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## The Interim window: Women's experiences during in vitro fertilization leading to maternal embryo attachment

Tammy MacKinnon Lampley

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THE INTERIM WINDOW: WOMEN'S EXPERIENCES DURING IN VITRO  
FERTILIZATION LEADING TO MATERNAL  
EMBRYO ATTACHMENT

by

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## ABSTRACT

### **The Interim Window: Women's Experiences During In Vitro Fertilization Leading To Maternal Embryo Attachment**

by

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Infertility affects about 7.3 million women and their partners in the U.S., about 12% of the reproductive-age population. In vitro fertilization (IVF) has been used successfully in the United States since 1981. The number of women seeking artificial reproductive techniques (ART) has increased dramatically and the number of ART cycles performed in the United States has more than doubled, from 64,681 in 1996 to 134,260 in 2005 and 99% of these are IVF. Studies indicated that women rank waiting for the outcome of and IVF treatment and a negative pregnancy result as the most stressful events during their treatment. Although men and women report being satisfied with the medical care received during infertility treatment, they are less satisfied with their psychosocial care. One of the most frequent concerns reported in the literature regarding infertile couples' perceptions of their experiences was the lack of understanding and knowledge by health care providers, including nurses, who did not understand what the couples were experiencing and a lack of psychological support provided to. The literature indicates little is known about women's experiences during the 10-14 day window following embryo transfer prior to determination of pregnancy, and the meaning women ascribe to their non-implanted embryo(s) following embryo transfer. The American Psychological

Association (APA) lists the “examination of risk factors for negative psychosocial outcomes in those who confront infertility is required, as is documentation of the efficacy of interventions designed to decrease psychological morbidity” as a research priority. Research to discover additional knowledge about the experiences of women who receive IVF was warranted to ensure that nurses, physicians, and other health care members provide appropriate education, support, and intervention to this already vulnerable population.

The purpose of this research was to: (a.) understand the experiences of women who receive IVF during the 10-14 day window following embryo transfer and prior to determination of a quantitative beta hCG pregnancy test, and (b.) discover the meanings women ascribe to their non-implanted embryo(s) following embryo transfer and prior to knowing their quantitative beta hCG pregnancy test result. The research question was: What are the lived experiences of women who receive in vitro fertilization during the period of time following embryo transfer and prior to knowing the outcome of their initial quantitative beta hCG pregnancy test? From a purposeful sample, a total of six women were interviewed. Methods for data collection include in-depth interviews and journal records. All data was coded and analyzed for emergent themes. Van Manen’s (1997) phenomenological method and Four Existential Lifeworlds were used to guide the interpretation and discover the women’s experiences. The essence of the phenomenon emerged as essential themes through the participant’s vivid descriptions of their daily lives. The analysis revealed Waiting was the overarching essential theme and how the women waited was revealed as eight sub-themes: Hope, Awareness, Doubt, Anxiety, Isolation, Vulnerability, Despair, and Anticipation. The long-term objectives of this

study are to (a) educate nurses and other healthcare workers, and the women who experience IVF including the families who support them; and (b) improve the level of health care received by women who experience IVF. Implications are addressed in the study and may lead to improvements in nursing education and the fertility care of women undergoing IVF treatments.

## ACKNOWLEDGEMENTS

Most importantly, I express my heartfelt gratitude to the women who shared their stories with me. This study is in honor of all women who are Waiting for motherhood.

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## TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	vi
CHAPTER 1 INTRODUCTION.....	1
Introduction to Phenomenon of Interest.....	1
Justification for Studying the Phenomenon.....	5
Purpose of the Study.....	10
Research Question.....	10
CHAPTER 2 EVOLUTION OF THE STUDY.....	11
Rationale.....	11
Historical Context.....	12
Summary.....	30
Research Method and Justification.....	31
Relevance of Study to Nursing.....	32
Experiential Context of Researcher.....	34
CHAPTER 3 THE METHOD OF INQUIRY: GENERAL.....	37
Introduction and Description of Phenomenology and Rational for Use.....	37
Background of Phenomenology as a Method.....	37
Van Manen: Hermeneutical Phenomenological Research and Analysis.....	38
Van Manen's Four Lifeworld Existentials.....	41
Methodological Rigor: Data Trustworthiness.....	43
Concepts and Terms Related to the Study.....	46
CHAPTER 4 THE METHOD OF INQUIRY: APPLIED.....	50
Sample: Participant Recruitment and Selection.....	50
Setting and Access.....	53
Human Subject Consideration and Protection.....	54
Data Collection Procedure.....	57
Data Analyses and Management Procedures.....	59
Specific Aspects of Methodological Rigor Used in Study.....	62
CHAPTER 5 FINDINGS OF THE STUDY.....	67
Description of Study Participants.....	67
Results of Audit Trail.....	77
Themes and Subthemes Supported by Descriptions From Participant's Data.....	77
CHAPTER 6 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	150
Discussion and Interpretation of Results.....	150
Implications for Nursing and Healthcare Professionals.....	188

Limitations of the Study.....	196
Conclusions.....	197

## APPENDICES

APPENDIX A	UNIVERSITY OF NEVADA, LAS VEGAS IRB APPROVAL .....	199
APPENDIX B	CONSENT FOR RESEARCH PARTICIPATION.....	200
APPENDIX C	RECRUITMENT HANDOUT.....	203
APPENDIX D	INTERVIEW GUIDE .....	204
APPENDIX E	SOCIO-DEMOGRAPHIC AND FERTILITY SURVEY.....	205
APPENDIX F	AUDIT TRAIL .....	208
APPENDIX G	GUIDE TO DATA ANALYSIS .....	245
APPENDIX H	CONCEPTUAL MODEL OF WAITING .....	258
BIBLIOGRAPHY.....		259
VITA.....		275

## CHAPTER 1

### INTRODUCTION

#### Introduction to Phenomenon of Interest

The birth of the first *in vitro* baby, Louise Joy Brown, in a London hospital in 1978 signaled a new era in reproductive technology. Her conception was heralded as a triumph in medicine and science (About.com, n.d.). Previous medical approaches have concentrated efforts on in-vivo, or inside the womb, techniques, and now the modern in vitro, or outside the womb techniques have been ushered in. Along with this advancement came an announcement of opportunity for want-to-be parents - the hope of parenthood. For women diagnosed with infertility who had once given up their dream of parenthood, the impossible had become possible. Common to advances in medical technology, the psychological component was not kept on par. Women soon realized that along with the renewed sense of hope for parenthood ensued great psychological, physical, and financial stress. “The medicalization of infertility has unwittingly led to a disregard for the emotional responses that couples experience, which include distress, loss of control, stigmatization, and a disruption in the developmental trajectory of adulthood” (Cousineau & Domar, 2007, p. 293).

The desire to have children and become parents is a basic one. Each year thousands of women face the possibility of never conceiving a child. For these women this prospect can be emotionally devastating. Infertility is a disease of the reproductive system that impairs the body’s ability to conceive or carry a child to term; it is a condition with the reproductive system often diagnosed after a couple has one year of unprotected, well-timed intercourse or if the woman suffers from multiple miscarriages (RESOLVE:

Infertility Diagnosis, 2008). One-third of infertility cases can be attributed to male factors, and about one-third to factors that affect women. For the remaining one-third of infertile couples, infertility is caused by a combination of problems in both partners or, in about 20 percent of cases, is unexplained. Infertility (ASRM, 2008) affects about 7.3 million women and their partners in the U.S., about 12% of the reproductive-age population (Chandra, Martinez, Mosher, Abma, & Jones, 2005), up from 4.6 million in 1988 — an increase due in part to delayed childbearing and the aging of the baby boom generation (Centers for Disease Control and Prevention [CDC], 2000). A woman's peak fertility occurs in her early 20s and as a woman ages beyond 35, especially after age 40, the likelihood of becoming pregnant drops to less than 10% per month (Medline Plus, 2008). Approximately 20% of American women wait until after age 35 to begin their families (American Society for Reproductive Medicine, 2003) contributing to the incidence of age-related infertility and the number of women who will seek artificial reproductive techniques. The causes of infertility are equally distributed among conditions affecting the man, the woman, or both partners. Infertility affects people from all socioeconomic levels and cutting across all racial, ethnic and religious lines (RESOLVE, 2008: What is infertility?). The process to find out how and why they have infertility issues and the treatment can be long and taxing. Although many couples still struggle with infertility, today's technology has offered some the chance to become parents.

The American Society for Reproductive Medicine (2008) describes infertility as one of the most distressing life crises in which persons must cope with a multitude of decisions. In addition, the uncertainties that infertility brings result in intense emotional

upheaval. Infertility has long been associated with substantial levels of stress attributed to its prolonged time frame and the uncertainty of its diagnosis and treatment (Schneider & Forthofer, 2005). By the time a couple initiate artificial reproductive techniques they may have been infertile for up to six years and in treatment for four years (Boivin, Takefman, Tulandi, & Brender, 1995). A study by Lukse and Nicholas (1999) on women who either had IVF or ovulation induction medication revealed that women experienced measureable levels of grief or depression before, during, and after treatment. The experience of prolonged stress may leave people feeling depleted, isolated, and vulnerable (Valentine, 1986).

More than 25 years has passed since the United States celebrated its first in vitro success in 1981. According to the National Survey of Family Growth conducted by CDC in 1995 – the most recent report available at the time of this proposal – 9.3 million (15%) of the 60.2 million women of reproductive age had ever used some kind of infertility service (medical advice, tests, drugs, surgery, or other treatments) compared with 6.8 million (12%) in 1988 (Abma, Chandra, Mosher, Peterson, & Piccinino, 1997).

In 2002, approximately 1 in every 100 babies born in the United States was conceived using artificial reproductive techniques (ART) (ASRM, 2008), which includes all fertility treatments in which both eggs and sperm are handled; generally, the procedures involve surgically removing eggs from a woman's ovaries, combining them with sperm in a laboratory, and returning them to the woman's body (CDC, 2008). The American Society for Reproductive Medicine (ASRM): A Guide for Patients (2007) identify that the majority of ART procedures (99%) are in vitro fertilization (IVF). Because of the predominant proportion of ART being in vitro fertilization (IVF) procedures, this study

will focus on women enrolled in IVF. The most recent report available at the time of this research indicates the number of pregnancies resulting from all ART procedures is 29% (CDC, 2005). ART brings hope to women of achieving the pregnancy of a biologically related child, which might otherwise be impossible.

The average cost of one IVF cycle in the United States is \$12,400 (ASRM, 2008), and for many women the cycle is often repeated in hope of achieving success. Insurance coverage of IVF incurred expenses remains limited in the U.S. In light of this growing population, many women will face fertility problems and complex decisions regarding the use of reproductive technologies, which are associated with considerable physical, emotional, and financial cost (Greenfield, 1997). Although men and women report being satisfied with the medical care received during infertility treatment, they are less satisfied with their psychosocial care (Schmidt, 2006). For many couples, infertility treatment can cause serious strains on marital and personal relationships, personal distress, reduced self-esteem, and periods of emotional crisis (Greil, 1997). Research to discover additional knowledge about the experiences of women who receive ART is necessary to ensure that nurses, physicians, and other health care members provide optimal emotional and educational support to this population.

Regardless of the etiology of infertility or the outcome of an IVF procedure, it is women who will bear the brunt of the treatment. Each of these women will share a common experience - a unique window of time lasting approximately 10-14 days (Clapp, 2004) in which she will embody an embryo without knowing if she is pregnant. For the purpose of this study the initial determination of pregnancy is determined by a biochemical pregnancy test and not visibility of a fetus via ultrasound. Unlike the woman

who has a spontaneous pregnancy, the woman undergoing IVF is acutely aware of the embryo's presence within her body from the moment it is placed, and with this awareness accompanies a perception of meaning which has not been previously explored.

The literature review demonstrates a lack of insight into women's perspectives following embryo transfer. Little is known about the meaning the embryo has to a woman receiving infertility treatment from the time of embryo transfer to hearing her pregnancy results. Even less is known about the meaning of the embryo while actively enduring the treatment as much has been devoted to studies conducted in a post-treatment phase. Knowledge of women's experiences during this 10-14 day window can provide health care workers and family members with a better understanding of the complex meanings and emotions they experience. The goal of attaining this new knowledge is to understand, educate, and appropriately intervene to help limit the psychological morbidity experienced by women undergoing this treatment. The purpose of this research is to (a) understand the experiences of women who receive IVF during the 10-14 day window following embryo transfer and prior to determination of pregnancy and (b) discover the meanings they ascribe to their non-implanted embryo following embryo transfer.

#### Justification for Studying the Phenomenon

The number of women seeking ART assistance has increased dramatically and the number of ART cycles performed in the United States has more than doubled, from 64,681 in 1996 to 134,260 in 2005 (CDC, 2005). The technology is no longer widely viewed as a medical marvel, and one source has regarded in vitro conception as ordinary



(USA Today Health and Behavior, n.d.). As the delay of childbearing is a common choice many women will face fertility issues.

Medically a pregnancy is not diagnosed until specific serum levels of hormones are achieved. For women experiencing IVF these levels are usually measured 10-14 days after the embryo transfer (Clapp, 2004). This occurrence presents a unique phenomenon in which a woman is not considered pregnant but she is embodying her biological embryo(s). Current research has barely addressed this stage directly. Society has failed to acknowledge that an unsuccessful IVF attempt is more than failed IVF. A bond could form between a woman and her egg or embryo prior to having a positive pregnancy (Bateman-Cass, 2000). An early attachment and the possibility of a subsequent loss may be present which is neither recognized nor valued by society and in particular by health care workers. It is plausible to consider the perceived lack of acknowledgment exists because most people do not understand the women's experience. Each detail about the meaning women ascribe to the non-implanted embryo can enhance our understanding of infertile women who experience IVF.

Advanced technology has allowed women, couples, health care workers and the public alike to visually witness, via microscope, an egg removed from the women's ovum, placed in a petri-dish, and if successfully fertilized by sperm, observe as it splits and duplicates in cells to become a human embryo. It is possible to conceive that while this technology has brought reasons to celebrate it simultaneously may elicit false hope as the images of a human baby can be visualized in its very early stages of development. Traditionally, a woman experiencing a spontaneous occurring pregnancy would never see

her egg, a 2-8 cell embryo, and she would be completely unaware that fertilization has occurred.

Regardless of the nature of infertility, women are the recipients of the IVF treatment and the psychological stress which ensues. Initial reactions to infertility are often surprise and disbelief, followed by a variety of emotions that occur with any grief process. Feelings of anger, hostility, fear, and frustration have been reported (Olshansky, 1987; Sandelowski, 1987; Sandelowski & Pollack, 1986; Slade, 1981). Numerous studies, described in greater detail in the historical context section of this dissertation, have found women's loss and grief response to an unsuccessful artificial reproductive procedure similar to women who have experienced a miscarriage. Even though medically a pregnancy may not be diagnosed, the loss of the embryo(s) perceived by the woman can be similar to a miscarriage as the woman may feel both physically and psychologically pregnant. When an IVF treatment fails the associated loss is difficult to understand and a medical term to describe it does not exist (Bateman-Cass, 2000). It is not a fetal demise or a miscarriage, and nor is it merely a failed IVF attempt. "The invisibility of infertility and pregnancy loss leads to a silent grief, a loss within a loss, no pregnancy and now no child" (Bateman-Cass, 2000, p. 14).

Studies have found the period of waiting for the serum pregnancy result following embryo transfer is most stressful for women. The scenario lends natural curiosity and poses the question: What is the experience of embodying a non-implanted embryo(s) like prior to determining a positive pregnancy test for women who are receiving IVF? For each woman there is a conscious decision, a willingness to receive an embryo(s), and

with this action follows a sense of consciousness, in which there lies a meaning. This study seeks to explore the essence of this meaning.

For healthcare personnel who work with women who experience IVF, it is of utmost importance to understand the meaning the embryo presents to women undergoing IVF treatment in order to provide effective interventions. The failure to understand and/or acknowledge, by both lay persons and healthcare professionals, the experience perceived by these women during this time in the IVF process must be explored and is fundamental to the education of healthcare workers, specifically nursing, the woman herself, and her support systems. A lack of research exists which have explored the meaning of the period waiting for the serum pregnancy result following embryo transfer and the meaning of the embryo ascribed by these women while receiving IVF. New knowledge from this study will enhance nursing's ability to intervene most effectively by lessening the women's overall stress and to help her regain her sense of well-being.

Given the abundance of research on the physical and psychological aspects of infertility and ART, what are the relationships between women who carry an embryo(s) prior to their determination of pregnancy really like? At the time of this proposed study no studies are known to this researcher that explore the meaning of the experiences of women during the intense time period immediately following embryo transfer (approximately 10-14 days) prior to receiving the serum pregnancy results. A phenomenological study devoted to understanding women's lived experiences during this specific time in the women's IVF cycle best lends itself to exploring this question. The proposed study will enhance our understanding by enabling this group of women to share their stories and illuminate the meaning given to their individual experiences. The goal

of this dissertation is to increase the understanding of the psychological experiences women go through while enrolled in IVF and ultimately in order to educate healthcare workers, specifically nursing, the woman herself, and her support systems by lessening the women's overall stress by helping her regain her sense of well-being. This study will help to lay a foundation for practical recommendations that may someday inform the education of nurses and healthcare workers and guide interventions for women and their partners who cope with infertility.

Pavone (2005) studied infertility and its psychological impact on women in the work force. According to the U.S. Department of Labor 2003 report, the most recent information available at the time of the study, women compose nearly half (47%) of the work force. This qualitative heuristic explored the question, how do working women over the age of 35 describe their lived experiences after a failed IVF procedure? The results were astonishing. Seventy-five percent were negatively affected in their workplace: four of the eight women were fired from their job and two had to reduce their hours to part-time positions. Five themes emerged from the data analysis: (a) loss of control (b) guilt, (c) emotional impact, (d) negative work-life impact, and (e) financial hardship.

Today women age 16 and older encompass 56.6% of the civilian labor workforce (U.S. Department of Labor, 2008). With women composing a greater portion of the workforce, infertility related issues present significant problems within America's workforce, and are sure to become an increasing National concern. The American Psychological Association (APA) (2008) has named the determinants and psychosocial correlates of infertility, as well as the physical and psychological consequences of

treatments for infertility, in their Research Agenda for Psychosocial and Behavioral Factors in Women's Health: Gynecological and Reproductive Health. The APA lists the "examination of risk factors for negative psychosocial outcomes in those who confront infertility is required, as is documentation of the efficacy of interventions designed to decrease psychological morbidity" (Research Priorities for Gynecological and Reproductive Health, para 7) is warranted. This proposed study, related to the psychosocial impact of infertility, is both timely and justified.

### Purpose of the Study

The purpose of this research is to (a) understand the experiences of women who receive IVF during the 10-14 day window following embryo transfer and prior to determination of a quantitative beta hCG pregnancy test, and (b) discover the meanings women ascribe to their non-implanted embryo(s) following embryo transfer and prior to knowing their quantitative beta hCG pregnancy test result.

### Research Question

The primary question posed by the researcher was: What are the lived experiences of women who receive in vitro fertilization during the period of time following embryo transfer and prior to knowing the outcome of their initial quantitative beta hCG pregnancy test?

## CHAPTER 2

### EVOLUTION OF THE STUDY

#### Rationale

*In vitro* is Latin for "in glass" (Word Info, n.d.). It is a technique in which human eggs are fertilized outside of the body in a glass or petri dish in a laboratory; it is the opposite of *in vivo* which refers to in "a living organism." *In vitro* fertilization is a technique in which human egg cells are fertilized outside a woman's body. The process involves hormonally controlling woman's ovulation cycle, removing eggs (ova) from the woman's ovaries and letting sperm fertilize them in a fluid medium in a laboratory. The fertilized egg (zygote) is then transferred to the patient's uterus with the purpose of having a successful pregnancy.

A diagnosis of infertility and its treatment presents a stressful and often traumatic time in a woman's life and the failure to achieve motherhood can leave women feeling devastated. The advances of artificial reproductive technology bring hope of achieving a pregnancy that would otherwise be impossible. Unlike a woman who conceives pregnancy spontaneously, a woman who conceives via IVF has an early and heightened awareness of carrying an embryo(s) without being pregnant. What is it really like for these women to carry an embryo(s) following an embryo transfer without knowing if she is pregnant? A review of the literature indicated there is little research which directly addresses this unique window of time in a woman's life.

The following section presents the historical context of the phenomenon. The literature review reveals that at the time of this study there had not been any research that focused on the experiences of women during the window of time immediately following

embryo transfer to determination of a quantitative beta hCG pregnancy test or asked women: “What is it like to carry an embryo(s) without knowing if you are pregnant?” The literature indicated that women who are infertile or treated with IVF experience a profound psychological impact. A loss may be present which is neither recognized nor valued by society and in particular by health care workers. The literature also indicates it is plausible to consider a significant level of attachment is present and that women who undergo infertility may suffer in a similar manner to women who have endured a miscarriage. In order to fully understand the psychological impact experienced by women undergoing IVF, an in depth description of the meaning women ascribe to the embryo is indicated. Educating women, their support systems, nurses and the health care workers who work with women is necessary in order to intervene most effectively and lessen the women’s overall stress by helping them regain their sense of well-being. Each woman has a unique and meaningful experience with her infertility treatment and understanding each of these stages is necessary in order to attempt to limit women’s suffering and help women by educating them, their spouses, and families.

### Historical Context

The procedures to locate the existing literature on the phenomenon related to the one under study included electronic searches for abstracts, texts, and full text articles published through Fall 2009 using the following databases: Academic Search Premier, Alternative Health Watch, CINAHL, pre-CINAHL, Family and Society Studies Worldwide, Health Source – consumer edition and nursing academic edition, Medline, Primary Search, Psych Articles, Psych Info, Soc Index, and ProQuest. The primary key

words used were: embryo, embryo transfer, in vitro fertilization, artificial reproductive techniques, attachment, maternal-fetal attachment, childlessness, infertility and stress, infertility and anxiety, infertility and coping, infertility psychological adaptation, miscarriage and loss/grief.

### Psychological Implications of Infertility

Numerous studies have examined the psychological aspects of infertility and have found artificial reproductive techniques are emotionally traumatic (Milne, 1988; Litt, Tennen, Affleck, & Klock, 1992; Boivin, Takefman, Tulandi, & Brender, 1995; Su, Yang, & Teng, 1997; Weaver, Clifford, Hay, & Robinson, 1997; Kee, Jung, & Lee, 2000; Hammarberg, Astbury, & Baker, 2001). Subjects in these studies often reported negative experiences involving the lack of information provided, the quality of support received, and the manner in which they were treated by healthcare professionals. Initial reactions to infertility are often surprise and disbelief, followed by a variety of emotions that occur with any grief process. Feelings of anger, hostility, fear, and frustration have been reported (Olshansky, 1987; Sandelowski, 1987; Sandelowski & Pollack, 1986; Slade, 1981). Infertility may be considered as numerous invisible complex losses (Bateman-Case, 2000). The experience of loss is noted in terms of one's body, identity, control, fertility, and faith. A case study by Christie (1997) has linked models of bereavement to grief as a psychosocial response to infertility. A diagnosis of infertility is traumatic and can be devastating, especially in light of the long and stressful course of investigation and treatment and society's expectations of motherhood. Christie concludes that individuals or couples have to mourn their *fantasy child* in addition to the loss of their fertility. This *sense of loss* has also been reported by Mazure and Greenfeld (1989) who studied



psychological aspects of in vitro and embryo transfer participants and by Greenfeld, Diamond, and DeCherney (1988) who documented the presence of grief reactions following IVF treatment.

In a qualitative study Knegden (2003) explored the meaning of hope for four couples experiencing infertility. The participant's descriptions revealed three common themes: (a.) hope is a driving force and aspiration of optimism in the face of adversity, (b.) patterns on the living with hope are in facing powerful emotions, which are always shared, and are painful and extreme at times, but remain focused on determination to reach the desired goal together, and (c.) concerns, plans, and dreams related to hope are unique opportunities and limitations invested in the desire to move on with the unknown. The author noted that the findings may provide guidance to advanced nurse practitioners on how to approach infertile couples and being focused on what is important to the couples when they share their experiences. Informed practice may lead couples to be more willing to seek medical care.

Numerous studies have led reproductive healthcare workers to focus their counseling on a bereavement model to comprehend individual or couple responses to infertility. Scholars (Hunt & Monach, 1997; Syme, 1997) suggested that an approach to understanding patient responses based solely on bereavement is insufficient. They believe it is vital for providers to consider depression, independent of it being a stage in the mourning process, as a significant response to infertility. Additionally, they suggest health care providers acknowledge the individuals' social stigmatization and sense of helplessness which intensify the already complex nature of dealing with feelings of loss and grief. Infertile couples may also experience loneliness or isolation (Menning, 1988)

and may feel out of place at social gatherings where there are children. They may also have difficulty sharing their sorrow. Infertile couples often grieve alone because they fear that others will not understand how they feel (Hirsch & Hirsch, 1989).

Several studies have found that as women attempted to adjust to unsuccessful IVF they would often experience depression (Baram, Tourtelot, Meuchler, & Huang, 1988; Beaurepaire, Jones, Thiering, Saunders, & Tennant, 1994; Berg & Wilson, 1991; Verhaak, Smeenk, Eugster, VanMinnen, Kremer, & Kraaimaat, 2001; Visser, Haan, Zalmstra, & Wouters, 1994). A subgroup of people may develop severe emotional problems (Reading, Chang, & Kerin, 1989; Howarth, Johnson, Klerman, & Weissman, 1994). A study of 148 women and 71 partners completed self-report questionnaires on anxiety, depression, personality characteristics, meaning of fertility problems, coping, marital relationship and social support at pre-treatment (Verhaak, Smeenk, VanMinnen, Kremer, & Kraaimaat, 2005). Assessments of anxiety and depression were repeated immediately following the final treatment cycle and again six months later had found that six months after their last unsuccessful IVF treatment greater than 20% of women displayed clinical symptoms of anxiety and, or depression. Women showed an increase of both anxiety and depression after unsuccessful treatment and a decrease after successful treatment. Men showed no change in anxiety and depression either after successful or after unsuccessful treatment. In the six months after unsuccessful treatment, women showed no recovery. Personality characteristics, meaning of the fertility problems, and social support determined the course of the emotional response. The authors concluded most women adjusted well to unsuccessful treatment, but at the 6-month follow-up a considerable proportion continue to demonstrate substantial emotional problems.

Additionally they noted personality and the pre-treatment meaning of fertility and social support can help with early identification of women at risk for long-term emotional problems as well as guide interventions. Consistent with these findings, Bryson, Sykes, and Traub (2000) identified the need for improved counseling, both in preparation for treatment and long-term intervention following IVF failure.

Research has indicated that IVF couples reported experiencing dissatisfaction from healthcare workers' poor interpersonal and communication skills (Milne, 1988; Malin, Hemminki, Raikkonen, Shivo, & Perala, 2001). The couples' dissatisfaction with health care workers included not being taken seriously, not having psychological aspects of IVF taken into account, receiving little emotional support or compassion, healthcare workers always being in a rush, and poor communication. It is conceivable to consider that the poor communication portrayed by health care workers may be directly related to a lack of understanding as a result of inadequate education. In a survey of 1,366 women attending outpatient clinics for the investigation and initial management of infertility, 86% felt they had not been given enough help with the emotional aspects of infertility (Souter, Penney, Hopton & Templeton, 1998).

Infertility is more than a medical condition because it has profound psychological and social implications. Although women with infertility may feel as though they are alone, their diagnosis does not occur in a social vacuum. "Like other illness identities, infertility is a socially constructed reality" (Bute, 2007, p. 10). As is often the case, when a person is diagnosed with a potentially stigmatizing or chronic illness, an identifiable and socially encouraged sick-role may occur. This role may be self labeled by the person with the illness or inflicted upon the person by society. Either way, persons with

potentially stigmatizing illnesses are left to feel the tremendous impact of the added burden society places upon them. In a society in which physical appearance and role expectations are held to a perfect standard little acceptance or understanding may be perceived by persons who are not on par. In a study by Mindes, Ingram, Kliewer, and James (2003) the presence of unsupportive behaviors or emotions were correlated with adjustment problems for women, including increased depressive symptoms, higher psychosocial distress, and lower levels of self-esteem.

Infertile couples may also experience loneliness or isolation (Menning, 1988) and may feel out of place at social gatherings where there are children. They may also have difficulty sharing their sorrow. Infertile couples often grieve alone because they fear that others will not understand how they feel (Hirsch & Hirsch, 1989). In a society that values fertility, infertile women may bear an immense social stigma (Miall, 1985, 1986, 1989, 1994; Becker, 1997; Gonzalez, 2000; Whiteford & Gonzalez, 1995). The women's involuntary failure to become pregnant and fulfill society's expectations of bearing children may lead to stigmatization. Traditionally, women have been expected to marry, and shortly thereafter become pregnant, and produce children. Women who do not conform to this expectation may be perceived as going against society, thus provoking a sense of uneasiness that may be felt by both the infertile woman and others. Although the choice to have children, either voluntary or involuntary, is intensely personal, women may find themselves in either an explanatory or defensive position as they receive inquiries regarding their childless state (Sandelowski & Jones, 1986; Miall, 1986). Because a state of childlessness is publically apparent it invites many prying and unwanted questions as not having children often means failing to fulfill society's

expectations of adulthood or “having broken a group norm” (Whiteford & Gonzalez, 1995, p. 29).

A diagnosis of infertility may dominate the woman’s identity and result in her feeling ashamed, abnormal, devalued, or less than complete (Miall, 1985, 1986; Greil, 1991; Whiteford & Gonzalez, 1995). Letherby (1999) noted that some women do not report having these negative feelings, but believe that others perceive them as pitiful or unfulfilled. Infertility may also threaten a woman’s sense of gender identity or femininity as reproduction is associated with the very nature of being a woman (Becker, 1997). Becker (1997) also noted that once a woman realizes she is unable to get pregnant she may view her body as “an empty decaying vessel” (p. 49) while women who seek ART may view their bodies as mechanical or industrialized (Whiteford & Gonzalez, 1995).

The literature indicated that women with both primary and secondary infertility feel as though they may not belong to a specific group (Sandelowski & Jones, 1986; LaJoie, 2003). A recent study indicated that women diagnosed with secondary infertility may also find that socially they too do not belong. LaJoie (2003) examined the psychosocial adjustment in 83 women, ages 25-49 experiencing secondary infertility. The women completed numerous self-administered surveys, including demographics, psychosocial adjustment, marital satisfaction, and social support. Results from the study found that the women with secondary infertility also experienced high levels of emotional stress and were consistent with previous studies on infertility and stress. The author concluded that social support from women’s primary network is associated with decreased stress and calls for further research involving women experiencing secondary infertility.

A review of the literature indicated that some discrepancies exist between the findings of qualitative and quantitative studies. Qualitative inquiries tend to portray infertility as more devastating especially for women (Greil, 1997) while quantitative studies produce more “equivocal results.” Although the quantitative literature does not wholly support qualitative findings; Greil (1997) concludes that both studies acknowledge there is distress related to infertility. The lack of consensus between quantitative and qualitative findings further indicated the need for additional research into the psychological well being of women who are diagnosed with infertility.

Psychological Response to In Vitro Fertilization  
or Failed In Vitro Fertilization

Van Balen, Naaktgeboren, and Trimbos-Kemper (1996) compared (a) experiences of pregnancy and delivery among 45 couples who were in-vitro fertilization parents, 35 couples who were described as other formerly infertile parents, and 35 couples who were fertile parents, and (b) the burden of fertility treatments. Inclusion required that each of the women were experiencing their first deliveries and that the birth was singleton. The results demonstrated that the psychological burden of the treatments exceeds the physical burden. The IVF group parents and other infertile parents evaluated the pregnancy as more stressful than did fertile parents.

Greenfeld, Diamond, and DeCherney (1988) interviewed 97 women after having experienced failed IVF and found that the symptoms exhibited by the women paralleled the symptoms of women suffering from a pregnancy loss. This response could be predicted by observing the degree of the IVF patient’s attachment to the expected pregnancy. Of the 97 patients, 20 patients sought counseling for distress after a failed first

cycle of IVF. Of these, three suffered severe grief reactions including: emotional and somatic distress, guilt feelings, intense subjective distress, feelings of hostility toward others, and a breakdown of normal patterns of conduct. The researchers concluded that IVF technology, such as ultrasounds, can inadvertently foster and intensify IVF patients' attachment to the expected pregnancy by creating unreasonable expectations of successful treatment of infertility. The experience of infertility and its treatment can have a lasting psychological effect on women and their partners.

A survey using self-administered questionnaires compared 281 women from three different countries who were awaiting assisted reproduction to a control population of 289 women (Oddens, den Tonkelaar, & Nieuwenhuyse, 1999). The researchers investigated: (a) whether the patients had experienced more negative emotional feelings and negative emotional impact during periods when they were attempting to conceive as compared with the control groups, and (b) whether there was any difference in their well-being at the time of consultation. Women with fertility problems reported a higher prevalence of negative emotions than the controls with reference to the periods during which they had been trying to conceive. Patients reported more changes in their partner relationships (either negative or positive). Sexuality was negatively affected among the patients. At the time of consultation, the patients had less favorable scores than the controls on scales for depressed mood, memory/concentration, anxiety and fears, as well as for self-perceived attractiveness. Twenty-five percent had scores indicating depressive disorders as compared with only 6.8% of the controls. Current well-being was markedly affected in patients with previous unsuccessful in-vitro fertilization (IVF) experiences. The experience of infertility was perceived as severe by both groups of women. Prior to

consultation and during diagnosis and treatment, women with fertility problems had a higher prevalence of reported negative psycho-emotional experiences than women without fertility problems.

Additional studies have explored women's infertility treatments and the time interval perceived by women as most stressful. The studies indicated women ranked waiting for the outcome of treatment and a negative pregnancy result as the most stressful events during IVF (Baram, Tourtelot, Meuchler, & Huang, 1988; Connolly, Edelmann, Bartlett, Cooke, Lenton, & Pike, 1993; Boivin & Takefman, 1995). These studies further reinforce the need for health care providers to understand the stress perceived by women during infertility in greater depth and the need for health care workers to intervene appropriately during this most arduous time.

Imeson and McMurray (1996) studied the experiences of six couples undergoing IVF treatment for infertility. The phenomenological study revealed four themes from the data: (a.) life changes, (b.) powerlessness, (c.) hope and disappointment cycle, and (d.) social isolation. Each of the couples experienced changes in lifestyle and relationships, in addition to both physical and emotional changes. The couples felt a loss of control over various parts of their life, and described experiencing alternating feelings of hope and despair. Many of the couple's experienced social isolation. The researcher provides knowledge to improve how nurses advise and support infertile couples. Olshanksy (1988) also described the work of infertility treatment as exacerbated cycles of hope and despair.



## Maternal-Fetal Attachment

A mother's attachment to her child is a strong human bond. Klaus and Kennel (1976) define attachment as "a unique relationship between two people that is specific and endures through time" (p. 2). The very essence of attachment indicates it is something of value and inherent to value is the potential for loss. Numerous scholars have researched maternal fetal attachment and have focused on the period immediately following childbirth (Klaus & Kennel, 1976; Peppers & Knapp, 1980) and during pregnancy (Gaffney, 1988; Heidrich & Cranley, 1989; Peppers & Knapp; Mercer, Ferkitich, May, DeJoseph, & Sollid, 1988). In addition, Peppers and Knapp maintained the notion that maternal-fetal attachment began long before the infant's birth, with the planning of the pregnancy. Furlong and Hobbins (1983) suggested that technological advances, such as ultrasound, have offered women opportunities for direct contact with their unborn children and fosters the development of attachment.

In studies of prenatal attachment between women who conceived "naturally" (without ART) and women who conceived via IVF, no differences between the two groups were found (McMahon, Ungerer, Beaurepaire, Tennant, & Saunders 1997; Stanton & Golombok, 1993). A longitudinal study by Hjelmstedt, Widstrom, and Collins (2006) found that in vitro fertilization mothers were attached to their unborn children to the same extent as other mothers and that prenatal attachment increased during pregnancy. Kemp and Page (1987) confirmed that prenatal attachment was present in both normal and high risk pregnancies regardless of whether there was a threat to the loss of the pregnancy. Moulder's (1994) framework for understanding attachment suggests that the key factors in explaining a woman's reaction to the loss of her pregnancy is not necessarily decided

by gestational age but is determined by “the extent of the attachment to the baby and the degree of investment in the pregnancy” (p. 66). For women who undergo IVF the emotional investment in the pregnancy is huge.

In an article written by Robinson, Baker, and Nackerud (1999) the authors write that women’s expectations about parenthood and their future children increase the sense of loss if successful pregnancy is not achieved. In a profound statement the authors caution clinicians to be aware that “when attachment definitions include an element of time there is the potential risk for minimization of a perinatal loss” (p. 261) and the accompanying emotions felt by these women.

### Women’s Responses to Miscarriage

This literature review includes studies that have examined women’s psychological responses to miscarriage because the literature indicates women may experience reactions to an unsuccessful in vitro fertilization treatment that are similar to women who do not achieve a positive pregnancy test. These studies offer additional information while further supporting the need to conduct additional studies during this challenging time.

Many women may experience the anguish of a miscarriage during their lifetime. It is estimated that miscarriages occur in 20% of women and this number may be underestimated. The literature indicates the majority of miscarriages occur prior to 12 weeks of pregnancy (Renner, Verdekal, Brier, & Fallucca, 2000; Cramer & Wise, 2000). Studies investigating women’s response to early miscarriage have demonstrated that women may experience psychological distress, including anxiety and depression that may be extended up to a year after the miscarriage. The women in the study did not differ from women who experienced a late miscarriage or a still birth (Friedman & Gath, 1989;

Neugebauer et al., 1992; Robinson, Stirtzinger, Stewart, & Ralevski, 1994).

Posttraumatic stress disorder after miscarriage has also been described in the literature (Englehard, Van den Hout, & Arntz, 2001).

Most women experience an intense period of emotional distress in the time period following a miscarriage characterized by grief, guilt, anxiety, and depression (Friedman & Gath, 1989; Thapar & Thapar, 1992). A study of 15 women following a miscarriage by Adolfsson, Larsson, Wijma, and Bertero (2004) used the terms guilt and emptiness to describe the women's feelings after miscarriage. They found that the experience of miscarriage carries a great emotional impact and the losses identified in the study included the expected child, the child's future, and the role of motherhood. The authors note that when the child and its already-planned future is taken away from the woman she feels profound emptiness inside, as if a person in her family has died (Adolfsson, Larsson, Wijma, & Bertero, 2004). Often what remains after miscarriage are feelings of emptiness, loss, grief, and guilt.

A study by Freda, Devine, and Semelsberegr (2003) examined the experience of miscarriage in women who have had infertility. The study revealed that women who have a miscarriage following a positive pregnancy test after being diagnosed with infertility struggle between hope and hopelessness, uncertain future fertility, running out of time, anger/frustration, lack of understanding by others, feelings of guilt, feelings of being alone, and numb with grief. The researchers note that women would often desire a pregnancy soon after experiencing the miscarriage as a means of dealing with their grief. For women who have infertility the prospect of achieving another pregnancy may be

difficult. In this group of women the risk of intense and long-lasting distress following miscarriage may be high (Brier, 1999).

### Others Responses to Miscarriage

#### Healthcare Workers

Nikcevic, Tunkel, and Nicolaides (1998) interviewed 204 women diagnosed with a miscarriage at 10-14 weeks of pregnancy and examined their psychological morbidity, the availability and desirability of routine follow-up care, and whether the follow-up care is associated with a reduced psychological distress. Clinically elevated anxiety was observed in 45% of the women and depression was observed in 15%. The severity of grief was similar to the levels observed in people who suffer the death of a close relative. Ninety-two percent of the women indicated a desire for a follow up appointment while only 30% of the sample had been offered one. No significant association between follow-up care and psychological morbidity was identified. However, the study found that women who did attend a follow-up visit and were not offered an opportunity to discuss their feelings experienced elevated levels of anxiety over the women who were able to discuss their feelings during the follow-up visit.

Follow up health care for women who experience miscarriage may support their emotional adjustment (Hamilton, 1989). A study by Paton, Wood, Bor, and Nitsun (1999) indicates that the medical and psychological care received by women experiencing a miscarriage may directly affect their emotional adaptation to the event. The study included 79 women and reported on qualitative and quantitative data collected 4-6 weeks after a miscarriage. The findings revealed that the level of grief among patients was high, and the areas suggested by the sample for improvement by healthcare providers were: the

manner in which the bad news was given, the explanation for why the miscarriage had occurred, and the provision of medical and psychological follow-up care. A study by Ujda and Bendiksen (2000) explored the relationship between the women's emotional responses of miscarriage and the support given by their health care providers. The study concluded that words can take on incredible importance for this group of women and if health care workers can choose their words carefully and with sensitivity, they can contribute to their patient's feelings of being well cared for.

Ponte (2002) acknowledges that there are very few locations in our culture to mourn the early loss of a pregnancy. She describes the difficulty of grieving "the infant that never was, yet was somehow already a part of you" (p. 54). She proceeds to write about how rarely such a loss is acknowledged, how few rituals exist to express grief after miscarriage, and how ill prepared and insensitive healthcare providers can be.

One of the most frequent concerns reported in the literature regarding infertile couples' perceptions of their experiences was the lack of understanding and knowledge of health care providers including nurses who did not understand what the couples were experiencing (Daniluk, 1988). In a qualitative study exploring the coping strategies of 30 infertile women, Davis and Dearman (1991) reported that "none of the subjects stated that health care providers helped them to cope" (p. 227). Salakos, Roupa, Sotiropoulou, and Grigoriou (2004) examined the psychological needs of 235 infertile women who had undergone treatment for IVF. The results indicated that the psychosocial support and the scientific information provided to those women who participated in IVF programs were insufficient.

A survey of 258 baccalaureate nursing programs examined the ways nurse educators were preparing nurse generalists to meet the needs of couples entering the healthcare system with infertility problems (Sherrod, 1998). The author found that most schools included some information on infertility and only slightly more than half of the programs surveyed included information on the emotional and psychosocial issues surrounding infertility. The findings lead the researcher to write the following excerpt:

What is interesting to note is only slightly more than half of respondents included information on the emotional and psychosocial issues of infertility, despite the fact that the greatest cost of infertility is the emotional one. One of the major concerns of infertile couples is health care providers, including nurses, do not seem to understand what they are experiencing. How do nurses obtain such understanding if they are not prepared in their educational program to do so? (Sherrod, 1998, p. 412)

#### Society

Madden (1988) indicated that women who miscarried report that family and friends respond in ways that seem to reduce the impact and importance of the event and little is understood why society responds this way. In an effort to explore if miscarriage is an unrecognized loss and to assess the meaning it represents to others, Renner, Verdekal, Brier, and Fallucca (2000) studied 393 co-ed undergraduate students enrolled in a psychology class using 25 vignettes depicting a variety of women from 10 to 20 weeks pregnant and miscarried. The results indicated that although miscarriage was viewed as a loss, it is a loss considered by others as having little value. The authors believe this is due to a cultural norm of silence. Because the loss is not apparent to others it further compounds society's lack of sensitivity. Also noted was the secrecy often surrounding

when a woman is pregnant, leaving others unaware of the loss, and thus unable to provide support. This secrecy is likely present surrounding the occurrence of women who opt for IVF treatment as the topic of infertility may have social stigma attached and arouse numerous questions as to a woman's fertility status as the subject appears to be of social concern (Bute, 2007). Combined, this leaves the grieving woman with little sense of social support. Belittling comments such as you can have another pregnancy is commonly heard by women who have had a miscarriage. The authors present the notion that women may need to prepare themselves for the lack of empathy and understanding when they need it the most.

Kavanaugh, Trier, and Korzec (2004) examined parents' descriptions of the ways family and friends who offered support after they had experienced a perinatal loss indicate that parents with a perinatal loss often seek support from family and friends. The way in which families and friends support parents can have lasting effects. If parents perceive that they are not supported, they may feel isolated and misunderstood in their grief or experience a more chronic grief. The authors concluded that health care workers are in a position to educate the woman and her family as to the needed support and its effect/impact.

