatening experiences, marital difficulties, loss of a job, death of a loved one, relocation or serious or potentially life limiting health issues are all perceived as stressors. However, high levels of stress can also be reached with an accumulation of less obvious stressors. These stressful situations can result in mild to severe, and temporary to chronic situations of stress. Either way, they affect a person's wellbeing with different levels of intensity and duration (Seegerstrom & Miller, 2004).

It is now widely accepted that humans can experience somatisation. Somatisation refers to the tendency of humans to physically manifest psychological distress. Very little material explores the effects on stress on infertility.

Dr Knight, IVF specialist at Demeter Fertility Australia reports that research shows stress can interfere with fertility by acting on Gonadotropin releasing Hormone (GnRH), which is fundamental in the reproduction process. Furthermore, a research from the University of California Berkeley shows stress can result in the increase of Gonadotropin Inhibitory

Hormone (GnIH) which further inhibits the actions of GnRH. This suggests stress not only weakens reproduction hormones, but also strengthens their inhibitors (Knight, 2016).

For the purpose of understanding the relationship between stress and physical health, the most common medical effects mentioned in the literature were examined. As the primary human organ, the skin is especially vulnerable to the development of somatisation. Dermatological diseases, psychiatric disorders (including depression) and poor quality of life are often related. Stress can be connected to the onset of skin disorders, and chronic idiopathic urticarial (Chung et al., 2010).

In a study exploring the impact of war exposure on physical health (Maia, McIntyre, Pereira, & Ribeiro, 2011), it was shown that returning veterans suffering from Post Traumatic Stress Disorder (PTSD) are twice as likely to report poor health. Nurse veterans returning from Vietnam with PTSD showed more signs of ill health than ones who were not affected by PTSD. They recounted numerous cardiovascular, dermatological, gynecological or Ear Nose and Throat complains.

The same research also reports that returning Iraq war veterans experiencing PTSD, described worse health, had more physical complaints and health care visits, and missed more days at work than their counterpart without a diagnosis of PTSD. Out of the three main PTSD symptom clusters (hyper arousal, avoidance or flashbacks) hyperarousal was found to be the strongest predictor of medical complaints.

To measure the psycho-neuro-immunologic response to stress, Utz et al (2012) followed a group of newly bereaved spouses and studied the association between stress and immunity. They observed ‘considerable somatic symptoms during the earliest months of bereavement’ (Utz et al., 2012, p. 460) followed by a tendency to adjust to a new lifestyle in the 12 to 18 months following the death of a partner.

Another study was conducted by Arnetz et al (1991) with a group of employees in an unstable working environment. Employees were in very insecure situations and knew jobs would be lost over a 2-year period. During this time, they were regularly tested for cholesterol, cortisol, triglycerides, urea, albumin as well as psychological variables. They found that psychological stress and cortisol levels were highest and quality of sleep were poorest during the anticipatory period. Cortisol levels matched the control group immediately after they lost

their jobs and remained stable for six months of unemployment. Stress levels went back up after one year of unemployment.

This indicates that lack of news generated more anxiety than bad news in the short term. The authors concluded that not knowing their fate left workers in a state of general anxiety, living with a constant perception of potential threat. This finding is relevant to unexplained infertility as it can be assumed that not knowing the cause of infertility could potentially add more anxiety for couples unable to conceive.

2.5 - Effects of stress and trauma on secondary infertility

Whilst secondary infertility is a slightly different phenomenon to unexplained infertility, some parallels can be drawn between these conditions. A review of the literature on the link between emotional health and secondary infertility returned some results relevant to this study. The articles found give an indication of the importance of psychological factors present in the situation of people affected by it.

Secondary infertility is defined as the inability to carry a pregnancy to term despite having previously experienced at least one live birth, either naturally or through ART. The current literature focuses on a few groups, such as women with a potentially traumatic birth experience (caesarean), relinquishing mothers or veterans returning from war.

According to RESOLVE, a US infertility association, more than three million American couples were affected by secondary infertility in 2004. In her article, Sue Woodson (2008) found that the rate of secondary infertility was higher amongst women who had given birth to a child through a caesarean (6.4%) compared to women who had vaginal births (2.2%).

Another research study looked at the rate of secondary infertility amongst a group of birthmothers who relinquished a child for adoption. The relinquishment of a child to adoption, regardless of the circumstances is regarded by all birth mothers and professionals working with them as an extremely traumatic and painful experience. According to a Perth adoption organization, the rate of secondary infertility in a group of relinquishing mothers was estimated between 40 and 60% (Andrews, 2009). This figure confirms the findings of a research based on the study of US birth mothers by Nancy Verrier (1993).

A study in post war Kosovo (Elezaj et al., 2015) looked at the correlation between male infertility and PTSD. It had been observed that the growth rate of the population was in decline, due to the increase of infertility in the country. The rate of secondary male infertility was 20% in the control group without PTSD, and 62% in the group of males affected by PTSD and the quality of the sperm (count and mobility) was found to be affected in the group of men with PTSD.

In the *Diagnosis and Statistical Manual of Mental Disorders (DSM5)* (American Psychiatric Association, 2018), PTSD is defined as having these main components:

- direct or indirect exposure to a traumatic event
- re-experiencing of the traumatic event after it is over, in the form of regular flashbacks, distress in the presence of triggers, nightmares
- avoidance of trauma related stimuli, hyperarousal and hyper-reactivity

On their website, the American Psychiatric Association describe PTSD as a phenomenon that creates ‘distress and affects one’s ability to concentrate, obtain good quality sleep, and the overall self-esteem and wellbeing of the sufferer’ (American Psychiatric Association, 2018).

The difference between PTSD and non-PTSD sufferers indicates there is a psychological impact of PTSD on the patients’ health, including their ability to conceive a child. Psychological factors have been found to interfere with a person’s health in general and more specifically with fertility. Some articles addressed the effects of reducing stress with techniques such as self-compassion education or mindfulness base stress reduction can have on the management of some chronic or unexplained medical conditions.

2.6 - Role of self-compassion and mindfulness in the regulation of health

According to Kristin Neff, self-compassion ‘involves being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness. Self-compassion also involves offering nonjudgmental understanding to one’s pain, inadequacies and failures, so that one’s experience is seen as part of the larger human experience’ (Neff, 2003, p. 87).

During an interview, (Neff, 2016) Neff explains that self-compassion is strongly linked to well-being. It has been shown to reduce the negative mind-states such as anxiety and depression, stress, rumination, thought suppression, perfectionism and shame. Self-compassion increases positive mind-states like life satisfaction, happiness, connectedness, self-confidence, optimism, curiosity and gratitude. Neff also maintains that self-compassion helps cope with difficult situations with more resilience. People who have self-compassion are proving more effective in coping with divorce, chronic pain and are less likely to develop PTSD after combat. They also show less anxiety coping with illnesses such as HIV.

Neff explains that in order to have self-compassion, there has to be a willingness to turn inwards and acknowledge our suffering. This is achieved through mindfulness. Mindfulness allows acceptance when experiencing painful feelings and thoughts, and involves being aware of experience in the present moment with clarity and balance. Mindfulness allows one to neither ignore nor fixate on negative life experiences, and fosters a flexible thought process that allows for a non-judgemental acceptance of self (Germer & Siegel, 2014).

In 1979, Jon Kabat-Zinn recruited chronically ill patients who did not respond well to traditional treatment to participate in his newly formed Mindfulness Based Stress Reduction (MBSR) treatment (Kabat-Zinn, 2018). Research in this field has since grown and suggests that interventions such as MBSR and Mindfulness Based Cognitive Therapy show significant improvements of conditions such as pain, anxiety and stress (Baer, 2011). Scientific evidence demonstrates how mindfulness-based interventions improve not only mental but physical health. MBSR is reported to reduce chronic pain and migraines, arthritis, gastro-intestinal reflux and stomach ulcers. In one study (Ferguson, Weinrib, & Katz, 2012), participants completed questionnaires before and after a mindfulness practice, and rated their pain intensity, engagement in activities and general well-being. They reported an increase in well-being and a decrease in chronic pain over the course of the MBSR practice.

Because MBSR has been shown to reduce stress and anxiety and improve health outcomes, such an approach has become a popular complement to medical interventions over the years, and positive results have been recorded in several scientific publications (Kabat-Zinn, 2018). It would appear practicing non-judgmental awareness and being kind to oneself can increase well-being which in turns brings a better outcome of treatment.

2.7 – Conclusion

This literature review provides an insight into the current situation around infertility and treatment in Australia and around the world. It highlights a developing body of knowledge studying the effects that stress or well-being can have on a medical condition. In the past forty years, psycho-therapeutic models have emerged that treat chronic medical conditions with techniques aimed at reducing stress through mindfulness and self-compassion. These techniques have shown some positive results both for chronic or unexplained conditions. Literature shows that the state of psychological health can have effects on physical health, including reproductive health.

3 - Methodology and research design

3.1 - Epistemological approach

The focus of this research was on understanding rather than on quantifying a phenomenon. Its aim was exploratory (new features of data are drawn from the raw information itself) as opposed to confirmatory (hypothesis driven) which would require a quantitative approach (Punch, 2014).

In this qualitative research, the emphasis is on the socially constructed nature of reality, the intimate relationship between researcher and what is studied, and the situational constraints that shape enquiry. According to Denzin and Lincoln (2005, p. 10), qualitative researchers ‘emphasise the value laden nature of enquiry. They seek answers to questions that stress *how* social experience is created and given meaning. In contrast, quantitative studies emphasise the measurement and analysis of causal relationship between variables, not processes.’