### Spousal and Social Support

A woman's experience of infertility is influenced by a social context. Interpersonal relationships can minimize or exacerbate the emotional responses of people to numerous chronic illnesses including infertility. Several studies have indicated the positive relationship between encouraging social support and positive adjustment among infertile women (Abbey, Halman, & Andrews 1992; Connolly, Edlmann, Cooke, & Robson,

1992). Abbey, Halman, and Andrews (1992) found that social support received by a spouse helped to reconcile the relationship between stress and marital life quality. These findings were supported by Amir, Horesh, and Lin-Stein (1999) that infertility specific social support received from a spouse or partner moderated the relationship between infertility related stress and marital quality along with well-being. Not all types of social responses are desired by infertile couples. As positive social support facilitates positive adjustment among fertile women a direct negative relationship also exists between unsupportive social support and decreased psychological adjustment (Abbey, Andrews, & Halman, 1995; Mindes, Ingram, Kliwer, & James, 2003)

A longitudinal study examined the direct effects of IVF specific unsupportive social interactions and IVF specific social support received from one's spouse upon psychological adjustment over time among a sample of 35 women receiving IVF treatment for infertility (Mindes, 2004). The questionnaires measured IVF-specific social support and unsupportive social interactions received from a spouse, overall psychological distress, and positive mood. The result suggested that unsupportive responses received from a spouse, specifically distancing type responses play a relatively stronger role than social support received from a spouse in their associations with both overall psychological distress and positive mood. Because unsupportive social support interactions is significant to the social stigma associated with infertility, the author calls for an increased knowledge among the general public regarding infertility and the general stressors associated with infertility and its treatment, as this may serve to reduce unsupportive responses from spouses and other network members, thus decreasing the risk for women's poor psychological adjustment. Boivin, Scanlan, and Walker (1999)



explored why infertile patients are not using psychosocial counseling and found that 70% of the woman and 60% of the men surveyed relied on their spouse as a source of support, and that both men and women rated their spouses as their most helpful source of support. The study's findings were consistent with earlier reports from Baram, Tourtelot, Muchler, and Huang (1988) which found that both partners identified their spouse as their primary source of support during their infertility and IVF.

As infertile women come to terms with their inability to conceive a child and possible long-term involuntary childlessness a level of acceptance may be achieved. But for some the continued awareness of infertility and childlessness may continue long after a woman's ability to bear a child ends. The day-to-day social interactions with women and families who have experienced the joy of motherhood, compounded by the failed hopes of future grand parenting, may forever be constant reminders of a painful fact.

### Summary

Research suggests that women want their feelings validated since some perceive no one understands or acknowledges how they feel. Understanding the intricate relationships between the non-implanted embryo and the woman who embodies it is a key factor to understanding the psychosocial responses experienced by women who undergo IVF, including loss and grief. Healthcare professionals working in infertility clinics, particularly nurses, can facilitate women to work through the emotional reactions of ongoing crises and provide a safe environment for the women to discuss individual responses and feelings. However, without a clear understanding of the meanings ascribed to the embryo by women undergoing IVF, health care providers are unable to offer

optimal support to this already emotionally vulnerable group. Based on the reviewed research, it is reasonable to discern that maternal-fetal attachment begins when planning for a pregnancy. The literature clearly indicates the grief, loss, and complex emotions expressed by women who experience a miscarriage. Although an abundance of literature is available on prenatal attachment very little has focused on the period immediately following embryo transfer in women undergoing ART. The literature indicates that it is likely that women who failed implantation following embryo transfer may not have their losses acknowledged by society. Lack of research into the meaning the embryo has for the woman during the time she waits for her initial pregnancy test demonstrates that research in this area is needed. The literature review indicated that no studies have been conducted with a focus on women during this brief, yet stressful time. Additional research is necessary to deepen the knowledge and understanding of the women themselves, their spouses/partners, their family and friends, and the health care workers who provide them with care.

### Research Method and Justification

The primary research question necessitated a qualitative inquiry in order to support and obtain the richness of data, and explore the essence of the phenomenon under study. A qualitative study is most appropriate to engage a dialogue with women who are experientially knowledgeable about this topic and to give voice to their experiences. It was the most suitable approach for the question under study as little research has been done to address this question. Because of the highly personal and sensitive nature, this phenomenon is not easily amenable by other investigative methods.

The purpose of phenomenology is to describe the lived experiences of the participants and increase our understanding through interpretation rather than observation or explanation (Bergum, 1991). Phenomenology offers a descriptive, reflective, interpretive, and engaged mode of inquiry where understanding another in order to take more solicitous actions toward the participant is the central aim of research (Field, Marck, Anderson, & McGeary, 1994). Phenomenology can contribute to nurses' knowledge and strengthen the case for an empathetic, non-judgmental approach to fertility care and research (Peddie & Teijlingen, 2005). "Because phenomenological inquiry requires that the integrated whole be explored, it is a suitable method for the investigation of phenomenon important to nursing practice, education, and administration" (Speziale & Carpenter, 2007, p. 92).

#### Relevance of Study to Nursing

Nursing is a profession which is concerned with human experience. Understanding human experience as a base for education, intervention, and theory development is essential to providing competent nursing care. As a human caring science and art, the aim of nursing is to care for people by using informed, timely, and appropriate care based on human caring and understanding (Munhall, 2007). "A phenomenological perspective can help increase nurses' understanding of their clients by entering into their lifeworld" (Beck, 1994, p. 508) as the diagnosis of infertility carries tremendous social, psychological, physical, and financial burdens. The short-term and long-term tolls on women and their partners can be enormous. Limited studies have explored the specific time from post embryo transfer to determination of pregnancy in women who are

currently receiving IVF treatment, contributing little understanding to this unique window of time. Improved awareness and understanding by nurses will help guide nursing intervention and restore the woman's sense of well-being.

Nursing's body of knowledge has long been the focus of numerous publications. Although these scholarly works differ in both their views and suggestions of various methods to organize, explain, and identify nursing knowledge, common to each is the acknowledgement that knowledge is necessary to the discipline of nursing.

Understanding the experience of women while undergoing IVF is essential to health care providers, including the discipline of nursing. Without the knowledge provided by persons who have gone through specific life experiences, nursing knowledge will not fully develop, leaving theory and practice without specific guidelines from which to base decisions and guide interventions. A lack of knowledge will lead to the preparation of inadequately educated nurses working in a poorly informed practice.

The American Nurses Association (ANA) (n.d.) defines nursing as "The protection, promotion, and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations." This definition leads this researcher to ponder the question: How can nurses advocate for someone who is experiencing something we do not understand? One of the most important roles of the nurse is to be a patient advocate and to protect the interests of patients when the patients themselves are unable. Research conducted, disseminated, and utilized by nurses is necessary to advance the nursing profession. Nurses can then orchestrate optimal women's infertility care in collaboration with health care providers.

## Experiential Context of Researcher

As a registered nurse I have worked in women's health for 18 years. I have helped new life come into the world and witnessed the pure joy motherhood brings. But I have also witnessed the pain of women who struggle with infertility and the devastation it can bring. As is often the case with qualitative research, my interest in this topic stemmed from my own experience with infertility. The idea to study the meaning of the transferred embryo(s) to women who experience IVF originated from my personal experience and numerous conversations with various women who have experienced infertility and various infertility treatments and more specifically IVF. From these experiences, I felt there was a limited understanding into specific areas of artificial reproductive techniques. I had found it amazing to me how little professionals and lay persons alike seemed to understand my experience of infertility and IVF. Although I found my husband, who was also an obstetrician and gynecologist, to be my source of greatest support, at times I didn't think even he understood what I was going through or how to support me. I felt a need to explore this unique experience in woman's life. My quest to become pregnant was an all consuming and an emotionally desperate time in my life; and yet it was worth everything to experience the joy of my biological daughter.

Also prompting my interest were the numerous painful stories women had shared with me about their struggles with infertility- untimely phone calls of bad news from the reproductive clinic, perceived lack of understanding from healthcare workers, and numerous failed ART attempts. The idea of studying a phenomenon that can bring women immense stress and possible joy simultaneously became intriguing, as did studying women who knowingly carried an embryo without knowing if she would be

pregnant. During this time you are not pregnant, but I feel you are more than non-pregnant. As a woman who experienced both a failed and a successful IVF I realized that each of the women who were experiencing IVF had a story they wanted to share. I found myself very moved and captivated by their stories.

One woman, a friend, shared her experience with me: She was an RN working on a labor and delivery unit and had just failed her third in vitro attempt. She relayed how no one seemed to understand or care, her co-workers would say to her “Better luck next time” or “Oh well.” She described how one co-worker had experienced a miscarriage during the same time she failed her IVF and how the staff supported her co-worker emotionally, with expressions of grief, offering food and days off by working her shift. My friend felt as though “no one understood” or even “acknowledged” her experience or sense of loss. For her, there would not be a next time. Not even the staff at her infertility clinic, with whom she had no contact with while waiting for her first pregnancy test following embryo transfer, and who notified her by phone of her negative pregnancy result while she was driving alone on the interstate portrayed understanding. To her no one understood. People either did not say anything or offered inappropriate comments.

I began to think of her experience, and how both myself and the women I spoke with perceived a lack of understanding or support at some point during our infertility experiences. I was especially attuned to the fact that even health care personnel, on a women’s care unit, did not respond in a helpful way or understanding way. Perhaps nurses do not understand. Perhaps health care workers do not understand, maybe because people really do not know. I found myself asking: What had my friend experienced during her IVF and subsequent losses? What did it mean to her? Why does it have to be

so hard emotionally for women who face IVF? As a healthcare professional is there anything we can do to help women – women like me?

## CHAPTER 3

### THE METHOD OF INQUIRY: GENERAL

#### Introduction and Description of Phenomenology and Rationale for Use

The research question, “What are the lived experiences of women who receive in vitro fertilization during the period of time following embryo transfer and prior to knowing the outcome of their initial quantitative blood pregnancy test (or the beta hCG test)?” necessitated a qualitative inquiry in order to obtain the richness of data of the phenomenon under study. A qualitative study was most appropriate to engage a dialogue with women who were experientially knowledgeable about this topic and could give voice to their experiences. The qualitative methodology most appropriate for this study was phenomenology, which is an approach to study how people experience life. The phenomenological method offered an understanding of a little understood area, which may help provide nurses and other healthcare professionals with a sound knowledge base to educate and approach reproduction care and research.

#### Background of Phenomenology as a Method

Phenomenology as both a method and philosophy began in the early twentieth century and draws heavily on the writings of the German mathematician Edmund Husserl and those who expanded on his views such as Heidegger and Merleau-Ponty (as cited in Creswell, 2007). Phenomenology has a strong philosophical element and has provided a means of describing human experiences that could not have been discovered otherwise by the previously predominant empirical approaches. It is a personal account of how and



what someone lives or experiences. Phenomenology can be divided into two types: (a.) hermeneutic: employed by Van Manen (1997); and (b.) empirical transcendental: employed by Moustakas, Giorgi, and Colaizzi (as cited in Creswell). Hermeneutic phenomenology (Van Manen) involves writing a description of the phenomenon and has an interpretative component in which the researcher makes an interpretation of the meaning of the lived experience; while empirical transcendental phenomenology concentrates more on the description of the participants' experiences and less on the researcher's interpretations (Creswell, 2007). The aim of interpretative phenomenology is to look at the context in which human beings live, listen to their stories, and illuminate meaning.

### Van Manen: Hermeneutical Phenomenological Research and Analysis

The focus of phenomenology is on a concept or phenomenon and the essence of the lived experience of persons about that phenomenon (Creswell, 2007). Using an interview design with open-ended questions this researcher will be able to illuminate the women's perceptions and meanings attributed to their individual experiences during this unique window of time in IVF treatment. As the goal of this study is to discover and understand new meanings of reality rather than verify pre-existing ones this study will follow the approach of Van Manen's (1997) hermeneutic phenomenology. The central phenomenon under study is women's experiences during the window of time from embryo transfer to determination of the outcome of each woman's initial biochemical pregnancy test (approximately 10-14 days). To be precise, this research will be an interpretative

phenomenological study following the hermeneutic phenomenological writings of Van Manen's methodological approach. Hermeneutic phenomenological research is a search for the fullness of living, and in this instance for the ways a woman can possibly experience the world as a woman, and for what it is to be a woman.

Hermeneutic phenomenology attends to both terms of its methodology:

It is a *descriptive* (phenomenological) methodology because it wants to be attentive to how things appear, it wants to let things speak for themselves; it is an *interpretative* (hermeneutic) methodology because it claims that there are no such things as uninterpreted phenomena. (Van Manen, 1997, p. 180)

Phenomenological research is a description of an aspect of living that is shared with a researcher by a person who has knowledge through personal experience, in an effort to shed understanding on the meaning of that experience. As human beings our experiences are connected to the world we live in through our perceptions. This research method aims for a deeper understanding of the meaning of an every-day experience; it is a search for what it means to be human (Van Manen, 1997). Phenomenology is “assistive in informing providers who are helping others deal with life experience, especially experience and phenomena that involve tremendous human suffering and agony, which often continue for very long time, a lifetime, and forever after” (Munhall, 2007, p. 222). Qualitative research is useful to study “silenced voices” and when a “complex detailed understanding of the issue is needed” (Creswell, 2007, p. 40). Phenomenology is a fitting research tool to use when we want to better understand what it is like for someone to experience a specific phenomenon in his or her everyday life.

Phenomenological research is the study of essences. The essence of a phenomenon is “that which makes a some-“thing” what it *is*-and without which it could not be what it is” (Husserl, as cited in Van Manen, 1997, p. 10). Hermeneutics is a mode of inquiry that offers nursing the freedom to explore and understand the richness of human experiences (Allen & Jenson, 1990). Conducting phenomenological research is to question the way human beings experience the world, to ask what is that experience like? It is the “study of the lifeworld-the world as we immediately experience it” (Husserl as cited in Van Manen, 1997, p. 9) and offers an account of lived space, lived time, lived body, and lived human relation. The methodology of phenomenology implies an approach toward research that holds at bay any tendency toward constructing a predetermined set of fixed procedures, techniques, and concepts that would control the research project (Van Manen). The method of hermeneutic phenomenology is not previously determined; it is discovery oriented, and evolves in the participants’ responses and from the researcher’s analysis of the phenomenon under study. “To *do* hermeneutic phenomenology is to attempt to do the impossible: to construct a full interpretive description of some aspect of the lifeworld, and yet to remain aware that lived life is always more complex than any explication of meaning can reveal” (Van Manen, 1997, p. 18).

In an effort to communicate the message the participants are sharing in a manner that is faithful to phenomenology, the researcher will follow the non-sequential interplay of six steps advanced by Van Manen (pp. 30-31):

- (1) turning to a phenomenon which seriously interests us and commits us to the world;
- (2) investigating experience as we live it rather than as we conceptualize it;

- (3) reflecting on the essential themes which characterize the phenomenon;
- (4) describing the phenomenon through the art of writing and rewriting;
- (5) maintaining a strong and oriented pedagogical relation to the phenomenon;
- (6) balancing the research context by considering parts and whole.

Van Manen's approach to data analysis is not a prescriptive step-by-step methodology, as the steps may occur in any order or simultaneously.

### Van Manen's Four Lifeworld Existentials

Van Manen (1997) refers to four basic lifeworld existentials of all human beings: lived space, lived body, lived time, and lived human relation as guides for reflection during research. Van Manen (1997) refers to lived space as perceived space. It is the spaces where humans live their everyday life, and it effects how people feel. The space can be static – with physical dimensions, or dynamic and vast, such as the outdoors. According to Van Manen (1997), a person's feelings are influenced by various spaces, for example in an elevator, on a beach, in a doctor's office, or in one's home.

For Van Manen (1997) lived body refers to the human body, it is the body in which humans live. When a person meets someone he or she meets that person in their body while he or she experiences the meeting from his or her body. According to Van Manen (1997) in their physical body a person reveals something about him or herself, while at the same time concealing something about their self.

Lived time (Van Manen, 1997) refers to time as it is perceived by humans. Time may be experienced as going fast, or passing slowly. Lived time also refers to the past, such as memories, and to the future. Van Manen writes that human often "reinterpret" who they

are because the past can change “under the pressures and influences of the present” (p. 104) and the already envisioned future.

Van Manen’s (1997) lived other refers to the relations that humans maintain with others in the interpersonal space that humans share with one another. As people encounter each other they do so in a corporeal way, but also in a transcendental manner in which humans can transcend themselves. Van Manen (1997) uses the example of forming an impression of what someone looks like from an indirect contact, such as a letter or phone conversation, which can be either very similar or very different from the actual person’s physical appearance. Lived other also refers to human relationships with religion or spirituality which Van Manen (1997) refers to as the “absolute Other, God” (p. 105).

These four elements or existential of lifeworlds are part of the context in which a phenomenological study occurs; therefore a conscious effort to consider the four lifeworld elements throughout the study was made. The search to understand what it means for a woman to desire motherhood and embody an embryo while non-pregnant required the researcher to consider the influence of each of the women’s lifeworlds on the interpretive analysis. The analysis, interpretations, and, meanings ascribed by the researcher present the common shared experiences of a specific group of women, occurring during a specific time that has been influenced by history, culture, science, and the relationships these women have to themselves and others. Van Manen’s lifeworld existentials provided a lens to interpret the women’s experiences.

## Methodological Rigor: Data Trustworthiness

The techniques for assessing trustworthiness in a naturalistic paradigm are discussed below (Lincoln & Guba, 1985; Frankel as cited in Creswell, 2007; Meadows & Morse as cited in Creswell, 2007):

Verification is the first step in achieving validity of the research project. This standard will be fulfilled through literature searches, adhering to the phenomenological method, bracketing past experiences, keeping field notes, using an adequate sample, identification of negative cases, and interviewing until saturation of data is achieved (Frankel as cited in Creswell, 2007; Meadows & Morse as cited in Creswell, 2007).

In phenomenology the researcher transcends or suspends past knowledge and experience to understand a phenomenon at a deeper level; it is an attempt to approach lived experiences in a new light free of past prejudice to elicit rich and descriptive data. Bracketing is a process of setting aside one's beliefs and perceptions, allowing the researcher to be more faithful to the methodology. As a nurse, educator, and a person who has experienced IVF, it is important for the researcher to acknowledge and attempt to bracket personal experiences.

Based on the suggestions of Lincoln and Guba (1985), Creswell (2007), and Speziale and Carpenter (2007), the following strategies are discussed as technique to ensure that the descriptions and interpretations of the researcher are trustworthy:

*Prolonged engagement* - multiple contacts, personal interviews, and attentive listening with each participant will help to establish trust and enhance data credibility;

*Data immersion* - immersion into the subculture of infertility and IVF via numerous readings and reflecting on the transcripts, audio tapes, journals, field notes, and a comprehensive review of the literature will serve to increase trustworthiness;

*Triangulation* - of multiple data sources via interview and journaling and a review of the literature, to determine if the study's findings are consistent with previously published information, will serve to enhance trustworthiness. Multiple session interviews diminish threats to validity while aiding in the development of the researcher-participant relationship.

*Peer review and debriefing* - external input on the data analysis provided by the chair and methodology expert on the researcher's dissertation committee will provide critical feedback, expertise, objectivity, and an opportunity for researcher reflection.

*Audit trail* - dependability can be enhanced via a detailed audit trail. The audit trail will include writings related to the women's interview tapes and journals, transcriptions, thematic categories and analysis. Appropriate use of an audit trail from the beginning of the study throughout the final written product will permit both peers and the researcher to evaluate the step-by-step procedures taken by the researcher and the justifications for the decisions.

*Clarification of research bias* - bracketing and reflexology will be used to monitor researcher bias and subjectivity via field notes. The investigator will keep a journal to remain focused and keep subjectivity and personal perceptions in check. Measures such as (a) writing personal attitudes and knowledge prior to initiating the research and (b) keeping field notes before and after each interview will aid to enhance the credibility of the research.

*Member checking* - sharing interview transcripts, analytical thoughts, and drafts with research participants will ensure that the investigator both represents and present ideas accurately will enhance credibility. Although this step may be believed unnecessary (Giorgi, 2006), Lincoln and Guba (1985) consider this technique to be “the most critical technique for establishing credibility” (p. 314). Validating findings with the participants is part of the researcher’s effort to ensure the interpretations reflect the women’s descriptions and have captured the essence of the phenomenon under study.

*Rich, thick description* - enables the reader to enter the research context, by open-ended questions, attentive listening, and field notes, as well as taping the interviews verbatim and listening many times to the text, pauses, silence, tone and pace of the text transcribed immediately following each interview.

*External audit* - by chair of dissertation and committee members who are experienced in phenomenological research and who will examine the research process and product by auditing field notes, coding schemes, representation of overall themes will also aid to verify the data credibility. These researcher’s themes will then be compared with the findings reported by other authors in the literature.

*Bracketing* - The investigator’s attachment to this field of study may lead her to support her own ideas (preconceived notions) and to disregard those that are of similar equal importance to hers but take an opposing position. The investigator will address researcher bias by continuously remaining aware of her own opinions and by bracketing them in writing before and after each interview and reflect her own subjectivity as writing will enable her to separate her own thought in a reflective manner.



To further ensure credibility the researcher should maintain detailed field notes and use quality tapes for recording. Immediately following each of the interviews the text is to be transcribed verbatim. The transcription should be verbatim, including pauses, tone, overlapping, and repetition. Additional activities to enhance credibility include using a quality recorder, one interviewer, one transcriber, and a transcript that is carefully checked for detail. True objectivity is difficult or impossible to achieve, as the researcher brings who and what he/she is to the study. Attempts to control researcher bias should be incorporated via bracketing prior to as well as throughout the study in an effort to minimize data contamination. Strategies for ensuring the quality of the equipment include a tape recorder with a variable speed. A back-up recorder and high quality tapes, and extra batteries will be brought to the interview site. The researcher should be familiar with all equipment used prior to the start of the data collection to ensure smoothness of operation and that the equipment is in working order.

### Concepts and Terms Related to the Study

*Embryo* - An egg that has been fertilized by a sperm and has undergone one or more divisions (CDC, 2007).

The following definitions are from American Pregnancy Association (2008):

*IVF cycle* - The process includes (a) an ART procedure, (b) ovarian stimulation, or (c) frozen embryos thawed for transfer into a woman. This process begins when a woman starts fertility medications or has her ovaries monitored for follicle production.

*In vitro fertilization (IVF)* - An ART procedure that involves removing eggs from a woman's ovaries and fertilizing them outside her body. The resulting embryos are then transferred into the woman's uterus through the cervix.

*Follicle* - Structure in the ovaries that contains a developing egg.

*Egg retrieval* – The eggs are removed from the ovaries using the hollow needle, also referred to as *oocyte aspiration*.

*Embryo transfer* – In IVF it is the placement of an embryo(s) into to the uterus via woman's cervix following IVF

*Fertilization* - The penetration of the egg by the sperm and the resulting combining of genetic material that develops into an embryo.

RESOLVE (2008), the National Infertility Organization, defines infertility as a disease or condition of the reproductive system often diagnosed after a couple has one year of unprotected, well-timed intercourse or if the woman suffers from multiple miscarriages. Infertility can be male, female related, or both (RESOLVE, 2008). Primary infertility is the term used to describe a couple that has never been able to achieve a pregnancy after at least 1 year of unprotected sex (Medline Plus, 2008) while secondary infertility refers to a condition where couples have had at least one pregnancy, but have not been able to achieve another pregnancy (Medline Plus).

Approximately one-third of infertility cases can be attributed to male factors, one-third to female factor, one-third of infertile couples infertility is caused by a combination of problems in both partners, and in up to 20 percent of cases the etiology is unexplained (American Society of Reproductive Medicine, 2008). Medical advances, such as IVF, have become successful options in the treatment of infertility. IVF encompasses a

complex variety of procedures in which both eggs and sperms are handled. The following description is an overview of the procedures in which women become involved when they elect IVF treatment and include some descriptions which are provided by the American Pregnancy Association (2008). (This is not intended to provide a medically entailed and complete description of IVF as these steps may vary for individual women and infertility clinics, but it does offer an overview of the basic steps involved in a typical IVF cycle):

*Suppression* - for women who are ovulating naturally, often the first step of IVF begins with suppressing her natural ovarian cycle via medications.

*Stimulation* – within the next month the woman’s ovaries are stimulated by medications to produce multiple eggs. Fertility medications are prescribed to control the timing of the egg ripening and to increase the chance of collecting multiple eggs during one of the woman's cycles. This is often referred to as *ovulation induction*. Multiple eggs are desired because some eggs will not develop or fertilize after retrieval. Egg development is monitored using ultrasound to examine the ovaries and urine or blood test samples to check hormone levels. During this stimulation phase the woman is monitored closely by frequently conducted serum levels to monitor the hormones and ultrasounds to examine ovaries. At this point the IVF may be cancelled as the woman may not make enough eggs or the egg follicles may become hyper-stimulated causing complications. If the follicles produce mature eggs the next step involves the retrieval of the eggs.

*Egg retrieval* – the process of egg retrieval involves the woman enduring a surgical procedure in which the eggs are removed from the ovary via an ultrasound guided needle

that enters the pelvis through the vagina. Sedation and local anesthesia are provided to remove any discomfort the woman may experience.

*Insemination* - upon retrieval, the eggs are combined with sperm in a laboratory and are fed a nutritive substance. In a process called *insemination*, the sperm and eggs are placed in incubators located in the laboratory which enables fertilization to occur. In some cases where fertilization is suspected to be low, intracytoplasmic sperm injection (ICSI) may be used. Through this procedure, a single sperm is injected directly into the egg in an attempt to achieve fertilization.

*Fertilization* - after about 40 hours, the eggs are examined to determine if fertilization and cell division has occurred (ASRM, 2008). Once this occurs, the fertilized eggs are considered embryos.

*Embryo transfer* - the woman is notified by the infertility clinic as to when to arrive for embryo transfer. On the day of the transfer the woman will be sedated and the embryo(s) will be passed through a catheter into the uterus cavity via the cervix. Two days after the egg retrieval the fertilized egg has divided to become a two-to-four cell embryo. By the third day it will contain 6-10 cells, and by the fifth day a fluid cavity form in the embryo and the placenta and fetal tissue begin to develop (ASRM, 2007). The embryos are usually transferred into the woman's uterus anywhere from one to six days later, but most commonly it occurs between two to three days after egg retrieval. The higher quality embryos will be selected for transfer into the woman's body. During this time the woman receives intramuscular medications to prepare her uterus to receive the embryos and facilitate implantation. The number of embryo(s) selected to be transferred varies with the quality of the embryo, input from the woman regarding the number of

embryos to be transferred at once, and the decision of her reproductive endocrinologist. The transfer process involves a speculum which is inserted into the vagina to expose the cervix. A predetermined number of embryos are suspended in fluid and gently placed through a catheter into the womb. This process is often guided by ultrasound. Some women may experience cramping, which usually subsides the following day; however, a feeling of fullness or pressure may last for several weeks following the procedure (APA, 2008).

Following a brief period of recommended bed rest a woman will wait up to 14 days (Clapp, 2004) to return to the clinic and have a blood test to determine if one or more of the embryo(s) have implanted in the uterine wall. Usually within 24 hours of having the blood drawn a negative or positive diagnosis is communicated to the woman via phone. Following this step there are frequent blood levels drawn to determine if the beta hCG levels are rising appropriately and indicate the pregnancy is or is not advancing normally. If successful development occurs in the uterus implantation happens 6-10 days after egg retrieval (ASRM, 2007). Approximately 6-8 weeks from the time of embryo transfer an ultrasound is performed to determine if a heart beat is visible. Around 12 weeks pregnant she will be referred to her regular obstetrician for the remainder of the pregnancy.

## CHAPTER 4

### THE METHOD OF INQUIRY: APPLIED

#### Sample: Participant Recruitment and Selection

Purposive homogenous sampling was used to recruit the participants needed for the study. This type of sampling enabled the researcher to select women who have the knowledge of the phenomenon of interest in order to describe this subgroup in depth (Morse, 1991). Polkinghorne (as cited in Creswell, 2007) suggests that researchers interview from 5-25 individuals who have each experienced the same phenomenon and Dukes (1984) recommends studying 3-10 participants. While no set rules are established as to how many participants to include in a qualitative study, the number should be enough to provide rich data (Patton, 2002). The goal for the study was to recruit up to 12 women in enrolled in a reproductive clinic located in the North Carolina, in an effort to reach data saturation. Group data saturation served as a guide to determine the number of participants to include in the sample.

The criteria for participation in the study are women who are fluent in English (speaking, reading, and writing) and planning to experience IVF during the months of March 2009 through December 2009. The women's history of fertility was addressed in the socio-demographic and fertility history survey demographic (APPENDIX E). Regardless of who is the source of infertility women reported higher levels of stress, anxiety, and depression than men (Brucker & McKenry, 2004). Women are the central focus of this study because they experience the burden of IVF treatment.

A total of nine women contacted the researcher and all nine agreed to participate in the study. Six women completed the study. Two of the women who had agreed to

participate in the stud, each had a very low number of eggs retrieved and opted to end their immediate IVF attempt and froze their eggs, thus unable to complete the study.

Both women plan to undergo future stimulation and egg retrieval in an attempt to increase their chances of achieving a pregnancy in a future IVF cycle; and one woman had not started her IVF.

The study involved a total of six participants, five women who identified themselves as Caucasian (non-Hispanic) and one woman who identified herself as both Caucasian and African American. The women were between the ages of 25 and 40, having either a college or professional degree, and were able to read and write in English. The participants had received in vitro fertilization at a fertility clinic located in the Southeast region of the United States. Each of the women were married, and five of the six women worked either full time or part-time, and reported an annual household earnings ranging from \$101, 000 to greater than \$150, 000. One woman was unemployed and reported annual household earnings similar to the others. The length of time diagnosed with infertility ranged from 1 1/2 to 5 years, and the women had been receiving some type of infertility treatment for 1 1/2 to 2 years prior to their enrollment in the study. Only one woman reported having a biological child from a previous IVF procedure. The remaining five women did not have any biological children and this was their first IVF attempt. For the purpose of this study the researcher did not exclude participants based on the cause of infertility, the type of infertility, or the number of embryos which were transferred as this did not have a significant bearing on the purpose of this study.

## Setting and Access

The researcher contacted appropriate infertility clinic personnel (office manager, research director, clinical coordinator) in order to seek permission and gain access to the population. The investigator requested permission via phone to access their patient population in the hope of recruiting up to 12 participants. Once permission to access the population was secured the researcher forwarded copies of the Recruitment Handout (APPENDIX C) in person to be distributed by the primary care nurse to each woman who met the study's inclusion criteria. The primary care nurse was be asked by the investigator to offer each women a copy of the Recruitment Handout and to inform each person that they were being provided with information regarding a research study which was designed to explore women's feeling as they receive IVF and if they were interested in participating or had any questions to contact the researchers whose name and contact information was provided on the handout.

Once the investigator was contacted by each potential participant, via phone or e-mail, the investigator described the overall purpose of the study, participant requirements (two audio-taped interviews each lasting approximately 60-90 minutes and keeping a brief journal for approximately 10 days), a basic overview of the consent form, and answered any questions the woman had. During the initial phone contact each participant was asked to review the Recruitment Handout (APPENDIX C) and ample time was allowed for them to ask the researcher any questions. If the participant agreed to participate in the research the date, time, and place for the first interview was tentatively arranged. Each participant contacted the researcher on the day their egg retrieval



appointment was scheduled to formalize an agreed upon date for obtaining consent and conducting the first interview.

Consent to participate in the study also included maintaining a daily written journal for approximately five minutes twice-a-day to express their thoughts and feelings. Following the initial telephone contact the journals were be mailed to the participants with written instructions. The purpose and how to use the journals was addressed during the initial telephone conversation. The women were given the option to either hand-write or use a word processor for their journal activities. Upon completing the second interview each of the participants received a \$50 Visa Giftcard in an effort to compensate the participants for their time. Once the consent was signed the participant was informed by the researcher that she would receive the gift card regardless if she completed study. All six women completed the study.

#### Human Subject Consideration and Protection

Permission was received from the Biomedical Internal Review Board at University of Nevada of Nevada, Las Vegas to conduct the study. Each participant was asked to sign an informed consent (APPENDIX B), including a consent to be audio-taped, at the beginning of the first interview visit. Participants were free to withdraw from the research project at any time during the research study without prejudice. The women's privacy was protected by incorporating the following procedures in the study design:

Approach by a third person who was employed at the infertility clinic as the primary nurse for the potential participants helped protect the women's privacy. Providing each woman with a written handout was an effort to limit the level of recruitment involvement

on the part of the primary nurse and the infertility clinic. The study was designed to (a.) avoid the investigator viewing any of the women's medical records, and (b.) to avoid the investigator's direct contact with the women at the infertility clinic, as potential participants will voluntarily self-initiated contact with the investigator via phone or e-mail, if they were interested in the study. These actions encouraged participant privacy by protecting the women from any undesired contact with the investigator as well as protecting the women from their primary nurse being aware of which women consented to be included in the study, and from feeling any undue influence from their primary nurse to participate in the study. Providing each woman with a copy of the Information for Participants maintained privacy and encourage voluntary participation.

The participants communicated with the researcher via private cell phone or UNLV e-mail, and all communication were read and accessed only by the investigators. The identity of the participants was known only by the student researcher. Each participant was informed during their initial telephone conversation, and prior to the beginning of each interview, that at any time during the study the participant may opt to withdraw and the researcher will no longer have contact with the participant. Communication with the investigator occurred either in person - during the interviews, or by the researcher's private phone or UNLV e-mail account to which the passwords were known by only the student investigator. All data will be recorded and saved using pseudo names for the participants. The master list will be shredded upon completion of the project.

The women's confidentiality was protected by incorporating the following methods:

(a.) Assigning pseudo names - a master list identifying the women with their pseudo names was kept on the student researcher's private password protected computer and a

hard copy locked in a file drawer. The identity of the women was known only by the student researcher. The master list was shredded upon the completion of the data analysis. All data was transcribed by a hired professional transcriptionist who signed a confidentiality agreement per UNLV policy. All personal identifying information was excluded in the obtained interview data (prior to being accessed by the transcriptionist) and in the data analysis and research findings;

(b.) All transcribed data was stored on the researcher's a password secured computer in a Microsoft Word program. Only the investigators and expert methodologist had access to the audio tapes of interviews and written transcriptions;

(c.) The data and research findings were presented in a manner in which the information is publically accessible without compromising the women's identity; and

(d.) After writing the analysis, the data on the tapes, transcripts, journal entries, were kept in a locked cabinet in the PI's office on the UNLV campus for a period of three years following the completion of the study. After this time, the data will be erased and/or physically destroyed.

In additional participant consideration in regard to this research included those noted by Van Manen (1997, p. 162) and was taken into account by the researcher throughout the study:

The research may have had effects on the participants. Women may feel uncomfortable, have a sense of false-hope, hopelessness, increased awareness, or a call to action. If negative emotional feelings had been expressed and the participant demonstrated or verbally acknowledged that the interviews were stressful, depending on the participants' choice and the judgment of the student investigator would have paused

or rescheduled the interview, or if the stress level was perceived as high the researcher will cease the participants involvement and request she contact her infertility specialist. At times during the interviews the women wept and none of the participants indicated to the researcher (either through observation or verbally) to cease the interview. Participation in the study may have a beneficial therapeutic effect upon the women as they share their feelings with an objective person. Each of the women commented that they felt that participating in the study was a therapeutic and, or a cathartic experience.

### Data Collection Procedure

All data collection was conducted by the student researcher, under the guidance of the PI, and each of the interviews occurred in an office at the fertility clinic which was located on a floor in which the women would not have contact with their physicians or primary nurses. The study's primary techniques of data collection were interviews, participant journals, and field notes. The researcher kept field notes in the form of a written notebook. The field notes included the researcher's observations regarding the emotional tone, date, and time of the interview, interview site, physical environment, interviewer impressions, non-verbal participant expressions, persons present, and any events which may have occurred during the interview, such as technological difficulties. Maintaining field notes helped to provide the researcher with a more in-depth data collection and analysis.

At the beginning of the first interview each women completed a Sociodemographic and Fertility history (APPENDIX E). Each woman participated in two interviews. The first one occurred three to five days after their embryo transfer while the second one

occurred from eleven to fourteen days following their transfer. The length of each interview varied and lasted approximately 70 to 190 minutes. The data generated from the total of each woman's interviews yielded a total of 20 to 36 single-spaced pages of transcribed data in Times New Roman Size 10 font. The interviews were open ended in style and began with a specific leading question to initiate the discussion. Follow-up questions were posed by the interviewer in an effort to focus on the central phenomena under study and depended on how the participants answered the leading question (APPENDIX D).

During the second interview the researcher reviewed key words, phrases, and interpretations from the tapes and transcriptions which were stated by the women during their first interviews. This review presented an opportunity for each woman to be involved in member checking as a means of enhancing credibility. During the second interview the women offered further details of their experiences and clarified any misinterpretations which were made by the researcher. The second interview afforded the researcher an opportunity to ask each participant to further elaborate on some of the experiences they shared in their first interview, and also to seek additional information since the previous interview in an effort to more accurately represent each woman's story and to describe the essence of their experiences.

In addition to participating in two interviews each woman maintained a detailed journal. The women wrote in their journals daily, making either one or two entries per day. Their journaling began on the day prior to their embryo transfer and were continued until the time they had their first pregnancy test drawn. Some of the women made their last journal entries on the night before their first scheduled pregnancy test while others

opted to include the results of the pregnancy test. The journal entries were typed in single space and each journal generated from three to seven pages of single spaced size 12 Times New Roman font. The journal entries were collected by the researcher via e-mail or traditional mail at the end of the study.

### Data Analyses and Management Procedures

Data analysis was accomplished using Van Manen's (1997) six steps phenomenological method and approach to transcription analysis. Van Manen (1997) refers to four basic lifeworld existentials of all human beings: lived space, lived body, lived time, and lived human relation. These four elements or existentials of lifeworlds are part of the context in which a phenomenological study occurs; therefore, a conscious effort to consider the four lifeworld existentials during the data interpretation was made by the researcher. Bracketing of the investigator's knowledge, values, and preconceptions was also employed.

Van Manen's approach to data analysis is not a prescriptive step-by-step methodology, as the steps may occur in any order or simultaneously. In an effort to communicate the message the participants are sharing in a manner that is faithful to phenomenology, the researcher included the following non-sequential interplay of six steps advanced by Van Manen (1997, pp. 30-31):

(1.) Turning to a phenomenon which seriously interests us and commits us to the world; turning to the phenomenon of lived experience by re-learning to look at the world in a non-judgmental way. The researcher interviews six women who are the source of experiential knowledge in an effort to describe their lived experiences while undergoing

IVF in the days following embryo transfer until determining if they are pregnant. The women shared their experiences with the researcher by participating in two interviews and providing the researcher with a copy of contents from keeping a daily journal during the experience of the phenomenon under study.

(2.) Investigating experience as we live it rather than as we conceptualize it. The researcher will acknowledge and attempt to bracket preconceived ideas and beliefs about the phenomenon under study. The researcher must suspend personal past experiences with IVF to listen to the women's stories and to prevent bias. Ideas which were bracketed include: the embryo as a baby, the pain and stress associated with IVF, desperation to be a mother, and the idea of how attached one becomes to her children. To bracket the researcher's thoughts and to explore the experiences of these six women during the window of time in which she is acutely aware of the presence of her embryo within her body, without knowing if she is pregnant, is to study this phenomenon as the women themselves are experiencing it. The interviews and journals were transcribed in a Microsoft Word document.

(3.) Reflecting on the essential themes which characterize the phenomenon the researcher engaged in micro thematic analysis. The transcripts and journals of each woman's descriptions were read through several times to obtain an overall feeling for them. While reading the researcher asked what were the words or phrases that stand out from the text as important to capturing the experiences of these women when they were undergoing IVF - focusing on the time from their day of embryo transfer until finding out if they are pregnant. The women's descriptions were read line-by-line and words or events that appeared central to the women's overall description were identified. Special

attention was given to the tone and pace of the participants' words, noting when the women laughed, paused (silence), or sobbed. Words and phrases that pertain directly to the phenomenon under study were identified and color-coded by hand (APPENDIX G). The researcher also referred to listened to the audio tapes and field notes to aid in the analysis.

Notes were hand written made by the researcher on the transcripts to facilitate reflection and data analysis. Phrases and words were extracted from the description of the women's experiences. These phrases were then grouped into common themes. The researcher reflected on the essential themes from the women's descriptions to characterize their lived experiences of the phenomenon.

(4.) Describing the phenomenon through the art of writing and rewriting involved identifying the overall themes common to each of the participant's transcripts and integrating them into an in-depth description of the phenomenon to capture the essence of the women's experiences. The researcher reflected upon the themes and the women's words were used to support and describe the essence of the topic. Objectivity of the researcher was helped by bracketing throughout the research and maintaining an audit trail.

(5.) The researcher maintained a strong pedagogical relationship to hermeneutics by consistently referring to Van Manen's (1997) text "Researching Lived Experience: Human Science For An Action Sensitive Pedagogy." This relationship was maintained throughout the study by: (a) obtaining data from the women who have key knowledge and experience by conducting two interviews, using open-ended questions, and by maintaining a daily journal beginning on the day prior to the embryo transfer and ending



on the day before finding out the results of their first scheduled pregnancy test; (b) listening carefully to the women's language and voices; (c) remaining faithful to the women's descriptions; (d) performing verbatim transcriptions; (e) being constantly aware of researcher bias; and (f) allowing the research process to unfold free of predetermined rules – this involved reading and re-reading the text, developing common themes, reflecting on themes, and going back and forth between the text and common themes to develop overall themes.

(6.) The researcher balanced the research context by considering parts and whole. The women's descriptions of their lived experiences were considered in context of the lifeworlds: body, time, place, and relationships. Interpreting meaning from the descriptions and themes required the researcher to give careful thought to each of these areas in order to wholly capture the essence of the phenomenon.

#### Specific Aspects of Methodological Rigor Used in the Study

Trustworthiness was addressed in the study as described by Lincoln and Guba (1985). The techniques for establishing trustworthiness (Lincoln & Guba, 1985) in this study are discussed:

##### Credibility

Lincoln and Guba (1985) describe major activities to enhance the likelihood of generating credible findings and interpretations. These are:

(a.) prolonged engagement: to learn the context of the phenomenon, minimize researcher, and participant distortions, and to build trust. In the current study prolonged engagement was accomplished the researcher spending time with the participants during

two lengthy face to face interviews with each woman (each interview lasting between one hour to two and a half hours with each participant) and from spending time reading and re-reading the interview transcripts and journals which had been maintained daily by each woman, and the researcher spent a substantial amount of time exhausting the literature regarding the phenomenon under study;

(b.) persistent observation: helps render the researcher open to multiple influences that are most relevant and impact the phenomenon, and to focus on these to provide depth. During the study persistent observation was accomplished by identifying the concepts and characteristics in the study that were most relevant to women who have received an embryo transfer while not knowing if they are pregnant revealed that the women described that they had experienced elements such as lack of understanding, stress, fear, excitement, doubt, social ostracizing, identity confusion, dreaming of their future, pain and hurt. These elements were focused upon and provided depth to the descriptions and interpretations of the women's experiences. Evidence of persistent observation was documented in the researchers hand written notes and audit trail.

(c.) triangulation includes referring to multiple sources as a cross check to support the data obtained such as repeated interviews and comparing respondent journal entries with the data from the interviews, or different designs such as a mixed method design of qualitative data supported with quantitative component. In the current study triangulation was accomplished by accessing and comparing two interviews and a daily journal from each of the women;

(d.) peer debriefing involves exposing the researchers ideas to peer(s) who can help maintain researcher honesty through questions referring to researcher bias, and

clarification of meanings. It is an activity which affords the researcher an opportunity to brain storm out loud and discuss his, her thoughts and stance related to the study including the methodological design of the study, often debriefing may lead to a researcher's cathartic moments (Lincoln and Guba, 1985). Peer debriefing was accomplished by frequent and in depth contacts with the researchers dissertation chair throughout the study and with a methodological expert during the initial phases of developing the essential themes;

(e.) negative case analysis is a process of redefining a hypothesis numerous times to include at least 60% of the characteristics (Lincoln & Guba, pp. 312-313) commonly experienced by the participants, or in the case of this study developing essential themes from the data to help define the presence of a positive case or phenomenon. Van Manen (1997) described this as the defining characteristics that make something what it is and without which it would no longer be. In the current study the overarching theme of Waiting and the eight sub-themes of hope, doubt, anxiety, awareness, isolation, vulnerability, despair, and anticipation were experienced by each of the women in the study and emerged from their descriptions as essential to understanding the phenomenon;

(f.) referential adequacy is a means of establishing the adequacy of the descriptions and interpretations of the sources of the data, which have been collected during the study, and compare them to the original data – this may include interview transcripts, audio tapes, analysis coding of a transcript. During this study referential adequacy occurred by providing both the chair and methodological expert with raw data which had been coded to compare the themes which had emerged; and

(g.) member checks is the process of referring back to the original participants who provided the data to see if the interpretations and themes which were constricted “ring true” to their experiences. Member checks allows participants to react, respond, and clarify the researchers constructions which emerged from the data. From here the researcher carefully considers the participants’ reactions to ensure that an adequate representation of their experiences is revealed by the study. With regard to the current study this process was accomplished by conducting two interviews with each participant, where in the second one each woman was afforded an opportunity to respond to the researcher’s initial impressions from the first interviews.

#### Transferability

It is the responsibility of the researcher to “provide the data base that makes transferability judgments possible on the part of potential appliers” (Lincoln & Guba, 1985, p. 316). During this study the researcher conducted purposeful sampling with women who met minimum requirements to participate in the study in order to access women who were experiencing IVF during the time period from having received their embryo transfer to knowing their pregnancy if they were pregnant by means of a quantitative beta hCG level. The researcher determined that women who were over 18, were involved in IVF during the two weeks under study, were not known to be pregnant during the time of the study, and were fluent in English would provide rich thick descriptions necessary key to understanding the phenomenon.

#### Dependability

Dependability can be determined by establishing credibility and by independently conducting an audit of the study process to ensure the study findings are trustworthy.

The auditor is expected to examine the process of inquiry, and to determine if it is acceptable by confirming its dependability; in addition the auditor examines the final product (data, researcher findings interpretations, and recommendations) which is confirmed by the supporting data and deemed to be well reasoned and sound (Lincoln & Guba, 1985). During the current study four members of the researcher's dissertation committee were provided with a copy of the data, interpretations, research findings and recommendations, the researcher's journal and audit trail were also provided for review. In addition, access to the original data was made available to all committee members and had been used by two member of the committee to evaluate credibility.

#### Confirmability

Lincoln and Guba (1985) identify the major technique for establishing credibility is to conduct a confirmability audit, as described in the section on credibility. To conduct an audit the inquirer evaluates the researcher's audit trail. The audit trail consists of raw data, data reductions and analysis products, data reconstruction and synthesis products process notes, materials related to the intentions, instrument development information. During the current study the researcher maintained an audit trail which included original interview tapes and transcriptions, sociodemographic and fertility history survey, research questions, data analysis guide, reflective journal, field notes, original participants journals, study proposal, current literature and theoretical literature, final study report which intergraded the data and interpretations to the current literature.

## CHAPTER 5

### FINDINGS OF THE STUDY

#### Description of Study Participants

##### Sarah's Story

Sarah was a 25-30 year old woman who was experiencing in vitro fertilization for the second time. She had an 18-month-old son at home, who was conceived in a previous in vitro fertilization cycle. Sarah and her husband had been unable to conceive for two years prior to her first IVF treatment and she described her husband as the source of their infertility. Unlike her first IVF cycle, of which she told many friends and family, Sarah decided to share this IVF experience with only her husband and mother.

Sarah depended on both her husband and mother for support during her IVF treatment. Sarah is a dentist and works part time and described herself as a “Type A planning girl.” During the interview Sarah shared some of her experiences while going through her previous IVF cycle: during her first IVF treatment Sarah had thirteen eggs retrieved and only one survived – her son. When the initial pregnancy test (her first of three) came back positive she was overjoyed. Only to find two days later, she had received news that her hormone levels were not rising as expected, and she may lose the pregnancy. She described waiting for her pregnancy tests as “excruciating.” She shared with the investigator that she never gave up on Ben (her first child) when she thought she was losing him but she knows that an initial positive pregnancy result with IVF may not be a guarantee that you will have a child.

I just remember during that time period when we didn't know if we were going to lose the embryo or the baby, and I remember just saying I can't...I just had to make the decision that I'm going to be fully behind and just fight for this little creature that's inside me, and not give up on it. And so I think, I think I am preparing myself

for the same and the fact that I am not going to give up on one or two of these, hopefully babies that come out of it, but I certainly do know that there is a chance. (Sara, Interview 1, Lines 95-100)

I would never want to look my child in the eye and be like, well I didn't think you were going to make it. I totally did not want to give up on Ben [son from previous IVF] and I am so glad that I didn't even with the first pregnancy test for this one, I am not going to be, o.k., [until]well we're in the clear. (Sara, Interview 1, Lines 102-106)

Sarah was hopeful that if it worked one time it could possibly work again.

The physician was able to retrieve seventeen eggs from Sarah and nine had fertilized.

The quality of the embryos was high, and five days after her egg retrieval she was transferred with two embryos and was able to freeze two.

They [fertility clinic] called on day three [three days after the egg retrieval] and that was when I found out we had nine embryos, seven that were really doing well, so that was positive. And the fact that we were going to have a day 5 transfer was really positive, so I felt really good that day and Jon [husband] was excited too. So we were both upbeat and had a good day knowing that we were going to have a blastocyst transfer, we had these potentially great looking embryos, we were really upbeat about it. (Sarah, Interview 1, Lines 24-29)

Sarah's first interview was three days after she had two "good quality" embryos transferred. This was her first day up after two days of bed rest and she was happy to be out of the house. During the first interview Sarah described herself as hopeful, but because of what happened with her first IVF experience she was cautiously optimistic.

### Beth's Story

Beth was a 31-35 year old woman who is a minister. She had never been pregnant before and has been diagnosed with infertility for two years. Beth described herself as a "control freak" and identified herself as the source of her infertility. Two years earlier she had been misdiagnosed with ovarian failure. The diagnosis was "devastating" for her. She described it was the lowest point of her life. She remembered thinking, "Wow, I'm

defective.”

I know defective is a hard word but that was what was in my mind like when I’m told you can’t have kids. And it’s like, well what’s the problem with me that I can’t fulfill that purpose that I’m supposed to be created for? (Beth, Interview 1, Lines 229-234)

Believing that she would never produce her own eggs, she says she grieved the loss of motherhood and had accepted she would never be a parent. Her husband wanted children and thus they agreed to go to a fertility specialist. Once assessed at the clinic she was diagnosed with endometriosis and was relieved to hear that she did not have ovarian failure and was a candidate for in vitro fertilization. She made it clear that she feared she would not have any eggs. To her delight and disbelief the physician was able to retrieve 13 eggs. Hearing that she actually did have eggs and that the embryos fertilized brought her great relief. There was finally a possibility that maybe she really could have a child.

I was definitely anxious about the number of embryos because they told me on Day 3 [post embryo transfer] that there were nine that were still growing and looking good, and a couple of others were a little bit slower and so, I just knew between Day 3 and Day 5 that could change dramatically. And so I was definitely nervous about that. With the way I got into all this to begin with I was misdiagnosed with ovarian failure, and even though my reproductive endocrinologist told me that I was misdiagnosed, I think there was always in the back of my head that “Wow, what if my eggs just are no good whatsoever?” And I know that it wasn’t until the transfer and we actually saw what the embryos looked like that I would know for sure whether it was a misdiagnosis or not, so there was a lot of anxiety around that part of it. (Beth, Interview 1, Lines 26-33)

For Beth, “the decision to have children was a hard one,” and her husband was the person who really wanted to try and have a child, and if the embryos fertilized she did not want to be pregnant with more than one baby at a time. She described her husband as very supportive, and she also found support in a few close friends. The physicians transferred one embryo at her request. There were three embryos that were of good quality and were cryo-preserved (frozen) for possible later use. Beth shared:



The large percentage of pregnancies that end in miscarriage occurs before people even know they're pregnant. But, with infertility, you know immediately pretty much so, then you are coping with miscarriage that you probably wouldn't have known about if you hadn't been in this spot. (Beth, Interview 1, Lines 318-321)

I met Beth for her first interview three days after her embryo transfer. This was her second day off of bed rest. She described herself as feeling “calm,” “numb” and not fully “self aware” as she waited “for a lot of stress and anxiety to kick in.”

### Julia's Story

Julia was a 31 to 35-year-old-woman and had her baccalaureate degree in nursing. She worked full time with a drug company in their research department. Julia had never been pregnant and this was her first time receiving IVF treatment. She had two stepchildren (her husband's from a previous marriage) who resided with her and her husband on the weekends. Julia had endometriosis and was diagnosed with infertility one-and-a-half years ago.

Julia's first interview occurred four days after her embryo transfer. She described her IVF experience as “hard.” Since the embryo transfer she shared that she has felt pessimistic about the likelihood of her IVF attempt being successful. During her egg retrieval the physician retrieved eight eggs. Julia described that initially she was optimistic because six eggs fertilized. Her excitement was quickly followed by anxiety and disappointment when five days after her eggs had been fertilized the fertility clinic notified her that they needed to wait another day to perform the embryo transfer - allowing time for the embryos to develop and differentiate themselves for quality. By the sixth day only one embryo had survived.

And then, Day 5, they called me I knew it wasn't a bad thing to go from day five to day six and I knew that, you know, it just means they [the embryos] need to mature a little more. It still kind of gave me a little uneasy feeling. So I think the optimism

started kind of fading out and once I heard that I was going from day five to day six, they told me that there was only one [embryo] that was mature enough and viable enough [for transfer]. (Julia, Interview 1, Lines 21-25)

Yep, I was told the day I arrived, right before I went into the room. So, it was hard to hold back the tears before going into that room. I just think that's the point that kind of put me down and I think again, if I had had two [embryos], I would just feel a little bit better right now about things. (Julia, Interview 1, Lines 27-29)

Julia does not have any family nearby and identified her husband as her primary support. She kept a blog documenting her experience with IVF. Leading up until her embryo transfer she had written frequently in her blog to keep her family and close friends abreast of her treatment. She admitted to writing in her blog only once since her embryo transfer to offer an embryo status report; since the transfer she has not been in the mood to write or communicate with anyone because she felt pessimistic and, had had nothing new to write. She planned to wait until the results of her pregnancy test to write any new entries.

Actually receiving treatment is so much better emotionally for me than the not knowing, I mean that was such a rough [time] the two years that we tried...actually coming here [fertility clinic] there is some relief. But the not knowing part of infertility I think is the toughest. (Julia, Interview 1, Lines 195-200)

### Kate's Story

Kate was between the ages of 36 and 40 and worked in a highly stressful environment as a counselor preparing victims and witnesses to testify for the prosecution at felony trials. Kate has been diagnosed with infertility for five years and had been experiencing infertility treatment for two years. The source of Kate and her husband's infertility was unknown. She has experienced one previous pregnancy loss - a result of a tubal pregnancy. Kate's husband has an 11-year-old son, and she was busy preparing for her stepson to live with them full time.

I am 38 and I worry about that. I worry about the options, and it is kind of like a double edged sword you know, while I believe in my faith wholeheartedly and I believe in God, it is just difficult not to worry because I have thought about the fact that I may not have children. You know the possibility that this may not be in God's plan for me. But my husband has a son from a previous marriage and ironically....he is coming to live with us, at this point, at this time which is stressful. (Kate, Interview 1 Lines, 586-593)

And so I thought, well you know is this God's way of saying well...maybe you may not have a child of your own but here you will be responsible for this child? So, I vacillate between those feelings. Logistically, I understand exactly where we are, we are waiting. (Kate, Interview 1, Lines 595-597)

This was Kate's first IVF attempt and I met her for our first interview five days after her embryo transfer. On that day, Kate was very upset and had not been able to sleep, because she had been informed that none of her embryos were able to be frozen. Without the added security of frozen embryos for future IVF attempts, she fears that if this first IVF attempt is unsuccessful that she will not be able to financially afford to repeat a full IVF cycle. To further compound her stress, there had been a communication breakdown at the infertility clinic and no one had informed her about the loss of her remaining embryos. She had many doubts and wondered if she was clear enough in her communication with her doctor when she stressed that financially this IVF attempt may have been her only chance to have her own child. She wondered if she should have started aggressive infertility treatments, such as IVF, earlier in her life, and questions why it was that no one had consulted with her that her embryos were unable to be frozen. In her reality Kate fluctuated between hope and doubt, while facing increased maternal age and diminished financial resources.

Kate's described herself as biracial and she identified more with her African American culture. She says her husband was supportive, and although she shared her IVF experience with a couple of friends, she found that she lacked feeling a level of

cultural understanding and support because she did not know any African Americans who had experienced IVF.

I mean my immediate family, my culture, I mean like even an African American culture because that is primarily what I identify with. With how I was raised and so this is unknown, it is you know, you just pop up pregnant (laughing), you know without assistance and I'm going to say that's probably economically driven. (Kate, Interview 1, Lines 166-168)

Kate described herself as a realistic person, and coming from numerous failed attempts at pregnancy, she knew that IVF may not work. She has not shared her IVF with many family members, as she feared her husband's family may not understand and this would further compound her already high levels of stress. Kate has also not shared her infertility treatments with her sisters.

I am in the middle of my sisters and all of my sisters have kids....Above and below me. So I am just like the, not the "enigma" but just you know, it's like well why don't you have kids? You know, it's always kind of been assumed that I don't want kids. Yeah, although I love children and everybody knows I love children, I am really good with kids, But I think because the notion of not being able to have kids is just not [considered] ... my sisters, you breathe on them and they're pregnant... My youngest sister is pregnant now and she didn't want to have another baby... it's so funny talking to her, because she is my baby sister and [I am] trying to be emotionally supportive to her, with her not knowing what I am going through, you know, and hearing her not want to have another child. (Kate, Interview 1, Lines, 133-146)

Kate was painfully aware of the irony, and in light of all of these events in her life she remained hopeful and attempted to dispel her worry by placing her faith in God. Kate shared that it felt "like the calm before the storm, the stillness." (Kate, Interview 1, Line 451).

### Paige's Story

Paige was between the ages of 31 and 35 and was diagnosed with infertility since 18 months. She had experienced two miscarriages (one at 9 weeks gestation and one at 4 1/2 months gestation) and identified herself as the source of infertility. It had been two

years since Paige's first miscarriage and she had been receiving infertility treatment for 16 months. This was Paige's first IVF treatment. Due to her history of miscarriages, and on the advisement of her physician, Paige and her husband had performed genetic testing on their embryos prior to her transfer. Of the 11 eggs which were retrieved she froze nine to await additional test results regarding her uterus. Eight of the eggs survived the thawing and were fertilized; eight embryos developed and by Day 5, after fertilization, two of the embryos were candidates for transfer. Genetic testing was performed on the two remaining embryos and one of her embryos was diagnosed with a defect of the twenty-second chromosome and was discarded, due to the severity of the anomaly, while the other was considered "normal" and transferred to Paige.

I met Paige five days after her embryo was transferred. She was scared and wondered what it is she will have to endure if this IVF is unsuccessful? Will she have to go through the same procedures as she did with her miscarriages? She was aware there were not any embryos to freeze, and that she had only healthy embryo transferred. There was a sense of sadness when she shared "Oh no, those were discarded and I was [pause] it caught me off guard, it was like but those were my babies." (Paige, Int. 1, Lines 90-91)

That was sort of scary to just kind of feel like all of a sudden you start with 11 opportunities, and you're down to one, and you go through the whole thing about, you'll have up to two implanted and the rest of them we'll keep stored and we're thinking, "great, we've got 7 opportunities, we have 7 more, we can do this three times" and we can't. (Paige, Interview 1, Lines 20-23)

Along with her sorrow Paige expressed a sense of relief, even gratitude she had "reached a milestone" and had at least one embryo transferred. She feels for the first time she knew that something has been genetically wrong with her embryos and this may have explained her two miscarriages and difficulty becoming pregnant.

*Paige described her perceptions of time during the two-week window:*

We are kind of in that holding period, that it's like, it's not like getting ready, like for the retrieval, where you do something every other day, it's not that. You don't have that incremental progress, it's just here's this procedure and then here's the test, and everything in between is just holding, you just wait, it's just like sitting, you're just waiting. (Paige, Interview 1, Lines 675-679)

Paige described her husband as very supportive and felt her "journey needs were different" than his. She was aware that this was "not the end of the road" and she lived day-by-day while she waited. Amidst all of her worries Paige was unable to hide her excitement that she had one healthy embryo to transfer and in a voice filled with optimism she uttered: all it takes is one embryo, that's all we need to be successful.

#### Michelle's Story

Michelle was between the ages of 31 to 35 and was diagnosed with infertility for the past three years. The source of her infertility was unknown and neither Michelle nor her husband had any children. They received infertility treatment for one and a half years and this was her first IVF attempt. Michelle had 15 eggs retrieved and seven fertilized. She received two embryos during her transfer and hoped the remaining five could be frozen. Six days following fertilization she was informed that only two were able to be frozen. Although unsure what happened to the three that "did not make it" she is relieved there were two to freeze. Michelle still wonders "why me" as she recounts the day she was diagnosed with infertility.

When I first met [infertility specialist], and I cried for two days, thinking this wasn't happening to me (crying), my husband took it a lot better than I did, "Amy, it's just a fact of life, it's something that people go through" but I just took it a lot harder because I'm a good girl you know, I'm not in trouble, I'm not a smoker (crying), I have an occasional glass of wine but why am I the one that can't get pregnant? I guess the hardest part was being diagnosed. (Michelle, Interview 1, Lines 154-158)

There are no problems in my family, my mom, my sister. I have a lot of close

girlfriends from college who never had a problem. So, it's just hard for me to think of the small statistics that have trouble conceiving but I'm one of those. (Michelle, Interview 1, Lines 71-73)

*When she heard that her sister was pregnant for the third time and her friend was pregnant with her second child Michelle recalled how she felt:*

It's funny, it was harder for me to hear that they were pregnant than it was for me to know that I had infertility and I'm really happy for them and it's kind of a jealous thing, I'm really surprised by that, I was more jealous when my sister gets pregnant with her third baby, no problems, and my girlfriend here in Charlotte, this is her second, she thought she had to get on Clomid [infertility drug] because she didn't get pregnant the first month they tried to have a baby and I haven't, you know, talked to her about this as it is none of my business but I'm honestly thinking, "are you kidding me? I have been doing this for so long, trying to have a baby for so long and you are jumping off the deep end. (Michelle, Interview 1, Lines 203-209)

*Michelle chastised herself for feeling the way she does.*

At the beginning of their pregnancies, when they told me that they were pregnant, I kind of had a problem with that. I was more envious or jealous but, now that they have these babies, I'm so happy for them. There is not a bit of me that is jealous or upset that they have two babies, or three healthy babies and I can't even get pregnant. And, I can afford to do this. They are the ones that can't afford to do it so, which is snobby in a way; I know that that's not fair to them. (Michelle, interview 1, Lines 214-218)

Michelle had not told her friends about her infertility, but had planned to share the news of her IVF treatment during an upcoming weekend trip because she needed someone to help with the injections, and she feared they may not understand. Her husband was supportive and processed things matter-of-factly, which at times left her feeling alone. She found support in virtual chat rooms on the internet.

I met Michelle for our first interview four days after her embryo transfer. Although advised by her infertility doctor and nurses against taking any pregnancy tests prior to her first scheduled one at the clinic, she entertained the possibility of taking one at home because she already had one at home. In light of all of the advances in medicine Michelle

wondered why a woman had to wait so long for before taking her first scheduled test.

On the day of our first interview Michelle shared that she was unsure if she felt “happy or sad.” Sometimes she said it all felt surreal but that had changed since her transfer, “ It became more real because, you know, the day before the transfer I knew that there was nothing in my body. The day of the transfer, there were two possibly babies being developed in my body” (Michelle, Interview 1, Lines 97-98). Since her transfer, Michelle shared that her anxiety and excitement have increased.

...just rubbing my belly, I mean, I don't know that I would have really done that before but then [the transfer] I thought, maybe I don't know, these could be lives, babies right now but just to comfort them, I mean, they don't know anything else about me but I'm sure they can feel me, you know, my love and my warmth, letting them know it's okay, you know, “you guys, do whatever you have to do so, you know, you can grow inside my belly. (Michelle, Interview 1, Lines 103-106). You know, as hard as this is, it's really amazing that you know, 32 years ago I was born the same year the first test tube baby was ever made and I don't know what it was like 32 years ago but, oh my gosh, I can't, I really cannot believe that scientists can do this, it's unbelievable. (Michelle, Interview 2, Lines 696-698)

## Results of Audit Trail

### APPENDIX F

#### Themes and Subthemes Supported by Descriptions

##### From Participant's Data

Analysis of the women's descriptions revealed a common overarching theme of Waiting. Waiting was present in each of the women's stories. The word waiting did not necessitate doing nothing. Waiting was a transient verb - an act in and of itself. In this study waiting captured the meaning of what it is like for the women who experienced this



window of time while receiving IVF. During the phenomenon under study the women were waiting eleven to fourteen days following their embryo transfer for an event (the pregnancy test) to reveal an unknown outcome (the results of the pregnancy test).

*During her first interview Paige shared her thoughts on Waiting:*

Yeah, I mean you can take the time that you are Waiting and do things with it, like you can sit and think and think about your feelings and think about you know the anxiety and the hope and the excitement and the belief, you know. You can ignore it and you can try to occupy your time so that you don't get consumed by it. I mean, there's just a lot of different things you can do, it doesn't matter what you do or don't do, that's the part you can't change. I mean, you can't make time go faster, you can't make that day get here sooner, you can't make all the things that you have to do between now and then go away, you still have to function and you still have to progress through your normal life, but regardless, I mean, it's just the day will get here when it gets here and not a minute before and not a minute after. (Paige, Interview 1, Lines 682-689)

Everything is on autopilot ...you're mentally just Waiting and you go through the motions. Like, I know that Wednesday I was working, I was accomplishing my tasks but I wasn't thinking...I was just going through the motions because I know there is this report I have to run, I know I have to email a few people... You know what I mean?...It's kind of funny but you know you can stop and think and all of a sudden you're reminded, oh yeah, I'm Waiting. You can do these other tasks but when you're done doing these other tasks it's just everything is kind of on the surface because all the other stuff is there, the Waiting (Paige Interview 1, Lines, 674-706).

Reflective analyses revealed eight subthemes which emerged as essential components of the overall essence of the theme of Waiting. These subthemes are supported with text (excerpts) from the women's interviews and journals. The eight subthemes were present in each of the women's descriptions. In this study Waiting refers to how the women waited and the day-to-day experiences the women shared as they progressed through their IVF treatment. Ultimately Waiting brought each woman closer to hearing the results of their initial pregnancy test at the fertility clinic. The sub-themes are:

1. Waiting in Hope
2. Waiting in Anxiety

3. Waiting in Awareness
4. Waiting in Doubt
5. Waiting in Desperation
6. Waiting in Isolation
7. Waiting in Vulnerability
8. Waiting in Anticipation

### Waiting in Hope

In this study Hope was the excitement the women expressed about the potential for a positive pregnancy test; it was the belief that their IVF treatment may be successful. It was because of Hope that each of the women started IVF to fulfill their desire for a child of their own. Hope was present in the women's words throughout the data and emerged as a rollercoaster of ups and downs. It was most predominant when the women discussed the number of high quality embryos which fertilized and were either transferred or frozen. Hope was also present when the women felt they were progressing towards their goal of motherhood. Hope was experienced by the women when they perceived symptoms of pregnancy. The women were acutely aware of the finite nature of the pregnancy test; but waiting in Hope was so powerful a theme that when the women were feeling pessimistic they remained hopeful for the slightest chance of what could be. Hope was described as an essential, but relative, feeling as it fluctuated moment-to-moment, often within a single thought or sentence throughout their time in Waiting.

*Excerpts from Sarah's first interview three days post embryo transfer:*

I'm very excited that there is potential for me to be pregnant and that, so there's that component of it, thinking that Ben [son] might be getting a brother or sister, or two brothers, or you know, whatever, so there's that component to it and, but I am excited (Sarah, Interview 1, Lines 50-51). This could be the beginning of a beautiful thing

(Sarah, Interview 1, Line 213).

I don't want to get my hopes up too high, so I am trying to kind of prepare for the worst of it, but there is that excitement in that we might [be pregnant] (Sarah, Interview 1, Lines 53-54).

*Excerpts from Sarah's second interview eleven days post embryo transfer:*

Nausea, backache, cramping, a little bit of food aversion at the beginning of this week...Definitely, yes, it is definitely different, so I am hoping it's towards a good thing, yeah, there has definitely been a change physically from the last time we talked (Sarah, Interview 2, Lines 19-22)...I think it does have to do with the symptoms that I have been feeling...I am thankful, even though I don't feel great, I am thankful for the symptoms because they give you hope (Sarah, Interview 2, Lines 75-76, consistent with journal 8-12).

I'm feeling pretty good today...actually better than I expected to feel the last day of waiting before the pregnancy test tomorrow. I had some light spotting today coupled with backaches, cramping, and nausea. Again, I think it's the presence of these symptoms that are comforting me (Sarah, Journal 8-14, day before her pregnancy test). I think I am still hopeful, still cautious, still tired (Sarah, Interview 2, Line 226).

*Excerpts from Beth's first interview three day after her embryo transfer:*

*Beth described her feelings and actions during the past three days since her transfer:*

I definitely found myself...on baby websites, and watching, you know, baby stories on television, that sort of thing, which is very unusual for me...The decision to have children in the first place was a hard one for me and so I have never been one who just kind of sits and thinks about what would a nursery look like and that sort of thing...I would definitely say that, since Monday when the embryo was placed, I have thought a lot more about, wow, what would this really look like and so for me, that is very unusual.(Beth, Interview 1, Lines 73-77)

*Beth's described hope when she experienced progress towards her goal to become a mother:*

Wow, you know we have 13, those are 13 possible little babies, so, it started to feel more like, wow, those are our kids or could possibly be (Beth, Interview 1, Lines 90-91). I did feel like [I] really starting to think about this could be the start of a person (Beth, Interview 1, 99-100).

I may never be able to have children then, while that still may be true, at least now I feel like there is hope (Beth, Interview 2, Lines 184-185, consistent with journal 8-19). Maybe I can actually do this (Beth, Interview 2, Line 236). [It is] almost like a

sense of healing for me to know that it's o.k., there is hope (Beth, Interview 2, Line 244).

*Excerpts from Beth's second interview eleven days post embryo transfer:*

*Beth described experiencing negative feelings and could not wait another week for the scheduled pregnancy test at the clinic. She administered a home pregnancy test which she described as "faintly positive." In the couple of days following this test she described some reprieve from the negative feelings and begins to feel hopeful once again:*

I have found myself like looking at websites on, you know, where you are in a pregnancy at that point, if you are indeed pregnant, that sort of thing, and not a lot of time but just out of curiosity and I don't think that is something I would have done without that positive result, I think I did indeed compartmentalize until I saw that result and then I allowed a little more, you know, just kind of entering into, "Wow, this might have actually worked" (Beth, Interview 2, Lines 52-56).

I've also been thinking about future plans if this round of IVF works. I wasn't really allowing myself to do that before. I'll be really disappointed if tomorrow's test is negative, but it's nice to feel hopeful. Before the positive pregnancy test result, I was battling some real anger and disappointment. At least I've had some relief from that for the past couple of days (Journal 8-26).

*Excerpts from Julia's first interview four days after her embryo transfer:*

*Julia described hope as she progressed closer to her goal of motherhood:*

There were times that, like when I found out I had six embryos, I was ecstatic but I brought it down to a level too, you know I have to keep in mind some would very likely die off or wouldn't be the right quality (Julia, Interview 1, Lines 163-165). I still felt good, I actually felt really good hearing that there was 7 instead of 6...probably, that's my happiest point (Julia, Interview 1, Lines 402-403).

You know, through the whole thing [IVF], I kept thinking you know, you feel like you're doing something, you're going through a treatment but, I think that's why you end up feeling good, because you're finally at a point where, "Oh my God, this could happen" (Julia, Interview 1, Lines 194-197).

*Excerpts from Julia's second interview ten days after her embryo transfer:*

*Julia described that she has not had any symptoms of pregnancy and was convinced that she was not pregnant from this IVF cycle. In her disbelief she described wanting*

*very much to believe that a positive pregnancy was still possible. She found a small strand of hope when she administered her daily injections of progesterone:*

I'm thinking, "okay, it's over and done" I still get my progesterone shots and I don't mind those shots, isn't that funny? That's the only thing that's still progress for me (Julia, Interview 2, Lines 442-445).

I was Googling [searching the internet] women going through IVF, who had no signs and ...who had no symptoms but got pregnant...I guess that was my way of saying, it can happen. Can I have any hope? (Julia, Interview 2, Lines 172-174).

*Excerpts from Kate's first interview four days after her embryo transfer:*

*Kate described her feelings when she viewed the photos of her embryos:*

I found that when I look at the picture, the picture is more hope and excitement....which is why I don't have it in my bedroom, you know, it's downstairs....it's on our kitchen counter but I'm not gazing at it every day and I'm not stopping every time I see it you know. It's, I guess, I'm grateful you know, to even have this opportunity because, again, this is not something that we even thought would be possible so, yes, I pray that we're pregnant (Kate, Interview 1, Lines 213-217).

*Kate recalled the day of her embryo transfer:*

...until we got here and we saw the embryos and then I thought okay, these are our babies, you know, they have done this work that nature would normally do and so....yeah, it became more real to me once we got to this part because I didn't know that they would show us a picture (Interview 1, Kate, 389-392).

When they showed me the picture...these are our babies...honestly, it just made me have an appreciation for God, because the miracle of just of how intricate that process is...how life begins...it was very exciting because it was like, these are our babies, you know, you very rarely even get even under normal circumstances in pregnancy...I mean to really have an image of what our children, like from the beginning literally from the beginning and I felt, "wow" if we're pregnant, we will have a chance to show our kids what you looked like in the most primitive form. (Kate, Interview 1, Lines 187-194)

*After hearing the devastating news that Kate had lost the embryos she had hoped to freeze:*

I am excited. I am hopeful that we are pregnant but I think that was kind of like a blow for me and it takes some of my hope away...I have to gradually build back up.

I'm not at that nine that I was at, you know, probably at a four now. (Kate, Interview 1, Lines 684-686)

*Excerpts from Kate's second interview ten days after her embryo transfer:*

*Kate was two days from her pregnancy test and felt her hope had lessened as the pregnancy test drew near:*

Yes, it is kind of like a balance, you know, not one more greater than the other. So hopefully I still have more hope than the acceptance that I might not be pregnant and I verbalize that, you know, with my husband, we talk and you know, we hope and pray that we could be, so I'm still hopeful. (Kate Interview 2, 121-123)

*Excerpts from Paige's first interview four days after her embryo transfer:*

*Having received the information that there was only one embryo that survived from 12 retrieved eggs, Paige expressed hope:*

I feel like there is a lot riding on just this one, and then I feel that that is unfair to put that pressure on this little tiny embryo, you know, but there is definitely excitement that this could really be happening. (Paige Interview 1, Lines 25-27).

The ups are way up, more than the downs are down so, that's good. Because I think I feel like there is some conditioned response to those feelings because we have been feeling those more than we have had reason to feel the "ups" in the last year and a half. (Paige, Interview 1, Line 147-149).

*Paige described her excitement from the day of her embryo transfer:*

I felt like I was the only patient today and, the transfer went well and it was just exciting...they have this screen up where you can see the ultrasound and then you can see the camera from the embryology lab....It was just the coolest thing ever and they gave us a picture of our embryo and I almost cried, I almost started crying right now, and I was thinking "that's our baby." (Paige, Interview 1, Lines 238-242)

*Paige was excited after her transfer:*

I was so happy when I woke up; just knowing the little guy is in there...We both keep rubbing my belly and smiling. (Paige, Journal entry 11-24)

I'm still excited today and rubbing my belly, talking to the baby... It's all pretty exciting and it is comforting to know that we are in good hands and have given this little one the best possible chance to make it. (Paige, Journal entry 11-25)

*Sometimes Paige found herself dreaming – hoping, even though she realized the future was uncertain:*

I think ahead, you know, in two months what's it going to look like, and in two months what are we going to be buying. So I think I am kind of stuck in the middle, sometimes I feel safe to think ahead because of what we have overcome so far, how far we have gotten, but then I know we're not 100% there yet and I know that even after the pregnancy test, even if it is positive, we are not 100% there yet. So, it's just unguarded excitement. (Paige, Interview1, Lines 306-312)

*Excerpts from Paige's second interview 10 days after her embryo transfer:*

*Paige described experiencing doubt and increased anxiety as the pregnancy test was two days away and wanted to hope:*

I still find myself thinking like, well maybe it's just hanging out, maybe it's going to implant tomorrow. (Paige, Interview 2, Lines 823-824)

*Excerpts from Michelle's first interview three days after her embryo transfer:*

*Michelle acknowledged that both hope and anxiety have increased since the transfer:*

Just rubbing my belly, I mean...these could be lives, babies right now but just to comfort them, I mean, they don't know anything else about me but I'm sure they can feel me, you know, my love and my warmth letting them know it's okay you know, "you guys, do whatever you have to do so, you know, you can grow inside my belly". (Michelle, Interview 1, Lines 101-106)

*Michelle felt hopeful prior to knowing any pregnancy test results:*

I feel great today! I actually feel like there could be 2 fetuses inside me and I would be crazy about it (Michelle, Journal entry 11-30).

I'm going to continue being positive and hope that I have one little baby. (Michelle, Interview 1, Line 630; Supported by Michelle Journal entry 12-1)

I feel good and I feel so positive about this pregnancy. I know I am pregnant! ...I even have the positive vibe...that is could be pregnant with twins. I am still cautiously optimistic but I really feel as though I am going to have a baby out of this first cycle. (Michelle, Journal entry 12-5)

## Waiting in Anxiety

In this study Waiting is Anxiety included descriptions of Anxiety, stress, worry, and fear. The description of stress appeared throughout the data, and intensified as the day of the pregnancy test approached. High levels of stress were evident when an event occurred during the IVF which had been unexpected, these included delays in their IVF or inadequate numbers of embryos to transfer or freeze. The women described needing to feel a sense of normalcy to relieve their experiences of stress and Anxiety. Their levels of Anxiety were at times so unbearable that some of the women administered a home self pregnancy test – even when advised against it by healthcare workers at the infertility clinic. The sub-theme of Waiting in Anxiety was so dreadful that when the women described themselves as not feeling high levels of Anxiety, they also described the dreaded stress and Anxiety they believed was inevitable. Anxiety appeared as a constant interplay between hope and doubt while waiting for an unknown pregnancy test result.

*Excerpts from Sarah's first interview three days after her embryo transfer:*

It could be the beginning of a long two weeks wait that may not have a positive result to it. I know that I am going to be more stressed out as it gets closer to that date [of the pregnancy test] and I am prepared for that. So I guess I am kinda enjoying the time where I know it is so far away but I am telling myself it does no good to worry about it yet because it's far away. It is just a very complex time and I am trying to take it day by day, and just go through our normal routine and make the best of the two week period (Sarah, Lines Interview 1, Lines 112-117).

I know that it's going to get more stressful and it's not to that point yet (Sarah, Lines Interview 1, Lines 204-205).

*Excerpts from Sarah's second interview eleven days after her embryo transfer:*

*Sarah described her anxiety was rising while she waited for her pregnancy test:*

I would love for it to be instantaneous results, you know, but that waiting you're just



waiting on your phone to ring which is an awful feeling too (crying) so I just wish, I don't know how fast the blood test runs, but I wish they would, just like, do the pregnancy test, you know let's rush this, yea, so, anxiety is definitely building back up towards that level. (Sarah, Interview 2, Lines 67-71)

I find myself getting more and more anxious for Monday [day of pregnancy test] to come. (Sarah, Journal entry 8-10)

*Sarah described her emotions during IVF:*

I definitely think it is a daily emotional rollercoaster, the highs and lows, and just a really, you know, emotional time and just to be prepared to be emotional and be prepared to not think this was just going to be a breeze, that you are just going to go through the physical part, you know, and deal with that and heal up and be fine mentally and then just wait two weeks and find out. I mean there is just that much invested that it's just such a huge emotional period and it is just this huge. (Sarah, Interview 2, Lines 195-199)

*Sarah described in one word what it was like from the time of her embryo transfer throughout waiting for her pregnancy test:*

“Anxious”. (Sarah, Interview 2, Line 238)

My anxiety level is definitely increasing, I am more anxious than I was last time [first interview]. I'm not jittery, I am not to the point where I can't concentrate on anything else, but definitely notice a little difference in [concentrating]. If I am not doing something, my brain immediately goes to that and I just think about that whereas it wasn't that intense last time we talked. (Sarah, Interview 2, Lines 235-237)

I'm really getting more and more anxious to find out [the result]. It's during those times when I slow down and rest that my brain refocuses and pregnancy is all I can think about. (Sarah, Journal entry 8-14)

*Excerpts from Beth's first interview three days after her embryo transfer:*

*Describing what it has been like for her during the three days since her embryo transfer Beth shared:*

I have been waiting for a lot of stress and anxiety to kick in, and I have not experienced that. (Beth, Journal 8-9)

*Beth thought that getting back into a regular routine would help her not sit and*

*wonder whether her IVF was going to work.*

I definitely, I could definitely feel my mind being drawn toward more [anxiety] when I'm just having to be in the house [bed rest] not being able to get out. I wouldn't say I was stressed about it, but I could find [that] if I start thinking about it a little bit more this can get into a regular routine. (Beth, Interview 1, Lines 199-202).

*Excerpts from Beth's second interview eleven days after her embryo transfer:*

I'm learning that I'm not great at waiting. I think the past couple of days, I'm to the point where I just want to know and I'm thankful that I haven't spent the entire 12 days just, you know, anxious and overwrought but here at the end it has kicked in more so than at the beginning. (Beth, Interview 1, Lines 214-219)

I've had cramping today and have been looking online to see if this is normal. It makes me a little anxious. (Beth, Journal 8-26).

*Excerpts from Julia's second interview ten days after her embryo transfer:*

*Julia identified finding out that she had only one embryo to transfer caused high anxiety:*

Yep, I would rate that number one (Julia, Interview 2, Line 63).

*Julia described waiting for anxiety:*

I was surprised how anxious I was in the beginning, before I even started the meds, and when I found out I had to take extra drugs and I was thinking, Oh boy, this is not going to be an easy road. So I was surprised how hard that was and I kept telling people "I can't imagine what it is going to be like in the next couple weeks", I'm surprised how well I have taken this IVF process and how bad, for me, I have always been thinking the worst and reading on line and it is just agonizing for these women and it's going to be agonizing for me and I'm going to go through these hormones and I'm gonna have these mood changes and it's just going to be horrible and although it is not easy I felt like I was not as bad emotionally that I thought I was going to be (Julia, Interview 2, Lines 315-324).

*Julia anticipated that waiting would be stressful:*

[I am] not sure how I am going to keep my mind off all of this...I am just going to be a basket case for this two whole weeks (Journal 8-25).

*Excerpts from Kate's first interview four days after her embryo transfer:*

*Kate described her dominant feeling since the transfer:*

Stress, yes, I guess it is a worried stress kind of, you know, am I pregnant? I'm questioning, did it take, is it working, just the anxiety of you know, the unknown, is the kind of stress I am describing. You know, and thinking about how many more days I have to go until I find out and then what happens after that. I think it's the anxiety and stress of where am I, did it take and are my eggs developing, am I pregnant, those thoughts. (Kate Interview 1, Lines 7-12)

*After her transfer Kate was informed that none of her remaining embryos were able to be frozen:*

I couldn't sleep last night, I tossed and turned which builds my anxiety even more because, at least we had, you know, perhaps a second or even maybe a third option, you know, if this transfer doesn't take, then that's gone now so it's pretty much if we're pregnant now, great, if we're not, we're not and I don't know if or when we will be able to, just because we have a lot of issues going on. (Kate, Interview 1, Lines 45-48)

When finding out there were no eggs to freeze it was like, okay, this is the top, the end so, probably yeah, more of an [anxiety] because the day that they told me, like immediately I was like, you know, at my anxiety level, like I tried not to let myself get beyond like a 3 or 4 and like I was at an 8 (Kate, Interview 2, lines 239-241).

*Kate was concerned when she thought she was bleeding vaginally:*

I thought I was spotting today which really scared me. I know that it is a symptom that is identified as normal. It does not feel normal when you want to be pregnant... but the scare has evoked some new anxiety. (Kate, Journal Entry 11-21)

*Excerpt from Paige's first interview, four days after her embryo transfer:*

*Paige described what it was like to wait for the unknown:*

I would say [I am] up and down. Up and down are predominant feelings. So, I go through periods of just thinking about everything and then there is that anxiety you know, is this going to work, is it not going to work, what will you do if it doesn't, what will we do if it does, those kinds of things. (Paige interview, 1 Lines 126-130)

*Excerpts from Paige's second interview 10 days after her embryo transfer:*

*Paige was surprised to find that she felt more anxiety and less hope as the days passed:*

I think it's just kind of opposite [of when I had first had the transfer]. Like, the mix

has shifted so it's not like I feel there is no chance in the world or anything like that (Paige Interview 2, Lines 49-50). Yeah, it's kind of like, you know, jumping out of an airplane, it's really great and it sounds like a lot of fun until you are sitting on the edge of the plane, with the parachute on and you're like, "Oh!" (Paige Interview 2, Lines 59-61)

I thought, "Oh, it's been a week, 7 days, we're halfway through" and then all of a sudden it's like, "oh my gosh, it's two days" and we have to make it through today I have to do the same thing but I don't have a plan for tomorrow so I'm like, "What will I do, I'm going to be a wreck". (Paige, Interview 2, Lines 111-120)

It's just anxiety and everything that comes with it. The excitement, there is some excitement in anxiety, like "whoa, you don't know what's coming", there's the worry about all the bad things that could possibly come, there's just, you know, the physical feelings, like the tension, I'll notice that I'm shrugging my shoulders or like I'm getting nervous about something and then I'll have to force myself to physically [relax]. (Paige, Interview 2, Lines 572-575)

*Paige worried that she may do something wrong to cause her IVF to fail:*

There is potential for the low to be really really low, Yeah, because at that point I'm worried. I worry at that point in time is that it is going to be my fault, that I did something to make it not happen...but what if I picked up the turkey and I shouldn't have you know, just something stupid like that...so if it doesn't [work], everybody else did what they needed to do, did I fail? So, it's kind of like I'll have those thoughts like maybe I shouldn't have or maybe I should have just stayed in bed for more days, maybe I twisted in the middle of the night or something, or whatever, just something there is room for that every little thing that I did, analysis of everything that I did. (Paige, Interview 2, Lines 790-800)

*Excerpts from Michelle's first interview three days after her embryo transfer:*

*Michelle described her anxiety:*

I know that this may not turn out the way I want and that ...worries me. (Michelle, Interview 1, Lines 114-115). So it's hard you can't just feel hopeful and then you have the other there too, every time you have hope, you have anxiety. I try not to think about the case where this ... may be a negative, it may not [work], you know, these babies may not come around. (Michelle, Interview 1, Lines 116-119)

It's hard to wait, you know, day after day. (Michelle, Interview 1, Line 548)

It's been a long morning. I rolled over about 5am and just started thinking I hope I am pregnant! I think it could be twins! Are we ready for this? What if this cycle doesn't work?? My body doesn't feel any different than it did 1 month or 1 year ago. I don't think... Why do I have to wait these 13 days???? I would think science is far

enough along that within a few days of the transplant they would be able to know if they attached. I still have 8 more days until bloodwork. Will they call me that afternoon and tell me if I am pregnant or not? How will I tell [husband]? Will they know if it's 1 child or 2? When do I go to my OB/GYN? All this anxiety and it's only 8 am. (Michelle, Journal entry 12-3)

*The rollercoaster of hope and doubt caused anxiety for Michelle:*

I thought I was using the bathroom a lot and then I had these cramps, well then I started to read these things and I thought, well, maybe I am, maybe this is a good thing but then the books that I read, breast tenderness was the first symptom and I don't have any breast tenderness so then I'm like, you know, I'm obviously not and then the cramping and I think, well, you know, the breast tenderness would be the sure thing, that's the number one thing, and I don't have that, so I'm not [sure] but the frequent urination, the cramping and all that stuff, I think well maybe I'm imagining it because before I'm going to the bathroom 4-5 times a day, maybe I'm still going 4-5 times a day, I just think that I'm going more now (large sigh). I don't know if my mind is playing tricks on me, it's like, also, I thought I was thinking I had these symptoms before I read about them so that kind of that was more of a positive and imagined it first, read it first then imagined it rather than, I don't think I'm imagining it first and then I read it. I didn't know that was part of it, so....I'm just so ready to find out, I'm so anxious. (Michelle, Interview 2, Lines 247-258). I don't know, it's so hard. (Michelle, Interview 2, Line 264).

*Michelle had been waiting for her anxiety to increase:*

Another thing that surprised me is that I wasn't as consumed as I thought I would be. I don't know what I mean by that, maybe just thinking about it. Yeah, I'm a planner. (Michelle, Interview 2, Lines 644-646). I thought it would be worse because I thought that maybe I would be a crazy, crazy person and think about it all the time, and eat and sleep and ...this whole baby thing. (Michelle, Interview 2, Lines 649-651)

*Michelle describes her IVF treatment as more difficult than she had expected:*

I don't know, it's so hard. It's been hard. Oh yeah [harder than I thought it would be]. Yeah, I think so. Just stressing out about this, I just, I guess just the frustration that why am I waiting this long, it just seems like they could tell me sooner than the 12 days, in that period of time they could tell me sooner. And then I think, you know...I'm not out of the woods yet, what about the other hurdles maybe, that could happen. (Michelle, Interview 2, Lines 264-271; supported by Michelle, Journal entry 12-6)

*Her anxiety grew and Michelle administered a home pregnancy test:*

But, for the most part, I have tried to be positive and, like you and I talked about

“cautiously optimistic” because, you know, just because I took that home pregnancy test, doesn’t mean anything. Yes, I was just so anxious and at that point. (Michelle, Interview 2, Lines 114-117)

### Waiting in Awareness

Waiting in Awareness emerged as the women became aware of their embryos, their bodies, and time. In the women’s descriptions they describe being aware as well as being aware of a level of unawareness (often numb). Awareness emerged as the women described their levels of attachment to their non-implanted embryo following their transfer; and again when their focus of Awareness changed from the embryo (around Day 5 to Day 7) to the final result of the process – the pregnancy test. In their experiences the women described being hyper-aware of their thoughts, feelings, and bodies. Awareness was central to the phenomenon as the women experienced perceptions of self, perceptions of their physical body (symptoms), and knowing – as they embodied their non-implanted embryos. Time was revealed as a chronological countdown day-by-day, but time also emerged in the descriptions as suspended.