This research study is based on the constructivist paradigm. This refers to the belief that knowledge is a social reality that is value laden (subjectivism) and comes to life through individual interpretation of a phenomenon (relativism).

3.2 - Theoretical perspective

The motivation for this research was the desire to understand and interpret the empirical observations of spontaneous conception after cessation of infertility treatment. In effect, how does an ‘unexplained pregnancy’ follow unexplained infertility. This mysterious and complex phenomenon is not yet fully understood.

The aim of this study is to establish if there is a link between emotional wellbeing and unexplained infertility. The basic assumption is that physical and emotional health are linked. A medical condition can have some effect on one’s emotional wellbeing, while emotional wellbeing can have effects on physical functioning (Chung et al., 2010; Levy et al., 1997; Utz et al., 2012).

A number of qualitative research methods were considered for this research, such as: Multiple Case Study, Grounded Theory and Interpretative Phenomenological Analysis (Punch, 2014), however, it was decided the research questions were best answered through a detailed, in-depth analysis of individuals’ lived experience of spontaneous conception following cessation of infertility treatment. Interpretative Phenomenological Analysis (IPA) was chosen as it allows individuals to recount and make sense of a lived experience.

At the heart of the perspective of IPA research lies a clearly declared phenomenological emphasis on the experiential claim of the participants. The second aim of an IPA is the development of an interpretative analysis within a social, cultural and theoretical context. This is achieved by providing a critical commentary of the participants making sense of their experience (Larkin, Watts, & Clifton, 2006). IPA allows for detailed accounts of the personal ‘lived experience’ of a smaller number of participants (Coates, Ayers, & de Visser, 2014). Moreover, IPA is the preferred methodology when the research question contains a bio-psycho-social aspect such as chronic pain or anxiety or depression (Smith & Osborn, 2007).

3.3 - Strategy and design

IPA focuses on providing a detailed examination of a personal lived experience, and ‘recognizes that this is an interpretative endeavour as humans are sense making organisms’ (Smith & Osborn, 2015, p. 41). Smith and Osborn claim that IPA is a particularly useful

methodology to explore complex or ambiguous matters. It shows how individuals recount their experiences and bring meaning to them and aims to provide descriptive accounts of the phenomenon under investigation.

IPA is a qualitative approach that draws upon phenomenology and hermeneutics and is dedicated to a detailed exploration of lived experience and personal meaning (Pietkiewicz & Smith, 2014). IPA synthesizes ideas from phenomenology and hermeneutics resulting in a method which is descriptive because it is concerned with how things appear and letting things speak for themselves. Interpretative because it recognizes there is no such thing as an uninterpreted phenomenon' (Pietkiewicz & Smith, 2014, p. 8). Pietkiewicz and Smith (2014) describe the analytical process of IPA as a double hermeneutic as it includes the participants' interpretation of their experience, and the decoding of participants' recount and interpretation by the researcher. IPA studies contain elements of both types of interpretation, making the analysis richer and more comprehensive.

The third theoretical orientation IPA relies upon is 'idiographic'. Idiographic refers to an in-depth analysis of single cases and examining individual perspectives of study participants in their unique context. This approach leads the researcher to focus on the particular rather than the universal, bringing a detailed case exploration to the study. IPA is described as an approach true to a study aim, to the experience of participants and to the richness of participants' account. It is deemed the appropriate method of analysis particularly where one is interested in complexity or where an issue is personal (Brocki & Wearden, 2006).

'IPA is committed to the particular, in the sense of detail and therefore the depth of analysis... It is also committed to understanding how particular experiential phenomena have been understood from the perspective of particular people, in a particular context.... On the one hand, experience is uniquely embodied, situated and perspectival. On the other hand, it is also a worldly and relational phenomenon...' (Smith, Flowers, & Larkin, 2012, p. 29).

As the intention of this research is to gain understanding in the phenomena of spontaneous conceptions following cessation of infertility treatment, IPA was selected as a suitable method to allow participants to describe their own lived experience. Considering the sensitive nature of the experience participants were asked to recount and reflect upon, IPA has the added advantage of allowing emotionally laden experiences in a safe, supportive environment for participants to recall and share their past experiences (Smith & Osborn, 2015).

3.4 - Data collection

Data for IPA are obtained from a purposive, homogeneous participant sample. The most common data collection method is the in-depth, structured, semi-structured or unstructured one-on-one interview. It is also possible to collect data using other methods such as diaries or personal essays (Smith, 2017).

Semi-structured, in-depth one-on-one interviews with women who had lived the experience under study was considered the best way to obtain the type of rich descriptions of experiences desired for this study. Semi structured interviews allowed participants to share stories, thoughts, feelings, and understanding about the phenomenon. The role of the interviewer was to guide the interview to stay within the frame of the study but give enough flexibility for participants to elaborate on some topics of importance relevant to the research. In depth semi structured interviews allow original and unexpected issues to arise whilst ensuring that the researcher / interviewer has addressed all the research questions adequately with the participant (Pietkiewicz & Smith, 2014).

Original and unexpected issues were raised, the content of the interviews was rich, offering valuable data for analysis. Probing questions related to all aspects of the experience, particularly the psychological well-being and general health of the couple around the time of diagnosis of unexplained infertility, during the unsuccessful attempts to achieve a pregnancy, and at the time of spontaneous conception. No time limit was imposed during the interview. They lasted between 45 minutes and two hours. The interviews were audio-recorded and fully transcribed after the interview for analysis (Pietkiewicz & Smith, 2014).

3.5 - Sampling and recruitment

The primary concern with IPA is to provide a detailed account of individuals' experiences. The main focus is quality, not quantity, and given the complexity of most human phenomena, IPA studies benefit from a concentrated focus on a small number of cases (Smith et al., 2012). Typically, IPA research can have between three and six participants. This range 'provides sufficient cases for the development of meaningful points of similarity and difference between participants, but not so many that one is in danger of being overwhelmed by the amount of data

generated' (Smith et al., 2012, p. 51).

In the research proposal, the initial intention was to interview three to six couples who had experienced spontaneous conception after some years of infertility. After initiating the first contacts to start the interview process, it became clear that the women contacted wished to be interviewed without their partner. The main reasons cited were that they saw it highly unlikely or impossible that their husband would get involved in the interview process, due to working commitments or reservations to share an experience that they found difficult and now see belonging to the past. Some women also expressed that they would find it easier to voice their perceptions and feelings if they were alone during the interview.

Taking this feedback into consideration and after consulting with supervisors, a decision was made to change the participants sample suggested in the initial proposal. The ethics committee was presented with the suggested modifications and the reasoning behind them and the new proposal was approved. Once the decision was made to get women's perspectives only, the recruitment process became more straightforward.

The researcher interviewed five women in total. The content of four of these interviews were used in this analysis. In the fifth interview, the participant's focus was heavier around her experience of IVF treatment. Her description of the contexts surrounding infertility and spontaneous conception was confirming what all other participants had already described. The researcher was satisfied that saturation had been reached around the content which is the focus of this analysis. Therefore, a decision was made to base the analysis on four interviews. The researcher conducted, transcribed and analysed four participant interviews.

In order to understand the phenomenon, it was important the participants were in a situation where they could report their past journey of infertility and being fertile. It was preferable that they could give an insightful retrospective recount of their story, and be able to reflect on their journey including all aspects of their experience. For this reason, participants were chosen who were not considering adding more children to their family. The distance between a potentially difficult situation and the time of the recount was also considered beneficial to allow participants to not only retell their story with greater ease and with greater insight, it also provided some objectivity in a history that was by nature very emotional and subjective.

Participants were recruited via snowball recruitment. The majority of participants knew someone through their friendship group, their mothers' group or amongst their '*IVF friends*' who had conceived a child after ceasing treatment.

A Participant Information Sheet as well as a Consent Form were provided prior to the interview.

3.6 - Interview structure

The researcher prepared for the interview, which consisted principally in a 'grand tour' question, being: 'Can you describe your experience of conceiving a child spontaneously after ceasing to actively try to conceive?' Further probing questions were sometimes guided by the dialogue and aimed at facilitating a comfortable interaction between the participants and the researcher, which in turn, enabled participants to provide a detailed account of their experience (Smith et al., 2012).

Probing questions related to all aspects of the experience, particularly the psychological well-being and general health of the couple around the time of diagnosis of unexplained infertility, during the unsuccessful attempts to achieve a pregnancy and at the time of spontaneous conception.

Semi-structured in-depth interviews require the interviewer to present with a combination of strong empathic engagement and awareness in order to probe further into interesting or important aspects (Smith & Osborn, 2015). The researcher was prepared to witness interviews with participants that could carry an emotional content which would be translated to research material. The researcher was aware her conduct during the interview should project sensitivity towards her research participants and provide a safe environment for participants to enjoy an open dialogue.

Prior to the interview, the research was discussed and participants were given an indication of what the main question would be, either during a conversation or by email or text. The question was posed as follows: 'Can you describe your experience of being able to conceive a child spontaneously after experiencing infertility. What do you think made it difficult for you to conceive a child at a certain point in time, and possible at another time? Are there any

circumstances surrounding those two situations that changed, such as medical, psychological, financial, social or emotional? ‘

3.7 - Interview methods

All interviews started with a short informal conversation to ensure the participants felt comfortable ahead of a sensitive conversation, then the ‘grand tour’ question was presented to them. Most of them chose to tell their story in a chronological order, starting with their difficulties to start a pregnancy, their decision to consult, followed in most cases by a decision to have a medical fertility treatment, and in one case by contemplating adoption as a way to parent a child. Finally, the circumstances of their spontaneous conception were described. All women interviewed were comfortable sharing their stories and presented them with a natural flow. They were all able to offer an interpretation of what had happened and why it happened.