*Excerpts from Sarah’s first interview three days after her embryo transfer:*

But it is still like there’s a ticking clock and I would just love for August 17th [day of scheduled pregnancy test] to come tomorrow, but obviously it’s not going to, but it’s just a week or so away (Sarah, Interview 1, Lines 52-53)...It’s just the week, it’s just, you know, today’s Thursday, the test is not this Monday but next Monday, and it is just a week and how fast does that go if you weren’t going through this? So, I try to think about that too. Yeah, just the blink of an eye but, it just drags out with this. (Sarah, Interview1, Line 137).

*Sarah described a maternal feeling having her embryo transfer:*

I do feel much more protective but it’s a hard feeling to describe...more aware I guess of my body, just to protect it, you know, I don’t want to be jarred in any way that might harm what potentially is hopefully growing inside so I guess it is more of a maternal protective feeling. (Sarah, Interview 1, Lines 60-63)

The potential, you are protecting the potential. (Sarah, Interview 1, Lines 85)

I think it would certainly be odd if you didn't have that instinct (Sarah, Interview 1, Line 88).

Just thinking about them [embryos] specifically, just knowing that your children are in here, hanging out, so I think it's more of a maternal as far as that maternal protective thing that we were talking about, you know, after we had the transfer, yes that was stronger but it was still like a warm, loving feeling to know that we potentially have children that are growing. (Sarah, Interview 1, Lines 222-225)

*Sarah's awareness of her physical symptoms offered reassurance:*

The symptoms I think have just kinda stabilized me, just giving me that hope that something is happening...if I'm like "oh, I feel pretty good", you know, my mind starts going, "oh, what's wrong", that kind of thing but with my back cramping and you know, I'm nauseous, yea, yea, so there's that component of it. (Sarah, Interview 1, Lines 78-81)

*Excerpts from Sarah's second interview eleven days after her embryo transfer:*

*Sarah's found time had passed slowly and tried to keep busy:*

You have to keep your mind busy, and definitely I think these past two days would have gone a lot slower had I not been so busy (Sarah, Interview 2, Lines 39-40).

*Sarah expected her maternal feelings to grow but the emotional risk was far too great*

*of such an emotional investment is too great:*

I mean, if you are logical, like it really would make sense you would think that the feeling of [attachment to the] embryos would be, you know, that protectiveness and everything would be growing as time went on, but it's just that the possibility is there that if it's negative (Sarah, Interview 2, Lines 126-129). It's just the realization that I am really not allowing myself to go forward with feeling pregnant even though I do, I do feel pregnant but I am just so reluctant to just let that [happen] you know because I am just so afraid of being disappointed. (Sarah, Interview 2, Lines 157-159)

*Excerpts from Beth's first interview three days after her embryo transfer:*

I think my husband and I both felt like, wow, you know we have 13 removed and those are 13 possible little babies, so, it started to feel more like, wow, those are our kids or could possibly be, there's more ownership of it and definitely is more of a feeling of attachment once we knew, you know, especially on I think day three because we felt that a little bit after the retrieval when they come and tell you how many they got, but then on day three when they call and say, o.k. well nine embryos are actually growing, so that was more of an emotional connection (Beth, Interview 1, Lines 90-95).



*Excerpts from Beth's second interview eleven days after her embryo transfer:*

I think with the embryo being placed, it just feels more real to me, I mean, they give you that picture of what your embryo looks like and so, up until now it has been kind of hypothetical to me and so now it just feels a lot more real, like, wow, this could really be something big in my life (Beth, Interview 2, Lines 81-83).

*Since Beth's first interview her feelings have changed towards her transferred*

*embryos:*

I think what's been more surprising is that I don't feel like, I haven't had as much of an attachment to, you know, "Wow this is my baby, this could be my baby". I haven't thought about it really in those terms at all, it's been, you know, it's an embryo. So I haven't, I think that's surprised me that I haven't attached a little bit more emotionally (Beth, Interview 2, Lines 74-77).

I think I feel like I should be more attached than I am and so, you know I'm trying to think more along those lines of babies because I fully believe that life begins at conception and so, I am trying to think along those lines but that's not my natural bend I lean toward embryos and a bit of disconnection for whatever reason (Beth, Interview 2, Lines 83-86).

There have been points in time where I felt more attachment, it's not like I remained completely detached (Beth, Interview 2, Lines 96-97) [such as after I took the home pregnancy test] but it just has not maintained I mean I have just kind of gone back to that place of being a little more guarded and not thinking about, "o.k. this is actually, you know this could be our baby" (Beth, Interview 2, Lines 99-100).

Thinking about it [IVF] not working makes me feel even more disconnected from the embryo that they placed (Beth, Journal 8-24).

*Beth described feeling disconnected from her body, specifically her embryo and*

*uterus:*

[I feel disconnected from] the embryo and uterus part, I have felt disconnected from having a baby, from the possibility of being pregnant (Beth, Interview 1, Line 334). I do feel like I'm alone, I don't feel like I have a life inside me. I want to feel that way, and I feel myself trying to feel that way but, if I'm really honest, I don't right now (Beth, Interview 1, Lines 440-441). I think it is causing me a little bit of concern because it makes me wonder, well, why am I so disconnected with this, but I think part of it is I just, I don't want to have to pick up the pieces if I let myself go there. (Beth, Interview 1, Lines 153-154)



I continue to feel less and less connected to the embryo and find that I'm not thinking of it as a baby at all. I'm also not thinking about myself as pregnant or as, at some point, a mother. Just after the transfer those thoughts were definitely in my mind somewhat, but not now (Journal 8-25).

*Beth tried to make time pass faster by staying busy:*

I have noticed my thoughts wandering to pregnancy more than I think they would normally. I think the more I occupy my time and the more I talk with other people about their lives, the quicker these two weeks will go by. I'm not sure that anything good can come from me sitting around wondering what's going on in my body (Journal 8-19).

*Beth was aware of her symptoms:*

I know that whatever symptoms I'm having, you know, it could be one way or the other, it doesn't really determine the outcome of the test and then I also don't want to start thinking long term and then find out, wow, it didn't work this time and that we will have to go through this again (Beth, Interview 1, Lines 160-162).

I'm starting to have phantom pregnancy symptoms. I know even if this round of IVF was successful, it's way too early to experience nausea. But, that's been an issue late yesterday and today, also, cramping, bloating, and weird food cravings. I really hate to admit that this is the case because it seems a little crazy to me. When I read posts on discussion boards from women who want to interpret every little sign, I always think they're strange. I looked at the embryo picture again this morning. It still doesn't seem real to me yet. (Beth, Journal 8-21)

*Excerpts from Julia's first interview five days after her embryo transfer:*

I think once you get into the embryo transfer, you know, it's hard and an emotional time, it became harder, it became that feeling that you have had the past two years of the waiting, and it truly changed things. (Julia, Interview 1, Lines 136-137)

*Julia described the first few days after her embryo transfer:*

I got to say when first coming home you don't want to move, you just keep thinking how is my embryo? My uterus? And I can't let it fall out and what if the progesterone gives a lot of constipation? And you know, of course, you think well, what if I strain is it going to fall out? You think of these things even though I have a medical background, you think of these things so, of course, you're moving different, you're you know, you're making sure you're not jumping up and down or anything, thinking Oh my God is the embryo going to fall out? So you have to laugh but you can't help but feel like I got to be careful you know, moving out of bed the second day it started to get a little easier (Julia, Interview 1, Lines 217-225).

*Julia is aware that she does not perceive any symptoms:*

But now, it's almost like it's not real it's almost like it just didn't even happen because you can't feel anything (Julia, Interview 1, Lines 238-239).

I thought I was feeling more of like it was in me and I'm feeling like a process, like maybe it will grow but I never thought I would feel like, it just didn't happen you know, there is nothing in me, you know? You know, there is no embryo in me, they just put there and I keep getting the thought in my head it didn't, it's not there. Do other women feel this? Do they? (Julia, Interview 1, Lines 243-246).

*Early in her IVF Julia ascribed human characteristics to her embryos:*

When they [the fertility clinic] called me, I specifically asked them, "Is there still a chance that they could, you know, die off?" So I already knew there was a chance that they could die off (Julia, Interview 1, Lines 416-417). I don't think I expected so many to die off between [days] 5 and 6. (Julia, Interview 1, Lines 424). I think it's because it's an embryo you almost want to like start naming it (Julia, Interview 1, Line 450). Because at one point I thought maybe in the blog I should name these six but of course I didn't because then it's like, once you name it, it's almost like a person dying off, so I didn't (Julia, Interview 1, Lines 457-458).

*Excerpts from Julia's second interview ten days after her embryo transfer:*

*Julia described her perceptions of chronological time after realizing she does not have any embryos to freeze:*

That weekend for me, I felt like it was two weeks for other women. (Julia, Interview 2, Lines 241-253).

*By the second interview Julia described her attachment was not growing because she had not felt any pregnancy symptoms:*

It's (attachment) not growing any more (Julia, Interview 2, Line 428). It [embryo] is not a growing A, B, or C baby (Julia, Interview 2, Line 433).

*Excerpts from Kate's first interview four days after her embryo transfer;*

*Kate referred to her transferred embryos:*

We say babies, we say our babies (Kate, Interview 1, Line 220).

*Kate described how she felt about her transferred embryos as compared to her non-*

*transferred ones:*

Embryos, I mean, I guess it's because that's what I hear them [persons at the infertility clinic] call it, not necessarily the way I think of them, because with my husband I will say, these are our babies, you know and when we talk about it or I rub my stomach or he rubs it, I will say, these are our babies. At night, I will rub my stomach and you know, even from the very beginning, you know, I'll say, we want you, grow! No, we and I look at it like these are our babies, not as fertilized, even though they have not progressed to that point. (Kate, Interview 1, Lines 220-228)

*After her transfer Kate described that she has become aware of her body:*

The discharge instructions say you may cramp, you may spot, you may have bleeding and, in the past, I have had some of those things when I have had the IUI, so I have been looking for those you know, just to say, okay, maybe this is a good sign, not spotting, although I know the reality of that is that this can be [either]. (Kate, Interview 1, Lines 426-429)

I am handling myself differently because, I do hold my abdomen like not necessarily looking to feel anything but just kind of like a connection like, "are you in there" you know, "I know you were put there, are you still there"? (Kate, Interview 1, Lines 443-445)

Although whenever I see any little sign of spotting, it like temporarily sends me into a frenzy, you know, that would spark my thoughts about, okay, am I pregnant? Because again, I've not really had, you know, a lot of symptoms but I did have what I thought was a little spotting and I guess, I don't even know if you could qualify it as [spotting] But, more so now, you know, particularly with spotting and that type of thing, anything in this lower region, I am quite aware of. Yeah, [looking for] some sign...although I know it's still out of my hands but, you know, I guess it is more like a confirmation like, okay, if I'm bleeding - bleeding then that's probably a definite no. (Kate, Interview 2, Lines 97- 110)

I see any kind of spotting, discoloration, you know, any kind, you know, it immediately sparks my thoughts like in a totally different way. I could be in the middle of cooking and immediately my thoughts are focused on that. I'm wondering you know, now I'm like, is my back hurting, am I cramping, you know, I'm hyper aware of every time I'm using the restroom I'm looking, you know, whereas before I'm just, I just go to the bathroom. (Kate, Interview 2, Lines 125-129)

*Kate continued her daily routine but remained aware of the reality of her transferred embryos while she waited for her pregnancy test:*

I'm going about my day but I am still protective. (Kate, Interview 2, Lines 384-385). Yeah, it's like a numbing and like, as you get closer and the anesthesia is wearing off

and reality is coming back. (Kate, Interview 2, Lines 348-349)

Excerpts from Paige's first interview four days after her embryo transfer:

*Since her transfer Paige shared that she has been "rubbing her belly all day", and visualized a baby. (Paige, Interview1, Lines 278-279)*

It was kind of funny, it was the first time I had been in the car, being on our way from the transfer so I wasn't really paying attention but I almost felt like, you know like, there's a baby in the car seat only it's inside me. (Paige, Interview 1, Lines 537-539)

*Paige had become aware of physical changes in her body:*

Thursday morning when I woke up I was kind of nauseous and then I thought well we had a normal dinner, is it the drugs or is something going on?...It's that whole you just chalk it up to the drugs, just because that's safe - but you still think like maybe it is [a sign of pregnancy]. (Paige, Interview 1, Lines 598-601)

*Excerpts from Paige's second interview 10 days after her embryo transfer:*

*Paige described waiting for a positive sign:*

It's just waiting, there is nothing, there was no intermediary step to say, okay this is what we'll do this day getting ready, getting ready, getting ready. There is no getting ready any more, it's just, you have to, there is just nothing going on, there's nothing. I think it would, and I don't know if it would be or wouldn't be, but I hope, I kind of hope it would be easier if I felt something, like cramping, or back ache, or anything but, I feel like maybe after that time it was, my body realized that, okay, nothing to work for so, it's just hanging out so, but every once in a while, I still have like a pain or twinge and like last night I was eating dinner and had a really bad one, I mean really bad it was just like a split second and I was like, that really hurt and then it was gone. (Paige, Interview 2, Lines 127-133)

*Paige felt a sense of relief from feeling her pain and was acutely aware of her*

*responsibility for the embryo she embodied:*

I think positive because it's like, "oh, something's happening". But there's still kind of that, as long as it hurts, it probably means it's good. (Paige, Interview 2, Lines136-138)

I still feel very cautious about how I lay, you know, that I'm not twisting or putting pressure on or lifting heavy things and I'm still...I haven't let myself go on that (physical activity) because I know that if I do, I could just be ruining everything that could be. So I am like, nope, I'm not even going to chance it. (Paige, Interview 2,

361-364)

*Paige said she was aware of time and the possible day-by-day development of her transferred embryo:*

Yep, because I know what happened, I know the procedure happened, and I know that, okay, hypothetically speaking, if everything went fine, the embryo attached and is now developing, it's probably, you know, it's probably getting close to being able to see an egg sac, see it on an ultrasound...and I think about that and I'm kind of like so, ...if I am where I should be if everything worked out, then probably like before we go home for Christmas, we will see a heartbeat (Paige, Interview 2, Lines 368-373)

*Paige acknowledged that her attachment to her transferred embryo has grown since finding out the gender of the embryo, but as the days passed her feelings had changed:*

I found myself feeling less attached, I guess, like I'm looking less and less I guess, being pregnant, waiting for that negative test on Monday. I think part of that has to do with I don't feel anything. Physically, you know, no symptoms, nothing. I mean I feel normal. (Paige, Interview 2, Lines 7-12)

Well, I guess kind of what's part of the detachment though, this week that I guess I felt is even though we know the sex of the baby, I still kind of won't let myself get that far. (Paige, Interview 2, Lines 690-691)

*Excerpts from Michelle's first interview three days after her embryo transfer:*

*Michelle noticed changes and was aware of her body:*

I'm getting almost 11 hours of sleep at night, going to bed at 8:30 at night, I can barely keep my eyes open and I am so hungry, especially dinner time that I just, I mean, this is just not typical of me so that makes me feel like maybe I am pregnant (Michelle, Interview 1, Lines 11-12).

Like I said, I don't know if they [changes] are in my mind, if I'm really tired or I'm really hungry, or I'm really cramping, or if I'm just imagining this so I don't know what I am feeling, happy or sad-wise but it is more of the physical feelings I think that I am feeling the most right now. (Michelle Interview1, Lines 13-16).

*Aware of having been transferred with two embryos Michelle felt maternal:*

But I found that I kept rubbing my belly just to maybe comfort the embryos, telling them it's okay. I don't know. Protective and comforting, I was comforting them. My husband wasn't that way, I mean, and then what was funny was I had the transfer

on Saturday, and on Sunday he started to warm up and he would rub my belly just, I guess, kind of like what I was doing. We don't know that there is anything in there but maybe just the touch that these embryos could feel my warmth I guess. (Michelle, Interview 1, Lines 55-63)

*Michelle's perceptions have changed since her embryo transfer:*

It became more real because, you know, the day before the transfer I knew that there was nothing in my body. The day of the transfer, there were two "possibly" babies being developed in my body so, it became more real. (Michelle, Interview 1, Lines 96-100)

*Michelle described the significance of her physical symptoms:*

Once I hear about the pregnancy test, I think I will be definitely more sensitive and emotional but, right now, when I'm journaling I'm thinking, "I don't really know what I'm feeling" you know, I'm not happy because I don't, I mean, I'm happy about the possibility of having a baby in my belly but I don't know that, I'm not really sad but I could be sad because I may not have a baby, but I don't really feel that way. A kind of not really a blank feeling but I don't think about it until like something physical, like I am starving (Michelle, Interview 1, Lines 362-368).

Mixed with anxiety in there, but nervousness and all of that, but then like just a numb feeling...I don't feel heavy in my belly, my chest, my breasts don't hurt and they did a week ago before this transfer, I thought "oh my gosh, these are hurting" but now, they don't, more physical symptoms that I feel rather than emotional right now. (Michelle, Interview 1, Lines 374-376)

I felt like I was cramping, I guess about two days ago, pretty badly, and I thought, oh for sure, that means that I'm not pregnant or that I might have lost one. (Michelle, Interview 1, Lines 9-10)

I was a little crampy feeling tonight. I read into things too much so now I am thinking it means maybe I have lost the babies. No spotting yet though. (Michelle, Journal entry 11-29)

*Excerpts from Michelle's second interview 12 after her embryo transfer:*

*By the second interview Michelle grew aware of time:*

Maybe not so much when you and I talked, that was pretty early on in the process and I didn't, I don't know, as the time went by and I wasn't working, I'm not working so I don't have a job that takes over my mind every day so, that was hard. You know, I get up in the morning and I'm like, "oh my gosh, I have eight more days left" you know, "how am I going to do this" and so then when I thought, in terms of time that

why am I waiting 12 days, why can't I go in, you know a week later, or three days after they why is it so long? (Michelle, Interview 2, Lines 137-144).

Waiting, yes ...like it was just long, long agonizing days yeah, in a way I felt it was like suspended (Michelle, Interview 2, 153-154)

I'm still thinking embryos. And sometimes in this journal, I call them babies but I don't think I can really until I get a real confirmation from the doctor, I think at this point, then I can say "Yeah, the baby inside me" but it's still not confirmed yet. (Michelle, Interview 2, Lines 216-218)

### Waiting in Doubt

The sub-theme Waiting in Doubt emerged from the data, as women described not knowing if their IVF procedure would be successful. The women described feeling unsure and feeling as though the embryo transfer was surreal. As part of Doubt, the women searched for reassurance from the inside (signs and symptoms of pregnancy), and from the outside (literature/internet, family, friends, spouse, infertility doctors and nurses). The women's experiences supported Waiting in Doubt was a constant presence; it emerged as peaks and valleys throughout the data. The women also described Waiting in Doubt as they were unsure their embryo(s) had implanted or continued to develop, because it could not be qualified objectively (by a blood level, microscope, or ultrasound). They wondered are they pregnant or not? Even when the women described experiences of Hope, they were saddled with Doubt, as the women did not feel free to enjoy pure Hope. The descriptions revealed a greater intensity or occurrence of Doubt as the days drew closer to their pregnancy test.

In addition, Doubt was expressed as self-Doubt, and they began to Doubt their own degree of commitment to the embryo(s) or to the IVF procedure. The women often felt a need to shoulder the burden of a positive outlook, as if the outcome of the pregnancy test depended on their optimism. Similar to Hope, Doubt presented as ups and downs while



they waited for their pregnancy results and left the women self interpreting, second guessing, often sad and confused.

*Excerpts from Sarah's second interview eleven days after her transfer:*

Gosh, I do and I don't want to give in completely to that [feeling pregnant], because I just don't want to be set up for disappointment, that's the only thing, but I definitely have these feelings, a lot of the same stuff that I was feeling with Ben [previous child] when I was pregnant but, like I said, you know the mind is a powerful thing, to try to convince yourself mentally and to project those symptoms, that's why I have just, I want to know (crying) because if I'm not pregnant, I will feel pretty bad (Sarah, Interview 2, Lines 12-16). You self-doubt, you second guess yourself and you self doubt with the symptoms so, that's why I just want to know, because like I said, if I'm not pregnant, then wow (crying) you know, I don't know. (Sarah, Interview 2, Lines 84-85)

Just doubt, you know, you have these mental conversations with yourself, "Am I, am I not?", "What if I am, what if I'm not?" It is a back and forth kind of thing. It's again an emotional roller coaster, just kind of within the day, you know whatever that twelve hours that you are awake, just up and down, up and down (Sarah, Interview 2, Lines 140-143)... too complex, so complex. (Sarah, Interview 2, Line 145)

I am having an achiness in my lower back and some cramping... So I'm hoping this is a positive sign? But there's also doubt in my mind as to whether or not an achiness due to pregnancy can occur this early. I'm going to try to think positively here (Sarah, Journal 8-7). My backaches have decreased and part of me wishes they would return as their absence puts doubt in my mind. I hate the "am I or aren't I" mental dialogue that occurs during this waiting period. I'm hoping to keep my mind off of this back and forth conversation I'm having with myself. (Sarah, Journal 8-8)

I was nauseous the majority of the afternoon and my backaches have returned. But there's always that speck of doubt in my mind and I don't want to get too confident. (Sarah, Journal 8-10)

*Excerpts from Beth's second interview 11 days after her embryo transfer:*

*As the days passed Beth's doubt increased:*

I started feeling doubtful (Beth, Interview 1, Line 170). Just a little bit of a loss of hope which was hard for me to deal with (Beth, Interview 2, Line 172).

*Beth succumbed to her feelings of doubt:*

I think I have had emotional up and downs, not huge, but I think the first 5 or 6 days



after the transfer I just felt kind of numb and didn't really notice a lot of difference and then probably about 9 or 10 days in, I started to be a little anxious and really just started to feel like "this didn't work" and, you know, and I'm not really sure why that was, just, I think that one of things with infertility is that you get used to hearing that news regularly and so I went through a little bit of that and then, let's see, Wednesday, which I know is not wise, but I went ahead and took a home pregnancy test which was positive, and I know at this point, that doesn't necessarily mean anything but, just seeing that positive result made me feel better so, the past couple of days I've felt more hopeful than the 2-3 days before that. (Beth, Interview 2, Lines 11-18)

*Beth's renewed hope was short lived as doubt quickly returned:*

I definitely have had moments where, especially after that positive pregnancy test, where I have found myself like looking at websites on, you know, where you are in a pregnancy at that point, if you are indeed pregnant, that sort of thing, and not a lot of time but just out of curiosity and I don't think that is something I would have done without that positive result, I think I did indeed compartmentalize until I saw that result and then I allowed a little more, you know, just kind of entering into, "Wow, this might have actually worked". I will say I think late last night and then this morning, I have had a lot of cramping and so that has made me think, o.k., swing back in the other direction, o.k., maybe this didn't work and so now, today, I think I am guarding myself a little bit more than maybe I would have if I didn't have these physical symptoms (Beth, Interview 1, Lines 52-59). I've had more cramping today which doesn't feel like a good sign (Journal 8-23).

*Beth doubts she was pregnant and takes another pregnancy test:*

Yeah, I think that [feeling of relief] lasted for a few days and then just kind of that doubt began to creep in. (Beth, Interview 2, Line 183)

The cramping continues. I'm not really sure what to think of it. My mom and I went to the grocery store yesterday and, at one point, I picked up a case of water to put into the cart. She immediately told me that I shouldn't be lifting anything that heavy. It was really bizarre because it just never occurred to me. I think in a way it's an indicator or how unreal things seem to me at this point. I think deep down I just don't believe that this first round worked, so I'm not as careful as I probably should be. I'm feeling pretty sure that this round of IVF didn't work. I've spent some time online to see if cramping following an embryo transfer is normal which it apparently is. But, something just tells me to prepare myself (Beth, Journal 8-24).

It doesn't feel as real to me now...I think it has slowly moved away from that...the longer out I've gotten. So, yeah, I think in my journaling yesterday morning or evening, the word I used was that it felt more surreal than anything. [I] just I can't even wrap my mind around what it would be like to be pregnant, to be a mother. I just am not to that point yet where it feels like, wow, this could really be happening

(Beth, Interview 2, Lines 198-201). I'm still not thinking of myself as pregnant or a mother. That seems surreal. (Beth, Journal 8-26)

I took another pregnancy test this morning just to see if it would still be positive, and it was. I'm trying to remind myself that it could be a chemical pregnancy and tomorrow's blood test, or subsequent blood tests, could be negative. Seeing yesterday's result definitely caused me to begin shifting my thinking from an embryo to a baby. I'm still not thinking "my baby", but the attachment does feel stronger (Beth, Journal 8-27).

*Excerpts from Julia's first interview five days after her embryo transfer:*

*Julia learned only one embryo survived for her transfer and begins to feel doubt:*

...and then day 6, they told me that there was only one that was mature enough and viable enough to [transfer]. Yep, I was told the day I arrived [for the transfer], right before I went into the room. So, it was hard to hold back the tears before going into that room, so, I think the whole process I thought is amazing, I just think that's the point that kind of put me down and I think again, if I had had two [embryos], I would just feel a little bit better right now about things (Julia, Interview 1, Lines 22-29).

I still feel like it is surreal. I feel like it hasn't really happened. I feel like I'm getting a pregnancy test for something that really didn't happen (Julia, Interview 1, Lines 210-212).

I needed to get back to work and I need to start talking to people and start thinking and talking about other things rather than just thinking about this. So it definitely - the feelings change, it still stinks, I feel like I am going more toward the ... "I think it's not going to happen" than thinking about well I could be pregnant (Julia, Interview 1, Lines 557-560).

*Julia searched the internet for some reassurance:*

I find a lot of more, "it didn't work the first time" it's is very, very defined that it didn't work the first time, so I think that's the part [of online] that can be bad. But at the same time it's putting reality on the whole situation - that it very well could not work the first time (Julia, Interview 2, Lines 371-374).

*Julia described her feelings since the embryo transfer:*

"Hard" and I think it's been, throughout the whole process, it hasn't been as bad as I thought it would be but ever since the embryo transfer and, again, like I told you, I only had one embryo so that kind of put a damper on things, I think I would have been a lot more optimistic if I had found out I had more than one embryo to transfer (Julia, interview 1, Lines 6-9).

*Excerpts from Julia's second interview, 10 days after her embryo transfer:*

I was Googling (internet searching) women going through IVF, who had no signs and who had no symptoms but got pregnant, and now I guess that was my way of saying, it can happen, can I have any hope? And the majority that I read, it was no. I mean, there wasn't enough on there to convince me, "Oh my God, there's a woman that had no symptoms", so it just really confirmed it more for me. If I had one of my friends to say, my sister in law or someone who went through IVF and she had absolutely no symptoms and she felt the same way and she got pregnant, then I would have hope. So, that is the only thing someone could tell me right now and I would have hope otherwise. (Julia, Interview 2, Line 172-181)

*Ten days after her transfer Julia described that she felt empty:*

I don't feel like there is something else there. When we tried naturally and there are those two weeks you wait to see if you're pregnant, you have such a feeling of, you actually visualize, actually like you might hold your belly and thinking like is there something growing in there? Like, I have had none of that (Julia, Interview 1, Lines 293-296).

*Julia's feelings changed after her transfer to believing her embryo was "less of a child" because she could not measure it objectively or feel any symptoms:*

Yeah, and it's not like when they put it in me, if I had named it "Joe" I felt like it wouldn't have been Joe anymore, you know what I mean? And I still feel that way, you know. Uh hmm, [I am] waiting. There is no progress; symptoms would have been progress (Julia, Interview 2, Lines 232-236).

No, now that it's done, you almost feel like it hasn't happened, it's not there. It almost felt like when it was sitting in the petri dish, it was more of something that could form a child than in me (Julia, Interview 2, Lines 476-477). I also know that, you know, once these are attached to your uterus, and I feel like if it doesn't attach to the uterus, it is not growing and it is not becoming a child so it's less of a child if that kind of makes sense (Julia, Interview 2, Lines 479-480).

Yeah, but with the petri dish you feel like there's something growing and there is something happening but then once it's in you I guess it is kind of different (Julia, Interview 2, Lines 482-483). Maybe feeling like, if it didn't attach to the uterus, it is not growing so then essentially, it's dead (Julia, Interview 2, Line 485). Yeah you don't know if, what's happening (Julia, Interview 2, Line 495). They've [doctors, nurses, embryologists] seen the measures, seen the progress [before the transfer] (Julia, Interview 2, Line 500).

*Excerpts from Kate's first interview four days after her embryo transfer:*

*Kate described doubt:*

Just lying in bed and you know holding my abdomen wondering, “Am I pregnant?” You know...it’s more real... is this my only shot? Will I ever actually be pregnant? I can go on and on, it’s hard. (Kate, Interview 1, Lines 112-115)

*After finding out that none of her embryos survived to freeze, Kate began to question herself:*

Should I have called you know yesterday, to find out, what was happening? If I had called, would it have made a difference? So it’s hard to know (Kate, Interview 1, Lines 327-330)

*Kate compared waiting to “the calm before the storm”:*

Maybe if there were significant signs or you know, anything, anything out of the ordinary, it’s like my body is back to it’s normal self you know, the bloating has gone down, most of it, and so you know, it’s almost as if there are no signs now so I just have to wait and see. Right, even the medicine with all the bloating and that type of stuff made me realize this was going on. You know, this was happening but now it’s like almost like the calm before the storm, the stillness, and so I’m wondering if anything is going on, am I, is my body just wonderfully accepting it (Kate Interview 1, Lines 446-452)

*Excerpts from Paige’s second interview four days after her transfer:*

*Fueled by an absence of symptoms Paige’s doubt increased:*

But yesterday on the way home, I was driving and all of a sudden I just felt like, you know, it just didn’t work so, I don’t know why, I just was driving and it just kind of popped into my head so, it’s weird, it’s really weird to think, there is no reason that I would have more doubt but, because nothing has really changed, there has not been any, like there is no test or anything, there is nothing. If you don’t have any symptoms, it didn’t work, you know, you may or may not feel anything and I don’t feel anything so, even if it was just, you know having like, all of a sudden something really strange, having something off the wall to eat, or just maybe not feeling as good either in the mornings when I woke up, or something. (Paige, Interview 2, Lines 17-26)

But I don’t feel any different and then I think, I’ll think maybe it didn’t work. (Paige, Interview 2, Lines 38-39)

There is the knowledge of it’s not 100%, either way you can do everything right and it could still just not happen (Paige Interview 2, Lines 806-808). I am more accepting and understanding that it could just not work because maybe it just didn’t find the

right home. I don't know how long it has to implant before it's, you know, before there's a chance of it working, but maybe...How long do you have after a transfer, if it doesn't implant? Is it like, how long does it have to do that and still survive? (Paige, Interview 2, Lines 811-815)

*Doubting that her transferred embryo had continued to develop, Paige commented on the change from having objective measurements and a tangible photo before the transfer to not knowing anything for certain:*

Right and I think that there's just this part of it that suspension, like time has kind of stopped. I just have the little picture of this baby, you know tangentially, that's kind of where my mind is, it's like there's this embryo. That's the last factual thing or scientific thing or whatever that you've seen, hard evidence. Until Monday and then we are going to [have the pregnancy test] and then it's kind of like everything is going to push the fast forward button and everything still happens but you know my mind will then allow it to process and it's like, okay, last week this happened and then three days ago this happened, and then here and now we know, now I know all these things have happened but at this very moment, I don't know what is happening. (Paige, Interview 2, Lines 826-837)

Friday I started feeling less confident because I don't feel anything physically. Today is the same. There are no tests to tell me how things are progressing. No one is watching; we're just waiting. I'm up and down today. (Paige, Journal entry 11-28)

*Excerpts from Michelle three days after her embryo transfer:*

*After having received near daily reports from the clinic about her embryo and with no "proof" of continued development Michelle described doubt:*

I am surprised, I'm surprised where I don't feel like I have a connection to this baby because I don't know if I'm pregnant, I'm like, think that I am and you know the whole, you know, rubbing my belly and just, you know, I want to think that I am but I guess since I don't have any proof, then it's hard for me to really think that there is something growing inside me. Yeah, and I know [from daily reports], and I saw the embryos, I got to see them before they put them in so I know that there was something in there but it's, you know, it's just not it's just surreal right now to me. (Michelle, Interview 1, Lines 352-360)

I had the transfer I knew that something was inside of me. But now, and I don't know how to explain this because this will sound crazy, even though now I feel like I don't have any real feelings I can tag, I know that I want to feel that something is still inside me but, since it hasn't been confirmed, it's hard for me to, does that make sense? (Michelle, Interview, Lines 464-467)

*Michelle experienced self-doubt:*

Maybe I waited too long, we waited a year and a half, that's a long time to try to have a baby, a year and a half, and not get pregnant and then finally go see somebody but, when do you know? And, I only saw a gynecologist every 12 months so, should I have looking back on it, should I have called her six months into this and said something's not right. I don't know. (Michelle, Interview 1, Lines 435-439)

*Michelle described the cyclic nature of doubt:*

When I heard I could have a transfer I was excited, but the last few days it's kind of like, I don't really have a feeling, that doesn't mean that I don't, I'm not aware, I just don't have a feeling and I know, as far as confirming it, well I saw them put the embryos inside of me, so I know that they're there, but it will be another eight days before I can, you know, confirm a pregnancy so, it's do you know what I'm trying to say? I confirmed that it's inside me, but I haven't confirmed that I have a pregnancy. (Michelle, Interview 1, Lines 469-474)

*Excerpts from Michelle 12 days after her embryo transfer:*

*By her second interview Michelle's doubt had peaked:*

I think so and I guess that was where I think my negativity kind of just, all day yesterday from the start all the way to when I went to bed, I was just thinking, "if it's a negative" or "it is, I just feel it" or "I'm crazy thinking that I might be pregnant", "I'm crazy thinking that I have these symptoms" and then half the symptoms they say you get, I don't have, so I don't know if it was in the "if" or I was just totally convinced that I wasn't. And, it wasn't, it didn't get gradually more negative, I just think I was just sour all day long. It didn't creep up until the last couple days. Yeah, it increased but maybe was more stagnant until maybe the last 2 to 3-days, just because we were getting closer and closer to Friday [pregnancy test]. (Michelle, Interview 2 Lines 87-99)

*On the morning of her pregnancy test Michelle was concerned about feeling doubtful:*

Like I guess I just.... I stopped doing it [rubbing her abdomen] because I guess because just the realism that maybe, maybe there is nothing in there. But last night, when I was so negative, I was rubbing my stomach, thinking you know maybe I am being negative for today (crying) but tomorrow I'm going to know for sure so, I don't want to have this bad attitude and let them, or these babies, think that and not just for no reason (crying). (Michelle, Interview 2, Lines 207-213)

*Michelle continued to doubt herself:*

All along I was positive until yesterday, only because I think, only because today was

the day [of the pregnancy test]. And even last night, I mean I didn't sleep very much, my stomach was cramping again and I tried to, I mean I'm trying to say, "Michelle is your belly really cramping or do you want it to cramp, or are you making this up, or are you imagining"?' (Michelle, Interview 2, Lines 232-234)

*After taking a home pregnancy test, Michelle's reprieve from doubt did not last:*

I am totally convinced I am not pregnant. I just don't feel like I have the real symptoms to be carrying a child right now. I know this is negativity and it's not what I need to be thinking. Maybe because tomorrow is the big day and we're down to the final hour and I can have these feelings until the Dr. confirms one way or the other. I feel sad and I know it is b/c I have convinced myself. (Michelle, Journal entry 12-10)

*Michelle felt a responsibility to her embryos and there no room for doubt:*

And I feel like I have to be optimistic, not that I am putting on a front or anything, but if I am pregnant right now, this baby has to feed off me and my attitude. I just had a conversation with a girlfriend of mine that, she's pregnant, and she is taking an anti depressant and she was talking about the serotonin and everything in your body and your baby picks up on that. You know, that baby picks up on everything you put in your body, everything you eat, everything you...you know, all these medications, so even my happy mood or my positive, optimistic mood. (Michelle, Interview 2, Lines 481- 491)

### Waiting in Desperation

The sub-theme of Desperation emerged as the women experienced an absence of Hope. Desperation was experienced as the women described feeling hopeless about any possibility of a positive pregnancy test. Supported by the data the women frequently experienced significant emotional discomfort which lead to impulsive thoughts and actions. Often the women described not knowing how to act or what to think. From the women's descriptions Desperation emerged as obsessive thoughts, or engaging in a frenzy of activity, or self-administering a home pregnancy test when advised against doing so. Waiting in Desperation was revealed when the women felt very "low" and began to dwell on the impending pregnancy test. Desperation was also revealed in descriptions of the women self-interpreting their bodies or when they searched frantically



to grasp any thread of Hope. The women wanted desperately to believe a pregnancy was possible. Unlike the relativity of doubt, Desperation was a state of absoluteness – an extreme and pure emotion. Desperation presented as brief and intense moments in which the women were unable to function. It was a place their psyche could not remain.

*Excerpts from Sarah's first interview, three days after her embryo transfer:*

I was kinda getting a little antsy and so [I] turned to the internet and just had all those questions and like let's find this out and find that out, and it just becomes more of a obsessive kinda activity and you can kind of just work yourself up over it. (Sarah, Interview 1, Lines 15-17).

*Sarah described the searching for a reassuring sign of pregnancy:*

I research IVF topics which is not a good thing. You can read about anything and everything - it is almost like a type of self-induced torture, I think. I research and research, thinking that I will uncover some detail that will give me hope that this process is going to be successful (Sarah, Journal 8-5).

*Excerpts from Sarah's second interview eleven days after her embryo transfer:*

*Sarah described her desperation while she waited:*

It is so tempting to try to go out and take a [pregnancy] test but that, you know, you don't want to play with that (Sarah, Interview 2, Lines 254-255). Yes, I'm definitely not gonna go that route but the temptation is definitely there, yea, just to get some sort of, you know, just something, even it's not accurate, just something (Sarah, Interview 2, Lines 257-258).

*Excerpts from Beth's second interview eleven days after the embryo transfer:*

*Beth described the events which led her to take a home pregnancy test:*

I think more than anxiety, I just found myself becoming really negative. That's not usually me. Yeah, and so, it is just difficult for me to manage, you know, feeling like I have a really negative outlook so, I think that was harder for me to cope with (Beth Interview 2, Lines 64-68). I think the test right now is the only thing that I am really thinking about (Beth, Interview 2, Line 158). Yeah, and then I come in another direction and just, felt myself being, you know not only feeling all hopeless, just feeling a little angry and yeah, and so that was hard for me to process that's not usually where I camp out (Beth, Interview 2, Lines 175-177).

This morning I took a home pregnancy test and it was faintly positive. I know it



doesn't mean much at this point, but it was great to see a positive result for the first time. I guess it gave me a little hope. I'm not usually a negative person, but it's been almost impossible to imagine that IVF could work on the first round. I think infertility comes with a lot of disappointment along the way, so we just begin to expect less (Beth, Journal 8-26). Seeing a positive result broadened my view and I've started to consider that this might have actually worked (Journal 8-26). I think I probably would have struggled more if I hadn't done the pregnancy test, just like I said because I felt hopeless (Beth, Interview 2, Lines 404-405).

*Excerpts from Julia's first interview five days after her transfer:*

I think too it's hard because you don't feel the pregnancy symptoms and if... there was just something like definite that you could feel because you read on line, "cramping can mean this", or "this could mean that" you almost wish there was something that you could feel (Julia, Interview 1, Lines 201-205). I wait for that 14 days (Julia, Interview 2, Line 211).

*Julia described her feelings the day of her embryo transfer:*

You go see the fertility guy and you feel good because things are getting, working stuff up, until you get to this whole part about the transfer. I think that's definitely the different feeling, I think it is more of a devastating feeling (Julia, Interview 1, Lines 312-314).

Once we arrived at the clinic, we received heart-wrenching news from the doctor. Out of the 6 embryos, only 1 made it (of good quality to transfer); so none to freeze and only one for transfer. Any positive feelings were just wiped from my body. I was holding back tears walking to the procedure room and during the procedure. I know my husband was so disappointed but he does not express his feelings like I do. I kept telling myself that we were lucky to at least have 1 good embryo but so hard to gain those positive -glass half full feelings back (Julia, Journal 9-24).

Feeling still down about the fact we only had one embryo. I can't help shake the feeling that there is no way I can become pregnant. All seems like a dream that is going to turn into a nightmare when I hear the negative pregnancy result (Julia, Journal 9-25).

*Julia heard that only one embryo survived:*

And I can say the changing point from when I went from up, down to a low was [after the embryo transfer] (Julia, Interview 1, Line 526). I am still dwelling on the fact that we had one embryo and this is all not going to work. I wonder why I am even myself through this 2ww [two week waiting] for the end result to be a negative pregnancy test. I almost feel like going to the gym and doing my normal run and lifting workout knowing it won't make a difference (Julia, Journal 9-25).

*Julia described her experience waiting:*

There is so much information that you can find out and you feel like you are doing research so you are educating yourself, more than what the doctors can tell you. It also brings you down to a level of reality, of there is a lot of people out there that it doesn't work for them the first time. So it can be reality of, you might have to go through this a second time, or a third time, so your expectations are low which I think, for me, can be good I need to get it down a little and I get very depressed. But, it's also a source of obsession, it can be an obsession, just trying to research everything (Julia, Interview 1, Lines 347-352).

*Excerpts from Julia's second interview ten days after her embryo transfer:*

I am not dwelling that I don't have hope, I'm not crying that I don't have hope, I'm now at the point where I feel like, if tomorrow, now it could be different, you know, if I got a call and it says negative, who knows, I might burst into tears but, I don't think I will right now because I feel like, I kind of know it didn't work and that's okay, we will now go to the next step in what I have to do. I did do some research because you would think hCG levels might start to be kicking in, and you start maybe having a symptom here and there, but I have had no symptoms and, in fact, I have had reverse symptoms where my boobs were more sore before and not sore now, I lost a pound, so I am just calling it reverse symptoms of pregnancy. So, I think during the week if there was some kind of symptom, some of the hope would come back but I think during the week since I've had my thing, it has kind of stayed at "no hope". I just think that tomorrow I'm going to get a negative. I would be shocked if I got a positive, shocked, so that's where I am today (Julia, Interview 2, Lines 20-36).

I haven't felt any symptoms, so it just confirms it more for me this week, so it hasn't helped me be positive at all. But I am more at ease because I feel like; okay I'm over the fact (Julia, Interview 2, Lines 80-82).

I felt like the weekend was horrible for me and I felt it was getting over that one embryo. This week too where other women I think by the end of their two weeks, are like pulling their hair out and "I'm going crazy", I don't feel like I'm at that point now. I would want to get the pregnancy test over with so I can just get on with the next step (Julia, Interview 2, Lines 56-59).

I think this weekend was a grieving process for me. I still have no hope this worked and a strong gut feeling there is no pregnancy. I have no symptoms which does not help my lack of hope (Julia, Journal 9-29). I still am feeling better than this weekend but absolutely no hope. Again, I think this weekend was so bad for me since I was in the process of accepting that this all did not work and we will be faced with round #2 [of IVF] (Julia, Journal 10-2).

*Excerpts from Kate's first interview four days after her embryo transfer:*

*After learning there are no embryos to freeze Kate had moments of desperation:*

It is important, we questioned whether we had made it clear enough that, financially, we would have the opportunity to do this one process. And that we questioned whether we had made that clear enough that there was an understanding that, you know, we want to make sure you know because I don't know that even [doctor's name] was under that impression, or maybe he was. But we questioned ourselves about well did we tell them that, you know, we really wanted to freeze because we weren't going to be able to go through this again at this point and you know, so we wanted to have those frozen embryos as an opportunity for another transfer if possible and so these are all questions that are unsettling for me because, again, and I'm thinking well I didn't know to ask that or did we communicate that or maybe we should have told him that on the day of the transfer or, who should we have told or, I don't know. (Kate, Interview 1, Lines 343- 351)

To go with hearing the embryos did not make it to be frozen, up until like I heard yesterday, that like dropped me. (Kate, Interview 1, Lines 753-754)

*Excerpts from Paige's second interview 10 days after her embryo transfer:*

*Paige described her experience of "hopelessness" as a feeling of impending doom:*

I think I am like just suspended I think is a really good word. It's like I kind of just feel suspended and I'm like, you know how when you have like a stop light and it's just kind of suspended over the middle of the intersection but then it's windy and it will blow to one side or something, and then it calms down, it stops and then it goes right back to just being suspended, that's kind of how I will feel. It's like, I'm just waiting but then all of a sudden like something will come and blow me one way or the other, it will make me think something definite or bad is going to happen, or you know then I get the negative mood but then again sometimes I'm like "oh my gosh". (Paige, Interview 2, Lines 583-595)

Um hmm, yes, I would say that just, I guess, it was yesterday on my way home when I was just like yep that it just was like "nope, this just didn't work". Yes, because it was not just thinking that, "oh, I'm going to get another negative test", it was encompassing all of what we already knew, all of the good things and knowing that it still didn't work. So, it was like, I thought about where I was, and then all the way up here with all the good news and all that comparing all the good and the worst possible results. And I was just, well, I'm sure that, I'm just sure of it. (Paige, Interview 2, Lines 641-650)

*Excerpts from Michelle's first interview three days after her embryo transfer:*

*Michelle was tempted to take a home pregnancy test, but decided she can wait:*

Yeah, and they don't want me to get my hopes up if it [a home pregnancy test] comes

back negative And I have “one” left and it’s like, don’t take it too early because why would I go out and buy another one, I mean, I can wait another week to find out and I’m not the crazy person Yeah I have taken pregnancy tests during this course of trying to conceive on our own or even with being on fertility medicine but I would at least wait until the day I am suppose to start my period before I took it, not the day after we had sex like some of my friends but I think that way I am a little more conservative but I think I’ll wait, I know I probably will want to take a test just because, because I am a female and because I want to know and want to plan for this but I don’t know when I’ll do it but yeah, I think it’s definitely hard, I think if I didn’t have this other stuff I’m going through, the trips and stuff, I think I would be driving myself a little nuts or a little more crazy especially the closer it is to that Friday. (Michelle, Interview 1, Lines 557-567).

*Michelle changed her mind and justified her decision to take the pregnancy test:*

[It] has been very up and down, nine days, it’s been up and down meaning I am so tired. I thought I was pregnant for sure and then down where I had this cramping in my belly and I thought that was a bad thing so, just my emotions all over. On day nine, I think it was day nine, I took a pregnancy test and it was positive, just because I couldn’t stand it anymore, I didn’t know how I was going to survive, that was Monday, I didn’t know how I was going to survive until Friday. But, that kind of eased my mind in a way but I don’t believe, I didn’t believe, I’m not using that as the truth I guess, I know how faulty they can be, so I don’t want to 100% think that I am pregnant so I am just waiting for the doctor’s confirmation. But, actually to take that test, it kind of relieved me a little bit and made me less stressed I think because there is an answer for me, whether it’s true or not, it gave me something. (Michelle, Interview 2, Lines 10-19)

Yes, I was just so anxious and, at that point. I was nine days into it and ... I only had one test so that played in my head too because I was like, I’m not going to buy another test. I’m going to drive myself crazy if I do it. I’m just going to take this one test at a good time so I don’t waste it but then I didn’t want to take it too close to Friday because, I don’t know. I don’t know if I want my pregnancy test pushed to Friday because I was afraid of the results. (Michelle, Interview 2, Lines 117-121).

I don’t know. Had I not taken it, or had it been another outcome, I think I would be very depressed and ... negative. And you know, they [doctors and nurses] told me, don’t take it because it can give you a false/positive reading but I had to, you know, it’s just so long. (Michelle, Interview 2, Lines 626-630)

*Michelle admitted waiting could be consuming:*

I don’t work, so it gives me a lot of spare time to think about, you know, what if I am pregnant, here’s what we’re going to do to the nursery, when do I go see my OB...I’m not crazy about that, when do I go, you know, when do I really conceive this baby? All these questions, so yeah, I think it kind of like consumed me a little bit

more because I don't have a job. (Michelle, Interview 2, Lines 541-554)

### Waiting in Isolation

Waiting in Isolation was expressed by the women as they described their experiences of feeling alone, as though no one understood their need for support from family, friends, and healthcare workers. For this study Isolation did not necessitate loneliness, as the women described they have support, it was the feeling of being alone. The data indicated that the women believed people acknowledged they were experiencing something physical and that they were having difficulty becoming pregnant, but that people may have had difficulty comprehending the extent of the emotional impact of their IVF experience. Within this subtheme were women's descriptions of people asking them how they felt, without appreciating the value of the embryo(s) she embodied and its potential for life or loss. From the text emerged a description of people not understanding what it was like for a woman to conceive a pregnancy through IVF.

The women also described their need for psychological support while they experienced IVF and how difficult the IVF cycle would be if they did not have the support of family or friends. In sharing their stories the women expressed a need to connect with husband, family, friends, blog, by participating in this study, or through a support group. They described a need to know they were not alone; although in their descriptions a theme emerged that they realized ultimately they were alone. A spiritual connectedness to God emerged – as the women attempted to keep Waiting in Isolation at bay. In the individual story of a woman's IVF experience many family and friends may support the woman, and many health care providers may care for the woman, but ultimately she described her experience as it was she alone who waited to find out if she

was pregnant.

The women share that there was a common misconception among persons who were overly confident that IVF will work, whose impression is that you have the procedure and you will have a baby. Although persons acknowledged the women were enduring something to become pregnant, and may wanted to help, they did understand exactly what it was they were acknowledging as the procedure is complicated – complete with its own language. It was not just the diagnosis of infertility and that the women could not have a baby it what the women endured to have a baby. Each of the women articulated that the reason they participated in the study was to help other women like them – to let them know they were not alone.

*Excerpt from Sarah's first interview three days after receiving her embryo transfer:*

I felt like I can't do this without my mom because just to take care of Ben [son] and her emotional and moral support, she needs to be in on it, or else I'm going to be super stressed (Sarah, Interview 1, Lines 147-148). My husband [is] obviously is a huge support (Sarah, Interview 1, Line 155, consistent with Sarah, Journal Entry 8-3).

*Sarah described how her family asked how she was feeling physically and that they were not being fully aware of her IVF process and her transferred embryos:*

More in general [they ask about me] she [mom] and family ask how I'm feeling more physically. (Sarah, Interview 1, Lines 237-239).

*Excerpts from Beth's first interview three days after her embryo transfer:*

I have my husband [he] has been incredibly supportive and I have had one girlfriend and I have a couple of other friends who are just there to hear whatever it is I want to say at that point in time so that has been really, really helpful (Beth, Interview 1, Lines 116-118). I think if I had kept all of it kind of to myself and not processed it, I would be in a lot of more stress than I am (Lines 299-300).

I don't think that most people even understand what embryo transfer means and so I think that most of the people in my life are just concerned with, you're going through something really hard...and even my friend who has been through this herself, I think she understands the drama of it. So I would say across the board they [people] are

more concerned about my state of mind (Beth, Interview 1, Lines 123-125).

Right [people just think of it as a one step process] and I think too it's hard for people to understand that that first pregnancy test is great if it is positive but that doesn't necessarily mean what you think it means, you have to come back again a couple days later and have another one done and even getting that positive result doesn't mean that things are going to turn out exactly the way you hope they do, so, you know definitely I think it is a challenge for people to understand exactly what I am going through (Beth, Interview 1, Lines 129-133).

*Excerpts from Beth's second interview eleven days after her embryo transfer:*

I'm aware just of the clinical part of it, that a positive test today doesn't mean that I'm going to have a baby. But I have a feeling that if today is positive, that with friends, I will hear more of you know, "you're going to be a mom" and all of that because in their mind's, if it's positive, then we're just good to go (Beth, Interview 2, Lines 297-302). I don't think my husband understands that either and I have tried to tell him that but I'll be interested to see how he responds if the results today is positive, that in his mind it's absolute (Beth, Interview 2, Lines 308-309).

*While waiting Beth (a minister) described isolation when she felt as though she could not pray, but on the day of her scheduled pregnancy test:*

I think I feel a lot less disconnected today, I feel, like I have felt disconnected from my faith, I feel a lot less so today. Yeah, I feel like I was able to pray this morning and feel connected to God again in a way that I haven't felt in the last week or so (Beth, Interview 2, Lines 357-359).

*Beth described that although she felt she did not have a need to discuss her emotions in detail, she thought it would be difficult to do this with her husband:*

He's [husband is] like a lot of men he just doesn't do well with sitting and talking about issues and all of that so, while he has been very supportive, he's probably not the best person to sit and talk through emotions with (Beth, Interview 2, Lines 518-519).

*Beth described support from her healthcare providers:*

It is so helpful if they're [medical professionals], dialed in and caring just in the embryo transfer there was a nurse who stood beside me and put her hand on my leg and it was, it was so reassuring. It is so helpful when nurses or doctors aren't as clinical because some of the things that have come out of doctors mouths while I've been here have been hurtful, you know, because they are so detached and I understand why they are that way, but I guess it might be good for them to realize



that, you know, just to take a little bit of time and actually think about the patient as a person and that can help the whole process (Beth, Interview 2, Lines 541-548).

*Excerpts from Julia's first interview five days after her embryo transfer:*

I think it has been tougher than I had thought it would, ever since the embryo transfer and, again, I think it has a lot to do with just having one embryo, I think that was a big old disappointment and heart wrenching for me (Julia Interview 1, Lines 14-16).

I definitely put into the Blog if I wasn't feeling good, I definitely would put that in there because I want my family to know, it is not all peachy and one day I had a really, I had a really bad day (Julia Interview 1, Lines 151-152).

*Julia described using the internet to find support:*

I joined a chat room on this one website and I ended up, because I knew that for me talking about it and getting out there and talking to other people, it would be good support for me and it ended up going on a website and started a forum of anyone going through it, so I ended up with an IVF buddy who lived in Europe. But it was actually a good source of support and we are supporting each other (Julia, Interview 1, Lines 352-356), but, there are some things on the internet that you just don't need to read (Julia, Interview 1, Lines 357-358).

*Julia described how her support persons really did not understand what it meant to experience IVF or what an embryo transfer was like:*

[My mom] didn't realize this was all so hard until you [I] started blogging. She said I know people have gone through it, but I [she] didn't realize the extent of it. So, I think too people starting realizing, "Wow, it is a tough time". There are so much to do, you have all these shots, you have to wait, you have to do this and that. So I think they are more concerned about me and how I am doing, and even after the transfer it's not like, "Hey, how are you feeling, you feeling pregnant?" (Julia, Interview 1, Lines 565-577). I think they [people] think they [health care workers at the fertility clinic] just take the egg and sperm and put it together and that's it (Julia, interview 1, Line 589). That's why the blog is so good, why the blog I think was such a good support because now people, instead of me going you just have no clue what I am going through, they now know what I am going through (Julia, Interview 1, Lines 591-593).

*Julia described a change in her experience since having only one embryo transferred:*

I don't feel like blogging right now. I actually don't feel like talking [to family] today (Julia, Interview 1, Lines 170-173). I think it has to do with, I don't think I feel like hearing from them "remain positive, remain positive", because people tell me that you are so down and I'll tell them that I just feel not as positive and it is such a



waiting period, there is nothing you can do about it (Julia, Interview 1, Lines 179-182). I still don't even feel like talking to family members and know that won't go away until I find out the test results (Julia, Journal 8-26).

*Julia described the pain of waiting alone:*

I am still dwelling on the fact that we had one embryo and this is all not going to work. I wonder why I am even [putting] myself through this 2ww [two weeks waiting] for the end result to be a negative pregnancy test (Julia, Journal 9-26).

*Excerpts from Julia second interview eleven days after her embryo transfer:*

*Julia felt as though her IVF did not work and she wanted her support persons to acknowledge her feelings:*

The one thing I don't want them (friends and family) to say is, well "oh, it will work, don't [worry] you'll be fine" because people don't need to say that because they don't know that for a fact, if they knew that they could say it. People say more like "I still have hope for you" I was talking to a friend yesterday and I don't even want to. I'm at a point right now that I don't want to talk about it still as much, because I don't want to hear people say, "now you'll be fine", "it'll be fine", or "you really need to look at the positive". I have no optimism in me where I don't even want to hear it because I'm not going to accept it. (Julia, interview 2, Lines 133-145)

*Julia described her experience with a friend who told her that some people did not have signs and symptoms of pregnancy are still pregnant. Julia said she did not say anything to her "she took it":*

I was interested in what she [a friend] had to say but it still didn't convince me any, it didn't help me any and I know whatever anyone is going to say to me, it's not going to help me to have hope. Again, a defense mechanism, maybe, have I really accepted it? Maybe, I don't know. (Julia, Interview 2, Lines 161-164)  
I mean, I definitely think that people have more a feeling that I am pregnant than I am....I still think they're still talking about me but I think definitely people have more of a thought that I'm pregnant than I do, definitely. (Julia, Interview 2, Lines 489-492)

You know, what's going to be hard is when I put on there, if this doesn't work, and I put on the blog that it didn't happen, I feel like at that point it's almost going to be harder for other people thinking, "Oh man, that must be so hard for me"...I don't particularly want to take calls from them because I don't want to explain to them that I knew. I never felt I had to. (Julia, Interview 2, Lines 503-507).

*Julia described what she needed as support during her IVF:*

You need people's support, it's too much to handle it yourself. I think you need people out there knowing what you're going through, your family, people that people love you, neighbors, whoever, they need to know what you're going through so when they ask how you're doing, they really know you've gone through a lot...The blogging definitely....that was a Godsend (Julia, Interview 2, Lines 556-564). They (women experiencing IVF) may not even know (Julia, Interview 2, Line 589) sometimes you don't know that you need to [to talk] (Julia, Interview 2, Line 591).

Support groups I think would be good...it's got to be easily accessible when going through IVF, of like having a support group here of people who are in their two week waiting and people who are at the same stage, who are at a specific stage. I think when you don't [have people in a similar stage of IVF], you don't feel like it's benefiting you as much (Julia, Interview 2, Lines 596-598). Then it would have been nice to have someone there who just went through it, to get their perspective of how things went (Julia, Interview 2, Lines 607-608). Yeah, I think that would be a good idea like two-week waiters (Julia, Interview 2, Line 610).

When you are on line you're more alone because you don't know the other person. But when you are face to face, there is a proctor, like you know; I mean someone's got to be there to lead it (Julia, Interview 2, Lines 619-621).

Sometimes I think, you need during those two weeks, it would have been nice if the clinic had called me, like hey, how are you feeling now (Julia, Interview 2, Line 648-649).

*Julia described experiencing exhaustion when family asked about her IVF:*

[Family and friends] constantly asking me, yeah, and I think too it has been exhausting to keep telling them kind of what's going on and I think after a while that kind of gets exhausting so you get past the part [by keeping a Blog] (Julia, Interview 2, Lines 65-67).

*Julia made an effort to include her husband in her IVF:*

I definitely told him [husband] all the steps of what we were going through and I would talk about how I was feeling, I definitely though made sure I didn't overkill by talking about it too much, because I think the women, I think, tend to think about it constantly....but I made sure that he knew exactly what was going on because the one thing that was really important to me, is that it was "us". It was both of us and when I write the journal, I kept saying us we and us, which was very hard to do....and I would have to write it five times to make sure I had us and we in there because, a lot of times I feel like it is the women (Julia, Interview 2, Lines 117-118).

*Excerpts from Kate's first interview four days after her embryo transfer:*

*Kate described that although her husband was her main support sometimes she still felt isolated:*

It is weird going through it but I really feel like I'm going through it because you know, he gives me my shots and things like that and he holds my hand and he comes to every doctor's appointment even if they are drawing blood and he is very supportive and emotionally involved in a process that ultimately is my body, you know, that all of this is happening to me....so, I feel like he understands but he can't quite possibly understand because of where he stands, so....Yes, I have two girlfriends that I talk to that know we are going through this process, my own family don't know, it's just my two girlfriends and I find that I don't really explain it explicitly to them because it is not something that they are going to grasp anyway, you know...(Kate, Interview 1, Lines 86-97)

Emotionally I talk about it, just because that's where they're [friends] coming from, the emotional part...they don't know what the procedure is, they don't understand the process so, it is more less letting me getting out, this is where we are, and I will give just the most basic, "they will take my eggs and, you know, take his sperm and you know, put them together"....just barely basic, not the technicalities of what it is of what is really happening...and, then more less our conversations are, well, how do you feel about this, you know, how are you holding up, and I am pretty honest about it...but even talking to them about it I think that, unless you have been through it, you know, they hear and maybe understand and be empathetic to what I am saying but they can't really feel, at least in my mind, really grasp the feeling that I have because they have not gone through this process and I think (Kate, Interview 1, Lines 99-106)

*Kate described that personally she did not have cultural support and felt her family could not truly understand, and now her sister was carrying a pregnancy she didn't plan:*

Our families, we haven't told them just because, as we spoke about, economically it is not something that, well culturally..... it is probably something, it is about economics at a basic level but culturally, it is not just something that we have ever known anybody, you know, that has gone through this process. Yeah, family or friends, nobody, and so you know to explain to our family, as most families are, wanting the technical part of it also, not just how are you feeling, well what exactly are they doing....and of course they want us to have children so, there is that added pressure which, you know, tends to make us band together and only keep it among ourselves, apart from our family because you know, it is hard enough to have the highs and lows for us to deal with, much less to carry the burden of our family's highs and lows also, we would rather just, you know, say "we're just not pregnant" or "we're pregnant"...Yeah, like, well we're going to try this process and then have 10

people calling, “well how did that work”, “why are they doing that?” And quite honestly, you know, I am in the middle of my sisters and all of my sisters have kids above and below me so I am just like the, not the “enigma” but just you know, it’s like well why don’t you have kids? You know, it’s always kind of been assumed that I don’t want kids...my sisters, you breathe on them and they’re pregnant...like, my youngest sister is pregnant now and she didn’t want to have another baby, you know, and so, like it’s so funny talking to her, because she is my baby sister and trying to be emotionally supportive to her, with her not knowing what I am going through, you know, and hearing her not want to have another child (Kate, Interview 1, Lines 115-146).

I mean my immediate family, my culture, I mean like even an African American culture because that is primarily what I identify with, with how I was raised...and so this is unknown, it is you know, you just pop up pregnant (laughing), you know, without assistance and I’m going to say that probably economically driven, but I’m going to say mostly economically driven because I had no idea, you know, had I known a lot of what I know now, I probably would have gotten started a lot earlier, you know, but it has taken for me to, I guess, educate myself about it, to be around people who are educated about it too, I guess to be in a better position in my life where I can be exposed to the medical treatment that’s out there, because some of my family [they] don’t even have health insurance.... just maintaining the very basic health, that type of thing, so...you know, again that education probably would have brought me in a whole lot sooner but, you know, as I said just not having a whole lot of access. (Kate, Interview 1, Lines 176-177)

I know, because my husband always comes with me and I look at the doctor and we both hear something different and I think how we process is different, for him it has been listening to the process of it all, for me it is internalizing, what am I going to have to do, what am I going to experience, what is going to happen to me and my body and so on. That, I think, is the difference in how you know we heard the information that is given to us because, you know, sometimes I feel bad for him but not really (Laughing), you know (Kate, Interview 1, Lines 80-86)

From everything that I have ever heard or read, this process is so individualized, it is just hard for me to.... even though someone who has been through it can identify with the process, but it still is an individual process (Kate, Interview 2, Lines 296-298)

We [women] have a more personally vested interest in it honestly. You know I just think that there will always be like a level because it is happening to me, my body, and that there will always be just a piece that I don’t think for me I feel that anybody else might be able to relate to other than maybe a woman who has actually been through it, you know...you know, I think there is like just a piece of it that is just so about you, you know, how you deal with things, what is happening with your body, just the process...of those things combined, that is something that I may never be able to really actually communicate to someone else and that, even if I could, I could not feel that they could really grasp, they could empathize with me but not really, really

understand (Kate, Interview 2, Lines 490-498)

What's interesting is that my one girlfriend, because she is a woman, I feel like she understands even a piece more than even my husband would, you know, there is like, hard to explain but just different elements of it, that I get a little more comfort from her because she is a woman, she has had children, she has had a miscarriage, you know that she understands maybe from a woman's perspective, the emotional piece of it, you know whereas my husband is a man and, not disrespecting him in any way, is absolutely emotionally in tune but by nature is a problem solver and so, he feels that emotion to a point, he doesn't feel the emotion as I would or, at least I don't think he does (Kate, Interview 2, Lines 505-510).

I remember I think the first IUI, I did like have a breakdown and actually my husband and I, we I can't say we argued but I felt that he couldn't understand because he has a child and for him there is a difference if you and I never have a child, you still have had the experience of having a child so you can't really understand where I am coming from, unless you didn't have a child and you know he was very hurt by that and explained that, you know, it didn't feel less hurtful for him or he was less disappointed because he has a child because it was important to him, as important, to have a family, for us to have a family and it didn't negate that because he has a child already...but I still think there is a little difference there, you know (Kate, Interview 2, Lines 573-579)

*Because Kate's husband already had a child, she felt he could never really*

*understand how she felt:*

I think that, you know, I think he understands and he feels the disappointment because, trust me, my husband wants children, he wants us to have kids...but I do think that the realism of him really understanding, of not having children, he could never conceptualize that because he still has a child...and I think that that is different when you are not able to have another child versus not ever having had a child...So, you know, we disagree on that, he feels that, you know, his feelings are as strong as mine and his disappointment was as great as mine and I don't doubt that, I just think that we come from different places and that, because we come from different places, you know, it's like once you have a child, you can never...it is hard for you to imagine not having a child (Kate Interview 2, Lines 582-590). So, you can't go back because you're already there (Kate Interview 2, Line 592).

*Excerpts from Paige's first interview four days after her embryo transfer:*

*Paige and her husband had experienced many emotional losses together. Paige described that she used discussion boards on the internet as a form of emotional support when she lost her first pregnancy, and during her IVF she accessed it for factual*

*information and not emotional support.*

More factual, this is what a frozen embryo transplant consists of, this is how it happens, this is you know, this is what an embryo is...what preservation means, and things like that so that kind of information I feel safe looking up. When we lost our first baby, my girlfriend, she was going to an infertility clinic and she said do the [discussion] board...Doing the boards, these women will help you and they will be there for you. And it was. It was incredibly supportive but, when I was done with it, I was done with it. And I didn't want to go back there. And, every once in a while I will go back and just kind of check in to see, you know, how some of the people are doing that I was close with and I couldn't connect any more with that because I felt like this is my journey, this is not, I mean, I don't need to share everything with strangers. (Paige Interview 1, Lines 336-344). I don't need that now because, maybe it's the fact that [husband] and I have figured out how to do this together. (Paige, Interview 1, Lines 347-348)

*Paige shared that her friends are "fascinated" with her IVF process and wanted to help but there wasn't anything they could really do:*

And, so they're like, oh my gosh, I had no idea it worked like that...after all that we kind of have gone through, they're like just, they have questions, all the time, it's like, "so okay, now explain how this works and explain how this...and like, okay if this happens, then what do you do" Because they all went off birth control and they got pregnant two weeks later, I mean they didn't even have to try but it just did, it just happened. They are more involved and they offer support and they offer wanting to know...saying, "tell us what we can do" and it's like, "nothing". (Paige, Interview 1, Lines 364-369).

*Paige shared that her friends did not understand but they tried:*

I don't think they understand but, I don't think they fully comprehend that this may not work and there is less than a 50% chance that it's going to take, I don't think they really...I can say that to them but they're like, "yeah, but that won't happen to you". (Paige, Interview 1, Lines 469-471)

*Paige acknowledged that her husband was her support and she had shared her dreams with him. But she also mentioned that she had dreams for herself about being pregnant and becoming a mother:*

You know there is still kind of the same moments of you know, he is excited and we're together or he is nervous and we are together, but it's still me. (Paige, Interview 2, Lines 466-467)



*Excerpts from Michelle's first interview three days after her embryo transfer;*

*Michelle described her friends as supportive but feared that they really did not understand:*

I mean, they are so supportive and they love and they will give me, you know, all the support that I need but, also, I told a girlfriend of mine that we had to have to IVF and she said, "Oh, I thought it was something really bad". I'm afraid...I'm afraid for two reasons, number one, I don't want to hear, "oh, it's okay, at least you can have kids", well, I don't know that I can, or like her reaction, I'm sure she didn't mean it that way because she is a very sensitive person but it was, "oh, I thought it was worse than that". (Michelle, Interview 1, Lines 260-267)

*Michelle did not want her feelings minimized:*

Yes, and I wasn't even a candidate for IUI so it wasn't like I could do that...I mean, it's IVF....I know that I'm more sensitive about it, obviously, than anyone else but I can just imagine somebody telling me that, and I don't know what to say to them, like, "it's going to be okay" but, well, I don't know that....it's just a double edged sword, because I want them to ask questions about it, you know, if they want to but I don't want them to tell me that "it's going to be okay", or "at least you can get pregnant". Yeah, and I know they don't mean it that way but that's how I am taking it. (Michelle, Interview 1, Lines 269-275; Supported by Michelle, Journal entry 12-2).

I think, depending on the person, I think the majority of my friends are more sensitive and can really feel my heart breaking and know that I'm not...they probably don't know anything about IVF other than knowing that you just need help getting pregnant, I don't even know if they know what [is involved]....And I don't think they do....Yeah, you're spending this money, they know it's expensive....it's a process...I do feel like I am alone and that's why I wanted to share my story with you because, I mean, you can look on line....Everybody's situation is so different. (Michelle, Interview 1, Lines 278-293)

*Michelle acknowledged that even though her husband may not have understood everything he was there for her:*

And it is different, a female mind and a male mind and so I think it's a little bit of me holding back, not that I'm embarrassed or afraid to call her, but I just don't know her well enough to be like, "hey, so let's talk about the deepest, most intimate feelings..". (Michelle, Interview 1, 278-303).

*Michelle was aware that she was not the only woman to experience IVF, she just feels*

*she was alone:*

Yeah so, I know that I'm not alone and I know that I know someone "real", a real person, not just the person's name on the list in the shot room...but everybody is so different. She took different medications than I did, she didn't have endometriosis which kind of put this in a tailspin for me, where I did have the surgery so, it's just different, That's what's hard and I know this is my situation which is different...(Michelle , Interview 1, Lines 305-311).

There were 10 of them [female friends] at the party that I attended and I got to tell everybody eventually ...they asked tons of questions but none of them were specific like, "well when did you start this". I mean, I guess they all just assumed that it's...well, I don't even know what they think. There was more just sympathy and you know, "I'm sorry" and "I'm here for you" that type of thing...I guess later on we talked about it but it was more me telling them how the process is, rather than them asking. It was more educational because I think they don't know. None of them, none of them knew really anything about it, they didn't know the process, they didn't know timeline, they didn't know. (Michelle, Interview 2, Lines 163-180)

Like, [husband] doesn't know, he doesn't know the symptoms of this, even if he read a book, I don't think he would. Yeah, like if I told him you know, I feel crampy today, he doesn't know what that means. Like, he's kind of like, "oh, I'm sorry" next subject (Michelle, Interview 2, Lines 280-284). No, I just don't know if he has thoughts about it. Like, "we'll find out Friday if we're pregnant. If we are, we'll deal with it, if we're not, we'll deal with that." (Michelle, int2, 291-292). I do feel like I am alone, I feel like I could tell him anything but, I don't feel like he can understand everything I'm going through . (Michelle, Interview 2, 298-299). It's still me that has to find out. (Michelle , Interview 2, Line 313)

I have a lot of girlfriends and I'm the only one that has gone through this so I feel like I am this lonely soldier that they don't understand. So, I don't want them to be like, "oh, I understand" because you don't understand. (Michelle, Interview 2, Lines 338-340)

*Michelle felt that her friends assumed that she would become pregnant from this IVF*

*treatment:*

Maybe because of being ignorant about it, just not knowing....Well, I think they just really do not know...(Michelle, Interview 2, Lines 358-36) Yeah [they think] that it works just like that, just it happens to everybody, if you have to go that route, you'll get pregnant. Yeah, I even told them, you know, this is not guaranteed and I told them about the two fresh ones and two frozen ones (Michelle, Interview 2, Lines 358-367)

*Michelle described that ultimately she was the only one who could do this:*



[Husband] can't do it, these girls I talk to on the internet, my girlfriends....I just, I'm ready for that to happen. (Michelle, interview 2, Lines 495-500)

### Waiting in Vulnerability

In this study the theme of waiting in Vulnerability emerged from the women's descriptions of feeling a lack of control, their relationship with healthcare workers, family, and friends. The women experienced feeling vulnerable socially and asked themselves "Why me?" The women's stories indicated they knew that much of their IVF procedure, including the outcome of their pregnancy test, was out of their control. The women guarded themselves, living with the pain of their past and their hopes for their future. They had invested self, time, and finances. Vulnerability was expressed as the women depended on the intimate relationship with the fertility clinic – particularly on the communication with the doctors and nurses often describing it as if it were a lifeline to their embryos and bodies. When the women perceived a failure in communication they described feeling vulnerable. During the time following their transfer the women no longer had daily, or near daily, contacts from the infertility clinic.

Unable to separate their past experiences and losses from the present, their Vulnerability was compounded. Their IVF attempt was in response to losses from their past – lost fertility, miscarriages, and failed pregnancy attempts. Some grieved the loss of the embryos that did not survive for transfer or cryopreservation. As a woman waited to hear if her pregnancy test was either positive or negative she was vulnerable - she had to wait.

*Excerpts from Sarah's first interview three days after her embryo transfer:*

*Sarah described her experience on the day of her transfer:*

[I] just came home and got in bed and just kinda sighed a sigh of relief that that part

was complete, and now it was just up to God how things turn out so it was kind of out of my control (Sarah, Interview 1, Lines 33-34).

I mean it is so not in our control that you, I mean, we just have to give it to God when, you know, he's going to take care of things (Sarah, Interview 1, Lines 73-74). And to give it to God it's hard because I'm someone who likes to be in control a lot, this happens. You know just cause and effect so far to be out of my control and to give it to God is one big thing, I struggle with that, so say a lot of prayer (Sarah, Interview 1, Lines 249-251).

*Sarah described her need to self-protect when she considered the possibility of being pregnant:*

It's a protective mechanism for me I guess (Sarah, Interview 1, Line 103). Yea not physically but just mentally because there is that chance that you are not pregnant and I don't want to be like, oh, you know, I'm pregnant, there is just that, and it is totally self protective (Sarah, Interview 1, Lines 104-105). I think I might just be blocking it out (Sarah, Interview 1, Line 111). It's definitely a coping I mean, there's definitely been physical symptoms there but just some part of me just doesn't want to totally commit to the possibility that there is a, you know, embryo baby growing because I am so afraid of that disappointment (Sarah, Interview 1, Lines 113-115).

*Excerpts from Beth's first interview three days after her embryo transfer:*

*Beth described experiencing vulnerability since her embryo transfer:*

I guess [it's] humbling in some ways. I say that because I am a control freak so, you know, I definitely have learned that that is an illusion and so, yeah, I think it has given me a sense of how vulnerable I really am, you know, that I don't have control of how this turns out in any way (Beth, Interview 1, Lines 142-144).

*Beth's described her experience of self-perception during the first few days following her transfer:*

I'm not very self-aware right now but I don't think that there is a difference at this point [in embryo attachment since the transfer] (Beth, Interview 1, Lines 328-329). I think numb might be a good word for it because I do think that you get to a certain point, especially if you have kind of been at it for a couple years and you've had the ups and downs and that sort of thing, I think that, you know, you get to a certain point where you are a little numb to good news and bad news, or maybe guarded is a better word, but I definitely think at this point that that is where I am (Beth, Interview 1, Lines 332-335, consistent with Journal entry 8-17).

*When describing her vulnerability to health care worker's communication Beth shared:*

Of all the doctors here, they are not terribly sensitive sometimes when they deliver news and so, I think, it really helpful to have someone there that can kind of hold your hand and reassure you (Beth, Interview 1, Lines 257-259).

I think there have been some moments with doctors where I've thought, wow, do you really need to say it just like that? An example of that is after the transfer, my doctor came in and looked at us and said you have two embryos that are really good and seven that are so, so and I was like, what does "so, so" mean, I mean what do you do with that?...[A nurse sat down with us and says] o.k., this is what this means, exactly what he [the doctor] is saying, it doesn't mean that they're not going to be fine, it means they are still growing, and so that was so helpful (Beth, Interview 1, Lines 264-267).

Excerpts from Beth's second interview eleven days after her transfer:

*Beth's feeling of reassurance, following her positive home pregnancy test, was gone and her numbness returned:*

I've said a few times before, I think in some ways I am just a little numb right now (Beth, Interview 2, Line 38). Yeah [once again], I think, it may just be trying to guard myself a little bit, not wanting to get really excited about things at this point (Beth, Interview 2, Lines 40-41).

I was getting ready for work one morning and I noticed that I had one [home pregnancy test], so I thought, why not?...Which I guess, deep down there was a part of me that was like, o.k., I need to have some sort of control over this (Beth, Interview 2, Lines 119-121). I just decided I would get a little control back (Beth, Interview 2, Lines 367).

Why does it bother me that some people ask me and it doesn't bother me at all with others? I'm not sure what that's about but I'm definitely to the point where I'm, you know, I'm tired of constantly answering the question, how are you, how are you doing, when will you know, what's the process? I feel like I just need to make a tape and just play it over and over again so I won't have to keep recounting for people (Beth, Interview 2, Lines 246-249).

I think it was really great to see like I had so much love and support and all of that and now I'm to the point where I almost feel like people asking me how I am all the time is a point of weakness, you know, that like I'm somehow not able to cope and I know that's not reality at all but that they're just concerned but I think, you know, it makes me feel, well, less equipped to deal with things when people come to me and ask how I'm doing (Beth, Interview 2, Lines 257-260)...The difference is when I want to talk about it versus when someone else wants me to talk about it (Beth, Interview 2, Lines 265-266).

*Recognizing that she has little control during her IVF experience, Beth described:*

I realize too that so much of that [having control] is just an illusion, I really don't have any control in this process (Beth, Interview 2, Line 467). Yeah, I think it's liberating in a lot of ways to feel like, o.k. I'm not responsible for making this happen. So, in some ways it's very liberating to realize I don't have control but I do find myself like reverting back and trying to take it, you know, to points where I feel like I can (Beth, Interview 2, Lines 471-473).

*Beth described her experience with healthcare workers:*

I think sometimes specific comments come out that [they] don't realize which are very difficult for patient's to deal with (Beth, Interview 2, Lines 552-553)...Just kind of realizing that someone's whole future is in their hands in a lot of ways and so, you know, and even for me, I feel like I am not nearly as emotional as a lot of people, it is challenging (Beth, Interview 2, Lines 558-559).

*Excerpt from Julia's first interview three days after her embryo transfer:*

It's such a feeling of, o.k. this is it... there is not much more I can do, I just need to wait and that's it (Julia, Interview 1, Lines 201-202).

*Excerpts from Julia's second interview 11 day after her embryo transfer:*

*Julia described that the whole process of infertility and IVF has been hard and she had not any control:*

It has not been easy going month by month...there have been so many detours and so many things going on and I'm kind of surprised at myself that it's been emotionally hard. It's probably been one of the hardest things I have gone through [not having any control] (crying) (Julia, Interview 2, Lines 344-349)... but the IVF has not been as bad as I thought it would be, it's been the whole thing (crying) (Julia, Interview 2, Lines 362-364). See somewhere it those two weeks that I started...I think it's been the whole thing. I think its been before the IVF, that's been the hardest part emotionally. I'm sure after this, and hearing that, I think the scariest thing to hear, if it's [pregnancy test] negative, of course, I know for myself I may try again, I think that idea will be harder because the more you're going to hear it's negative, the more you think in your head, that I can't have kids (Julia, Interview 2, Lines 389-393).

*Julia described feeling socially vulnerable:*

Seeing other women get pregnant in between [her pregnancy attempts], your friends are having [their] second and you're saying, that's fine with me I have my career

(Julia, Interview 2, Lines 361-362).

During this whole time, and this is not during just the two weeks, but during this whole time, there were points in time where it was starting to get hard for me to be around all our friends around us have kids, so it got sometimes to the point where you're like, I just don't want to go out right now because I don't want to be around all their kids and all that, and right now, these past, during this two weeks I haven't felt that way but it has been more of the going through the IVF with more pregnant women. And I'm thinking about it and I don't want to see them you know what I mean. I don't want to hear about [pregnancy] (Julia, Interview 2, Lines 365-370). For these two weeks it's not as hard to be around parents with kids, it's more hard to be around the pregnant women (Julia, Interview 2, Lines 375-376).

*Excerpts from Kate's first interview four day after her embryo transfer:*

*Kate shared her feelings about having no control:*

It is in God's hands and already done....If it is meant for me to be a mother God will make that happen. (Kate, Journal 11-23)

What's interesting for me though is that it was easier for me to just kind of go on faith. You know, God has this, it is beyond my control. (Kate, Interview 1, Lines 753-754). No worries because I have accepted it is already done and I cannot change that. (Kate, Journal 11-24)

It is not within my control; I have done all that I can do. (Kate, Journal 11-26)

*Kate described how important it was to be able to freeze some embryos and how much she had relied on the communication from the infertility clinic:*

... which is why I was upset yesterday because my transfer was Monday the 16th, and [the embryos were] five days old and so, you know Tuesday went by, nothing, so yesterday I called to find out because I didn't hear anything and I was told that they didn't make it so, I don't know what that means...But nobody called me, nobody alerted us and I don't know that we would have had any options at that point where, you know, because at five days, you know, everything was fine and so I don't know what transpired between that fifth and sixth day, who made the decision, you know, I just felt violated because we weren't contacted. (Kate, Interview. 1, Lines 17-23)

and I felt like it was our right to make a decision, perhaps we would have chosen to freeze at five days if we could versus going that 6th day or, if it looked like there would be....I just felt like we should have been consulted in that process. Outside of that, no one called us, I called in and left a message and the nurse called me back, it wasn't my nurse, my nurse is out, certainly not blaming them but what she told me was, well, you'll get a letter in the mail....and I said, are you kidding, I'll get a letter

in the mail, this is very personal to me, you know, so you want to notify me by mail, you called me all up until this point, but something as important as the last two embryos didn't survive, you are going to send me a letter in the mail (Kate, Interview 1, Lines 25-30)

Yes, yes...we were under the impression that they had been froze...just because no one had called us, I just called to follow up....I was very hurt honestly, it brought me to tears, just to hear it, one because we have been through this extreme process and, two, that meant that for us, we are not financially able to go through this process again at this point so we were hoping that we would be able to have those eggs frozen so that if this initial process didn't take, we would have an opportunity to have it again without having to go through it [the entire process]. (Kate, Interview 1, Lines 32-38)

My treatment team is really great, you know, this is common knowledge for them and you know, I'll have to stop (the doctor) sometimes and say, explain to me like I'm 4 years old, you know, can you boil things down for me, sometimes, like I would save their messages, I wouldn't answer purposefully so they would leave me a message so I could replay it over and over, to really grasp what they were saying because it's like, o.k, take this, stop taking this, do this, do this, and it's like a five second message with all these instructions and I would need like extra time to process it so I like saved all of them so I could keep going through it and, also, like I could hear it and then my husband would say, "well what did they say" and I would be like, "I don't know (laughing)...and I would have to go back and listen to it again, you try to hear the important part. (Kate, Interview 1, Lines 70-77)

*Kate shared her feelings after finding that her embryos were unable to be frozen:*

I think that that is also some of the hurt that I felt when I found out, like some of our babies didn't make it...you know, and what was told to me was the embryos didn't make I still wonder what happened to the two [embryos]...just not knowing, I mean, I'm sure that emotionally I would have had some of the same feelings because, you know, we were hoping that we would still have the two, even if we were pregnant now, to even have the option in the future but, you know, to not be told and then, you know to not have the opportunity to ask what happened, you know, "they didn't make it" what does that mean? You know, did it mean that they were fine on day 5 but they just stopped growing or did that mean that something happened, you know, what does that mean, because I felt like, in a way, our rights were taken away...our right to choose...the situation may have had to play out the same way, I would just rather we had been a part of that process, than for it to be decided and done and then, Exactly....and then to be told that I was going to be sent a letter.... It was like, tell me that you forgot to call me, I could have accepted that better than to tell me that you are going to send me a letter in the mail....this is such an intimate and personal process, and you've explained it to me that way and you have treated it that way all of this time and then to send me an impersonal letter at the end...that, you know, my babies didn't make it, was.... He told us that he would watch them,

that they were going to watch them, you know, for the next day and that's all we knew (Kate Interview 1, Lines 272-287)

How important communication is when the remaining embryos are unable to be frozen - educate us on where.... If we had no options at that point, then fine, we didn't have any options but at least we would have been included in those options, you know, and we were aware of what was happening and I was offended by that greatly because, particularly because every, like, at every stage they were calling saying, o.k. this is....so, I was offended and surprised that, you know, something....Particularly if we had had five embryos left, then I might have understood, you know, that two had worked out, that these were the last two so I guess my expectation was that, because these were our last two, that there would be some urgency or at least somebody would contact us and let us know. (Kate, Interview 1, Lines 295-301)

*Looking at the photos of her embryos, Kate described the loss of what could have been:*

Looking at those pictures although the pictures that I have are not of the two that were lost.... they gave me a picture of the two that were transferred but, you know.... just in my mind, those were our babies and so, a sense of loss...you know because I process this a little deeper, these are our babies, this is a picture of the union of my husband and I, although it is not in our normal physical form that we seek children, this is the early stages of it and I look at it as this is you [husband] and I. (Kate, Interview 1, Lines 699-705)

Excerpts from Kate's second interview 10 days after her embryo transfer:

I have recognized that it is done already (laughing) whether I am pregnant or not, that that is done...you know that's a fact right now and I am just waiting to find out, so kind of the up and down emotions are, you know, am I pregnant, am I not...I do kind of come to terms with I am or I'm not already. (Kate Interview 2, Lines 8-10)

So, for me, that kind of takes some of that anxiety out, whether I am pregnant. You know, sometimes in my mind, like wondering if I am pregnant, it's almost like that process is still happening, which I guess if I am pregnant, that will still be happening but the definitive answer is that's already done. (Kate interview 2, Lines 13-16).

*In the second interview Kate was surprised that she had been more emotional during her IVF treatment, she felt that all of her past losses have left her somewhat numb and prepared her for the possibility of a failed IVF attempt:*

It presents a reality to you that just because you're doing this doesn't mean it is going



to work [the past] Numbs you up, it numbs you some, to some extent, not that it doesn't hurt ...you have to gauge it like maybe the first time, like that first IUI [failure] was like a 10 for me you know, I was really, I'm going to say, I was sad. (Kate, Interview 2, Lines 619-624)

Yes, and so the next one [failure] was probably like, well, okay you know, it dropped down to maybe an 8 but then I think we did two, maybe three [more] I can't even remember how many. Yeah, you prepare for the dip, you know, it's like you know that dip might come, you know, you just don't know where you are on that ride and it's like you know that dip is in this ride and you're like, okay, am I going that route and am I going to get this dip or am I going to be on the up? (Kate, Interview 2, Lines 634-638)

*Kate felt she had more invested with her IVF attempt than her previous pregnancy*

*attempts:*

It [IVF] was more, well it probably was more an emotional investment because I had heard that, the IUI, you know, there was still another option....there was still IVF, something, you know...but we're at the supreme, the treatment.... also when finding out there were no eggs to freeze it was like, okay, this is the top, the end...so, probably yeah, more of an investment (Kate, Interview 2, Lines 237-241).