Participants were able to articulate clearly their experience of unexplained infertility followed by spontaneous conception. They all had clear insight into their experience and had formed a good personal understanding with the clarity and detachment hindsight offered them.

3.8 - Description of participants:

The four participants were women who had conceived a child spontaneously after having experienced unexplained infertility. Three women lived in the Perth or Fremantle area, one participant lived interstate. No participant considered adding more children to their family. The age of their children ranged from two to eighteen years old. The duration of the infertility period varied for each participant, ranging from three to eight years. All were professional, educated women. One woman was an office manager, one had recently become a yoga teacher and personal trainer, one was an artist, one was retired from the army, and had retrained as a teacher.

Even though some of the participants described a medical condition that would make a pregnancy more difficult to achieve, no woman or their partners had any diagnosed condition

that would completely prevent a pregnancy. The length of infertility and time it took between the decision to cease trying to have children and spontaneous conception varied greatly between participants, as this table shows:

Table 1

Description of participants

Participants	P.1	P.2	P.3	P.4
Age	43	47	54	Mid 40s
Number of children – ART and SC	1 IVF and 1 SC	2 IVF and 1 SC	0 IVF and 2 SC	2 IVF and 1 SC
Length of infertility	7 years	3 years	6 years	8 years
Gap between IVF birth and SC	4 months and 8 months	3 years	N/A no ART treatment	18 months and 9 years

3.9 - Participants' profiles

P.1 had decided to start a family age 30 and had described that period of her life as generally very stressful. She was asked to renew and sign a work contract committing to stay with the company for a minimum of twelve months, one week prior to the company take over that she was unaware of. During the company restructuration period, she witnessed approximately four hundred jobs disappear, most of her friends lost their jobs. Overall, she would describe these times as 'very unstable times at work'. Consequently, she felt used and betrayed by the company and was concerned her friends would see her as betraying them. At the same time, the couple had started the process of building their 'dream family home' prior to the building boom in Western Australia which led to considerable delays. The process became very stressful and costly. Moreover, she and her husband went through numerous medical diagnosis tests and treatments as they wanted to investigate their inability to start a pregnancy. The results showed that she had a blocked fallopian tube. She underwent multiple surgeries that added to the stress

already experienced, and started to suffer from anxiety and depression for which she sought treatment. The accumulation of stress and anxiety led to a decision to make changes in their lives, such as change of fertility clinic, house, work, etc... She explains the feeling of having a fresh start that ensued led to new optimism and they had a successful IVF attempt which led to the birth of their first child. The couple conceived spontaneously four months after giving birth to first child through IVF. The pregnancy was unplanned and occurred while breastfeeding. It was diagnosed as an ectopic pregnancy, and led to an emergency surgery to remove the fallopian tube. Following the surgery, the participant was left with one tube, previously diagnosed as a blocked tube. The couple was then told they would not be able to conceive spontaneously again. They conceived spontaneously in the following five months, the pregnancy was carried to term and the couple give birth to a healthy baby.

P.2 was in her early thirties when she decided to start a family. Her mother was being treated for cancer at the time. They decided to seek medical advice and were diagnosed with unexplained infertility. Whilst receiving IVF treatment, her father was diagnosed with terminal cancer. She describes the period of trying to conceive as full of grief, caring for sick parents while undergoing fertility treatment. With hindsight, realised that she was fearful of pregnancy and motherhood. The couple had two successful IVF treatments. Around the time the family moved to Perth, they were informed their frozen embryos had been lost. They resigned themselves to the fact that they would not have any more children. P.2 went through a process of accepting that another pregnancy was no longer an option. The couple conceived spontaneously during a family holiday.

P.3 was treated for pre-cancerous cells in her cervix and underwent surgery to remove them. She reports that this intervention created an urgency to start a family. Despite trying to start a pregnancy, and no medical reasons identified that would make it impossible, she was unable to conceive a child. P.3 chose not to pursue fertility treatment. For P.3, the process of actively trying to conceive made a past trauma re-emerge. P.3 explains that this led to a few years of emotional hardship filled with self-doubt and poor self-esteem. This brought her to the realisation that she had to create a situation of healing in order to overcome the difficulties she was experiencing. An active and conscious process of healing followed. P.3's husband was

offered a position in Africa and the couple decided to accept it. They moved there for a couple of years. Their experience in the village they lived in, and the relationships she developed with the women in the village restored her self-confidence and self-esteem, as well as reinforced her confidence to be a mother. The couple conceived spontaneously while in Africa.

P.4 had some health issues from age fourteen and was diagnosed with Polycystic Ovarian Syndrome (PCOS) at a very young age. This is when she was told she will not be able to have children. She recalls having constant health issues from that time, she was tried on menopause tablets for a while, then was prescribed the pill from age fourteen. When she met her husband, she informed him of her health issues and her potential difficulties to conceive. The couple consulted and sought medical assistance to start a family. During this period, her mother was diagnosed with cancer. The couple underwent eight years of unsuccessful fertility treatment. They experienced some relationship issues they had to address during their infertility journey. The couple were moved often from one post to another, and although they accepted this as part of the lifestyle that is inevitable in the army, it sometimes caused further stress. The postings were mainly in Australia, and the couple were often together, but sometimes one of them was posted overseas. After eight years of treatment, they conceived two children through IVF. They bought a country property during one of their postings and this gave them a sense of belonging to the local community. They had their first spontaneous conception at this time, which resulted in a miscarriage. They decided to abandon any more IVF attempts and decided to donate their embryos. They conceived spontaneously after this decision while on a family holiday.

4 - Data analysis

4.1 – Introduction

During the analysis process using IPA methodology, the researcher was committed to understanding the participants' point of view and focusing on the personal meaning making in the particular context of the individuals. When dealing with a personal and emotional lived experience such as past infertility, one has to acknowledge that this activity involves an active

process of interpretation on the part of both participants and the researcher (IPARG, 2018). IPA acknowledges the role for interpretation, and emphasises the need for the researcher to distinguish between the experience as the participants report it and the researcher's interpretation of that experience. It is crucial for the researcher to suspend critical judgement and temporarily refuse any critical engagement which would bring the researcher's own assumptions and experience into play (Spinelli, 2005). Because of the hermeneutic nature of IPA, researchers are encouraged to keep a record of their interpretation in a reflexive diary, recording details of the nature and origin of any emergent interpretation (Biggerstaff & Thompson, 2008). . The researcher kept a record of personal notes and observations during the analysis process.

- For the purpose of this research, the recommended procedure by Smith and Osborne (2015) was followed. This involved the following stages: The initial stage involved multiple readings and making notes. Each reading and listening to the transcript provided new insight into the data. The researcher having conducted and transcribed the interviews herself became very familiar with the content of each interview. During this stage, the researcher made notes about observations and reflections about the interview experience, or any other thoughts or comments of significance – language used, pause, context of comment, and initial interpretative comments (Pietkiewicz & Smith, 2014).
- The second stage involved transforming notes into emergent themes. The initial notes were translated into emergent themes at one higher level of abstraction which may have referred to a more psychological conceptualisation, grounded in the participant's account (Pietkiewicz & Smith, 2014).
- The next stage involved looking for connections between emerging themes, grouping them together according to conceptual similarities, and providing each cluster with a descriptive label. The clusters were rechecked against the transcript to ensure the connections reflected the participants' actual words.

This process was repeated for each case, and results were produced in a table of ordinate themes for each case. After analysis had been conducted on each case, patterns or themes could be analysed cross-case and documented in a master table for the group of participants. The master table required the researcher to prioritise and reduce the data (Smith et al., 2012; Smith & Osborn, 2015) which was then transformed into a narrative account (Smith & Osborn, 2015). In this final stage, the researcher started the redaction of the full narrative

of the study that provided a comprehensive account of the findings. The analytic account was presented, supported by verbatim extracts from each participant (Smith et al., 2012).

An IPA analysis focuses on the participants' process of making sense of their experience as much as it does on the experience itself. There were two aims in the analysis of data in this IPA study. The first was to understand and describe the world of the participant. The second was to provide a critical and conceptual commentary on how the participants make sense of their experience (Larkin et al., 2006, p. 104).

4.2 - Overview of findings

The data collected during the interviews covered periods of unexplained infertility, treatment and conception of a child after the couple stopped actively trying to conceive. The psychological and emotional aspects of each of these periods was described in detail by participants. The focus was on understanding what creates a situation that enables a pregnancy for a couple who had difficulties to conceive in the past. The background on the circumstances and the state of mind during the time that preceded spontaneous conception was described and analysed by participants. It was compared with the circumstances and state of mind at the time of spontaneous conception. This insight into the whole journey lived by participants allowed the researcher to identify critical differences and draw conclusions on what had changed in participants' situations that could have enabled a pregnancy.

Participants identified blocks that they believed challenged their ability to conceive spontaneously. They understood the elimination of these blocks allowed a pathway to pregnancy. These changes were often accompanied by a ritual. Emotional health was mentioned by every participant though each participant's experience was different.