*Although Kate described she had been able to maintain a sense balance while she*

*waited, she also described the discomforts of waiting:*

I don't hang my emotions out on my sleeve, I'm protective...so, and I guess I'm trying to explain that I don't like that limbo...I don't like that hanging where, "oh my God, am I pregnant?" or "what if I'm not pregnant?"....Yeah, it's just exhausting every day...and I can't function.... Because [of] my thoughts... Yes, and so I don't want to be in that state because I still have to function, I still have a husband and responsibilities and things like that and, for myself you know....that's an uncomfortable state for me....If at all possible I try to avoid that and be realistic with, you know, where I am. (Kate Interview 2, 329-334)

*The fertility clinic phoned each woman after their transfer, but the call was not from*

*their primary doctor or nurse:*

They [the clinic] called me just to see how I was doing....now this is again, someone from downstairs in the lab which, you know was different for me and I asked her where my nurse is working because I got a little bit alarmed here, you know, are they still working there, and she is like, "yeah, they're here, I was just calling to see how you were doing" and she was like, "well, do you want to talk" and I said, no, you know because.... Like I don't have a connection to this person and I was like, "who is



this” you know...it felt like more just as a process call. Yeah, something like that versus like when I talked to like my treatment team, it’s like, oh, how are you? (Kate, Interview 2, Lines 468-476)

*Excerpts from Paige’s first interview four days after her transfer:*

*Paige describes how important the relationships were with her primary physician and nurse:*

I feel like I don’t have to worry about all the “what ifs” because somebody else is worrying about them, they know more about what is going on with my body than I do finally, and [nurse] and [physician] have been unbelievable, I mean, when I talk to [nurse] I feel like I am home, and it’s very comforting to understand that somebody else is paying attention to all the little details and all I have to do is take care of me. (Paige Interview 1, Lines 35-39)

We have accepted the things that we can’t control, we can’t control how I will respond to the medication, and I can’t control how they are going to make me feel, but I know that somebody else is watching what is happening and, if something isn’t going right, I don’t have to try and guess, somebody else knows and will tell me what the best thing is to do so, the things that I can’t control, I don’t feel like, I don’t feel like they’re out of control. Because somebody else is, and somebody else knows more about what is going on and I feel like I don’t have to be the expert and tell anybody else what is happening. (Paige, Interview 1, Lines 43-49)

Right and every time, you know, it doesn’t work from here on out, I’m not going to guess, “did they not do something, did they miss something?” whatever, that fear is gone, that sense of ambiguity with not understanding the process, or not understanding what is really important, is gone. (Paige, Interview 1, Lines 58-60)

*Paige described loss as she referred to her embryos that did not develop normally:*

“Oh no, those were discarded” and I was....it caught me off guard, it was like “but those were my babies” you know....I didn’t prepare myself for that response, but you know, they [infertility staff] waited, you know, and they said, well are you okay with that...and I said, yes, I just...that just surprised me...I was expecting the other answer and they said, no, they were not developmentally normal by day 5 to be candidates, so they wouldn’t have made it, even if this was a fresh transfer, they wouldn’t have made it. (Paige, Interview 1, Lines 90-95)

*Excerpts from Paige’s second interview ten days after her transfer:*

*Her past losses have impacted Paige, as she felt that she should be more positive:*

Maybe I feel like I’m just protecting my feelings or preparing for the worst until the

test. I'd rather not feel that way. I'm kind of like, you know, trying to kick myself out of it or something, and I keep saying, "no you have to be positive and you have to feel good and you have to" you know, build myself into doing better about things or whatever but it's kind of a, maybe I'm not going to let myself feel anything until I know what I can feel. (Paige, Interview 2, Lines 53-57)

In the car, I imagined a tiny little baby in a tiny little car seat inside my uterus traveling with me. It made me smile and remember that feeling of when it was real. And it scared me into thinking this will turn out the same way. I don't know how to feel like a pregnancy will last. Even if I get a positive test and everything is fine. I don't know how to think about the normal process, because we've only experienced loss. I don't want to undermine the joy and happiness that should be, only because of fear. (Paige, Journal entry 11-28).

*Paige compared the difference in communication with the clinic from before her*

*transfer to after:*

Yeah, that's hard. It's very hard, it's like I can't wait to come back here on Monday so that I can feel like I am reconnected. It's just...I did get a call on Monday from [a procedure nurse] ...so she called to check on me and see how we were doing...she just left a message because I wasn't able to answer the phone, and she said, "if you have any questions, you know, or anything just call us, we're here" and I'm thinking, oh yeah I can call her and then I'm kind of like, "oh, I don't have anything to call about" (laughing)...Oh yeah, it's like all of a sudden it's like [communication] every other day and now...And now it's like, nobody is in control, kind of like... I kind of feel like we're all just waiting on the sidelines and nobody is on the field. There is not...it's like half time. Half time and no marching band (laughing). Yes, waiting to get this show on the road again. (Paige, Interview 2, Lines 96-112)

*Paige described the vulnerability of having no control:*

And I have to figure out how and where to trust...whatever needs to happen is happening either way. (Paige, Interview 2, Lines 207-208)

*Excerpts from Michelle's first interview three days after her embryo transfer:*

*Michelle described her communication with the clinic when she wondered how many embryos could be frozen after her transfer:*

Seven eggs fertilized. I haven't heard back since my transfer how many they were able to freeze, which kind of surprises me because [clinic] has been so good at communication. (Michelle, Interview 2, Lines 28-30)

*Reflecting on communication, Michelle suggested it would be helpful emotionally*

*for the clinic to contact women near the day of their pregnancy test:*

You put them in there, you should know the next day if they're stuck, you know. So that's just frustrating and one other thing about this is, from the period of retrieval to transfer, they called me every day and told me how...they didn't call me every day they called me every other day, and told me how my "babies" were doing and I really appreciated [it]. (Michelle, Interview 2, Lines 145-148)

Leading up until pregnancy day may be a good time to contact [a woman] because doubt peaks very high. Especially yesterday, I was so negative, I had the worst attitude and I think maybe, thinking about it now, maybe it was the last day, the last real day, I mean, you know, so I just thought that I'm just gonna be realistic and... Yesterday was the worst, most negative day...that I can recently remember, leading up to this. (Michelle, Interview 2, Lines 69-73)

*Michelle's vulnerability was expressed when she identifies herself as being "one of those" statistics:*

The whole thing, I mean my, there are no problems in my family, my mom, my sister. I have a lot of close girlfriends from college who never had a problem. So, it's just hard for me to think of the small statistics that have trouble conceiving but I'm one of those. (Michelle, Interview 1, Lines 71-73)

You are so emotionally involved in this and emotionally attached to your doctor, and his first impression was wonderful. He answered every question, explained everything So, and that was the first of July, I believe, when I first met [doctor], and I cried for two days, thinking this wasn't happening to me (crying)...my husband took it a lot better than I did, "Michelle it's just a fact of life, it's something that people go through" but I just took it a lot harder because I'm a good girl...you know, I'm not in trouble, I'm not a smoker (crying), I have an occasional glass of wine but why am I the one that can't get pregnant? Um, so, I guess the hardest part was first being diagnosed. It so great to have a doctor that you can trust and that you just feel comfortable with and I had that connection with [doctor] he is very intelligent and you can tell when he talks to you that he also could lower it down to my standard and tell me, in a normal person way, that you know what our problems were. (Michelle, Interview 1, Lines 151-162)

After hearing she was only able to freeze two embryos Michelle shared:  
Only being able to freeze only 2 eggs [embryos] is worrying me and making me feel incompetent. (Michelle, Journal entry 12-4).

*Michelle described the comfort she felt from her relationship with her doctor and*

*nurse:*

When [husband] and I left we just both looked at each other ...and talked about how fortunate we are to go through this, to have such a great person ..., his [doctor] staff [nurse] were wonderful and very, just whenever I need to call them for anything in the past few months, they will get back to me right away and that is really special because it is just such a hard time, I mean especially for me, I want to have a connection. I know [doctor] sees a million patients, I know he has hundreds of patients that he treats. To be honest, I don't even know if he knows my name and [husband's] name without looking on the chart but he makes me feel like [I am]. (Michelle, Interview 1, Lines 163-169)

*Michelle described social vulnerability and remembered how she felt when she heard both her sister and friend were pregnant:*

When they told me that they were pregnant, I kind of had a problem with that, I was more envious or jealous but, now that they have these babies, I'm so happy for them, there is not a bit of me that is jealous or upset that they have two babies, or three healthy babies, and I can't even get pregnant. And, I can afford to do this. They are the ones that can't afford to do it so, which is snobby in a way, I know that that's not fair to them. (Michelle, Interview 1, Lines 214-218).

*Excerpts from Michelle's second interview 12 days after her embryo transfer:*

*Michelle said that seeing children or pregnant women was emotionally difficult:*

It doesn't consume me but...I feel I do that because, it's not fair for me to judge, even if it's a person walking down the street, it's not fair for me to judge them and I do. (Michelle, Interview 2, Lines 756-759. I don't like it. I wish that I could be more forgiving or, I don't know, less judgmental, but I can't, I just can't, it's hard. (Michelle, Interview 2, 765-766)

*Michelle wondered, "Why me?"*

I find myself thinking about that but gosh, I don't want this to sound in a bad way, but the people that do have a lower income or can't physically or emotionally support kids and here they go, not even planning it, not even thinking about it, popping them out, one after another and it's so easy but yet I have a problem and it's not fair for me to be judgmental like that but that's where...and it's people that I don't know personally, it's just, you know....The emotions, the physical, the expense of it....Yeah, why me? (Michelle, Interview 1, Lines 231-239)

I didn't have so much emotion invested into it like I do now. I mean like I was going to keep a journal anyway but I started keeping this journal in 2007, I mean not every day, I just kept thinking "why am I the one" you know and I know I can't be like that. I know I have to be positive about it (Michelle, Interview 2, Lines 745-748)

*Michelle acknowledged she had little control:*

Yeah, it has been hard and it's not necessarily I guess that I needed a plan because what can I do in the retrieval....nothing that I have done or can do...but, just to know that that's the next step and then this is going to be the next step after that and there's this time frame. That's been a little hard on me to just really drive here every day or every other day, driving in and trying to get blood work or get this and it's like (sigh)....Right, now I'm in the waiting....Yeah, I don't like to wait because there's not another step that I have to do...well, I take that back, the next step is pregnancy test Well, the whole thing's been out of my control really, I mean, I do the shots, you know at 7:00 but it's up to my body, what's going on inside of me to react. (Michelle, Interview 1, Lines 599-613)

*Vulnerable to information, Michelle said you can find sources but they may not be accurate:*

... I started reading these books, and the books and the internet were great but there is also that side to them where, you know, you can get anything you want, whatever you want to hear, whatever you want to read into, you can get it from the internet. (Michelle, Interview 2, Lines 22-25)

*Michelle realized she had no control over the outcome:*

Yes, when that transfer went in, God knew what was going to happen. (Michelle, Interview 2, Lines 707-712) Whether I was rubbing my belly or thinking these positive thoughts, I don't think that had any impact on whether these babies were going to survive or not (crying). (Michelle, Interview 2, Lines 714-715)

### Waiting in Anticipation

The women waited in Anticipation for the unknown: finding out if the result of their pregnancy test was either positive or negative. The subtheme of Anticipation was expressed, as the women desired closure regardless of the outcome. They began to anticipate how they would respond to the phone call from the clinic, and started to imagine the setting in which they would hear their results. Preparing for their possible outcome the women have already begun anticipating their next step in their pursuit for motherhood.

During the first interview, in the early days post embryo transfer, the women shared their hopes of planning a nursery and spoke of their embryo(s) as a child or baby. They anticipated the joys of pregnancy and motherhood. By the second interview the mood was more grim as pessimism grew and the women focused on the end result - finding out if the test is positive. Their Anticipation changed from using expressions baby, child, and nursery to I don't feel pregnant and I need to prepare for negative news.

Waiting in Anticipation included preparing for the possibility of a negative outcome. They described experiencing self-protection and were already considering the possibility of another IVF cycle. From the data emerged a fear that they would return to the pain they had experienced from past disappointments. The women anticipated the future as they wrote and directed their life script. They imagined their joy or disappointment as their futures unfolded in their minds. The women acknowledged their need to be positive, and do all they can, in order to curtail any future self-blame over a negative outcome.

*Excerpts from Sarah's first interview three days after her embryo transfer:*

*Sarah waited in anticipation of her pregnancy test results as she described her uncertainty about the future:*

I feel like it is just, it's just the beginning of the, I don't know, I guess there's a few feelings but I feel like it could be the very beginning of a beautiful thing. It could be the beginning of a long two weeks wait that may not have a positive result to it...I know that I am going to be more stressed out as it gets closer to that date and I am prepared for that (Sarah, Interview 1, Lines 111-114).

*Sarah shared that she will continue to wait in doubt even if the first pregnancy test is positive:*

Even with the first pregnancy test for this one [IVF cycle], I am not going to be, o.k., until we're in the clear (Sarah, Interview 1, Lines 105-106).

*Excerpts from Sarah's second interview 11 days after her embryo transfer:*

[I feel] just tired, plain tired, and it has mainly been just from external activities but, I am just definitely ready for this week to be over and I think knowing that “yes or no” answer and hopefully, the tiredness, will have resolved itself if it's just from external stuff and not from, you know, being pregnant and everything, but definitely I am ready to just know, “yes or no.” (Sarah, Interview 2, Lines 6-9)

*Sarah's described her desire for closure:*

I am expecting, I am hoping if it's positive, to have that relief again (crying) and then build up to the next, you know, the next time and then build up to that same cycle, that's what my hope would be for Monday as far as short term but, definitely, yea, definitely since our last interview I have been building more towards just wanting to know, either way, but it's probably a little bit more than the level that it was at after the embryo transfer (Sarah, Interview 2, Lines 57-60). I am planning on coming in first thing Monday morning [for pregnancy test] and getting it over with (Sarah, Interview 2, Lines 64-65).

*Sarah described her protective experiences as she anticipated her response to the test*

*results:*

It's mainly physical and I think there is part of me that is not wanting to give in completely to the fact, it is such a complex thing. It's like I don't, because I don't want to be set myself up for disappointment, I don't want to completely believe that there is a baby or there might be babies, to think of them as babies, because I'm, there's that scared part of me that thinks, what if it's not? What if I'm not pregnant? And it's weird to think well if I'm not pregnant and I was thinking that I have a human, a baby, growing. It is so complex because I did feel that right after the transfer I felt very protective and like...and now it's like I am waiting for that answer to fully commit myself, because I don't want to be just heartbroken, so, I guess it has changed (Sarah, Interview 2, Lines 94-100).

I can just picture the heartbreak of hearing a negative result next Monday, and it makes me cringe. Lots of prayers and my plan is to take it day-by-day! (Sarah, Journal entry 8-10)

For me, it's that, just, you know, it's that thing in the room, just the possibility of not being pregnant and so, you know, it's just too great and I think my personality too, I always, always am mentally prepared for the worst so maybe that's a very tough, not that I prepare for the worst and dreading everything, no it's just so I won't set myself up for a huge heartbreak, a huge disappointment. So, I'm ready to know (Sarah, Interview 2, Lines 188-191).



*Excerpt from Beth's first interview three days after her embryo transfer:*

*Beth shared that the tension had been growing since the embryo transfer and even if she heard the first test were positive she anticipated protecting herself in case the remaining pregnancy tests were negative:*

And I have endometriosis too which, you know, that's tricky because there is higher incidences of miscarriage with that, I guess it's hard...[to] realize that even the first results, you know, don't [guarantee]. [I] need to guard myself a little bit around that (Beth, Interview 1, Lines 135-137).

*Excerpts from Beth's second interview 11 days after her embryo transfer:*

*Beth describe why she needed to administer a pregnancy test, two days before the one her scheduled at the clinic:*

I think I just needed to prepare myself, one way or the other and, you know, I have a friend coming in to spend the weekend with me today and so I think I just kinda wanted, if it was going to be negative, I wanted to go ahead and see that and kind of cope with that a little bit and I was fully expecting it to be negative. I was very surprised when I saw a positive result and I guess what will make it even harder today if the blood test is negative (Beth, Interview 2, Lines 21-24).

I mean I am definitely thinking a little bit about that, you know, I think there is anxiety there because I know that if we have to go back a second time and do this, that my doctor will not want me to place just one as he did the first time and, so when I think about those three, it makes me anxious because I know now if we go back to that, you know, if this one is not successful and we go back to that, that indeed I will have a much higher chance of a multiple. (Beth, Interview 2, Lines 139-143)

*Beth anticipated that she may be repeating her IVF cycle:*

Since we knew we should have at least one [embryo] to freeze, we decided it was worth my peace of mind to go with transferring one the first time. If this doesn't work we will consider doing more in the future (Beth, Journal entry 8-17).

*Beth described that she was ready to hear the results of the pregnancy test and began to anticipate waiting for the second pregnancy test if it were positive:*

I'm feeling more hopeful today I think part of that is because I will know one way or the other, and I feel like I will have more clarity at the end of today. I will know, o.k. I either need to grieve a little bit and move forward, or I can, you know, begin to



celebrate somewhat. That's what I'm anticipating although at the same time knowing that, o.k., three days later I'm back again [for the second of three in a series of pregnancy tests]. I may find at the end of today that if the test is positive and I'm coming back, that's it three mornings of waiting (Beth, Interview 2, Lines 337-341). I think I am just ready for closure today (Beth, Interview 2, Line 355).

*Beth described waiting in anticipation for an unknown result:*

I'm dreading the pregnancy test on Friday. I'm afraid that a negative result will be harder to deal with than I originally thought. I have company coming to stay for the weekend and an engagement Friday night, so there won't be time to grieve (Beth, Journal entry 8-25).

*Beth wondered why she felt "disconnected" and at what point it would feel real:*

Everything that I had heard about these two week wait was that it was so challenging and so difficult and, while there have been challenging points, it hasn't been, you know, unbearable for me, and, so that was a surprise for me but as I said, it was just a surprise that I really thought that the minute that they did the embryo transfer, I would be feeling, "Wow, my baby" and all that, and I just have not come anywhere close to that and still I'm not there so I'm just wondering, you know, even if the next three blood tests are positive and all that, I'm wondering at what point will it seem real? You know, does that happen at the first ultrasound, or just when does it really begin to hit you? (Beth, Interview 2, Lines 425-430). I don't think that the embryo will become a baby in my mind until I know whether the pregnancy test is positive. And, even then, I'm not sure that it will. (Beth, Journal entry 8-23).

*Beth hoped there were embryos to freeze because she anticipated the likelihood of*

*repeating IVF:*

I did call and leave a message at [the fertility clinic] to find out how many embryos they were able to freeze, so emotions may hit if they call and say it was only one. I'm really hoping that they can freeze three or four at least. Then, if this round doesn't work, I'll know I have a good chance with a frozen embryo transfer before having to go through stimulation again...I know that it takes many women more than one round of IVF before conceiving (Beth, Journal entry 8-18).

It just struck me that this time next week I'll know the result of my first pregnancy test. I'm already starting to think through what we'll do if it's negative. It's good to know I wouldn't have to go through stimulation again next round, but I don't think I'd be up for frozen embryo transfer quite yet (Beth, Journal entry 8-21).

*Excerpts from Julia's first interview five days after embryo transfer:*

*Julia anticipated what it would be like to hear a negative pregnancy result:*

You know what you start thinking about too when it's this time of year [fall] you start thinking of the holidays and you start thinking about, well how am I going to feel if I'm not pregnant during the holidays, and most likely so you start thinking, wow I've got to get through the holidays to get through to try again, I think that makes it harder too this time of year (Julia, Interview 1, Lines 294-297).

I know next week if I hear a negative, then now it's going through this whole process again. When you are trying naturally...you try month by month. This time, it is definitely harder and you have the financial burden of it, which is tough too. And I think that doesn't help because you're thinking, "well I just spent \$13,000 dollars on this, if I have to do it again, it's \$13,000 more and, Oh My God, if I have to do it again (Julia, Interview 1, Lines 316-322, consistent with her Journal entry 9-26).

*Julia described her dominant feelings while she waited for her pregnancy test:*

Stinks, it stinks! It's unknown, definitely the unknown and the waiting (Julia, Interview 1, Lines 503-504).

*Excerpts from Julia's second interview ten days after her embryo transfer:*

Maybe it's the whole disappointment like I don't want to be so disappointed that day, so, if I accept it now, then it won't be as disappointing and if I hear that I am pregnant, I will be floored (laughing) (Julia, Interview 2, Lines 92-93).

I feel like I'm over the first IVF, kind of except tomorrow's pregnancy test, it's done. It's in the past, I did it, now we have to do it again, so again, I feel like it's consistent still with, I'm over it (Julia, Interview 2, Lines 445-447, consistent with her Journal entry 9-27).

*Julia accepted that she will endure a second IVF cycle and anticipated that*

*experience will be worse than this one:*

I would be pleasantly surprised if it ends up being okay. Now I'm sure this second go round [of IVF] is going to be "harder" and then I'm gonna start feeling more emotions. (Julia, Interview 2, Lines 542-543).

*Julia desired closure:*

I feel like I'm like, o.k. when's my next visit to talk about when we can do this next? Yep, I feel like (the pregnancy test) it's a formality I have to go through that's exactly how I feel right now and I almost feel, why can't they just take my blood now, what's going to make a difference if I do it in eight hours from now, why don't they just take it...you know, while I'm here but...yeah, it's a formality, right now. It definitely will be closure because there will finally be the answer because I really

don't know, as much as I'm saying it's going to be negative, you don't truly know (Julia Interview 2, Lines 452-459).

*Julia planned for the unknown:*

I was thinking how might I take this call of hearing whether it's positive or negative and I already know I'm going to forward my phone to my cell phone, I'm getting the call sent to my house, or when I see the call, in case I am on the phone...bottom line, he's [my husband] going to answer the phone...I actually for the first time like I want him to take that news because I'll get it from him better, because I don't know exactly how I will react ... what I'm going to have him do is ask, because this will help assure him, when can I come next? When can I come in to have that next visit to know... the next steps ? (Julia Interview 2, Lines 463-470).

*Excerpts from Kate's first interview four days after her embryo transfer:*

Today I feel stronger though and I am ready to know one way or the other. (Kate, Journal, 11-22, 6 days post transfer.

I am focusing my thoughts on accepting if I am not pregnant....There are certainly lots of children who need a good home through adoption. Something to think about. (Kate, Journal entry 11-23)

At this point I just want to know either way as I am tired of the unknown. (Kate, Journal entry 11-26)

*Kate anticipated negative news:*

We had gone through the IUI so that realism of it may not work, you know, you know I have tried real hard...I like to pride myself on being a real realist, I like to deal with the reality and you know, prepare myself and then hope for the best, you know...so I am very realistic that it may not work...Will it hurt my feelings, will I still feel all the same feelings...probably, yes...but I guess coming from those past attempts that weren't successful, it emotionally kind of prepared me that, you know, this process may not work either. (Kate, Interview 1, Lines 201-205)

*Kate planned for the future:*

What the odds are you know, what is the next step, what is the next process, and then it helps me deal with it and cope with it better because the unknown is very difficult for me because it leaves so much gray area....and I keep saying to myself, well, if you're pregnant, I guess none of this will matter you know, so...but we had that piece of unknown, besides this lingering unknown (Kate, Interview 1, Lines 366-373)

I have prayed on it, my husband has prayed on it and we believe that if this is God's plan, then it will be. It is just emotionally, I am preparing myself I guess, you know,

wrapping my mind around it, being able to think about living my life if I'm not pregnant and if we don't have the opportunity again to try to get pregnant, you know, how to move on with that, how to accept that, how to be happy with the blessings that I have, you know just all of those things is where my mind is now (Kate, Interview 1, Lines 597-602)

I do think about that I am getting older...so that's my barrier right now...not even the emotional part because I had already prepared in my mind that, you know, it may take a second time, you know, or a third time...it was already explained to me that there is no guarantee and so I understood that going in but, it is hard, to have that financial barrier there. (Kate Interview 1, Lines 607-612)

*As the pregnancy test date neared Kate grew more negative:*

Yeah...so, I think as days go by, you know, I lose anxiety and it's more or less, okay. I will just find out and what I have been trying to think about how am I going to handle this if I'm not pregnant, what is that conversation gonna be like between my husband and I and, you know, is this it or are we going to try again, would we look at adoption, you know, those types of things (Kate Interview 2, Lines 23-26).

*Excerpts from Kate's second interview 10 days after her embryo transfer:*

*Kate awaited resolution:*

You know, it's not questioning but you know, I want to know, resolution...I guess a resolution...resolution would be one of my words...I just want to know. (Kate, Interview 2, Lines 40-44).

*Kate accepted she was not pregnant and she anticipated how she would handle the*

*test results:*

I don't think my anxiety is going to peak, so I don't know if I am necessarily looking at the results as the storm any more, I have more or less again accepted that today: I am number one - not pregnant, you know whether it is today, tomorrow, or Friday, you know, it doesn't matter...I believe that, you know it will be emotional for me but I don't think it will be the 8 [stress level] that it was to find out that we didn't have any more eggs...I guess, preparation prepares that foresight, you know, helps me stabilize my emotions and deal with things better which is probably why hearing that they are not expecting that with everything going good, that we didn't have the eggs anymore, the embryos anymore was like, okay, well that was something that I hadn't anticipated, it was a shock, it came out of nowhere and that took my emotions way up higher than normally would, had they been shaky all along.....Yeah, so now it's like, there is no unknown variables no...so I don't necessarily see the test as the storm any more although it could very well be as much as I like to be aware of my feelings and my thoughts, I do surprise myself sometimes. (Kate, Interview 2, Lines 270-282)

*Excerpts from Paige's interview four days after her embryo transfer:*

*Paige anticipated her pregnancy result:*

And the fear of how am I going to handle it if it doesn't work, because we know what that feels like, we know how it's going to feel to have that negative test, knowing that they put a viable embryo inside me (Paige Interview 1, Lines 130-132). This is the closest I have been to being pregnant....so, it's that preparing myself and [husband] too (Paige, Interview 1, Line 134).

It's more the, like the guarded anticipation, just I don't want to get too excited, just kind of keeping my feet on the ground and keeping me in touch with the reality of what could happen. And sometimes I'm kind of like, "don't let yourself think like that, you're going to be negative" and sometimes I'm kind of like, "you know, you have to be realistic" because otherwise you're going to get caught off guard and it's going to be worse, it's going to be even worse...and for now I don't want to get my hopes up and I just...I feel like I want to expect the worst because I know what is going to happen but then, on the other hand, I'm kind of like, "you can't think that way." (Paige, Interview 1, Lines 502-510).

*Paige worried that her negativity would impact the outcome of the test:*

It's interesting you know, there is part of me, I don't want to get too excited because I don't want to crash harder but I don't want to not enjoy it because there is that excitement. And I don't want to be negative all the time because, if there is anything you can do to help the situation, if it, the test is negative and it's going to be your fault because you weren't happy about it. (Paige, Interview 1, Lines 517-521)

And if I have a bad vibe, does that mean it's not going to work....Yeah, and even, you know we know that no matter what the outcome is, we have come this far and this is only our first try and it is not the end of the road. So, there is plenty more for us to try (Paige, Interview 1, Lines 517-527)

I think that understanding that we had been through it twice and we can get through it again, we've had three failed IUI's so going for further pregnancy tests after IUI's is not really going to really be different than going through you know...it's the same process, you have a procedure, two weeks later you go for a test, so that process is not unfamiliar. The emotional process of understanding that they put a viable embryo inside and getting a negative test, that's new. (Paige Interview 1, Lines 620-624)

But knowing that no matter what, we have support in the next step already ready, it's already planned but if the test is negative, we meet with [doctor's name]. And you go through everything altogether and then we talk about where to go but mostly making sure you understand and have all the answers that you need so somebody is ready and waiting regardless to give us any answers that we need and I need any support,

whether it's statistical, whether it's emotional, or anything...all that is right here and it's ready and waiting. And that is...that relieves some of the anxiety towards the aftermath. (Paige, Interview 1, Lines 633-638)

*Excerpts from Paige's second interview 10 days after her embryo transfer:*

*Paige anticipated the values of her pregnancy test:*

If it's negative on Monday, you know, if it's a big fat zero on Monday, like if it is absolutely zero, then it's just negative and whatever." If it's like 20, then it's kind of inconclusive. If it's you know, 5000, you know it's going to be interesting...I think there might be something more going on. (Paige, Interview 2, Lines 165-168)

*Paige planned for the day her pregnancy test:*

We talked a little bit about how we are going to handle Monday, like they're going to call me in the afternoon, we're not going to be together, I'm going to find out first, what do you want me to do? Do you want to wait until we get home, to like...so I can tell you in person and he is like no, I want you to call me as soon as you know, even if he is in class, he will still answer his phone. (Paige, Interview 2, Lines 505-508)

*Excerpts from Michelle's first interview three days after her embryo transfer:*

*Michelle sought information on the internet as she tried to plan for the future:*

I mean it [internet] is helpful but I guess what I'm looking for is what comes next or what am I suppose to be feeling and you know, really, what comes, what happens after I find out that I'm pregnant? And it's all so specific to the person but, like even here, once I find out I'm pregnant, what do I do, you know. I mean, is this it, am I done with this or when does my gynecologist get involved in this, you know. (Michelle, Interview 1, Lines 399-411)

*Michelle anticipated receiving the phone call of her pregnancy test results:*

I think, the way that I know myself is I will get the phone call and hear it, "okay, thank you" and then I will have to sit there and take it in. Yeah, then I will figure out what to do. I don't know, I don't know. (Michelle, Interview 1, Lines 521-524)

I think about, I think that's probably how I handle it and you know I'm not thinking one way or another, I mean, obviously I want to think positively but then I'm also afraid if I think I may have two babies in here, or even one, and I don't, I want to be prepared for a big crash, you know (Michelle, Interview 1, Lines 526-528). And trying to be positive but cautious. (Michelle, Interview 1, Line 530)

*Excerpts from Michelle's second interview 12 days after her embryo transfer:*

*On the day of her pregnancy test Michelle shared her feeling about the possibility of a future IVF attempt:*

I just, I don't know what I'm thinking, I'm just so anxious to get the results and I'm prepared if it's not what I want, I'm prepared that...I don't know how soon I'll want to jump into the second cycle...more anxiety today. I really haven't had a positive or negative thought, well, maybe more positive today I think, more just surreal, ready for today where I'll find out. (Michelle, Interview 2, Lines 570-579)

*Michelle anticipated repeating IVF:*

I've been thinking about this for four years and, you know, hopefully this cycle will work and, if it doesn't, then you know, we'll get through it because I know we will, we've been let down before and I know, you know, it's not my last, you know, cycle, I have three more. (Michelle, Interview 2, Lines 603-605)...because I still have three tries left. After those three tries, then we may think about [finances]. (Michelle, Interview 2, Lines 435-438)

*Michelle has not shared with her husband that she has taken a home pregnancy test and planned how she would share the results:*

I haven't told him [husband] that I took it. Because...it really hurts when it comes to that part of it because for so long I have been wanting a special way to tell him (crying)...Yeah, yeah because I want to be home. I don't think they [clinic] will call me before 2:00, so I have stuff to do and plus [husband's name] is not getting back until late today so I wanted to kind of occupy, if I go straight home which, now I may do, I might just walk around the mall just to not think about it and not to be home. I'll probably be home around 2:00 and, if I don't hear by 4:00 or maybe 3:30, I'll call them and, you know, "what's going on" and.... it's a positive that I'm expecting, I haven't really imagined if it's not, but obviously I will....And then get ready to tell [husband's name] I know he's going to call me, "have you heard from the doctor" and I don't know how I'm really going to handle that yet because I want him to come home and I have these little baby shoes that I bought and I have way too many shoes, so I was going to say, I bought a new pair of shoes and he's going to roll his eyes and say something sarcastic and I'm going to pull them out and they will be these little baby shoes and he's going to go bananas but I don't know how I'm going to get to that point because he's going to get home and I can't be like, "hey, come here, sit down", you know, I don't know. (Michelle, Interview 2, Lines 578-601)

*Michelle was ready for closure:*

Because that's when either these embryos turn to babies or these embryos disappear, so yeah, closure. (Michelle, Interview 2, Lines 610-612).



This may sound negative, but I don't know if I'll ever be able to know, you know, I don't know if I'll ever, if this will ever come, if I have to go through all these four cycles, I don't know if we'll go through another, I don't know how many your body can actually go through. I don't know, you know, I don't know, I can't see into the future, I can't see what would happen. I mean, I'm really excited and I really, really want this. I'm ... I'm ready. If I get the call and they say, "I'm sorry", it's going to be horrible but I have a good support system. Because I think I would be fooling myself if I kept thinking "positive, positive, positive, positive" and then, I get the call and, here it is 12 days and for 12 or 13 days I've been going car seat shopping and going nursery shopping. (Michelle, Interview 2, Lines 724-734)

I know that if this doesn't work, that is also in the back of my head, like I have to get psyched up for this. I don't know how long you can wait until you can start your next cycle of IVF but it's something that you definitely have to emotionally and physically get psyched up for and ready for. (Michelle, Interview 2, Lines 127-130).



## CHAPTER 6

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS

#### Discussion and Interpretation of Results

“Lacking the charms of boredom or desire, waiting is neither interestingly melancholic nor despairingly romantic. Between hope and resignation, boredom and desire, fulfillment and futility, waiting extends across barren mental and emotional planes. Those who wander in it or through it find themselves in an exemplary existential predicament, having time without wanting it”. (Harold Schweizer, 2008)

Schweizer’s (2008) meditation depicts the unpleasantness of Waiting and describes a place of emotional discomfort. Likewise, when you enter into the life worlds of the women in this study you enter a complex and sometimes-uncomfortable place of dreams and losses. It is a place filled with a myriad of emotions - Hope, Despair, Anxiety, Doubt, excitement, and fear. Often joyous and at times sad – it is the place in which the women Wait.

The women in this study described their experiences with infertility and IVF in a heartfelt and compelling manner. Each of the women’s descriptions was unique and yet they shared a common experience of embodying an embryo and Waiting for the results of their pregnancy test following their embryo transfer. These women’s stories varied by medical and personal history which led them to this point of time during their IVF; but once they arrived at this time their experiences shared a connection.

Throughout the study the women remained unwavering and dedicated to their desire for motherhood. Although at times each of the women may have Doubted if the IVF attempt would be successful or if they should have tried IVF sooner, they never Doubted their choice to pursue IVF in order to become pregnant. The women’s words were clear as they described accepting the possibility that their current IVF attempt may not work

and their expectation to repeat the treatment. In this study, some of the women became parents and some did not; but each entered Waiting with the Hope of becoming a mother.

Chapter VI includes an interpretation of the research findings. A review of the overarching theme and sub-themes which emerged are addressed along with the implications of the findings related to education, practice, and research. Limitations of the study are also included. Van Manen's (1997) Four Existentials, or fundamental life worlds, provide a lens to facilitate interpretation of the findings and particular attention is given to the discussion of lived body or corporeality. Included in this chapter are the pregnancy results of each of the participants.

This phenomenological study explored the experiences of six women during their IVF treatment. A thorough analysis of the women's descriptions brought forth one overarching essential theme and eight essential sub-themes. The analysis revealed that the number of days spent Waiting and their circumstances did impact the women's experiences. The themes emerged as essential to understanding the lived experiences of the women who received IVF treatment from embryo transfer to determination of pregnancy and described what it was like for women to go through these experiences. The analysis revealed the overall theme of Waiting is essential to the phenomenon and offers a new way to understand the meaning of the women's experiences during this unique time. Some of the sub-themes were consistent with and reinforced current literature, while other sub-themes offered an opportunity to consider this phenomenon in a new light.

The data provided rich, thick descriptions of the women's stories and offered both researcher and reader clear insight into what it is like for the women to Wait for the

results of their pregnancy test following their embryo transfer. The six women were candid as they shared their stories. Each of the women verbalized that the reason they participated in the study was because they wanted to help other women who are experiencing IVF and that they were interested in the study's findings. Additionally, the women expressed that they found participating in the study was both cathartic and therapeutic.

From the analysis of the women's words it became clear that Waiting was the dominant theme and how the women experienced Waiting was best illuminated by eight essential subthemes: Hope, Doubt, Anxiety, Awareness, Desperation, Isolation, Vulnerability, and Anticipation. The meaning of the women's experiences in Waiting was captured in the eight essential sub-themes. Often interwoven, yet individually identifiable, the sub-themes offers a distinctive opportunity to ascribe meaning and understanding to the women's experiences.

The overarching theme of Waiting offers a new perspective of what it is like for women to experience this phenomenon. When considering women who undergo IVF and the days following their embryo transfer it is far too easy to regard Waiting as passive. In contrast the women in this study revealed stories which are rooted in a complex array of emotions and actions, and encompass their consciousness of how they Waited for results of their pregnancy test. The temporality of the women's Waiting is addressed in the eight subthemes which bring forth Waiting in perspective of the women's past, present, and future.

The concept of Waiting has not been considered in previous literature to help illuminate women's experiences with IVF. Ferguson (2009) used Waiting to describe the

experience of someone who has found a lump and is Waiting for their biopsy results. Although the analysis of this study shared some similarities with Ferguson's subthemes of Hope and Despair, the life circumstances of this phenomenon and analysis differ substantially from Ferguson (2009) as the women willingly chose to have IVF and they enter Waiting intentionally. Waiting is a theme that the women have not asked for in and of itself, but it is a necessary part of their IVF experience. Waiting is transient and when you use the word Waiting it is understood that you are Waiting for something - motherhood.

The literature establishes that women with fertility problems reported a higher prevalence of negative emotions in the periods during which they had been trying to conceive (Oddens, den Tonkelaar, & Nieuwenhuys, 1999). Studies indicated women ranked Waiting for the outcome of treatment and a negative pregnancy result as the most stressful events during IVF (Baram, Tourtelot, Meuchler, & Huang, 1988; Connolly, Edelmann, Bartlett, Cooke, Lenton, & Pike, 1993; Boivin & Takefman, 1995). The current study offers a new perspective on what it was like day-by-day for the women to experience Waiting for a pregnancy result following embryo transfer and prior to determination of pregnancy. This study reinforces the need for health care providers to understand the stress perceived and experienced by women during infertility in greater depth and the need for health care workers to intervene appropriately with education and counsel during this most arduous time.

Hope emerged as a subtheme of Waiting throughout the women's stories. Descriptions of Hope were evident in both their interviews and daily journals. The presence of Hope as an essential theme is reasonable to consider – as it is the women's

Hope for a possible pregnancy that has brought them to IVF. The women described the work of Waiting in Hope as a rollercoaster, often between Hope and Doubt, using words such as of ups and downs, highs and lows, or peaks and troughs. The presence and description of Hope is consistent with the previous findings (Olshansky, 1988; Kneqden, 2003). Hope was the dominant force which motivated the women to go through IVF.

This study broadens the current knowledge on Hope and IVF treatment by considering Hope as a relative dynamic experience, never felt by the women in an absolute or pure sense. The analysis revealed that Hope is a common theme throughout the IVF procedure. The analysis also revealed that the women were unable to feel Hope without a sense of Doubt. Hope was never expressed in absolute terms; it was relative and often transient and fleeting. The theme of Hope was described not only in day-to-day experiences throughout the week but also moment-by-moment as revealed within a single thought or sentence. The analysis also revealed that even when the women believed they were not pregnant they still expressed a sense of Hope. No matter how the women experienced Waiting, overall they never gave up Hope in the face of their circumstances, holding out until the last possible chance – receiving the results of their pregnancy test.

In this study Hope was the excitement the women expressed about the potential for a positive pregnancy test; it was the belief that IVF would be successful. Hope is present in the women's words throughout the phenomenon under study and emerges as a rollercoaster of ups and downs throughout the data. The women are realistic about the finality of their pregnancy test; but, Waiting in Hope was so powerful a sub-theme that when the women felt most pessimistic it reappeared with the slightest incitement. Even women who thought they may not be pregnant were Hopeful when they felt they were

progressing towards their goal of pregnancy. Progress was experienced as perceived signs and symptoms of pregnancy or administering their injections.

From the analysis emerges a cycle of Hope and Doubt, similar to cycles of Hope and Despair which have been documented by Olshansky (1988) and cycles of Hope and disappointment for infertile couples by Imeson and McMurray (1996). This relationship was best captured in the women's description of "cautious optimism." Hope was highest upon the successful transfer of their embryo(s) and also when the women were informed how many non-transferred embryos could be frozen. The interaction between Hope and Doubt peaks and troughs throughout the two weeks and was fueled by the each woman's perceptions of their physical symptoms of pregnancy. For example, cramping was perceived as a positive sign for some women and negative one for others. The data indicated that Hope lessened in intensity and frequency as the pregnancy test neared. Hope and Doubt interacted in an inverse relationship. When Hope was raised Doubt was lower and vice versa. The cycles and patterns of Hope and Doubt were present throughout Waiting. After having suffered many losses related to infertility and failed pregnancies, most of the women were at a high point – very Hopeful and excited in the first interview, because the transfer was successful and they had an embryo(s) to transfer. Also during this time Hope tapered if something occurred during the transfer which was unexpected or unwanted, such as when Julia, who only had one embryo transferred, and Hoped for two, leaving her none to freeze, or by Kate who did not have any embryos survive to be frozen.

The first interviews occurred during the 2-4 days immediately following their embryo transfer. Women who participate in IVF have already spent harrowing years with

numerous losses trying to become pregnant, and the news of having experienced a healthy embryo(s) transfer yielded great relief and Hope. They were one-step closer to their dream of becoming pregnant. This was apparent in the woman's words when they referred to the embryo(s) as a baby or possible child, and felt that motherhood could really happen. At that time the women were adapting from having spent a couple of days on bed rest and, with little distraction, they found themselves alone with their thoughts. Coming from the high Hope of their transfer, Doubt crept in and the women reported Hope began to lessen around Days 5 or Day 6 following their transfer or midway during Waiting. Upon hearing news of their embryos being frozen the women felt excitement and a renewed sense of Hope that their IVF attempt would be successful – a positive omen. Perhaps it was in response to feeling a sense of security - another option. In contrast, the unexpected and unwanted news of not having any embryos to freeze prompted Doubt and often left the women feeling grief and bewilderment. Descriptions of Hope and Doubt ebbed and flowed throughout the data. By the middle of the interim of Waiting the women described that Hope came in surges, less in frequency and duration. The descriptions revealed that the women never felt free to fully express Hope; it could never be solely enjoyed in a pure and absolute emotion. Anytime they mentioned Hope it was linked to Doubt, and as their pregnancy test neared Doubt grew more prevalent.

The women found Hope when they viewed the photos of their embryo(s). It was a tangible piece of evidence to offset Doubt, frequently expressed as “surreal” that the transfer really happened and the embryo(s) was placed inside of them. Consistent with previous literature the photos may have encouraged a false sense of Hope. Greenfeld,

Diamond, and DeCherney (1988) concluded that IVF technology, such as ultrasounds, can inadvertently foster and intensify IVF patients' attachment to the expected pregnancy by creating unreasonable expectations of successful treatment of infertility. Furlong and Hobbins (1983) suggested that technological advances, such as ultrasound, have offered women opportunities for direct contact with their unborn children and fosters the development of attachment, and in the case of this study, what might be considered a phantom pregnancy. The unintentional fostering of false Hope is even more evident in this study which revealed that women, like Paige, after finding out the gender of her embryo attached even greater, as she now knows if her embryo was male or female and she had the potential of a son or daughter. Due to advances in technology it is conceivable to consider that the potential for embryo attachment and possible loss is now greater than ever.

The present study expands the current literature by recognizing that the women in the study were unable to feel Hope without having it tainted with Doubt. Also the women do not want to allow themselves to feel or express too much Hope fearing something bad might happen in their future, such as having a negative pregnancy test. The cycles of Hope and Doubt were forever present throughout Waiting and were sources of Anxiety for the women. Their confusion was echoed in the words "I don't know." To further compound the women's Anxiety they plummeted into moments of desperation, which, although infrequent, were intense and unwelcome.

In the context of Waiting for the result of their pregnancy test it is difficult to discuss Hope without addressing the theme of Doubt. The women's "cautious optimism" was not only an expression of Hope but also one of Doubt, and brought the complex interplay



of Hope and Doubt to the forefront. The theme of Doubt was experienced by each of the women. The analysis revealed the sinister nature of Doubt as it loomed over the women as they Waited. Their ultimate Doubt was expressed when the women described the uncertainty of the results from their pregnancy test.

In the study the women described their embryo transfer as surreal, and left them feeling numb or unsure at times. They looked for reassurance from inside for signs and symptoms of pregnancy and also sought reassurance from the outside through their husband, family, friends, doctors, nurses, literature, or the internet. Saddled with Doubt they were unsure if their embryo(s) had implanted or continued development. No longer were their embryos able to be visualized and measured objectively by a blood level, microscope, or ultrasound. The descriptions revealed a greater intensity and occurrence of Doubt as the days passed and their pregnancy test grew closer.

Doubt was incessant while the women Waited. They attempted to keep it at bay by seeking reassurance , using self-talk to invite Hope, or by praying to God. The women experienced Doubt as part of being realistic: an unwelcomed thought that could not be avoided. Like Hope, the women described Doubt as a relative term; it was a lessening of Hope. And like Hope, Doubt was also fueled by both internal and external sources.

This study's findings revealed the women expressed self-Doubt. They begin to Doubt their own degree of commitment to the embryo(s) or to believing in the possible success of their IVF procedure. The women often described the burden of carrying a positive outlook, as if the outcome of the pregnancy test was dependent on their attitude or optimism. Similar to Hope, Doubt presented as ups and downs and left the women second-guessing themselves. The women self-Doubted their perceptions – wondering if

they had imagined their symptoms and feelings. It was not consistent which symptoms brought Hope versus Doubt, only that the same symptom could be perceived by two different women and lead to either Hope or Doubt.

From the analysis the women often felt guilty for experiencing Doubt – they feared their thoughts may be self-fulfilling and they did not want to reflect back on this time wondering if they had caused a negative outcome. They wanted to be positive because they needed to know that they had done all they could to make their IVF attempt successful. In the women’s words they described needing to let the embryo(s) feel loved and wanted, and did not want the embryos(s) sensing any negativity in their new environment inside the woman. In Doubt, the women faced the realistic possibility that their IVF may fail, which left the women anxious, sad, and fearful.

From the data emerged the sub-theme of Anxiety. Anxiety supports and reinforces previous known literature which acknowledged the stress of artificial reproductive techniques (Milne, 1988; Litt, Tennen, Affleck, & Klock, 1992; Boivin, Takefman, Tulandi, & Brender, 1995; Su, Yang, & Teng, 1997; Weaver, Clifford, Hay, & Robinson, 1997; Kee, Jung, & Lee, 2000; Hammarberg, Astbury, & Baker, 2001). Waiting in Anxiety was apparent in the women’s expressions of worry, fear, and stress. The women used the words “anxious” or “hard” to describe their overall experience of Waiting. Anxiety appeared throughout the data, and intensified as the day of the pregnancy test approached. High levels of stress were experienced when an event occurred during the IVF which was unexpected. These included delays in their IVF treatment, or inadequate embryo quality or quantity to transfer, or inadequate embryos to freeze.

The women described their need to feel a sense of normalcy to relieve their experiences of stress. The level of Anxiety perceived could be unbearable and lead two women to administer a self pregnancy test – even when advised against it by healthcare professionals. Both Beth and Michelle administered home pregnancy tests and shared that their attempts for reprieve from stress were short-lived. Although not all of women chose to take a home pregnancy test, some admitted they were tempted. Sometimes the women were surprised that their Anxiety was not worse. The sub-theme of Waiting in Anxiety was considered so grave that when the women described they were not feeling high levels of Anxiety, they dreaded the Anxiety they believed would ensue.

Anxiety resulted from the constant struggle of Hope and Doubt as the women struggled with the unknown. Van Balen, Naaktgeboren, and Trimbos-Kemper (1996) found that the psychological burden of the infertility treatments exceeded the physical burden. The women's interviews and journal entries described rising Anxiety as days passed which peaked as their pregnancy tests approached. High levels of stress were present when an unexpected event occurred during the IVF, including inadequate embryo quality or quantity to transfer, or freeze. Anxiety appeared as a constant flux between Hope and Doubt while Waiting for an unknown pregnancy test result that may be negative. But for some women like Kate or Paige, Anxiety was high, as this may have been their only chance to become a mother to their biological child. Finally, the women described that they tried to stay busy because they experienced higher levels of Doubt and Anxiety when they were not distracted.

Waiting in Desperation emerged from the data as an absence of Hope. Desperation was experienced by the women when they described their possibility of having positive

pregnancy test as Hopeless. Desperation was a place of severe emotional discomfort. Often the women described desperation as obsessive thinking about their circumstances, engaging in a frenzy of activity, self-administering a home pregnancy test when advised against doing so, or having already accepted their IVF had failed.

Waiting in desperation is an essential theme and was revealed as the women plummet into negativity. They no longer believed their IVF could work. They search frantically on the internet for information, began dwelling on the likelihood of a negative pregnancy test, and convinced themselves that the IVF procedure had not worked. From here, it was a short leap to feeling they may never have their own child. Despair is revealed in descriptions of the women self-interpreting their bodies to grasp any thread of Hope, literally anything, even if it was inaccurate - they wanted desperately to believe their Hope for pregnancy was possible. The women expressed a need for closure, and wanted the agony of Waiting to end.

Desperation was felt when a woman convinced herself that she must accept her fate that her pregnancy test would be negative. This theme was also described when a woman knew she has had an embryo(s) transferred and felt nothing reassuring but empty inside. Desperation was evidenced in the woman who Waited and who struggled to hold on to Hope for just a few more days. Kate described Desperation as “gut-wrenching” when she found out that none of her embryos had survived to freeze. While Julia described hearing her news that only one embryo survived was “heart-wrenching” and left her with only one embryo transferred and none to freeze.

Uncomfortable and unwelcomed, the subtheme of Desperation was evident when the women depicted a forlorn future: wondering how they would handle a negative

pregnancy test or worse, a lifetime of childlessness. Unlike Doubt, which loomed and tempted the women as they traversed in and out, Desperation was a dark place which would leap up and engulf them. It was a place of extremes – obsession, negativity, panic, a place where she could be consumed. In contrast to the relativity of Hope and Doubt, Desperation was experienced as an absolute feeling – brief, dark, and intense moments in which the women were unable to remain. Unlike Hope, Doubt, and Anxiety, desperation was a sub-theme which presented as more unpredictable. Sometimes it was triggered by intense Doubt, but often there was not a trigger; it was part of Waiting.

The sub-theme of Waiting in Awareness emerged as the women became aware of their bodies, their embodied self, their embodied embryo(s), and both chronological and perceived time. Awareness was central to the phenomenon as the women experienced perceptions of self, perceptions of their physical body (symptoms), perceptions of their embodied non-implanted embryos, and the passage or suspension of time. Time was revealed as a chronological countdown day-by-day, but time also emerged in the descriptions as suspended.

Awareness emerged in a heightened form – the women were hyper aware, it was an acute state of alertness. Awareness as it relates to IVF has not been addressed in previous literature. The women described being both aware as well as unaware – often described as numb. In the tradition of the philosophy of phenomenology the women's acknowledgement of Awareness and unawareness of mind and body describe consciousness. No other human conditions are known to the researcher, in which such a unique phenomenon occurs in which the embodied person knowingly embodies an entity. During this window of time women are considered by both medicine and society to be

non-pregnant; but what emerged from the women's words is that although the women may not be pregnant, they are more than non-pregnant, and their potential to feel attachment and loss may be far greater than previously understood.

Most notable from the data is that the women were aware of the presence of their embryo(s) inside of them. Awareness of the embodied embryo was revealed as the women described a change from within, knowing that their embryo(s) or potential baby was inside of them. The women ascribed human characteristics to the embryos, and they wondered: What is going in my body? Are the embryos growing? Are they implanting? Are they dying off? Awareness of their bodies was also described in the women's words as "feeling different" – resulting from a constant comparison of what it was like before the transfer to after. During this time in Waiting the women were very tuned to their bodies and minds. This was evidenced by the hyper Awareness of physical symptoms such as cramping, bleeding, nausea, and twitches. The women were also hyper aware of their emotional perceptions. Their heightened Awareness was revealed as a time of constant interpreting which often confused the women and left them feel as though they were "going crazy" second-guessing themselves.

The sub-theme of Awareness was present in the women's descriptions as levels of attachment to their embryos. Attachment was best described in the women's words when they called their embryos "my babies." Immediately after the transfer the women rubbed their abdomens and noticed themselves protecting their embryo(s) physically and emotionally, consistent with a maternal instinct. Paige described a poignant image of driving down the road envisioning her baby in a cart seat inside of her. From this study it is clear the women attached to their embryo(s) and like Hope and Doubt their Awareness

of their attachment was greatly influenced by their Awareness of their signs and symptoms of pregnancy. Awareness was most evident in their descriptions of their levels of attachment to their non-implanted embryo following their transfer; and again when their focus of Awareness changes, around midway in Waiting, from the embryo and using terms such as baby to the final outcome of the IVF process – their pregnancy test. This may have been related to patterns of Hope and Doubt, and the increased Anxiety as the pregnancy test ensued.

Prenatal maternal attachment has been documented in the literature, and in the current study the women felt a maternal-embryo attachment from the moment they realized their eggs had fertilized and again when their when their embryos were transferred. Peppers and Knapp (1980) maintain that maternal-fetal attachment began long before the infant's birth, with the planning of the pregnancy. This information reinforces that bonding is evident early and raises the question: How early can you consider prenatal attachment? Can the definition of prenatal be expanded to include the time before an embryo implants? Consistent with Furlong and Hobbins (1983), the photos of the embryos and Awareness of the gender of the embryo offered the women uncommonly early knowledge which fostered attachment. No longer were the women embodying or losing an embryo or potential baby, but it was now a boy or girl, a son or daughter.

Women find themselves in the emotionally complex circumstance of attaching to something that is – the embryo(s), but in reality may never be – a child. From the data obtained in interview one as compared to interview two, the women described their attachment to the embryo was lessening. It was plausible to consider that maternal-embryo attachment would have grown; peaking in the days immediately prior to their

pregnancy test, but it did not. Some of the women were surprised when they became less attached as the days passed. This may have been because after their embryo transfer they had no additional tangible or objective measurements, no daily reports, and no new milestones until their pregnancy test - they were Waiting and their sense of Doubt had increased. The extreme joy and relief once felt by the women following their embryo transfer had grown distant; as they viewed the entire IVF process as one procedure and all that mattered was the results of their pregnancy tests. The women also described that they feared attachment because they did not want to be even more hurt if the pregnancy test was negative. Sometimes the women wavered between the words embryo and baby, but they never wavered in their Awareness that their transferred embryos were part of their husband and themselves and had the potential to be their baby. The women in this study each attached to their transferred embryo(s) at some level while they Waited.

Greenfeld, Diamond, and DeCherney (1988) found that the symptoms exhibited by the women who had experienced a failed IVF attempt paralleled the symptoms of women suffering from a pregnancy loss; and that this response could be predicted by observing the degree of the IVF patient's attachment to the expected pregnancy. It could be said that women have a biological instinct to mother, and current social expectation reinforces this. Women cannot stop themselves from attaching to their transferred embryos – it is natural; but from the women's words and current literature healthcare workers and society in general may fail to acknowledge their level of attachment – possibly because the women's experiences are not truly understood.

To best intervene and help the women one must understand the attachment experienced by women to their embryos. When referring to their lost embryos the



women's words were mournful. The women described sadness, bewilderment, loss, and surprise. The women in the study may have mourned more than the actual loss of the embryo and a future baby; but also the lost potential for another transfer, possible pregnancy, future baby, and motherhood. The embryos were very valuable to the women and they are painfully aware that their dreams for motherhood are attached to the plight of their transferred embryo(s). Moulder's (1994) framework for understanding attachment suggests that the key factors in explaining a woman's reaction to the loss of her pregnancy is not necessarily decided by gestational age but is determined by "the extent of the attachment to the baby and the degree of investment in the pregnancy" (p. 66). For women who undergo IVF the emotional investment in the pregnancy is huge. This was evident when Paige described how much pressure for her to become pregnant was dependent on her "one little embryo".

The women did not remain in a state of grief over the lost embryos, but for the ones who lost embryos they each mourned in their own way and wondered how the loss impacted the likelihood of them becoming pregnant. Even in light of Kate having had two embryos successfully transplanted she grieved the loss of her embryos, and looked back on the days when they were *alive* in the lab, and wondered if perhaps she could have done something different to keep them alive and had them as candidates for cryopreservation. The women also described a form of attachment to the embryos which remained in the lab. Previous to this finding healthcare workers may have been aware of the value or attachment to the non-transferred embryos. People may have had a tendency to assume that because the women became pregnant, or experienced a successful transfer, that they would not care about the embryo(s) that didn't survive— and this was not

revealed by the data. Although the researcher concedes that the women's feelings may have changed had the women become pregnant.

This study adds to the literature by describing the descriptions of attachment to her non-implanted embryos following transfer and to the embryos which were not transferred, or failed to develop. From the women's words there was sadness, grief, surprise, and confusion over the loss of their embryos. Previously a tendency may have been present to underestimate the meaning of the non-transferred embryos because of the belief that the women had a successful transfer and may were longer concerned with their other embryos. But from the women's descriptions that was not how they felt. This new information implies that because of the invested time and meaning given to becoming pregnant, the women who experience IVF may attach to both their transferred and non-transferred embryos much earlier and more intensely than was previously known. Robinson, Baker, and Nackerud (1999) caution clinicians to be aware that "when attachment definitions include an element of time there is the potential risk for minimization of a perinatal loss" (p. 261) and the accompanying emotions felt by these women. For women who experience IVF the authors' warning is timely.

The subtheme of Awareness was also expressed by the women when they described time. Time emerged as a day-by-day countdown towards their pregnancy test; but it was also revealed as perceived time – at times fleeting when the women were busy and sometimes long and dragging when they were in Waiting. Time was reflected in the women's words as something needing to pass so they could find out their pregnancy results. Time was also experienced by the women as suspended and may have been considered as a reflection of their inability to proceed with their life plans this interim

window passes. Awareness was experienced internally rather than outwardly, which complicated the women's perception of self and may have lead to feelings of Isolation. The women's Awareness of their embodied embryos was hidden to others along with their feelings of loss.

It has been well documented that maternal fetal attachment is reinforced when milestones occur such as viewing the fetus on ultrasound, maternal Awareness of fetal movement, birth of baby, and the first time a new mother holds her baby. In light of this research it would not be far off to consider that maternal-embryo attachment occurs with IVF women's milestones as well: successful fertilization, embryo transfer, and obviously with a positive pregnancy result. This perspective offers a new way to consider attachment.

The sub-theme of Waiting in Vulnerability emerged from the women's descriptions of their relationship with healthcare workers, living with past losses, and their lack of control. The women experienced Vulnerability with family and friends. The women's stories indicated that they knew that much of their IVF procedure – including the outcome of their pregnancy test, was out of their control. The women guarded themselves, living with the pain of their past and protecting their Hopes for their future. They have invested self, time, and finances.

Previous studies have found that subjects enrolled in IVF often reported negative experiences involving the lack of information provided, the quality of support received, and the manner in which they were treated by healthcare professionals (Milne, 1988; Litt, Tennen, Affleck, & Klock, 1992; Boivin, Takefman, Tulandi, & Brender, 1995; Su, Yang, & Teng, 1997; Weaver, Clifford, Hay, & Robinson, 1997; Kee, Jung, & Lee, 2000;

Hammarberg, Astbury, & Baker, 2001). This study reinforces current findings and stresses the importance of the relationship between the women and her infertility physician and primary nurse.

Vulnerability was expressed as the women shared their intimate relationship with the doctors and nurses at the infertility clinic. Built on trust and communication, the women described the relationship as if it were a lifeline to their embryo(s) and body. During the time following their embryo transfer the women are no longer having daily, or near daily, contacts from the infertility clinic. Overall, throughout their IVF treatment, the women felt very comfortable and confident with their infertility team. The data also revealed that when women felt there was less frequent contact or a failure in communication they described feeling Vulnerable. Sometimes in their Vulnerability they sought outside information from other sources and some found this activity helpful, but as Michelle cautioned that you could get whatever you wanted to believe from the internet. Each of the women expressed some disappointment with the lack of communication from the infertility clinic regarding how they received information about the number of embryos that could have been frozen. The women who did not have any embryos to freeze felt as though their communication with the clinic could have been improved with more timely and sensitive information. Each of the women shared that they had received a follow up call from the infertility clinic after their embryo transfer, but felt that the call was more about the procedure and not about them. Some of the women added that they were not familiar with the person who had contacted them and would not have shared their feelings regardless.

The women would have liked communication with their primary nurse following their embryo transfer; and some expressed that were not prepared to learn that their embryos were not candidates for either transfer or cryopreservation. This additional information may have alleviated some of the women's surprise and Anxiety about the embryos that were unable to be transferred or frozen. Julia described that she found out while at the clinic, the morning of her transfer, that only one embryo had survived for her transfer. While Kate had to initiate contact with the clinic she found out that none of her embryos were of quality could be frozen. The descriptions indicated that the nurses and physicians may not have realized the value the embryos held for the women. The data indicated that the women also expressed a desire for additional communication with the infertility clinic during their Waiting, especially when the embryos did not develop as expected and as the pregnancy grew closer.

Vulnerability was also present when the women described the importance of their doctor's words and the impact it had on their emotional well-being, reinforcing the need for healthcare workers to choose their words with care and sensitivity. The women expressed that although they were offered a support group, because the women were all at different stages, and they were not lead by someone with whom they had a professional relationship with, so they declined to attend. From the data the women shared an interest in attending a support group that was in the same time in Waiting as they were in. Julia described this as "the two week Waiters." During the study each of the women expressed that their participation in the interviews was therapeutic, and the majority felt that they had not realized that they needed someone to talk to until they had.

The women's descriptions in this study shared some similarities with previous literature, which noted that one of the most frequent concerns reported by infertile couples was their perceptions of the lack of understanding and knowledge of health care providers including nurses who did not understand what the couples were experiencing (Daniluk, 1988). Davis and Dearman (1991) found that healthcare providers did not help them cope, and the findings of Salakos, Roupa, Sotiropoulou, and Grigoriou (2004) indicated that the psychosocial support and the scientific information provided to those women who participated in IVF programs were insufficient.

The women enrolled in an IVF treatment are there in a response to some past loss: fertility, miscarriages, tubal pregnancies, fetal death, and failed pregnancy attempts. Unable to separate their past experiences and losses from their present, their vulnerability is compounded. As previously discussed some women attached to their embryos and grieved the loss of their embryos that did not survive. One woman described her loss, "Those were my babies." This study brings to the forefront that these women were already vulnerable from a painful past, which placed them at high risk for additional psychological trauma. The discussion makes aware that women felt as though their embryo losses were not acknowledged or may not have been understood by healthcare members.

Infertility may be considered as numerous invisible complex losses and supported the work of Bateman-Cass (2000), who described the psychological implications of artificial reproductive techniques as *the loss within a loss*. Christie (1997) has linked models of bereavement to grief as a psychosocial response to infertility and this sense of loss has also been reported by Mazure and Greenfeld (1989) and Greenfeld, Diamond, and

DeCherney (1988). It could be presented that the women in this study experienced, and even mourned, their phantom pregnancy or phantom baby, much like one would a phantom limb; but instead of neurological information it is psychological information that is sent from the body to the mind. This idea will be further discussed using van Manen's Four Existential Lifeworlds.

Consistent with previous findings of women in IVF (Bateman-Case, 2000; Christie, 1997; Mazure & Greenfeld, 1989; Greenfeld, Diamond, & DeCherney, 1988; Imeson & McMurray, 1996), the women in this study described having no control over the actual outcome of their IVF attempt. They readily acknowledged their inability to impact the outcome of their pregnancy test. When human beings are placed in the precarious position of having no control over their body or their future – they are vulnerable. This was exactly where the women had found themselves. For some women their inability to control their life plans emerged as being frustrated or sad.

The data also revealed a previously undiscovered observation about the women's perceived lack of control: most of the women in the study described a sense of relief that they were not ultimately in control or responsible for the fate of this pregnancy and their destiny, and that someone or something was. At different times during this study the women said their future was out of their hands and in the hands of God, fate, or their physician. The women expressed an unexpected, but welcomed sense of relief knowing that what was done was already done and they were either pregnant or not. They were not responsible nor could they change it.

Vulnerability also emerged from the women's stories when they described their need to express Doubt and their need to not feel overly Hopeful or confident, as a form of self-

protection from the additional pain and loss of a negative pregnancy test. Robinson, Baker, and Nackerud (1999) wrote that women's expectations about parenthood and their future children increase the sense of loss if successful pregnancy is not achieved. The women in this study described a tremendous burden to be successful, as if it was their job to make it work. Although they recognized that realistically they had little control over the outcome, they did not want to look back with any regrets that they may have done something to jeopardize their chances. Combined with a history of previous losses, society's expectations for motherhood, and the loss of some of the embryos during their IVF attempt, this burden placed these women who were in an already vulnerable position for additional psychological suffering and potential self-blame.

Waiting in Isolation was expressed by the women as they described their experiences of feeling alone, as though no one could truly understand their circumstance. In addition Isolation was expressed when they acknowledged their need for support from family, friends, and healthcare professionals. The women's descriptions did not reveal that they felt lonely, as they felt that they had support; rather what emerged from the data was that they felt alone.

From the women's stories they feel as though most of their friends and families tried to support them during this stressful time, and consistent with Boivin, Scanlan, and Walker (1999) each of the women identified their husband as their main source of support during their infertility and IVF. But the women described that their friends and family did not truly grasp the significance of their IVF attempt. They shared that most people either did not understand infertility and IVF, or they minimized their feelings by having the misconception that their IVF would work, and that infertility did not carry the



grave seriousness that the women in this study felt. This may have been due to numerous factors: the women's friends and family were trying to be supportive and did not know what else to say; or in fact they really did not understand the success rates associated with IVF; or they were falsely under this impression based on the attention of popular media and news on the lives of Hollywood stars and women like *octomom*, and *Kate* from the popular reality show *Jon and Kate Plus Eight* that publically celebrate and even capitalize infertility success stories. The women also felt that because their family and friends did not have any difficulty with infertility and IVF that they were really unable to understand what it was the women were experiencing.

From this study it was also evident that the women believed that even if they did speak with someone who had experienced infertility and IVF that even she could not truly understand because their experiences may be different based on their infertility diagnosis, response to medications, and socio-cultural circumstances. Essentially the women believed that although they could share some common experiences with other women, none were really like them.

The data indicated that the women believed most people acknowledged that they were experiencing something physical and that they are having difficulty becoming pregnant, but that people may be unable to comprehend the extent of the emotional impact physical involvement of their IVF experience. Within this subtheme are women's descriptions of people asking them how they feel, without appreciating the presence or value of the embryo(s) they embodied and their potential for life or loss. This supports the idea that women who experience IVF may not have anyone who understands their losses. Hirsch

and Hirsch (1989) found that infertile couples often grieve alone because they fear that others will not understand how they feel.

In a society that values fertility, infertile women may bear an immense social stigma (Miall, 1985, 1986, 1989, 1994; Becker, 1997; Gonzalez, 2000; Whiteford & Gonzalez, 1995). The women describe that they felt some social Vulnerability. The women wondered “Why me?” and “Why did this happen?” The women described relief when they had a reason to explain their infertility. This was most evident in Paige’s descriptions of finding out that all but two of embryos had survived and one of them had a severe genetic disorder, leaving only one to be transferred. Michelle described her infertility identity as “being one of those,” and Beth shared that she felt “defective.” Michelle, Beth, Paige, and Kate expressed having emotional difficulty towards women who had children or were pregnant, especially when most of their sisters and friends were either pregnant or already mothers.

The women also described their need for psychological support while they experienced IVF and how difficult the IVF cycle would be if they did not have the support of family or friends. Sharing their stories, the women expressed a need to connect (husband, family, friends, blog, participating in the current study, attending a support group), a need to believe that they are not alone; although in their descriptions a theme emerges that they realize ultimately they are alone. A spiritual connectedness to God was described – as the women prayed in an attempt to keep Waiting in Isolation at bay. Regardless of the source or cause of the infertility a gendered Isolation exists because it is the women who endure the invasive IVF procedures. It is the female who is subjected to treatment even when it may be the male partner who has the medical

problem. In the individual story of a woman's IVF experience many family and friends may support her, and many health care providers may care for her, she ultimately described it is she alone who has carried the physical and emotional burden of the treatment.

As previously mentioned the contact with the infertility clinic, and primarily their nurse and physician helps the women feel connected. When the frequency of communication lessened during this stressful time in Waiting, the women felt alone. Equipped with its own technical language, women who suffer from infertility are often unable to connect with many people because they receive a lot of questions to explain IVF. Some of the women shared that they were tired of thinking and talking about it. Beth commented that people asking about her IVF made her feel inept. Each of the women in the study articulated the reason they participated in the study was to help other women like them – to let them know they are not alone.

The women felt that although their husbands were doing all that they could during this time to help support them, the women did not think their male partners could truly understand what it was they were going through. Kate shared that even though her husband really wanted to have a baby with her, that because her husband had a child from a previous marriage he could never understand what it was she was experiencing because he already had what she so desperately wanted. Kate's story presents the possibility that perhaps women who are married to men who are already fathers may be at greater risk for Isolation and emotional or marital discourse.

In light of the women feeling that they were ultimately alone, their relationships and communication with healthcare workers, friends, family, and their husband could have a

tremendous impact upon their psychological well-being. Kate described as a sense of cultural loneliness because she did not know anyone that was African American who had experienced IVF. A woman's experience of infertility is influenced by a socio-cultural context. Interpersonal relationships can minimize or exacerbate the emotional responses of people to numerous chronic illnesses including infertility. Several studies have indicated the positive relationship between encouraging social support and positive adjustment among infertile women (Abbey, Halman, & Andrews 1992; Connolly, Edlmann, Cooke, & Robson, 1992). Not all types of social responses are desired by infertile couples. As positive social support facilitates positive adjustment among infertile women a direct negative relationship also exists between unsupportive social support and decreased psychological adjustment (Abbey, Andrews, & Halman, 1995; Mindes, Ingram, Kliewer, & James, 2003)

Supported by Menning (1988), who found that infertile couples may experience loneliness or Isolation and may feel out of place at social gatherings where there are children, Julia and Michelle described that it was hard to be around pregnant women and children, especially during this time in Waiting. It may have reminded them of their inability to fulfill their own dreams for motherhood. This is important because healthcare workers may have underestimated or ignored the possibility that women who have had an embryo transfer, while joyous about the success of their transfer, may have continued experiencing Vulnerability and a heightened sense of social Isolation.

Last, from the data emerged the final sub-theme of Waiting in Anticipation. The data described that the women Waited in Anticipation for their unknown future. Will the test results be positive or negative? Will they become pregnant? Will they have a baby?

Will they finally become a mother? How will they handle the results? Aware of their plight, the women were left to the uncertainty of their future and in the emotionally uncomfortable position of Waiting in Anticipation. The subtheme of Anticipation was expressed in the women's desire for closure, regardless of the outcome. They began to Anticipate and plan for the call from the fertility clinic whose news would impact their lives forever.

The women became actor, writer, and director of their life world – and Waiting in Anticipation they planned the scene in which their phone call would occur. Some plans were broadly written – where they would be located when they receive the message, who would be with them, who would answer the phone and take the message. Paige described anticipating how she might interpret low beta hCG levels versus higher ones. Michelle shared her possible excitement in the details of her *positive test result script* and detailed what she would say to her husband, anticipating his response, complete with props – baby shoes. Each of the women described their experience of making plans for their future. They attempted to prepare for both positive and negative test results. The women described excitement when they imagined the potential joy they would have if the results were positive and the potential sadness that would ensue if the results were negative. They realized that either result was possible and planned the next step in their quest for motherhood. Culminating in that one instant will be all of their past losses and future Hopes.

While Waiting the women had already begun anticipating their next step in their pursuit for motherhood. During the first interview, in the early days post embryo transfer, the women shared their Hopes of what could be - planning a nursery and speak

of their embryo(s) as a child or baby, and they anticipated the joy of being pregnant and motherhood. By the second interview their mood was grimmer as pessimistic Doubt crept in and Anxiety grew; the women focused on the end result - finding out the test result. The women anticipated that they expected their Anxiety to rise higher until they heard from the clinic regarding their pregnancy results. Usage of words such as baby or child were less and the Anticipation changed from planning a nursery, and referring to their embryos as babies, to I don't feel pregnant and I need to prepare for the worse news. The women described experiencing financial concerns and considered the cost of future IVF attempts. The possible scenarios to the end of their stories unfold in their minds. From the data emerged a well of emotions as the women reiterated their onus to feel positive, and do all they can, in order to curtail any Doubts in the future.

Already vulnerable, the women described their need for emotional self-protection. Preparing for negative news is not new for the women. From the data emerged a fear that they could return to the pain they had experienced from past disappointments and the fear that this time could be much worse. The women described their investment was higher this time because after IVF they had no more medical advances to try. Waiting in Anticipation included the difficult work of self-preparation for potentially devastating and heart breaking news. Having already considered the possibility of enrolling in another IVF cycle, none of the women accepted that this was the end of their story. Aware of her financial and advancing age limitations Kate made a brief reference to adopting. Most women described that although they are aware that it may take a few IVF attempts for them to become pregnant they were not sure how they would handle going through another cycle and anticipated that each failed IVF attempt would be much harder.

The Women's Stories Through the Lens of  
Van Manen's Lifeworld Existentials

Consistent with van Manen's (1997) phenomenological method, the essential themes identified in this study offer an interpretation of the meaning the women gave to their experience of Waiting for a pregnancy result following their embryo transfer during IVF. This interpretation is not an absolute worldview of all women but offers one way to understand a phenomenon which had not been well understood before this study. The awareness of the embodied embryo not only impacts the conscious experience of the women but also their unconscious experience or reflection, shaped by their embodied selves in their present environment, leaving the women to reestablish their identity. To aid the interpretation of the women's experiences of embodying a non-implanted embryo, during the time she Waited for her pregnancy test, the women's experiential accounts of IVF is placed in a more structured context of van Manen's (1997) Lifeworld Existentials. APPENDIX H provides a conceptual image of the following description:

Lived Space (Spatiality)

The women's lived space was described as their felt space; it was their perceived sense of space and it shaped how they felt. It was part of the world in which the women lived as they experienced their IVF procedure. The women's space had invisible boundaries, framed by being a woman who has difficulty reproducing in a society and culture that expects motherhood as her primary role. This perception of space was always felt by the women in the study. Spatiality was not a conscious reflection; rather it was already there prior to considering it. During the time of this study the women perceived their space in their home, at the fertility clinic, and in their work environments.

Sometimes the women described a getting away space that lacked physical boundaries—such as going to the beach or getting away for the weekend. In this space the women found a distancing separation from familiar space. This is not an all-inclusive list of the women's perceived spaces, but this investigator's attempts to identify the dominant space the women experienced during the study.

The fertility clinic is where the women experienced procedures related to diagnosis of infertility. The invasive procedures related to IVF occurred in the space of the fertility clinic. It became evident that in this physical space the women perceived progression towards their life dreams – this was the central command station where someone else was in control. This is the space where they could achieve their goals for motherhood. The space of the fertility clinic was experienced as a place of familiar comfort but also a place of vulnerability – in their role of patient where the women found themselves more directed than directing.

In their home the women described a sense of solace. This was where they received all of the news about their progress towards reaching their goal, this is where the women recovered after their embryo transfer, and where they found the comfort of their husband. Here the women lived their lives. In this space they were free to laugh and cry. It is the place where they were both a woman and a wife, and it also where they dreamed of their nursery and Hoped to experience motherhood. It is the space in which they Hoped to raise a baby. Home is also where they felt safe and where each of the women wanted to be when they received the phone from the fertility clinic with their pregnancy test results.

The women spoke of their work place as a space of escape. It is where they found a role not connected to their infertility. The women described perceiving this place as



somewhere to be something else, other than in IVF treatment. Most women had specific professional roles where they were in control and impacting other people's lives – the social worker, the minister, the banker, the dentist, and the nurse. This space was a break from the space of the fertility clinic and home where there were many complex emotions.

#### Lived Time (Temporality)

The women's lived time was described as their perceived time. The women described time as a countdown day-by-day but these days were not described as 24 hours; rather the days were experienced as long, dragging out, suspended, and sometimes speeding by when the day for the pregnancy test became close. The women's descriptions of their temporal way of being in the world involved each of the three tenses. They lived with their past, they lived in Waiting in their present, and they lived in the future for motherhood. During the phenomenon under study their temporal way of being collided: the past losses, the IVF procedure of the present, and their dreams for the future created an eruption of emotions. The women shared their lived time in their stories. As a result of her experiences, both past and present, it was during this time in Waiting that the women re-established her sense of self and attempted to anticipated her identity in the future.

#### Lived Human Other (Relationality or Communalinity)

The women described their lived relations with whom they shared their interpersonal space. These included their husband, friends, family, co-workers, and the healthcare workers at the fertility clinic. Within relationality there is a physical meeting of one body (the women) to another body (other). The women experienced meeting others women as a mother, a child, or infant. These interactions were evident in their descriptions of

physically encountering pregnant women, mothers, children, or babies. Transcending the physical limits of corporeality the women meet others in their bodies which have been identified as infertile, childless, nullipara.

The women formed unique attachment with their embryo(s). To accomplish this relationship the women transcended the physical limitation of the embryo to that of a human. They visualized what the baby would look like, if they might have one baby or two; for some women they actually perceived seeing the baby inside of their uterus. The women experienced themselves in the interpretations of their relationships with others. Their meaningfulness with God or some higher being, the omnipotent other, was present when they discussed fate, God's plan for them, and searched for their unknown destiny. They saw the future as either meant to have children or not and may question why they could not bear children. For the women in this study lived human relation was experienced as being alone, and ultimately unable to truly share and transcend their lived experiences of IVF.

Lived relation also referred to the women's relationships with the healthcare workers at the clinic and how they gave their trust to them. The women depended on the relationship with the nurses and doctors because it was imperative to the success of their IVF procedure. The women expressed a need to communicate regularly with their healthcare workers. The roles patient and motherhood was influenced by the words and behavior of their healthcare providers. The attitudes of their healthcare providers during their IVF treatment shaped the women's experiences of IVF and their Hopes to become pregnant.

## Lived Body (Corporeality)

The women live in the world as embodied in a human form. They experienced life through their gendered body, revealing they are female and not visibly pregnant, while concealing they are infertile or carrying an entity – the embryo within. The gendered body is imperative to understanding the women's life world because they experienced their infertility and what was happening to their bodies as a woman, which is much different from that of a man. The female body lives in constant awareness of their expected role in society to conceive, carry, and bring forth new human life. The inability to become pregnant, and to be identified by others as infertile or with a self identify as infertile, leaves the woman trapped in a broken vessel, influencing and defining how she experiences her lived world. To the women the embryo is unattached floating inside Waiting for it to dwell and implant. Without intention, the women reflect the view of others in addition to their view of self, which is influenced by how they feel other persons experience them.

The current study presents a multi-layered phenomenological representation of embodiment - an embodied embryo(s) within an embodied woman. The awareness of the embodied embryo influences the embodied mind. That is the embodiment of the non-implanted embryo shapes the meaning of how she experienced Waiting. The woman viewed the embryo on a camera the day she received her transfer and had a photo of her embryo(s). Consider if the embryo had not been transferred, then she would not be Waiting with an awareness of an entity; it would simply be two weeks of time passing. It

is the presence of the embryo within her body that influenced her perceptions of the mind.

The Cartesian duality of mind and body is not new to medicine. Early approaches to medicine have long been critiqued for its focus on treating the diseased part and not the whole person. This traditional approach to medicine received much criticism and changed to a more acceptable holistic approach of viewing the person as mind, body, and soul or spirit, and not as a leg or uterus. Phenomenology as both a philosophy and a methodology offered a wonderful opportunity to explore human conditions as they experience them in their natural world. This current, more holistic, view towards healthcare has offered a foundation on which nursing has built its current philosophy. Today, a healthcare provider would be professionally and personally shunned for implying that a patient was a part – a hysterectomy, and not whole. Wholeness is a consciousness of the mind, body, and spirit or soul and comprises our humanity. It is clear from the analysis in the study that women who experience IVF ascribed meaning from their every-day life as a whole person and was made clear by the eight subthemes which traverse mind, body, and spirit. Therefore, no one would question that when medically treating a woman experiencing IVF you would need to consider the whole person. Contrary to popular thought a case could be made that the tendency has been to diminish or perhaps even ignore the most significant aspect of the woman's experience: her perception of self-embodying an entity – the embryo.

Within this experience the embryo was considered an entity, a separate part and not an extension of the woman. This separation of mind, body, and entity or part was supported by the women's words in identifying the embryo as either an embryo or a baby,

something separate from them. Although the women readily acknowledged that the embryo was made up of parts of her, it is essential to emphasize that it was not a part of her. This was also supported by the idea that during the study the women were unaware if the embryo(s) had implanted and therefore physically unattached to her. By failing to acknowledge the significance of the embryo it could be suggested that the overall meaning of the women's experience was lessened. Little emphasis or acknowledgment has been given to the role of the embryo in shaping the woman's experience.

From the women's experiences it is clear that the eight subthemes are directly related to the part – the embryo, which influenced woman's mind. Within the time confinement of this study it is plausible to suggest say that it is because of the part that the women's experiences are lived and given meaning. In order to better understand the whole it may be necessary to emphasize the part. During the experience of this phenomenon the body (embryo) controls or at least influenced the mind. Raised awareness about the meaning of the relationship between the embodied embryo and the women's sense of self may lead to new discoveries, and understanding about the psychological impact of these two weeks during IVF on the women's perception of experiencing an embodied embryo that exists, while simultaneously experiencing a pregnancy that never was, and the child that may never be. Greater understanding of the impact of infertility treatments on the woman may help educate healthcare workers to intervene appropriately to share knowledge and compassion to help maintain or restore their sense of well-being.

#### The End of This Story

Each of women shared the results of their pregnancy test:

Sarah

Sarah shared wonderful news that her IVF procedure was successful and she is carrying a singleton pregnancy.

Beth

Beth was happy to share that her IVF procedure had also been successful and she is expecting a little girl.

Julia

Julia was very sad and shared that her IVF procedure did not work. Since the time she participated in this study she has experienced her second IVF procedure and it was also unsuccessful, she is unsure what she will do next.

Paige

Paige's IVF procedure was successful and she is pregnant with one baby. She and her husband have decided to keep the gender a secret.

Kate

In a heart wrenching journal entry Kate shared that her IVF was unsuccessful. She wrote that each negative result "takes a little piece of her soul." Being "used to hearing negative results" she shared that she felt numb at first and then she broke "the reality is that I may never be a mother to my own child."

Michelle

Michelle was overjoyed to share that her IVF procedure was successful, and in a recent e-mail she announced that she was carrying a son.

## Implications for Nursing and Healthcare Professionals

### Education

Education is essential to ensure that health care workers provide appropriate care. Continuing education of health care workers regarding the experiences and psychological needs of this vulnerable population is indicated. Healthcare workers, especially nurses, are in the trusted position to have frequent direct contacts with women who experience fertility and can provide them with important information.

a.) Nurses and other healthcare workers must be formally educated in their academic preparation regarding the psychological experiences of women who receive IVF treatment, particularly during the time they wait for their pregnancy test result. It is clear from the analysis that this remains a highly charged and stressful time in a woman's life during which they require education, communication, and emotional support from their healthcare workers. As patient ambassadors it is imperative for healthcare workers who work with women receiving fertility treatment to understand what they are experiencing so that they may know how and when to best intervene and provide care.

This call for education is consistent with the last known findings related to nursing education and infertility from Sherrod (1998). Education could be delivered via traditional and internet based workshops and seminars specifically targeted at healthcare workers who specialize in women's care, but also at generalists who will likely encounter women experiencing infertility and its treatment. The education provided should include topics related to the types of experiences the women endure and the psychological impact these experiences have, and how best to help women work through these difficult times. Education focusing on the value that the transferred and non-transferred embryos have

for the women is relevant to the women's care. Education regarding infertility, artificial reproductive techniques, miscarriage, and the sense of potential losses that accompany them should be addressed in the curriculum of nursing students, either as part of women's health courses or content covering death and dying. Because nurses are educators and spend a great deal of time in direct contact with patients and their families, they are in an optimal position to improve education for this group of women. Healthcare professionals working in infertility clinics, including nurses, are in an ideal position to facilitate women as they work through their emotional reactions while providing a safe environment for women to discuss individual responses and feelings. By understanding what it is like for women to Hope and attach to their non-implanted embryos healthcare workers and especially nurses who have frequent patient contact, can help women cope, and live with and through both past losses and future ones if their IVF attempt is not successful.

The women in this study placed high importance on communication between them and their healthcare team. It is conceivable that the poor communication exhibited by health care workers may be directly related to a lack of understanding as a result of inadequate education, reinforcing the idea that the impact of healthcare workers choice of words and tone of voice can never be underestimated. Ongoing education regarding the value of the role that the nurse-patient or physician-patient relationship has should be emphasized. Education focusing on the women's perceptions of health care workers' attitudes and behaviors should also be addressed. Health care providers working with this group of women may need to know how to provide support to their patients. This could be accomplished through the provision of information to workers and ultimately patients. Healthcare provider education regarding the few outlets women have to mourn



their infertility, embryo losses, and failed IVF attempt(s) are important, as often the only contact these women will have with a health care professional is either their nurse or doctor.

The intangible losses experienced by women who have infertility and failed infertility treatments make it difficult for society to help support women. Interventions to help women cope and live with their grief should be addressed. By educating health care workers, the quality of care received by women and their families should improve. Appropriate and timely interventions by nurses, and other healthcare providers, can lessen the women's overall psychological morbidity and help them to regain their sense of well-being. Once the healthcare workers are educated they can provide the women and their support persons with much needed education to help them understand what is happening during this time in their lives.

Healthcare workers should be aware of the attachment to embryos that women experience during IVF. In addition, it is important for healthcare workers to realize that the likelihood of embryo photos and knowing the gender identity may foster attachment and falsely raise Hope. Healthcare workers may underestimate the impact of not having any embryos to freeze because they think that the women should be happy they have received an embryo(s) during their transfer.

b.) Education is indicated for the women themselves, as well as their support systems to understand and acknowledge the complexities surrounding their loss. Information that describes some of the common experiences of women who experience IVF is indicated, such as Hope and doubt cycles, moments of Despair, potential for attachment or detachment to embryos, potential for self-blame, guilt, or grief. Increased education

should be provided to the women to prepare them regarding the likelihood of their embryos not surviving to be frozen. This should be done to help lessen their surprise of “what happened.”

Healthcare providers must be aware of the number of patients who seek medical and psychological information on the internet. Consideration should be given to provide women with reputable resources from which they may find relevant and trustworthy information. In addition, increased public awareness about infertility and specifically IVF treatments is also indicated as continued ignorance continues to be present. Public service announcements, publications in magazines, newspapers, documentaries, pamphlets in physicians’ offices and clinics regarding the prevalence and physical and emotional involvement would raise awareness. Increased knowledge among the general public regarding infertility and the general stressors associated with infertility and its treatment, as this may serve to reduce unsupportive responses from spouses, friends, family, co-workers, possibly lessening the risk for women’s poor psychological adjustment to infertility. An effort should be made by healthcare workers to reinforce the normalcy of these experiences. Additionally, educating both nurses and the women themselves will enhance knowledge and foster collaborative relationships with other healthcare providers whose focus is on infertility treatment, ultimately improving the overall level of care delivered.

#### Practice

a.) The study indicates that psychological counseling should be targeted at women after embryo transfer and leading up to the pregnancy test. Allowing the women to speak freely offers time for self-reflection and may lessen the women’s Anxiety during this

time. Particular attention should be made to offer counseling if they were unable to transfer the expected number of embryos or if there are no embryos to freeze, as well as near the date of their scheduled pregnancy test as these were times that women found to be particularly stressful.

b.) If women experience an unsuccessful IVF attempt or loss of her embryos during her time in waiting an effort to validate the women's experiences of loss should be made.

c.) Increased contact and communication with the women following their embryo transfer and as women wait for their pregnancy test results is indicated. The communication should be initiated by someone that the women feel they have a trusting relationship with, such as their primary nurse. The communication should focus on how the women are feeling emotionally and if she has any educational needs. Particular attempts should be made to contact women when they do not have any embryos to freeze, and in the couple of days prior to their pregnancy test.

d.) Health care providers should be sensitive in their language and behavior when interacting with the women.

e.) Improved communication is indicated surrounding the condition of the embryos to be frozen, especially if the outlook is not favorable.

f.) Careful assessment of the women's risk factors for psychological well being both during and after IVF treatment may help screen for women who are likely to suffer higher levels of stress and possibly depression, or grief. Risk assessments should be conducted on women with low numbers of eggs or embryos, women who have lost numerous embryos and, or are able to transfer only one embryo, women whose embryos are genetically inadequate, women who do not have any embryo to freeze, women who

do not identify a support system, women who exhibit an unrealistic attachment to her transferred embryo(s) as may be indicated by frequent use of the word baby, or failing to acknowledge the risk for failure, and finally women who may financially be unable to afford additional IVF treatments.

g.) Due to a lack of consensus and routine regarding medical and societal acknowledgment or follow-up care for women being treated with IVF, not all women will seek medical attention when indicated or receive the support they need. Particular attention should be given by generalists such as primary care doctors, family practice nurses, obstetricians and gynecologists, and even walk in clinics to be aware to screen for potential patients who are either have infertility problems or experiencing IVF treatment. Sometimes all that is indicated is an appropriately worded question, to women of child-bearing age, regarding the number of children she has or if she is planning to have children in the future to elicit a wealth of information from a woman who may need infertility assistance or additional support.

h.) Consideration should be given to improve the women's psychological support. This could be accomplished by scheduling at least one visit with the infertility counselor during their time waiting. Although initially this may appear costly, but in view of the women's great emotional strain and financial investment, along with the risk for grief, depression, and Anxiety following a failed IVF procedure, the actual cost to the women is much higher than the potential one.

i.) Most women indicated that they would not have attended a more general support group meeting such as RESOLVE, but an option for the women to attend a support group lead by their nurse or counselor either at the clinic or online may help women cope with

their array of emotions. This group would be initiated by the infertility clinic. Specific sub-groups divided by where women are in their IVF process such as the “two week waiters” may help connect and find support, or a volunteer list or chat room to help various cultural groups connect

j.) Develop a volunteer buddy or sister program to help women connect with others who are very close in the same point of the infertility treatment or with a woman who has already received IVF.

k.) Regardless of the outcome of the IVF pregnancy each of the women shared this intense and emotional waiting period. Healthcare workers may fail to recognize the emotional state of the women who experienced IVF and became pregnant. Infertility clinics may want to offer an opportunity for a “de-briefing” session that has been found to be helpful for persons who have experienced severe stressful conditions.