All spontaneous conceptions were unplanned. Participants described their experience of conceiving as a '*miracle*' or a '*mystery*'. None of them suspected they could be pregnant without Assisted Reproductive Technology (ART). A super-ordinate table was drawn out of the material that emerged from the four interviews. It includes the themes identified, as well as some citations that helped identify the themes and the line number they appear on in the transcript. It presents as follows:

Table 2

Super-ordinate table

Themes	participant	Line number	Citation
EMOTIONAL WELLBEING			
<u>BLOCKS:</u> <u>stress, fear,</u> <u>grief,</u> <u>relationship</u> <u>issues, anxiety</u>	P.1	22	There were extreme stress at that stage
		25	It was awful
		30	My work... absolutely disgusting
		51	Anxiety, depression... from being in that environment
		139	Big great cloud above everything
	P.2	309	Fear played a big part for me too
		288	Caught up in negative emotions
		77	It was full of grief, a lot of grief
		65	Mum had been sick for maybe three years
		85	The whole thing, the IVF and the deaths, happening all at once
	P.3	45-46	Dirty... angry... I knew I had to deal with that
		145	I used to be angry
P.4	135	The move was playing on my head	
	91-92	No luck... I don't think I was ready personally	
	354,	There is a reason why we couldn't have children... relationship problems	
	356		

Themes	participant	Line number	Citation
<u>PATHWAYS:</u> <u>Well-being,</u> <u>stress release,</u> <u>freedom,</u> <u>stability</u>	P.1:	160	The right mindset
		186	We changed everything to get rid of all the stress
		214	Brighter and happier
		266	[husband] and I were loving life, loving everything...
	P.2:	279	some relaxation, some form of stress release
		P.3:	217
	304		A personal thing... the shift has got to come from you
	P.4:	204	We were happy, we were more than happy just cruising
		218-9	Beautiful friends, fantastic community
		222	Kids were doing really well, everything was beautiful
247		I had never felt better	
		370	It just had to happen when I was ready to happen
MINDSETS AND BELIEFS			
<u>BLOCKS: self-doubt, question ability to</u>	P.3:	26	Feeling I didn't deserve it as well
		23	I can't be a mother because how can I be a mother

Themes	participant	Line number	Citation
<u>conceive or parent</u>		23	I stopped myself from having children... powerful my mind is
		27	Self-doubt, recrimination, self-loathing
	P.4:	23	You're never gonna have children
		27	I ended up on the pill constantly from age 14
		29	I didn't like it. It played up significantly for me
		42	We may not be able to fall pregnant
<u>PATHWAYS: Increased confidence in abilities, experience of parenting</u>	P.1:	304	I was well equipped
		285	I had my daughter, things had worked my way
		300	We had our home, established family... not too much stress
	P.3:	91	Believe that I can be a mother
	122	I can love and they can love me back	
	56,62	Create that environment, cleanse	
	94-95	Psychological pattern huge impact on my body	
	P.4:	271	Outlook was what help me become pregnant

Themes	participant	Line number	Citation
ATTITUDE TO PARENTING AND CONCEIVING			
<u>BLOCKS: focus around conceiving and medical procedures</u>	P.1:	320	Everything becomes clinical
		355	How much of my life was consumed with trying to fall pregnant and how it affected me mentally
	P.2:	362	You really focus so much on your womb when you want to get pregnant
		36	This is the time that I would optimize so I put so much pressure
<u>PATHWAYS: broader life focus, detachment, holistic health</u>	P.1:	35-36	I think I was getting frustrated, I was hard on [husband]
		150	I went through acupuncture and meditation
		200	It was not all about IVF anymore.
	P.2:	276	Spontaneous pregnancy... the biggest shock of my life
		372	I believe that now if I wanted to fall pregnant naturally I could do it
		39	I still did Chinese stuff
		234	Lets just enjoy what we've got
		129	I sort of got on with my life
		139	It was that letting go
		121	There was not that pressure, you know this is peak fertility

Themes	participant	Line number	Citation
		124	Conscious process I wasn't going to have a daughter
		144	It was the acceptance
	P.3:	69	To take myself away
		56,62	Create that environment, cleanse
	P.4:	390	Not try too hard but not give up easily
		419	Letting go of that potential
		255	Holistic treating all of you, not this symptom
		311,313	Found out we were pregnant... 22 weeks
RITUALS			
	P.1:	191	I needed that feeling to be a mum and that was what (dog) gave us
		194-195	(dog)... was the best thing ever - catalyst
	P.2:	215	Bought a doll, spirit of daughter, dressed it and let her go with love
		239	Felt strangely comforted when I did it (ritual)
		242	Process or Ceremony was a key for me
		207	Finding that place of letting go of control
	P.3:	115-116	The weight of the child in your arms, the heartbeat against your chest
		200-201	Little girl wanted to come to me, feeling was light and good and soft, my body was reacting to it

Themes	participant	Line number	Citation
			Put trees in, talk to neighbors, lots of fun
	P.4:	168	We were settled back, we had the house
		136	Spending most week-ends down at the
		166	property... trying to improve, planting trees

The following detailed analysis will focus on the main themes that emerged out of the transcripts. Three main themes were present in all participants' experiences of transition from unexplained infertility to spontaneous conception:

Emotional well-being was mentioned as a factor that influenced couples' ability to conceive. All went from a situation that contained negative feelings such as stress, grief or fear to more positive ones such as contentment and happiness. The second part of the analysis will cover the general mindset that went from doubt and self-loathing to believing in their ability to conceive or be a parent. Finally, their approach to treatment went from bearing an intense focus on medical procedures, to being holistic and taking their whole body and mind into consideration. Their focus in life went from being narrowed down to becoming parents to adopting a wider outlook on life. This aspect will be covered in the third part of the analysis.

These blocks were either lifted in a conscious process, or unbeknown to participants. The transformation process could either be quite sudden, especially if initiated by a decision for a change, or spread over a longer period of time.

All participants mentioned that at some time they went through the practice of a ritual to either help initiate the changes or support the shift they had experienced. The importance of ritual as part of the healing process will be covered in the last chapter of this analysis.

4.3 - Emerging themes

4.3.1 – Theme 1 - Emotional well-being

All participants related to both the period of infertility and the time surrounding the spontaneous conception as being filled with strong emotions. With regard to the period when they tried to start a pregnancy, all described their lives as lined with negative emotions. Some participants described periods of stress, there were times of grief, fear, anger, instability, and betrayal. They usually went through a process where their negative emotions reached a peak leading to changes being made to improve their well-being. This brought some more positive emotions, such as relaxed state of mind, happiness, stability, freedom or a sense of belonging.

4.3.1.a Blocks to pregnancy; negative emotions:

The circumstances surrounding the time where couples discussed starting a family were described by all women as difficult times. They were challenged by different life situations which impacted negatively on their mental and psychological health. Some of the emotions were quite strong and felt extremely deeply. The emotions described encompassed betrayal, resurgence of past trauma, stress, grief and fear and were characterised by relationship difficulties.

Betrayal:

P1 describes that period in her life as filled with stress and a sense of being used and betrayed in her work place:

‘... things weren’t going good at work and at that stage, right at the time where we started trying [to get pregnant], there were extreme stress at that stage, ... [new company] made them all redundant ...four hundred staff... one week after I signed the contract [committing to stay one year in the company], so you can imagine I was in tears, I had my staff in tears, I had people calling me, staff were trying to take them to court trying to say how badly it was done, it was devastating.’

Resurgence of a past trauma:

A past trauma resurfaced for P.3 at the time she wanted to start a family. This past trauma also had an element of betrayal from someone she had trusted:

'... for me it was 'why can't I have a child, why can't we have kids?' ... and stuff started, 'STUFF' started coming out for me, mmm you know [past trauma triggered] and all the issues of love as well, so I went through a really hard time I was angry... I saw him as a big brother... he was catching me unawares... I felt angry... I knew I had to deal with that.'

Stress:

P.1 describes this period of her life as very stressful:

'... so we were building our house ...right at the heart of the building boom so things like we had to wait six months for our bricks to arrive... it was awful...a lot of stress, and thinking now I was trying to fall pregnant and the stress, it was around my waist, around that area, like everything, my body was tensed I was not in a good headspace put it that way... it was disgusting, it was awful, I started, anxiety started to build, just depression, just from being in that environment.'

P.1 was one of two participants making remarks on how they found stress was located in a certain part of the body. P.3 also described the stress as being located around the reproductive area:

'...I believe that trauma is locked in our body, and our muscles keep our experiences. And different conditions affect different parts of the body...'

She later describes how the shift in her well-being and her healing process was translated at a physical level for her too.

Some participants mentioned they felt pressure from family or friends to have children. P.3 felt that pressure coming from both her and her husband's families. She describes it as stressful, to the point where she had to explain that they could not achieve a pregnancy:

'... my family were still constantly ringing me, asking me: 'you've been married now for...' I actually told my family that I couldn't have children so told them to leave me alone... a lot of pressure from both families...'

Grief:

Three participants recounted that during this period, their parents or husband's parents were sick with cancer. As they were dealing with a life-threatening illness of loved ones, they remember an emotionally difficult time.

P2 recounts:

'I got pregnant with [IVF son] ... my mum was sick with cancer, she'd been sick for maybe 3 years... but when I got pregnant... in April, my dad was diagnosed in August with secondary cancer and they couldn't really do anything to help him... it was full of grief, a lot of grief'

Grief was also present after an unsuccessful IVF treatment, or the loss of frozen embryos, as P.2 explains:

'... I was quite happy with 2 boys, I must admit I always wanted a daughter, mm, but I, you know I sort of let it go (lost embryos) I don't know why because I was happy with the boys, but I was sad...'

Fear:

Other emotions such as fear also emerged in interviews. P2 recalls fear as being a strong emotion at the time:

'I think actually there was also a fear, so I wonder if that fear of being pregnant and becoming a mother also contributed to that time... because it was just a big unknown.... so I would say fear played a big part for me too. I think a lot of it, if not all of it was emotional within the bigger picture yeah, it's hard to sort of explain that but yeah there was some fear, a lot of fear (laugh) yeah not guilt, but fear.'

Relationship difficulties:

P.4 suspects that relationship issues may have hindered their chance to get pregnant:

'There is a reason for everything, and although we don't know it at the time, if we look back we see there is, and it's the same as having kids, we couldn't have children in the first 8 years, we had to get through, me and [husband] had to get through our relationship problems first.'

The following section helps understand the background of participants who have achieved a pregnancy after lifting a block that they now perceive was stopping their ability to have a baby.

4.3.1.b - Pathway to pregnancy: Well being

As participants became aware of these negative emotions, they realised they had to bring changes to their situation and improve their well-being. Depending on what they were dealing with, the changes they brought were either practical or more psychological, or both. Practical changes involved moving house or changing work or clinic. The deeper changes were often brought up by an awareness of the need to better look after themselves, improve their mental health and lower the levels of anxiety, anger or depression. That self-nurture came through meditation, yoga or other forms of personal healing techniques. Letting go of strong feelings and emotions was often accompanied by a sense of freedom. These changes placed a distance between their previous routine and their new life circumstances. In all cases, the women describe a reduced amount of stress and a considerable increase in their psychological health between the time of infertility and spontaneous conception.

Reducing stress:

P.1 says she and her husband made a conscious decision to reduce their stress. They decided to bring changes into their lives:

'... we changed everything that we could, to get rid of all that stress... everything seemed to become brighter and happier the people that were around us were happier I don't know everything changed...I really wanted to get my body in the best possible way it could be, I went through the IVF support clinic... You walk around tensing that area for years, and for that to be released for me personally, for the stress to be gone, a lot of stress in my life and to alleviate stress and to be in a happy place in my life...'

P.3 states that going to Africa had the added advantage of offering a respite from the stresses of her life and the pressure she felt from family in regards to their infertility:

'... pressure from both families and I know that I can say that... I'm quite honest, we ran away to Africa, I don't care, we did, but also I always wanted to go to Africa...'

Freedom:

P.3 describes her move to Africa as unleashing a new side of her, free from the anger she had previously described. She had become more open:

'We went to Africa but I went in a very different way... because I left myself open. I wasn't going to force myself ... I felt different before I left for Africa, I felt so different... psychically I have, you know, I have worked through a lot and talking about the shift that made it possible, it was so deep I hadn't realised it, but my sense of consciousness and my acceptance and my awareness... I believe directly affected it because within that year, a year and a half, my body started to change in Africa, I became voluptuous,,, I could feel things moving, I was becoming feminine... it was feminine, soft, and even [husband] noticed that I was a different person and then I became pregnant in Africa.'

Happiness:

P.2 explains the process of grieving for the third child she would not be able to have helped her release the need to control all aspects of her life and she had to bring some acceptance to her situation:

'... finding happiness wherever I am rather than wishing that things were a bit different because I can't control... really control it, and it makes me feel unhappy if I want something and it's not there... But rather be happy with what you have.'

She went through a process where she made a conscious effort to change her outlook on life and increase her happiness.

'I think for me it was about finding that place within me of letting go of control, because I always liked to have some sort of control over my world... realise I may have some input but there is a bigger, much bigger force and rhythm of creation of life that I'm being part of and I don't I certainly don't control, ... it's just finding your place in the world and it took that to realise that I'm not the centre of the universe I suppose (laugh), well some people think that, and that's alright but I now see that I'm part of the play, I'm part of the story, so it was given to me I suppose but I'm glad (laugh)'

Sense of belonging:

P.4 describes happy times, where she had meaningful friendship and was involved in the community. Even though she had described all the moves casually as a part of the lifestyle that comes with a career in the army, they were often stressful times. During one of their posts, she enjoyed feeling part of a community:

'... and we were happy, we were more than happy just cruising with our little family and... I'm so lucky that we had a fantastic set of friends... I had a forced break [from university] the last semester 2015 and in that time my daughter was graduating from y6 so I decided to take on the role of organizing the kids' graduation... also involved at the school canteen... The kids were doing really well and everything was beautiful and then 2015 in September we'd organize to take a family holiday...'

Physically and mentally, she states she *'never felt better'* in the time preceding the spontaneous pregnancy.

According to all participants' experience and their interpretation of it, emotional well-being plays an important part in their ability to conceive. This is something they say they probably would have denied whilst going through the infertile years, but when

they became aware of their well-being and decided to work towards improving it, all say it created a path to better health and eventually better reproductive health.

4.3.2 – Theme 2: Attitudes and beliefs

Research in epigenetics led by Dr Lipton, a cellular biologist, contributed to a new body of knowledge on the effects perceptions and beliefs about ourselves and others have, and how they can alter the body on a cellular level. In a google scholar article retrieved from his 2007 website, he states: ‘This new perspective of human biology does not view the body as just a mechanical device, but rather incorporates the role of a mind and spirit. This breakthrough in biology is fundamental in all healing for it recognizes that when we change our perception or beliefs we send totally different messages to our cells and reprogram their expression. The new-biology reveals why people can have spontaneous remissions or recover from injuries deemed to be permanent disabilities’ (Lipton, 2007, p. 1).

4.3.2.a - Blocks to pregnancy: Negative perspectives

- Doubts and (erroneous) beliefs:

Participant’s perception of their ability to conceive or to parent were often negative. Some participants had little belief in their ability to get pregnant, while others doubted their ability to be the ideal parent they wished to be.

P4 recounts having symptoms of ill health and being told from a very young age that the consequences of her issues would be difficulties in having children:

‘When I was 14, I had some pretty wicked periods, they were horrible.... My mum took me to the doctors [who] put me on those menopause tablets to stop me from bleeding, which was highly unusual... after 3 months, I hadn’t stopped bleeding... I was put on the pill by an old family doctor who sent me to a gynaecologist. The gyno did some testing and pretty much said to me at age 14: ‘you’re never gonna have children’ But at that stage in my life I was like OK whatever... I ended up on the pill constantly from age 14...’

Even though she doesn't recall this had much impact on her at the time, she felt the need to inform her future husband of the possible difficulties to have a family:

'I met my husband and we decided we were gonna get married, I said to him all of the problems that I've had we may not be able to fall pregnant straight away.'

Self-doubt and self-esteem:

P3 cited self doubt and the belief that she could not be a good mother as a block to her ability to have a child. This was a result of her perception that own mother was unable to protect her as a child,

'...the thought of I can't actually be a mother because how can I be a mother, my mother couldn't protect me, how can I protect my own child?'

This lack of confidence in her ability to mother and protect a child was doubled with a concept that she was undeserving. Her self-esteem as a person and a potential mother was very low for quite a long time.

'for years, I treated myself as the dirty one, as the one that had something wrong with them, and I wasn't... And also, the thing of the self-doubt, the recrimination of how can I be a mother when its happened to me so a lot of self-loathing, that didn't help, and this belief that I didn't deserve it as well.'

This topic came again later in the interview. She related her experience of past trauma with her fear of 'not being able to protect a child, especially a daughter'. When reflecting on her infertility and the miscarriage she had, she stated:

'.... Interesting, so I do believe that I stopped.... I believe that my mind is so powerful that I stopped myself from having children. That's how powerful I am in such a negative way... And so, if I can be powerful in a negative way, then I can be powerful in a positive way, yes, but I think I stopped myself having a daughter (broken voice) cos I miscarried her (cry... silence)... I had her, but was I just so scared of having a daughter, I don't know I'm still working through that one, and then I had [son], but that one [daughter] I just had to let go... and I can't do that to myself because that just

hurts and I'm just creating a drama that might not be there, but in my situation, I think it's related. That's ok, I won't have a daughter but I can have daughters in law.'

During the analysis, it became clear to the researcher that every block identified by women during the interview was counterbalanced by the positive equivalent at the time of spontaneous conception. These are detailed below.

4.3.2.B: Pathways to pregnancy: Breaking the negative cycle

Experience of nurturing:

All participants who sought medical assistance saw their treatment result in at least one pregnancy through IVF or ICSI. They all state that their belief in their ability to parent was no longer in doubt.

P.4 was responsible for most of the parenting due to long periods of absence from her husband when he was posted overseas:

'So, I gave up that job and I stayed home with, with [daughter], being a at home mum for a while, and yeah, we had a beautiful huge baby boy I pretty much had both kids to myself, yeah most of the time, I raised them by myself, yeah [husband] would be there and then gone, so yes for much for their younger life it was pretty much just me... [Husband] was looking after work, I was looking after the family...'

P.3 did not have biological children at the time of spontaneous conception, but had become a nurturing figure to many children in the African village she was living in. This allowed her to believe in herself and her mothering abilities and reinforced her self-esteem as a nurturer. She was also offered children to adopt as the village had many orphans at this point in time:

'... we could easily have adopted children from the village, so I really opened myself up and I spoke to [husband] and he said whatever will happen will happen so he was of the same... but I was more specific about what I wanted and what I wanted was I wanted to have children in some way ... and that was my other thing that we could

provide a home to children... lots of orphans yes, very universal, organic natural offers that were provided to us...'

This experience of nurturing was provided to P.2 by looking after her pets. P.2 recalled providing nurture for pets all her life. She knew she could offer nurture:

'... because my pets were my babies and I've always had pets, you're nurturing and caring for a little thing...'

P.1 explains it was a new dog that allowed her nurturing and protective side to express itself:

'I needed to nurture I needed that feeling to be a mum and that was what [dog] gave us, and that's when things changed we had the dog and that was when we made all the changes... [dog] was probably the catalyst, like [husband] knew that I was so under, you know mentally I was down and he knew that I just needed to have a child and mmm yeah, so she (dog) was the best thing ever...'

Confidence:

Those experiences of nurturing or mothering reinforced the message that participants could remove doubt about their own ability to parent, and sometimes to conceive, therefore creating a situation where confidence increased.

- P.1 describes her spontaneous pregnancy as being accompanied by a sense of normality:

'It felt like any normal pregnancy. With [son] we just kind of took it in our stride... We fall pregnant and that was the way it should be, we already knew how to look after a baby, we had our home, established family there was not too much stress there, it was incredible hmm just everything was... the stress was gone and I was well equipped.'

Despite eight years of infertility, it is interesting to note that the belief P.1 now holds around her reproductive health is based on her two experiences of spontaneous conceptions, and she sees herself as fertile:

'... for me to be able to fall pregnant twice naturally after having [IVF daughter], obviously one very negative experience and the second a very

amazing and positive experience, and I still believe that now if I wanted to fall pregnant naturally I could do it...'

Participants expressed their experience of parenting or nurturing in general released the self-doubt that they had.

P.3 explains she went through a conscious process of physical and spiritual healing in order to enhance her chances of being pregnant. She describes it as a step forward to healing and allowing pregnancy:

'...I made some inroads into my own self, allowing myself to be lovable, to be loved and to believe that I can be a mother, and [husband] and I can be parents and that I'm not a bad person...'

Her experience of women strapping their children onto her was described as a therapeutic step towards her healing. She really enjoyed this experience of nurturing and explains it increased her confidence about having children:

'...With children strapped around me in the front and behind... felt just wonderful, it felt so natural... It reinforced that I can love and they can love me back (voice break).'

4.3.3 – Theme 3: Attitude to parenting and conception

4.3.3.a - Blocks to pregnancy

Medicalisation and obsession around conception:

In her book 'How would you like our eggs?', Krisak (2013) describes in detail the journey of trying to conceive and the obsessions she had that were related to becoming a mother. All participants described that at one stage during infertility, the focus of their thoughts, energy, time and often financial expenses were all geared towards achieving a pregnancy.

P.1 recalls:

'I felt that stress in my ovaries, in my stomach... much of my life was consumed with trying to fall pregnant... I mean you really focus so much on your womb when you want a pregnancy. You really send those vibes, those negative vibes to your womb. You walk around tensing that area for years...'

P.2 recalls the ups and down of the IVF experience, and the focus that was put on conceiving and parenting:

'...it was a big rollercoaster, it was very emotional because we were very excited, very focused very this is my life you know feeling very sad when you see all my friends were getting pregnant at the time so yeah just having that around...'

She also mentioned the strain that focus on conceiving put on her relationship with her husband at times:

'but still no baby, ... , and I think I was getting frustrated at that stage, it was hard on [husband] because I knew I had so much medical knowledge that this was a good time to get pregnant, so this is the time that would optimise so I put a bit of pressure, it wasn't all that nice an experience, you might say but yeah, it was a bit tense there I suppose at times...'

P.4 says that even though a lot of focus was on conceiving a child for a long time:

'...they (IVF clinic) were too focused on the one thing where, I suppose you have your IVF doctors, you got your general practitioners, who have a bit of a wider range of things they deal with, so the (IVF) specialists focus on just that...'

She and her husband became aware they should not be consumed by these efforts:

'I just felt that there was no use in forcing it because the more you force things the less likely it is to happen, if you cut everything out but this one thing and you're pushing the walls then you're losing out on all those other things that need to be in your life.'

Bargaining, magic:

Bargaining is featured as one of the five steps of grieving in the Kubler-Ross table (Kessler & Kubler-Ross, 2018) Grief specialist Mal McKissock (2002) explains that other losses than those caused by death can cause a grief reaction. When dealing with infertility future parents grieve for a pregnancy and the child they desire and have hopes for. When this dream does not materialise, there is a feeling of loss. In all situations, participants experienced grief of a dream that could not be accomplished. Even though the ways of bargaining were slightly different for each participant, there are a lot of commonalities and all were seeking help from a 'higher power.' P1 talked about her willingness to try everything to get pregnant, even if she thought there was no rationale in the proposed remedy:

'they [friends] were saying try this and try that, I even did some strange things like juice that was from... you know I don't know I think Queensland or something, some oils and some you know all the stupid things like that I was trying whatever I could to put my body in the right place to fall pregnant.'

P.3 talks about a time where she realised she needed to rid herself of her strong negative feelings. She came to the conclusion that she needed to make changes:

'... be as calm and as clean as possible to become pregnant, to create that environment and [husband] as well ... being in a good state... that's when I started to go to yoga and looking at cleaning out my body for one thing, feeling clean in my body eating well... not drinking... I had some quite intensive prahnic healing, Indian ayurvedic healing...'

She decided to consult a psychic with the hope to understand and get answers to her many questions. The consultation was around having children. Even though she doubted the consultation and its content immediately after having it, she felt the need to seek it:

'... And you know I had seen a psychic and mmm she... when I came in the door she just saw this kind of hovering (showing above her head) and she said you know, oh you've got children and I said no I don't, and she said you've had children (showing around herself) she said they're like airplanes waiting to land...'

P.2 also tried a few ways to attract better chances to conceive. Some paths make sense to her, while others she thinks are a bit mysterious and can't be explained rationally:

'but I went more in the path of acupuncture, homeopathy, Chinese herbs, I can't remember what else we did, naturopath, and all different things, [... after went down IVF path] I still did Chinese stuff in Melbourne, I'd have some little balls on my ears and I'd have to press them and things like that it was interesting.'

Participants invested a lot of energy and focus into trying to find a miracle cure to their infertility. With hindsight, they now see that their quest to increase their fertility was chaotic, consuming and quite obsessive. In order to free themselves from these blocks, they needed a shift in focus.

Participants described the shift mainly as a release of the previously held anxiety around conception. The help they sought in order to increase their fertility was based around an increase of well-being through a holistic practice.

4.3.3.b Pathways to pregnancy: New outlook

– Release:

In order to achieve a pregnancy, the participants went through a process of transforming what they described as obsession to a more relaxed outlook on life. They went from catastrophising to releasing and letting go of their strong feelings around their fertility.

Catastrophising includes rumination, magnification and helplessness (Turner et al., 2016). Releasing these emotional states created a gentler and calmer outlook on life and themselves. This in turn generates an environment more favorable to well-being.

All spontaneous conceptions occurred when the couples were not actively trying to get pregnant and all were unplanned. P.1 had her first spontaneous conception whilst breastfeeding

her 4-month-old baby, a time when women assume they cannot achieve a pregnancy. It resulted in a miscarriage, and surgery to remove a fallopian tube. Her remaining tube was blocked and she was advised to abandon any hope of having another pregnancy. She became pregnant about six months after the surgery and her pregnancy went to term. P.2 conceived during holidays, after accepting she would not have a third child as the stored frozen embryos had been lost and P.3 conceived during her two year stay in Africa. P4's first spontaneous pregnancy occurred in the midst of two years amenorrhea and resulted in a miscarriage. Her second spontaneous conception occurred during holidays, after making the conscious decision to donate their eggs and not have any more children.

P.4 explains her personal process of release:

'Yeah pretty much just before we got pregnant with [third child] we thought yeah are you happy where we are? I'm happy with the 2 that we have, do you want to go to IVF anymore? No, no we don't want to do it anymore... we donated I think it was 2 frozen embryos... mm it took a lot of soul searching to do it... yeah, letting go of that as belonging to you, you know it's part of me and it's part of [husband], to let go knowing that that could be another child for us... Yeah, it's the potential yeah, and letting go of that potential is quite difficult...'

She sees the acceptance of their difficult situation as a great step forward for her:

'And you know and I went through [difficult] feelings, I just chose to accept it in a different way and I think that was pretty important.'

For P.1, the release took another form. She and her husband decided to drastically change their past routine with new beginnings:

'... we had a family home which we wanted to fill with children that was not happening so I made some changes, we sat down and discussed selling the house and I said I will consider [changing] fertility clinic, I had a big great cloud above everything you know the house, [the clinic], work everything was just negative and by the time we moved here it was just a massive change and things started to become more positive. I

went to this new clinic, and I definitely had hopes again thinking that I was back, I felt that I was having a reboot, I felt I was back into day 1.'

The release was also in the form of expressing nurture towards the newly acquired dog, and focusing on changes:

'I needed to nurture... and that was what (dog) gave us... it was not all about IVF anymore, it was about my dog, and moving house a new beginning, and obviously the dog was the biggest part ... I was walking her and I was no longer thinking 24/7 about having a baby.'

P.3 describes leaving her old situation behind as a form of release as well:

'When I went to Africa, I just released. I felt free... and you don't have to relive it [trauma] you can just release your body and let it go. There has to be some sort of physical release as well as therapy work.'

For P.2, the release was around the need to control her world. She went through a process of acceptance of what she could not control. Her changed outlook on life helped her adopt a more flexible view of her world:

'I still wanted a daughter but there was not that pressure of you know this is the time, peak fertility and things like that, it was an acceptance you know this won't happen in this life, and that's ok... It's just that acceptance, that letting go. That it's not supposed to be right now or it's not supposed to be like that at all. So, it's been a big thing for me to understand and accept.'

Holistic health:

For P.4 the spontaneous conception that followed her holistic treatment was not the motivation of her consultation with a chiropractor, yet she links the pregnancy to the treatment she received:

'He was fantastic... So, he used the vitamin supplement, magnesium supplement and concentrated on gut health so it was all prebiotics and probiotics and all that kind

of stuff and I'd only done the supplements for 5 months and umm I had never ever felt better... And I really really believe that him treating the whole of me was one of the contributing factors of me becoming pregnant... In hindsight I don't believe that I would have become pregnant if my whole body umm had not been in alignment. I believe that the holistic, treating all of you as, not this symptom and that symptom, I just think that it is absolutely fabulous.'

When asked if she had ever experienced that holistic approach in the past, P.4 replied:

'That is the first time, absolute first time it wasn't just treated for one particular issue... it was everything, it was the stress it was umm it was everything all at one time you know, yes, my back hurt and I was getting twinges in my shoulder or whatever, he was treating everything at the same time...'

The result of this holistic approach was a clear feeling of physical and emotional well-being which she describes as:

'Generally trying to make me feel the best person that I could be... with [other children] the doctors seem to be treating one little issue you know don't look at the whole it's only that particular issue, it's only that you can't get pregnant...I just truly believe that his whole outlook was what helped me become pregnant with [son] ...'

For the other participants, the holistic approach was adopted with the aim of creating the best possible conditions for a pregnancy:

P.1

'I went through acupuncture and meditation... so pretty much what they did they stimulated the ovaries, I could actually feel the blood flow which I don't think I had felt ever, I could feel the stimulation in my stomach in my ovaries at the end of it literally I could feel the tension gone and the blood flow actually going... I had 7 years or 8 years trying to fall pregnant and the one time that I got acupuncture is the time that it helped so all I can say is that it was successful for me.'

She explains this approach reduced her levels of stress and improved her general well-being:

'.... And obviously I had been harboring all my stress in that area of my body and I literally must have been tensing that area for years and years and years and I didn't even know anything different and after a month, I could feel it relaxing and getting in the right mindset through meditation and also I guess what it does with stimulating the blood flow... it's kind of giving you that chance that your body is at the right place where it should be...'

When P.2 realised that it could prove difficult to get pregnant, she sought natural therapies before getting fertility treatments. She continued those therapies after seeking medical assistance to conceive:

' ... but I went more in the path of acupuncture, homeopathy, Chinese herbs, I can't remember what else we did, naturopath, and all different things... natural ways... a lot of good growth came out of that for me... I still did Chinese stuff in Melbourne...'

The path P.3 decided to take focused on cleansing her body and creating an optimum condition for pregnancy:

'.... I cleansed my body, physically I detoxed. Physically, medically I may have created an environment for a child... (yoga, Ayurveda, pranic healing) I made some inroads into my own self, allowing myself to be lovable, to be loved and to believe I could be a mother....'

These steps were very important in the process of being able to conceive a child with no medical assistance. All participants reported the shift that enabled them to create a situation where spontaneous conception was possible was always marked by ritual. Sometimes, the ritual practiced was a deliberate act, other times, participants only became aware of the practice of the ritual and its significance with hindsight.

4.3.4: Ritualisation: A powerful enabler for all participants

There are many definitions of rituals across the literature. Rituals can relate to a certain culture or can have a certain purpose. In their article, Castle and Phillips (2003, p. 43) define rituals as a ‘specific behavior or activity which gives symbolic expression to certain feelings and thoughts of the actor(s) individually or as a group. It may be a habitually repetitive behavior or a one-time occurrence.’

Rituals can have a specific meaning and can be sacred or secular, traditional or created. A created ritual, for example, may be appropriate for a specific individual or set of circumstances. Such a ritual might be intuitively adapted from ceremonies from other cultures, developed in collaboration with a counselor or therapist, or inspired by meditation, dream work, or journal writing (Parker & Horton, 1996). Rituals help make sense of an experience with all its complexity and contradictions (Romanoff, 1998). This in turn can reduce anxiety and help create a feeling of security. Rituals have healing and curative properties (Castle & Phillips, 2003).

Participants reported going through ritualistic behaviours, sometimes consciously, sometimes without being initially aware of it (Baer, 2011). P.2 developed a very private ritual in order to help her accept the fact that she would not have a daughter:

‘I still wanted a daughter....I went through a process where actually it was a conscious process where I wasn’t going to have a daughter through this life, so I bought a doll and dressed it up and I spoke to it as if it was my spirit of a daughter... I went to the river and I let her go and I sent her off with love... I said in another life we will be together. And then I sort of got on with my life I tell her the story about the doll, she loves that... she said only when you let the doll go Mum, yeah so it was that letting go.’

She didn’t share this process with anyone at the time, it was a very private experience she needed to go through herself in order to surrender her strong wish to have a third child, a daughter. Following this practice, she accepted what she could not control:

‘I didn’t tell anyone. It was something I had to do.... It was in the water so it was letting her go wherever she wanted to be. So for me it was a pivotal thing.... I was happy with whatever happened...’

P.1's rituals allowed her to release the need to nurture. Her partner got her a dog and she describes this moment as a catalyst for change. Her need for nurturing was satisfied on the first night of having a dog:

'... the first night we had her, because she was so young I had her down in the laundry and I set up a swag and I slept with her cos she was crying throughout the night, I needed to nurture I needed that feeling to be a mum and thats what (dog) gave us, and that's when things changed we had [dog] and that was when we made all the changes... Getting a dog was probably the catalyst, and mmm yeah, so she was the best thing ever...'

This initial symbolic experience was followed by an ongoing ritual allowing her and her partner to appreciate the changes they had implemented in order to counter the stress experienced previously:

'We walked (dog) down by the river every day, walking down the most beautiful location you've ever seen and everything was brighter, happier...I don't know, everything changed.'

For P.3 the ritual was implemented by a group of African women from the village she was living in. She describes her experience of carrying children against her body as transformative and symbolically helped her believe in herself. The women of the village initiated this ritual and the children had developed an affection for her. This physical and emotional experience was meaningful and symbolic for her. This ritual allowed her to integrate a belief that she could be a mother and children could appreciate and love her. P.3 states how important it was for the shift to be an intrinsic process, the *'shift has to come from you, it can't come from anybody else.'*

'She gave me her babies and she said 'you will have a child.' Those women, whenever they found me they said you must have a child... the weight of the child in your arms, the heartbeat against your chest, and they strapped them (their children) so I was walking around the village with them strapped around me in the front and behind...it felt so natural... it reinforced that I can love and they can love me back...'

P.4 describes a subtle ritual prior to her first spontaneous conception. After years of moving due to husband being posted by the army, they decided to buy a property to have as a base to spend week-ends and holidays, and possibly as a future residence. With this came a sense of belonging:

'... we ended up buying a little property down there and spending most weekends down at the property and trying to umm improve... put trees in and talk to the neighbours, and all that kind of stuff so we had lots of fun, and then it was, I think... [son] was about 18 months and I fell pregnant again unknowingly and naturally.'

This pregnancy resulted in a miscarriage, but her second spontaneous conception also occurred at a time where she felt she belonged to a community. This pregnancy resulted in the birth of a healthy baby:

'I was doing uni part time and we'd made oh some gorgeous friends over there absolutely beautiful friends, had a fantastic community around us umm I became part of the school community.'

4.4: Discussion

The purpose of this study was to explore and understand the perceived blocks and pathways to pregnancy from a psycho-socio-emotional prospective. This understanding is based on the recount of participants' lived experience. To determine if well-being and life circumstances could influence the ability for couples to start a pregnancy, it was important to have the recount of the entire journey from the time couples discussed starting a family until the time they had completed their family. Their situation before and after having children was studied and the changes in the women's state of mind was noted. In order to understand what creates a 'pathway to pregnancy' the emotional well-being of all participants was explored. There was a marked increase in the general well-being of all participants who were able to conceive spontaneously. The researcher explored the factors contributing to the increase of well-being and found recurring themes in emotional state, the release of a certain block or tendency to obsess, the practice of holistic health and the performance of some kind of ritual.

This study indicates that the state of psycho-socio-emotional health of the participants interviewed had some influence on their reproductive health. The literature examined also highlights how the effects of a psychological state can influence the aggravation or amelioration of symptoms in patients suffering a range of chronic or unexplained conditions. The unexplained medical conditions commonly studied both in terms of somatization and treatment are disorders such as intestinal or skin disorders, which have been shown to intensify under stress and improve with stress reduction techniques. The findings of this study suggest that unexplained infertility can be integrated in the list of conditions influenced by a range of emotional and psychological factors. Participants interviewed in this research study expressed their belief in a correlation between their psychological state and their ability to have children.

5 - Conclusion and significance

In summary, this research identified improved general well-being as a factor contributing to a change in reproductive health. Improved well-being, release of the pressure felt at the time of infertility, expanding the focus from conceiving to promoting holistic health, and the practice of a ritual were all seen as enabling a spontaneous conception.

The findings of this research show that it is reasonable to compare unexplained infertility to other unexplained medical conditions that have been studied in the literature. This research study presents the opportunity for further research into the factors contributing to unexplained infertility. It also suggests there is a possibility that treatment of infertility could include not only medical procedures but also the promotion of holistic well-being through many approaches including mindfulness-based stress reduction and an increase in self-compassion.

It is envisaged that offering an individualised counselling approach would show favorable results. The researcher would recommend that initial counselling sessions could aim at identifying the potential presence and origin of stressors in the client's life. The significance of the stressors on both emotional and cognitive response could be assessed and a creative psychotherapeutic management plan could be put in place to eliminate stressors and create a state of physical and emotional well-being. Participants expressed they felt it was important their whole person was addressed during treatment, and how significant the use of a ritual had

proven in the shift from infertility to spontaneous pregnancy. This knowledge ought to be taken into consideration in the psychotherapeutic treatment of unexplained infertility.

This study suggests that there is room for diagnosis and treatment of unexplained infertility to go beyond the medical model. Individualised counselling focused on enhancing well-being could complement the medical treatment benefiting couples and possibly increasing their chances of being fertile. The efficacy of this approach could be tested in a clinical trial comparing ART only treatment to ART combined with individualised counselling.

- Strengths and limitations

The researcher's intention was to further knowledge in this field, combining what is known already with new insights provided by participants

All four participants shared a similar cultural, ethnic and social background. Each reflected insightfully on their experience and felt they had matured emotionally and spiritually. As a group they believed in the 'power of the mind' and its influence on their body.

The age range was broad for this group of participants. Their experiences were unique and their circumstances of both infertility and spontaneous conceptions were different and varied. Yet, they presented strong similarities in the way they dealt with these situations, both in difficult and better times. An increase in general well-being through active stress management, acceptance and self-compassion were regarded as vital factors in enabling them to conceive spontaneously.

The generalizability of this research is limited, but the findings provide a window for a deeper understanding into the complexities surrounding unexplained infertility and spontaneous conception. Based on the findings it is realistic to conclude that a new holistic approach taking account of these factors would be beneficial to obtaining positive outcomes in fertility treatment.

7 - Self-reflection and accountability:

The motivation for this research was addressed in the introduction of this thesis. The researcher's professional background, and her inclination to understand a phenomenon from a psycho-socio-emotional perspective were the main motivators for this research. The researcher's belief that subconscious activities can influence feelings, symptoms or behaviours led her to initiate this research study. Based on her observations of the phenomenon, she wished to extend the understanding of unexplained infertility beyond a physical only rationale and look at all other factors that could influence one's ability to conceive.

It is important to be aware that the problem of bias in a qualitative research study remains unresolved (Ortlipp, 2008). IPA acknowledges this and encourage researchers to be critical and self-reflective during the research process. With this in mind, the researcher was mindful to be objective during the interview and analysis process, applying the four principles listed by Yardley (2017) to demonstrate validity for this research.

These principles are:

- *Sensitivity to context*, which can be achieved by showing awareness of the participants' perspectives, the socio-cultural context of the research and how these may influence the information participants share as well as how the researcher interprets it.
- *Sensitivity to data*, can be shown by not imposing pre-conceived viewpoints on the data, but carefully considering the meaning generated by participants' experience and the current body of knowledge.
- *Commitment and rigor* can be displayed by deep engagement with the matter being investigated, thorough data collection and meticulous analysis.

- *Transparency* allows the reader to see how interpretation was derived from the content gathered from the interviews. Transparency was achieved by reporting the research process step by step and an accurate recount of participants through verbatim transcriptions.

Given the data for this research was collected through interviews conducted by the researcher and analysed by the researcher, it was important to check for neutrality and objectivity during the interview process. After each interview, the researcher listened to the recording within 24 hours of the interview and started transcription as soon as possible. Whilst completing this task, the researcher was attentive to any influence she may have had on the interview. After checking the content of each interview, the researcher was satisfied that she was not leading or letting her personal instincts guide or contaminate the interviews in any way.

8- Ethical considerations

Ethics approval was sought from the University of Notre Dame Research Ethics Committee. In undertaking this research, the researcher was also committed to adhering to the ethical professional conduct guidelines for social work practice, which she has followed throughout her career.

All participants were informed verbally and in writing about the study, and issues regarding the rights of individual privacy and confidentiality were addressed prior to interviews taking place. Participation was on a voluntary basis and written consent was obtained from those who volunteered with the understanding that they may withdraw from the study at any time.

Anonymity was ensured throughout this study and participants only appear by codes instead of their names, thereby ensuring all data collected is non-identifiable. Raw data including recordings and transcripts are stored for the appropriate period of time according to the requirements set out in the Notre Dame University Policy: Research integrity and the Code

of Conduct for Research.

The writer declares that there is no conflict of interest.

9 – Appendices

APPENDICE 1 – PARTICIPANT INFORMATION SHEET

Insight into Unexplained Infertility: How do women affected by unexplained infertility followed by spontaneous conception make sense of their experience?

You are invited to participate in the research project described below.

What is the project about?

The aim of this project is to explore the lived experience of couples who have been affected by unexplained infertility followed by spontaneous conception. A significant number of couples conceive a child spontaneously after stopping infertility treatment. This phenomenon leads researchers to believe that many cases of unexplained Infertility could be temporary. We would like to seek the insight of couples who have experienced this phenomenon, and explore how they describe and make sense of their personal experience.

Who is undertaking the project?

This project is being conducted by Fabienne Michea. It will form the basis for the degree of Masters of Philosophy at The University of Notre Dame Australia, under the supervision of Dr Suzanne Jenkins from the School of Arts & Sciences and Dr Caroline Bulsara from the school of nursing at Notre Dame University.

What will I be asked to do?

Couples are invited to participate in a face-to-face interview, which will be audio-recorded and will be held at a mutually convenient private location. The interview will focus on your experience of Unexplained Infertility and Spontaneous Conception. It is estimated that the interview will last between one and one and a half hour.

You may be contacted for a follow up interview if questions arise after the transcription of the first interview.

Are there any risks associated with participating in this project?

You will be asked to reflect on a past situation that may have been stressful. It is possible that you may experience discomfort or anxiety during the interview. You will be monitored closely and are free to withdraw at any time during the interview. If these feelings persist after completion of the interview, arrangements will be made for you to have access to a counsellor. The counselor will be independent to this research.

What are the benefits of the research project?

Being in a situation of having conceived spontaneously after a diagnosis of Unexplained Infertility, your retrospective insight can help greatly in shedding some light in the phenomenon of Unexplained Infertility.

Your contribution to a better understanding will help develop a holistic approach to treatment. Only when a condition is understood fully can we put in place a better treatment protocol. Whilst there is no immediate benefit for yourself, your contribution has the potential to help couples in a situation of Unexplained Infertility.

What if I change my mind?

Participation in this study is completely voluntary. Even if you agree to participate, you can withdraw from the study at any time without discrimination or prejudice. If you withdraw, all information you have provided and no longer wish to share can be destroyed.

Will anyone else know the results of the project?

Information gathered about you will be held in strict confidence. This confidence will only be broken if required by law.

Only the researcher and their supervisors will have access to individual information. You will not be identified.

Once the interview is transcribed, the data collected from you will be de-identified and stored securely in the School of Arts and Sciences at The University of Notre Dame Australia for at least a period of five years. The data may be used in future research but you will not be able to be identified. The results of the study will be published as a thesis.

Will I be able to find out the results of the project?

Once I have analysed the information from this study I will email you a summary of my findings.

Who do I contact if I have questions about the project?

If you have any questions about this project please feel free to contact either myself on 0417 051 884 or Fabienne.micheal@my.nd.edu.au or my supervisor, at Suzanne.jenkins@nd.edu.au. My supervisor and I are happy to discuss with you any concerns you may have about this study.

What if I have a concern or complaint?

The study has been approved by the Human Research Ethics Committee at The University of Notre Dame Australia (approval number 017145F). If you have a concern or complaint regarding the ethical conduct of this research project and would like to speak to an independent person, please contact Notre Dame's Ethics Officer at (+61 8) 9433 0943 or research@nd.edu.au. Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

How do I sign up to participate?

If you are happy to participate, please sign both copies of the consent form, keep one for yourself and mail the other to me in the envelope provided.

Thank you for your time. This sheet is for you to keep.

Yours sincerely,

FABIENNE MICHEA

APPENDICE 2 – CONSENT FORM

Insight in Unexplained Infertility: How do women affected by unexplained infertility followed by spontaneous conception make sense of their experience?

I agree to take part in this research project.

I have read the Information Sheet provided and been given a full explanation of the purpose of this research project and what is involved in the interview(s).

I understand that I will be interviewed and that the interview will be audio-recorded.

The researcher has answered all my questions and has explained possible risks that may arise as a result of the interview and how these risks will be managed.

I understand that I do not have to answer specific questions if do not want to and may withdraw from participating in the project at any time without prejudice.

I understand that all information provided by me is treated as confidential and will not be released by the researcher to a third party unless required to do so by law.

I agree that any research data gathered for the study may be published provided my name or other identifying information is not disclosed.

I understand that research data gathered may be used for future research but my name and other identifying information will be removed.

Date

NAME OF PARTICIPANT	
SIGNATURE OF PARTICIPANT	

I confirm that I have provided the information sheet concerning this research project to the above participant, explaining what participating involves and have answered all questions asked of me

SIGNATURE OF RESEARCHER	FABIENNE MICHEA	DATE	12/12/2017
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