#### Research

a.) Replication of the current study to explore men’s experiences of the phenomenon or couples’ experiences following embryo transfer until determination of pregnancy would be appropriate.

b.) Mixed method design studies to assess embryo-attachment during the time immediately prior to embryo transfer, again while waiting for pregnancy test results following an embryo transfer, and then after hearing a positive or negative pregnancy outcome are also indicated.

c.) Development of a dependable tool to measure maternal-embryo attachment levels could be useful to screen for women who may be at additional risk for negative psychological outcomes, especially after a failed IVF procedure.

d). Additional research of society's understanding of infertility, artificial reproductive procedures, embryos and fetal loss would be relevant, especially in light of the current political milieu surrounding stem cell research.

e). Replication of the current study with various cultural groups are indicated to explore if there are any differences in women's experiences across cultural and ethnic groups.

f.) A study designed to evaluate the experiences of women who have never had biological children and are receiving IVF with a partner who has biological children from a previous relationship are indicated to explore circumstances of women regarding their perceived levels of support, experiences of Isolation and vulnerability. Follow up studies to evaluate the women's adjustment to loss following a failed IVF may help lessen women's overall psychological morbidity when experiencing infertility and artificial reproductive techniques. These studies may also help couples as they work through infertility and its treatments.

g.) Additional studies are indicated which focus on communication between infertility healthcare workers and the women who experience IVF. The design should allow the researcher to focus on the choice of words, frequency of communication, and the impact it has on the women's experience of IVF. Questions to consider: How does the communication pattern of the primary healthcare providers influence the therapeutic or trusting relationship between patient and nurse/physician? How does the choice of words, actions, and communications patterns of doctors and nurses influence Hope, doubt, and Anxiety experienced by women receiving IVF?

h.) Evidence based research is indicated to evaluate the effectiveness of various support and counseling programs targeted on the psychological well being of women during and after their IVF treatments.

i.) Additional studies are indicated to further explore maternal embryo attachment for women who experience infertility problems, specifically how technology related to IVF technology and unintentionally fostering a sense of false Hope among women who use artificial reproductive techniques. By understanding the women's sense of attachment we may be able to better understand women's sense of loss, and be able to help her to mourn.

j.) Lastly, studies designed to discover maternal embryo attachment across various cultures and societies. Discovery of society's ability to acknowledge or value infertile women's sense of loss associated with failed reproduction and IVF, and how to best intervene to help this group of women to mourn and recover.

### Limitations of the Study

Limitations to the study were as follows:

The first limitation of the study was that the participants recruited for the study were from the same geographic location, and represented a small sample from one clinic's patient population, and not a sample from various fertility clinics located in various cities or states.

The second limitation to the study was that the participants selected themselves.

The third limitation to the study was that the limited ethnic and cultural diversity represented by the study participants.

The fourth limitation to the study was that due to the financial cost of IVF the participants were similar with regard to income and education.

The researcher notes that the findings and interpretations may not be applicable for all women who experience IVF, but from the rich text the essences and meaning of these women's experiences were captured in the theme of Waiting and the eight sub-themes. When applying the results to other women who experience IVF, the applier should be judicious when considering transferability.

### Conclusions

The purpose of this study was to describe the experiences of women who undergo IVF from embryo transfer until a qualitative beta hCG confirmation of pregnancy was known. Within the purpose was also an aim to discover the women's meaning of the non-implanted embryo following embryo transfer until a qualitative beta hCG confirmation of pregnancy was known. The data provided rich thick descriptions to explore the experience. This present study afforded a rare opportunity to explicate meaning from the lived experiences of women with infertility who received an embryo without knowing if they were pregnant and who lend their voices to help capture and understand this phenomenon. This study contributes to the knowledge base within the field of infertility treatments, specifically women's experiences during IVF.

The study was unique in that the focus of the interviews was directed toward the women's experiences and the meanings they ascribed during days they waited for their pregnancy test. This research brought forth some new ideas and reinforced the need for a call to action to understand and intervene appropriately to lessen the overall



psychological burdens of the women. It is the Hope of this researcher that by conducting this study, areas will be identified or will surface which may illuminate the women's experiences during IVF to inform understanding, intervention, and future research. The discovered new knowledge may also serve to promote theory development. Overall, the findings from this study remained consistent with the existing body of literature describing the emotional impact of infertility, and reinforcing that the many experiences of women receiving IVF remain to be discovered and understood.

## APPENDIX A

### UNIVERSITY OF NEVADA, LAS VEGAS IRB APPROVAL



### Biomedical IRB – Expedited Review Approval Notice

**NOTICE TO ALL RESEARCHERS:**

*Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.*

**DATE:** May 23, 2009  
**TO:** Dr. Yu Xu, Physiological Nursing  
**FROM:** Office for the Protection of Research Subjects  
**RE:** Notification of IRB Action by Dr. John Mercer, Chair *omde*  
Protocol Title: **The Interim Window: Women's Experiences During In Vitro Fertilization**  
Protocol #: 0905-3105M

This memorandum is notification that the project referenced above has been reviewed by the UNLV Biomedical Institutional Review Board (IRB) as indicated in regulatory statutes 45 CFR 46. The protocol has been reviewed and approved.

The protocol is approved for a period of one year from the date of IRB approval. The expiration date of this protocol is May 19, 2010. Work on the project may begin as soon as you receive written notification from the Office for the Protection of Research Subjects (OPRS).

**PLEASE NOTE:**

Attached to this approval notice is the **official Informed Consent/Assent (IC/IA) Form** for this study. The IC/IA contains an official approval stamp. Only copies of this official IC/IA form may be used when obtaining consent. Please keep the original for your records.

Should there be *any* change to the protocol, it will be necessary to submit a **Modification Form** through OPRS. No changes may be made to the existing protocol until modifications have been approved by the IRB.

Should the use of human subjects described in this protocol continue beyond May 19, 2010 it would be necessary to submit a **Continuing Review Request Form** 60 days before the expiration date.

If you have questions or require any assistance, please contact the Office for the Protection of Research Subjects at [OPRSHumanSubjects@unlv.edu](mailto:OPRSHumanSubjects@unlv.edu) or call 895-2794.

Office for the Protection of Research Subjects  
4505 Marvland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047

## APPENDIX B

### CONSENT FOR RESEARCH PARTICIPATION

RECEIVED

MAY 18 2009



#### INFORMED CONSENT

Department of Nursing

**TITLE OF STUDY: The Interim Window: Women's Experiences During In Vitro Fertilization**

**INVESTIGATOR(S): Tammy Lampley, PhD Candidate, MSN, RN, CNE**

**Yu Xu, PhD, MSN, RN, CTN, CNE**

**CONTACT PHONE NUMBER: Tammy Lampley (704-472-8358)**

**Yu Xu (702-895-3175)**

#### Purpose of the Study

You are being asked to participate in a research study. The study is designed to explore women's feelings while they are experiencing in vitro fertilization (IVF). The purpose of this study is to (a) understand the experiences of women who receive IVF during the 10-14 day window following embryo transfer and prior to determination of her first pregnancy test and (b) discover what it means for her to carry a non-implanted embryo following her embryo transfer.

#### Participants

You are being asked to participate in the study because you are a woman, of at least 18 years of age, who is able to speak, read, and write in English; and you are attending an infertility clinic and planning to experience IVF.

#### Procedures

If you volunteer to participate in this study, you will be asked to do the following:

- (1) Complete a brief social and fertility history (expected time to complete less than 5 minutes)
- (2) Participate in two informal audio taped interviews to occur in a location of your choice which will occur during the time period following your embryo transfer until having your initial pregnancy test drawn at the infertility clinic. Each interview is expected to last approximately 1 (one) hour.
- (3) Maintain a daily journal during the time period beginning on the day before your embryo transfer and to end prior to learning the outcome of your first pregnancy test (each entry will last approximately 5 minutes and will take place in the morning and evening of each day). The journal entries will be collected by the researcher at two points in time during the study: the first time will be at the end of the first interview, and the second time will be on the day prior to receiving the results of your first pregnancy test from the infertility clinic (approximately 10 days from your embryo transfer).

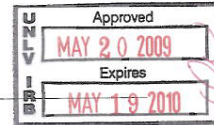
#### Benefits of Participation

There *may* be direct benefits to you as a participant in this study as sharing your feelings and experiences with someone may be beneficial or healing; and writing your thoughts in a journal may also be healing. However, we hope to learn and understand the experiences of women who receive IVF during the period of time following embryo transfer until learning the results of the first pregnancy test. This new knowledge may (a) help to educate nurses, psychologists, physicians, and other healthcare workers who work with women who experience IVF; (b) educate the women, and their

Participant Initials \_\_\_\_\_

1 of 3

RECEIVED  
MAY 18 2009



**TITLE OF STUDY: The Interim Window: Women's Experiences During In Vitro Fertilization**

families, who experience IVF; and (c) improve the quality of health care received by women who experience IVF during their treatment and follow-up care.

**Risks of Participation**

There are risks involved in all research studies. This study may include only minimal risks. You may be uncomfortable when answering some questions. If you feel too uncomfortable I will stop the interview, or if needed you can always refer back to your infertility doctor for help.

**Cost /Compensation**

There *will not* be financial cost to you to participate in this study. The study may take approximately 3.5 *hours* of your time. At the end of the two interviews you *will* be compensated for your time and will receive a \$50.00 Visa Gift card. If after signing the consent you do not complete the study you will still be compensated for your time and will receive the \$50.00 Visa Gift card.

**Contact Information**

If you have any questions or concerns about the study, you may contact either Tammy Lampley at 704-472-8358, or Dr. Yu Xu at 702-895-3715. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office for the Protection of Research Subjects at 702-895-2794.**

**Voluntary Participation**

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the infertility clinic, the researcher, or the University. You will not experience any loss or penalty should you withdraw from this study. You are encouraged to ask questions about this study at the beginning or any time during the research study.

**Confidentiality**

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at University of Nevada, Las Vegas by the Principal Investigator for 3 years after completion of the study. After the storage time the information gathered will be physically destroyed.

**Participant Consent:**

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

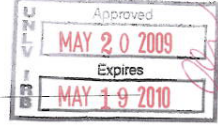
\_\_\_\_\_  
Participant Name (Please Print)

\_\_\_\_\_  
Participant Initials

2 of 3

RECEIVED

MAY 18 2009



TITLE OF STUDY: The Interim Window: Women's Experiences During In Vitro Fertilization

**Audio Taping:**

I agree to be audio taped for the purpose of this research study.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Name (Please Print)

***Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.***

Participant Initials \_\_\_\_\_

3 of 3



## APPENDIX C

### RECRUITMENT HANDOUT



A 3-day old Embryo

#### **WILL YOU SHARE YOUR IVF STORY?**

*You will soon be going through In Vitro Fertilization (IVF) and may be eligible to participate in a research study that can help other women who experience IVF.*

***Sharing your story can make a difference!***

**PURPOSE OF THE RESEARCH STUDY:** To discover the experiences of women who receive IVF during the time period following embryo transfer and before knowing if you are pregnant. Findings from this study can help other women who experience IVF and further improve the quality of healthcare provided to women.

**WHO IS ELIGIBLE:** Women who are attending a fertility clinic and plan to experience in vitro fertilization. All participants must be at least 18 years old and able to speak, read, and write in English.

**WHAT YOU WILL BE DOING IN THE RESEARCH STUDY:** You will be asked to share your experiences with in vitro fertilization by participating in two interviews with a Registered Nurse (RN) PhD student researcher, each lasting approximately 1-hour scheduled at a time and place of your choice, and by keeping a journal for ten days.

#### **PARTICIPANTS WILL RECEIVE:**

1. A \$50.00 Visa GiftCard to be given to you at the end of the two interviews.
2. A copy of the study findings, if requested.

#### **PRIVACY AND CONFIDENTIALITY WILL ALWAYS BE MAINTAINED**

The student researcher realizes that this is a sensitive and special time in your life.

Your identity will never be shared with anyone and will be known only by the investigator Tammy Lampley.

#### **HOW TO OBTAIN MORE INFORMATION OR BECOME A PARTICIPANT:**

1. Contact me by phone: **Tammy Lampley** at **704-472-8358** and leave a telephone number where you can be reached and your preferred time for a telephone call back. I will return your call.  
OR
2. Contact me by E-mail: **Tammy Lampley** at **[lampleyt@unlv.nevada.edu](mailto:lampleyt@unlv.nevada.edu)** and forward a telephone number where you can be reached and your preferred time for a call back. I will respond to you.

#### **CONTACT INFORMATION:**

If you have concerns about this research study, please contact the investigators.

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## APPENDIX D

### INTERVIEW GUIDE

#### THE INTERIM WINDOW:

#### WOMEN'S EXPERIENCES DURING IN VITRO FERTILIZATION

##### Interview Guide

In phenomenological inquiry the interview design is unstructured and open ended. The researcher began each interview with a leading question. Follow-up questions were posed by the interviewer in an effort to focus on the central phenomena under study and depended on how the participants answered the leading question.

*Interview one leading question:*

- Now that you have received your embryo transfer, will you share your thoughts and feelings with me about what it has been like for you since you have experienced your embryo transfer?

*Interview two leading questions:*

- Will you share with me how you have been feeling since you have experienced your embryo transfer? In what ways are your thoughts and feelings different since our first interview, and how are they similar?

## APPENDIX E

### SOCIODEMOGRAPHIC AND FERTILITY SURVEY

#### **The Interim Window: Women's Experiences During In Vitro Fertilization**

#### **Socio-Demographic and Fertility Survey**

Answers to these questions are voluntary and you may refuse to answer any or all questions without prejudice.

Please answer the following questions and place a "check mark" in any boxes which apply.

All answers will be kept confidential.

#### 1. Age

- Less than 25
- 25 – 30
- 31 -35
- 36 -40
- 41-45
- 45-50
- Greater than 50

#### 2. What is the highest level of education you have completed?

- Some high school
- High School Degree (GED)
- Some College or Associated Degree
- College Degree
- Some Graduate School
- Graduate or Professional Degree

#### 3. How would you describe yourself?



- Black/African American
  - Asian or Pacific Islander
  - White (non-Hispanic)
  - American Indian
  - Hispanic
  - Other, Please list \_\_\_\_\_
4. Are you currently employed?
- Full-time
  - Part-time
  - Unemployed
5. How would you describe your marital status?
- Married
  - Divorced
  - Separated
  - Living with a partner
  - Single
  - Widowed
  - Never Married
6. Have you ever had a miscarriage or stillbirth?
- Yes, If yes how many? \_\_\_\_\_
  - No
7. Have you ever had a pregnancy that resulted in a live birth?
- Yes, If yes how many? \_\_\_\_\_
  - No
8. How many children do you have through adoption, step-children, or foster-parenting?\_\_\_\_\_

9. How long have you been diagnosed with infertility? \_\_\_\_\_  months  years

10. Who is the source of the infertility?

- Male
- Female
- Both Male and Female
- Unknown

11. Length of time receiving infertility treatment \_\_\_\_\_  months  years

12. Number of IVF attempts \_\_\_\_\_

13. Number of previous pregnancies resulting from IVF \_\_\_\_\_

14. Number of previous live births resulting from IVF \_\_\_\_\_

15. Approximate household income

- <\$50, 000
- \$50, 000-\$100,000
- \$101, 000-150, 000
- >\$150, 000

## APPENDIX F

### AUDIT TRAIL

06.11.09 I made my first contact with the clinic back in summer 2008, also contacted three other clinics, very little or no response as they not interested in me doing the study there – either low staff or no interest in qualitative literature. Got the go ahead in November 2008, from the clinic that I wanted – largest one in South East, so I will wait to hear about when to come in after doctors give approval for me to recruit their patients. Go ahead took a long time as MD's were busy and clinic lost primary nurse to tragic death and they had to replace their embryologist. So finally, it I snow Mid June and I meet with the nurses and clinical director today at the fertility clinic. The best news is that the clinical director is really supportive and committed to my research. Qualitative work is hard – but I have only done one other study which was quantitative – so not much to compare this to. I spend a lot of time reading about phenomenology: Husserl, Heidegger, Merleau-Ponty, Benner, I am trying to get a small grasp on philosophy, but without a formal academic background in it – it is a tough self-read!

I brought the nurses and director lunch and provided an overview of the study. They had some questions – which I answered and they also had a couple of suggestions. One of these suggestions included an offer to use a corner office on their third floor of the infertility building to interview the study participants. Initially I was worried because I wanted to protect the confidentiality of the patients from the clinic workers knowing who had and had not participated. The director and the nurses reassured me that the operative procedures were conducted on the first floor and the clinic, where the women attended their appointments was on the second floor, and the only other office that was used on the

thirds floor belonged to a physician who treated menopause so no one would see the women who decide to participate in the study. I thought this was a great idea, and it gave the women an additional option as to where to meet. I was grateful. I also took this as a sign of support that they wanted me in their building! I provided the nurses with my contact information and made sure that they knew to call me or e-mail me with any concerns or questions.

During the 45-minute meeting we decided it would be best to hand the recruitment flyers to the women, who met the study requirements, at their initial consult. I think this time is good as the women will not be overwhelmed and will have an opportunity to contact me to participate before they are heavy in their meds. But then part of me wonders if the women will forget about the study because too much time will pass between the initial consult and the time of their embryo transfer. I will just have to see how it goes. I thanked the clinical director and each nurse individually because without them this study will not be a success. It has been a long wait to get here, but I am finally beginning participant recruitment.

06.29.09 I was contacted by Sarah today via e-mail who showed some interest in my participating in my study. I am so excited she is the first person to call me. I replied to her e-mail and thanked her for her interest, and asked if I could contact her by phone to give an overview of the study. She replied yes.

06.30.09 spoke with Sarah today on the phone, she is really interested in the study and wants to participate. Her only question was when to begin her journal and what did maintaining one involve. I gave an overview of the study and answered her questions. She is going to contact me when she knows the date of her embryo transfer and we will

schedule the first interview. She commented how her nurse had told her that I had been through IVF – I think that is how she connected with me. I will have to make sure that I do not talk too much about me and my experience so as not to influence her or take away her from her story.

07.28.09 Sarah e-mailed the embryo transfer is set for one week from now and our first interview will be three days after her transfer. She will have been on bed rest days one and two post-transfer. She has opted to meet me at the fertility clinic on the third floor.

08.07.09 The first interview with Sarah was today. I brought two tape recorders (one for back up) extra tapes, and lots of batteries. I tested the recorder prior to her arrival – it was good to go. She signed the consent and completed the socio demographic and fertility history. The interview lasted nearly 1 1/2 hours. We talked for about 10 minutes before and 10 minutes after. After the interview I asked her if she was okay – and she said she was fine.

The tape recorder worked fine and I took many notes. The only issue I had with taping is that I did not hear the tape end, so I missed some of what Sarah said before I was able to turn it over to side two. I will have to pay more attention to the time – as there is 60 minutes of tape time on each side – but then I do not want her to see me looking at a clock or at the tape.

The office space is quite nice and roomy. It is actual the office that the clinic's psychologist uses to counsel patients – so it is very calming and quiet in there. It has lots of natural light because it is a corner office and it is decorated in shades of blue and green. The room contains a large desk, bookcase, three chairs, a coffee table, and love seat. Sarah opted to sit on the love seat and I sat across from her with the tape recorder

placed on the coffee table between us. I also brought a bottle of water for her to drink – which she really appreciated.

I had conducted two interviews before - for a student PhD project, but this was the first interview for this study and in my role as PhD student researcher. These women were really patients and were at a vulnerable time in their life and they were letting me in their world – and I do not want to add to any of their stress. I was amazed how quickly Sarah trusted me and shared her personal life with me. I realize this is a very humbling and powerful role for me to be in. Sometimes I feel odd and or uncomfortable as the interviewer, like an imposter or something. Overall I thought the first interview went well but I made one error – well not an error exactly but at one point in the interview Sarah was really sharing her intimate feelings and I said something about her husband which threw the whole flow of the conversation off. It was a bit awkward, and I will always wonder if I had lost an opportunity to hear some important feelings about her experience.

At times I found myself very uncomfortable with the silence, and it was often easy to speak, rather than listen. I need to work on this for next time. It is important that I remain unbiased and keep my past experiences with IVF to a minimum when she asks me something. At one point she was weepy and I tried to be empathetic – but really deep down I was sympathetic. I also found it a challenge to listen and remain focused on where the interview was going. Sometimes ideas for the next part of the interview popped in my mind while she was speaking. And I did not want to forget to address my ideas and thoughts, but yet I wanted to give her my full attention. I am very aware of the need to bracket my own past experiences, feelings, and opinions. I think this is a challenge and some phenomenologists believe – it may be impossible to fully do this – but I will try.

Van Manen addresses it but it is not a huge part of his methodology, but I think objectivity to accomplish bracketing I will say readily that I think that infertility and IVF is one of the hardest and most stressful times in a woman's life – at least which is how it was for me. I also wonder if the women are going to call the embryos babies. They have so much invested in this possible pregnancy and based on the literature I expect them to be really attached to the transferred embryos as the days progress. Having said this, I will try to put these thoughts to the side and be open to the women and their stories. And listen to the women and their words for what they are and what they mean. I found it easier than I had thought to attempt to bracket my feelings – perhaps that is because I was up front with myself and readily admitted them. Or maybe it was because I was so absorbed in the interview – listening to their stories that I did not have room for thoughts about myself. Perhaps it was a bit of both – but I will continue to remind myself that I am in the role of the researcher and not the participant.

Notes during Sarah's interview – 3 days post transfer:

First day after transfer – Hopeful excited, good quality embryos, by her second day on bed rest, starting seeking info on internet in frenzy, obsessed with activity level, positive chipper appears composed. First day out and about after bed rest, very upbeat “elated”, happy two embryos placed, aware outcome is out of her control and up to God, describes herself as excited but wanting to prepare for worst, depends a lot on what MD says, watches what she does feels aware of embryo inside and wants to protect “the potential growing inside”. Aware of lack of control, scared, positive outlook but cautious – will think more baby if the test is positive, think this could be the beginning of a beautiful thing, but also a long two weeks, stressed as test seems far away, she say it is an exciting

complex time. She takes time day-by-day, obsessed and fixated tries to keep distracted, if she gets bored she ends up on internet and she does not want to do this. Overall she is optimistic, cautious, excited for potential. Needs her mom and husband for support – could not do it without them – keeping IVF a secret to everyone else they want it to be a surprise. Describes being on an emotional rollercoaster, knows someone else is in control. She is preparing for stress to increase close to pregnancy test. She has relief after successful transfer, still thinks more like an embryo since transfer but now after transfer is it what could be. Optimistic trying not to fixate, give control to God. She is a type A personality so giving up control is hard to do.

08.07.09 I listened to the tape and most if it was clear. I think I will try to arrange the seating so that the tape recorder microphone is closer for the next interview.

08.13.09 The transcription of the first interview yielded 9 pages of size 8 font descriptions of Sarah. The dominant feeling and interpretations that I analyzed from Sarah's first interview are Hope – cautious optimism. I make a note to ask her re: if this is still how she would summarize her feeling.

08.14.09 I changed the batteries, put in a new tape and had the second interview with Sarah. I still carried the extra recorder, tapes, and batteries with me. This interview went better than the last one. I am definitely happy that the study is designed to have two interviews as the second interview provided much more information. I was able to follow up with on some areas that I was unclear on or was wanting more detail on. I also shared some of preliminary interpretations of the previous interview with her to see if I was doing justice to her story and accurately representing her.



The second interview lasts approx. 75 minutes with about 5 minutes spent talking before the interview and about 20 minutes talking after the interview. Sarah was much more emotional during this interview and was crying – so we just talked for a while afterwards. She confirmed my ideas and interpretations from the first interview and elaborated on some thoughts, and offered some new descriptions as well. She has a lot more self-doubt now; dominant feelings are Hopeful, captious, tired, anxious. Has many internal conversations with herself and tries not to let herself think too positive in the future, she focuses one day at a time now.

I listened to the tape recording of the second interview. The tapes are still hard to make out at times, so I think I will use the back-up recorder instead to see if it is any better. Overall the transcriptionist does a good job with the tapes – but sometimes I think it is hard to write responses word-for-word as they occur in a conversation. To note that both the woman and I are speaking or switching quickly who is speaking or that there are pauses in the conversation the transcriptionist uses “...”.

08.15.09 Recruitment is going slow. I wonder when the next person will contact me. I stopped in at the clinic yesterday to meet briefly with each of the nurses to see how things are going, and to let them know I had one participant so far. I was also wondering if they had any questions or concerns regarding the study and my recruitment strategy. One nurse says that she gives the handout to each new patient that comes in the clinic and she was surprised to hear that I had only one person who had contacted me and was willing to participate. She says that when she gives out the handout that the women seem excited, but perhaps they just have too much to take in and are overwhelmed with IVF. Another nurse apologized and confessed that she had been forgetting to give out the handouts but

that she would try much harder. She is also surprised that I have only had one woman contact me, she says she expected more to contact me – even if they do not want to participate in the study. She thinks the women are just too stressed and that the topic of infertility and IVF is taboo and people are reluctant to talk about it. The nurse asks me to send a reminder e-mail to her every couple of weeks and to update her on where I am with recruitment. I agree to do this. It is probably not a bad idea I just don't want to come across as I am harassing her! But definitely the update idea is a good one - to communicate with the nurses and keep them informed – I will send the update to the director and nurses on a monthly basis.

08.17.09 Sarah sends me her journal and shares the results of her first pregnancy test. Triangulation of data – Sarah's interviews are consistent with her journal, themes/ descriptions are supported

08.12.09 My second participant, Beth, has contacted me via e-mail and writes she is definitely wanting to be in the study, I reply to her much in the same fashion as I did with Sarah. Beth also wants to meet at the fertility clinic.

08.20.09 The first interview occurs with Beth in the same office as Sarah's. Beth is three days post transfer. I bring the same supplies and use the backup tape recorder. Beth opts to sit in a chair at the desk, I offer the love seat to her as I thought this was more conducive to the interview, but she prefers over by the desk. I leave it up to her – I want her to be comfortable. I sit across the desk from her and the tape recorder is on the desk between us. She signs the consent and fills out the survey. I ask her if she feels okay after the interview and she says that she does. We spend about 5 - 10 minutes chatting and before she leaves.

Notes from Beth's interview:

She describes that she is waiting, a little stress and Anxiety but think the Anxiety has not fully kicked, she feels isolated. She shares that the whole experience is humbling, she says that she is a control freak. The lack of control is very difficult because she feels ill-equipped at waiting. Overall feeling is cautious and guarded. In the past few days since her transfer she is living the past two years of infertility. Online is easy to chat, as it doesn't feel like a burden, She feels as though anything, i.e. having eggs and embryos is better than where she was two years ago with primary ovarian failure, she was devastated that she would never have children. Only had them transfer one embryo – too scared of multiples. Husband really wanted children – there is Hope, she likes working as a regular routine gives the illusion of control, she says it can be all consuming so she likes to stay busy. When diagnosed with infertility she felt defective, now that she has eggs she feels more whole. She is aware there is something inside of her – tries to eat healthy not too active physically, she feels numb but also relieved and guarded because of past pain.

08.21.09 I listen to Beth's tape and it is a much better quality. I will use this tape recorder as my primary one from now on.

08.28.09 Today was Beth's second interview. I reviewed my notes from the first interview (as I did with Sarah) and Beth clarified some areas, she agreed with my interpretations and added new information.

Notes from Interview:

She still feels guarded and is attached as the days progress, it was more real closer to the transfer, now she says progress it is surreal to her. Anxiety has increased but not as bad as she would expect, definite increase in doubt. Was compartmentalizing her emotions as

self protecting, she is ready to know, wants clarity to return, Hopeful, doesn't feel as connected to embryo, uses the word baby less, rollercoaster of Hope, hyperawareness, numbness, disconnected from Faith (very upsetting because she is a minister), unable to describe these days just that they feel different. Used to say could be our kids when referring to embryos, now more doubt. She says it is not unbearable now- the stress, she took a home pregnancy test because the stress was so bad, she said it was faintly positive she needed to prepare herself for the pregnancy test news, she said the embryo transfer was a huge milestone. Having eggs was also huge, and having embryo to freeze was a milestone. Realizes that she may not get pregnant but is planning to do it again with remaining frozen embryos. Compared to first interview she thought there were 13 possible babies and she is guarded but Hopeful for one. She was searching the internet about baby stuff when we had our first interview but not so much now. She describes her time waiting as a journey. Says she was able to pray since we last met – brought relief to her that she could connect again as she was just so numb.

Received an e-mail today from Julia she writes that she is definitely interested in participating in the study. I make arrangement to speak with her via phone much as I did with the other participants. She is already in stimulation and the first interview will come quickly

08.30.09 Received Beth's journal today, she told me her pregnancy test results.

Triangulation of data – Beth's interviews are consistent with her journal, themes/ descriptions are supported

09.17.09 E-mail contact with Julia we schedule the first interview for Sept. 28. She too wants to come to the clinic office. Julia is unable to make it in on Day 3 – her first

available date will be on Day 5. That is okay, maybe this will give an opportunity to gain new insight in what happens between Days 3 and 5.

I sent e-mails to each of the nurses at the clinic just to check in with them, give them an update, and ask them if they have any concerns – oh yes and thank them!

Already heard back from one nurse today, quick response ... says all is going well.

09.21.09 Heard back via email from a second nurse, says she has been forgetting to offer the handout to eligible women in the study and that she will be more conscientious, she wishes me luck with my study. This is a different nurse than the one who forgot before.

09.28.09 First interview with Julia. This interview went very well. She opted to also sit at the desk. She is very easy to speak with. The interview lasts nearly two hours. And we spend about 10 minutes chatting before the interview and about 20 minutes after the interview. She is very distraught as only one embryo survived to be transferred and she has basically accepted IVF failure, but yet she says things like – well if I am pregnant I will be most shocked. She says she cried from the day of the embryo transfer until now, I really feel for her. I say to myself that I only had one embryo make it from 10 that fertilized and she is 6 years old and looking at me right now! But I push this thought out of mind, I want to give her Hope in her desperation but I realize I would not be acting in the best interest of my participant or my study. I would not want to give her false Hope but she does not have much of her own. Having only embryo to transfer and none to freeze is really significant creates a lot of doubt. She used “Heart wrenching news”. So I bracket those thoughts and focus intensely on her story. She is very negative and just a

few days after her transfer she feels that she is not pregnant. Her dream has turned to a nightmare she feels. She calls this time the two week waiting (2ww). Spends a lot of time on internet but says it can be your friend and your enemy. She gets tired of telling people stuff is why she keeps a blog – does not want to blog much since only finding she has one embryo. Husband and family are supportive. Hard is her word since transfer. Looks for Hope on internet looking at statistics of success with one embryo transferred, getting obsessed with internet searches for any sign of Hope. Isolated – does not want to hear remain positive all the time they do not understand it is not always positive. Searching or aware of any symptoms from body just to give her indication if it worked, does not want to do anything to impact the chances of success i.e. exercise, strain, calls it embryo and baby scared to dream about baby not enough Hope, feels surreal, plans to try again, talked about financial burden, did not feel prepared to hear that so many of her embryos could die off so fast and so close to transfer, better communication with staff about embryos not making it, not prepared she was devastated. Calls it an embryo but refers to naming it or talks about the possible child, says embryo was more real to her in the petri dish at lab because she could see it and now she doesn't know what is happening – doubt. No objective measurement and now subjective symptoms – says now just stinks the waiting for the unknown is horrible.

People are concerned about her – do not understand the emotional complications and steps of IVF.

09.30.09 Heard from the third nurse in response to my e-mail, says recruitment is going well but the physician she primarily works with is out of town for two weeks.

10.04.09 Second interview I review my thoughts and dominant themes with Julia and she clarifies some information and interpretations. She elaborates more on some areas to that needed more information.

Dominant themes from second interview with Julia.

Aware there are no symptoms, feels like her period is going to start, she is trying to accept that it will be negative, and says it is Hopeless, but then says that she would be shocked if it were positive, but does not want to totally give up. Plans she will have to do another cycle – anticipates. She wants to accept the negative part now to protect herself and then if she hears it is positive she will be chocked – still uses IF. Avoiding people with swine flu in case she is pregnant. Defense mechanism – vulnerable, people do not understand they tell you will get pregnant but they just don't know what else to say – diminish her real feelings. Doubtful, but wants to Hope - googling women going through IVF who had no symptoms but got pregnant, her way of saying, it can happen “can I have any Hope?” Doubtful overall want the test results over to move on to the next step- Hopes for any sign to hold onto. Takes her I/M shot she used to dread as only progress she can have now towards her dream. Still feel like it is surreal- like it hasn't really happened. “I feel like I'm getting a pregnancy test for something that really didn't happen”. Expected Anxiety to be worse - although it's not easy, it's not as bad as I thought it was going to be – “I felt like she was not as bad emotionally that I thought I was going to be.” Crying about looking back on how hard infertility has been and IVF is another hard part –does not want to be around pregnant people now. Thinks that when she hears a negative test the more it reminds her that she is not going to have kids. Plans in detail how she will take the phone call tries to anticipate her reaction to the unknown.

Found participating in research therapeutic – would like support group she can relate to, still Hopes it may have the slightest chance of being positive and then anticipates next IVF will get harder.

10.07.09 I received Julia's journal ...she shares with me the results of her pregnancy test.

10.12.09 I have re-read Van Manen's approach to data analysis. I have read and re-read the transcripts for data. First I picked I picked out some statements or words which seem to really stand out to me and capture or describe an experience. I also read each interview transcription and journal line-by-line – according to van Manen either one is acceptable. Then I code these with various colors and write my thought beside them. I grouped these statements by color and using word or phrase which encompasses what I believe the women are describing – themes. The labels for the themes either come directly from what the women are saying or from a word(s) I provide to best encompass this description. There is so much information here to analyze, I am getting to broad, I must remain focused. I ask myself often – Does this answer your questions directly, or is it something to think about later and is related to my topic. I recite the study purpose over and over again.

10.13.09 Common themes starting to emerge, Hope is a huge driving factor, the women's highs are high and the lows are really low, their emotions are up and down, the women plan, predict, expect they will have to do this again, sometimes they really talk themselves out of believing it can happen – doubt, but also fear that it won't.

10.15.09 I took a couple of days to get a break, let my head rest! I am looking at it again today and organize my thoughts. As I read over the words and phrases which



describe what the women are feeling I think the following themes will best capture these experiences:

Waiting will be color coded in pink and any sub themes related to waiting are also pink – these include Isolation, searching/desperation, test results;

Emotions are Green and include Hope, doubt, Anxiety, excitement, exhaustion.

Process is yellow and includes the trends I notice from the early post transfer days until later in the week leading up until the initial pregnancy test: attachment, detachment, labels for embryo, baby, child, etc., and closure.

Reassurance/Security will be Red, includes signs and symptoms, communication, embryos - the quality and the number of the embryos can really effect the woman and almost deplete their sense of Hope. Then the closure in the process comes early – well before the pregnancy test results. i.e. poor quality embryo, only one to transfer, no symptoms, etc.

Support will be blue and includes family, friends, society, health care workers, understanding or lack of understanding.

These are preliminary color codes, based on my reading, and the women’s feedback - I am starting with them until I see how it is comes together.

10.16.09 The codes are staying similar, some words seem to cross over into two categories. I will read the women’s words again to feel what they are saying, and perhaps this will help me to place them in themes. I feel as though I am entrusted with the women’s most precious thoughts, intimate and raw thoughts, and I want to do justice to the women and tell their stories in their words so I can really capture their experiences. By staying true to them I will be able to interpret the words and themes to share meaning.

10.17.09 Received transcription of Julia's first interview from transcriptionist - Overall a good quality transcript.

10.18.09 Received transcript of Julia's second interview. As I read my work I am going to add embodiment to the process theme along with awareness as an emotion. I see this split in the themes of mind and body. I am surprised to see that unlike dominant attachment beliefs, these women really start of Hopeful and attached but nearing the end of the week they have detached somewhat. I am looking at this and I see two a separation of mind and body, but then they converge, and having something (the embryo) on the body really affects the mind. This may be something I do some further evaluations on. But for now I will put this thought to the side until I finish the analyses and do chapter 6. I definitely see a progressive cycle or flow of steps in this small sample of women and maybe this is something that could be looked at with more women to determine if a progressive day-to-day cycle exists.

10.19.09 I may add a new title the body – the body as awareness, or as interpreter/or controller, i.e. symptoms, or actually seeing the transfer... I will see. I review some key concepts of Van Manen's approach.

10.22.09 Update from Sarah – able to freeze two embryos.

10.23.09 I have looked at the statements I pulled out and what is common to each one and there it was "Waiting". It is all coming together! These themes are how the women wait during these days. They wait in Hope (excitement), Anxiety, awareness (aware of the medical procedures/language, embodiment - attachment, quality and quantity of embryos, self ware – numb, of time – chronological day-by-day, suspended/limbo), doubt (unsure, looking for reassurance, signs, embryo frozen), desperation (searching frenzy,

try to read into things), unknown (Am I or Not?, What if? In limbo - time stops), Isolation (support, communication), vulnerability (fate/God, lack of control, communication), for time (time stops, an actual, life in limbo or suspense, chronological time. closure).

Attachment from waiting for a child vs. waiting for outcome – pregnancy.

10.24.09 Today I re-read the central words and phrases and recoded and grouped the data to be consistent with my final themes. The following code colors will assist with my final interpretations:

WAITING – anytime the word wait or waiting is identified in the data it will be

CAPITALIZED

Hope – yellow

Anxiety – turquoise

Awareness – pink

Doubt – grey

Desperation – red

Isolation – green

Vulnerability – gold

Anticipation – teal

Sometimes I am not sure what to do with some data that really fits within two themes – I will classify the sentences or statements as two different parts – each appropriate to the theme

I realize that the themes are distinct but are interrelated and that is okay. Looked this up on van Manen and he seems to say they are interwoven.

Received notification of someone wanting to be in the study, this will make four people – hoping to close study soon and complete analysis , recruitment remains slow - but with three people I want to be sure the data is rich enough that I can determine if it is saturated, so far the themes are present in each of the women's stories.

#### 10.26.10 Rough draft of analysis complete

Hope - excitement, Hopeful, dreaming of the future, present immediately after transfer, can vary person to person, depends a lot if IVF is going as planned, number of embryos transferred, number of embryos to freeze. Hope lessens as week gets closer to pregnancy test.

Doubt – usually expresses doubt similar to Hope and if something goes wrong, if no embryos to freeze they are doubtful, see-saw with Hope, hard to experience Hope without doubt, and vice versa, sometimes share Hope and doubt in same sentence. Doubt increases near pregnancy test, sometimes expressed as surreal experience.

Anxiety – always present at some level throughout the waiting, stressed from not knowing what is happening or what is going to happen, fear/stress, women are anxious, describe the work of IVF as hard. Glad they are busy working or trying to stay busy – keeps their mind off of what is going on.

Awareness – aware of physical symptoms – these reinforce Hope and doubt, aware of time – goes fast when busy, but usually a chronological countdown that is either really moving slow, or even suspended – women cannot move on with their life – it is suspended too, at least until they know if it has worked. The women spend all of their aware of everything – always analyzing and second-guessing – must be exhausting and stressed out. Some women say they are numb, and do not know what to think. Women

attach to their embryos – this lessened in strength as pregnancy test came closer, I was surprised and so were the women (have to remain as non judgmental as possible)

Desperation – severe and sudden drops into Hopelessness, no Hope an absolute place – when desperate they are not anything else (unlike doubt still has a component of Hope).

Some women have already given up, sure that they are not pregnant, not a good place to be and they can't stay here until the pregnancy test, they will burn out, must return to some little bit of Hope. Some women could not take it anymore when they hit the half way mark – so they take a pregnancy test that they are advised against doing.

Isolation – they have support but think they do not understand or cannot fully understand, depend on husbands as primary support, don't fit in with friends who are pregnant or have babies, feel alone especially when clinic doesn't call as often after their transfer, desire support

from others, want more contact with clinic. They go to internet for information, want support groups by stage i.e. two week waiters, want someone familiar to lead support group

Vulnerability – live with past losses, embryos important and if they lose them they are sad for them now and also grieve the potential of less likelihood of pregnancy in the future. Dependent on nurses and doctors to keep them informed, interactions with nurses and doctors impact feelings of Hope and doubt, self protect from past pain and loss.

Anticipation – they wait and anticipate the results of their pregnancy test. They think about what will be like when they get the call from the clinic with the results. They wonder how they will handle the news – try to self protect from negative news, they are scared to believe and fear karma. Women already talk about what they will do if news is

positive and what they will do if news is negative. They want closure, and want to know – some say either way because they need to move on.

11.5.09 Heard from two women wanting to be in the study.

11.7.09 Initial impressions from chair and methodology is draft analysis is solid.

11.12.09 Peer review of themes and sample of raw data that has been coded according to themes and color coding, both chair and methodology expert agree with coding and able to follow analysis

Heard from participant #6, Michelle, wants to be in study. Retrieval in couple of weeks.

11.17.09 Contact from participant #5, Paige, embryo transfer postponed until 11/30, awaiting genetic test results

11.18.09 Interview #1 with Kate scheduled for 11/19.

11.19.10 Met Kate today for our first interview – it lasted a long time nearly two and a half hours, I was not ready for a second tape – a bit clumsy but next time I will have two tapes sitting beside the recorder. I connected with all of the women so far – but more with Kate. She sat on a love seat and me in a chair with, she is very calm and controlled – stoic. She has a strong Faith in God but I can't help but get this feeling that if the test is negative it will be really hard on her. The control is like she is holding some of her emotion back. I am not sure – she was weepy at times and is trying to deal with her stepson moving in, her sister that has an unwanted baby, she has not told any family members. She is not sure if she will have the money to do IVF again – because of her advanced maternal age she was not eligible for a shared risk program with the fertility clinic. She is very open and easy to interview. Comments that stood out in the interview

– husband cannot truly understand because he already what she wants, unsure if she made it clear to doctor that she may not have money to do IVF again, doubt herself for waiting too long to go to an infertility doctor. Dealing with stepson is a constant reminder of her inability to have her own child. Very upset that the clinic did not call her about having no embryos to freeze, she was expecting to have some, as a back up so it would not cost as much next time if no stimulation. Dominant experiences – stress, worry, Anxiety – am I or am I not pregnant, what happens after I find out – trying to plan for unknown, no one called re: embryos not making it – violated, abandoned, impersonal contact, no eggs to freeze – was a safety blanket, vulnerable re: communication with staff, internalizes, loneliness – vs. feeling alone, believes life begins at fertilization – refers to babies, God, miracles, excited, realistic from so many past failures, fate, want this time to end to have her life back, our embryos/our babies, celebrate milestones – fertilization, what happened? To the embryos that are left, what if she could have done something different or the clinic do something would the embryos have survived? Questions self did she wait too late to get IVF help, looking for symptoms related to pregnancy – cramping, bleeding. Time stands still, most dominant themes of feelings – Hope, Anxiety, excitement, stress, liked to be up and around after bed rest – more normal. Put control in God’s hands, vacillates between believing and not believing faith on God versus self-worry. Easier to go on Faith. Unknown outcome – shock, my last memory was a nurse holding my hand saying don’t worry, she held my hand until I went to sleep for anesthesia. Not sure if any money to try again, but expects she may have to as this may not work. Expects more Anxiety, been an emotional downslide from Hope when she heard that there were no more embryos to freeze. Hopeful – aware it may not work.

Compounded losses present embryo loss with past losses, stress/Anxiety<-----

>excitement, and excitement<---→ disappointment

11.19.09 E-mail from Michelle- egg retrieval is 11/22. E-mail from Paige, two embryos survived (others failed to develop, of the two that survives one will be destroyed – has a genetic condition incompatible with life, transfer moved up to 11-24, pending embryo survival upon thawing

11.20.09 Communication from Michelle, interview tentative for 11/24 or 11/25 – changes day-by-day

11.22.09 E-mail from Michelle 11-23 is transfer and interview is set for 11/25

11.25.09 Interview cancelled due to delay with transfer. E-mail from Paige interview #1 scheduled for 11/28.

11.26.10 Kate's second interview, believes she is not pregnant, still upset about losing embryos and not being notified, finds peace in praying but realizes that it is out of her control she is already pregnant or not by now. God in control, sort of relieved it is not up to her, that what is done is done. Reviewed interpretations from first interview, some clarifications and comparisons, Kate agreed with overall impressions. Much more doubtful, still has that calm control, kind of eerie though, too calm – she says it is how she handles stress, a lot to do with her job she has to be in control for the crime witnesses and victims that are usually falling apart emotionally. Maybe she is numb? Interview lasts over two hours – I am prepared with tape this time. Interview flowed very easily. Reviewed themes and overriding experiences from last time – Kate agreed and elaborated also clarified that says Hope is less now, more Anxiety, worry, stress, over unknown, not watching baby shoes now, finding out that there were no embryos to freeze lowest point,?



It prepared her for bad news from pregnancy test, doesn't always count-day-by day, but aware of the date of test, still vacillating as before, failure to trust doctors and nurses now – makes her vulnerable, support person still husband, culturally does know any African Americans, confides in two counselors at work. Attachment up and down, prays to God for support – alone, admits uncontrollable situation, uses Hopeful, resolution, and desires closure as dominant feelings, was trusting of office workers her nurse went away and communication failed, not as anxious and emotional as she expected.

11.28.09 First interview with Paige – 4 days after her transfer, very pleasant and Hopeful even though only one of her embryos were healthy, she is relieved to know what – genetic disorder and glad to have one, lots of pressure on this one embryo – knows gender, increased attachment, history of two miscarriages 2007 at 9 weeks, and 2008 at 18 weeks was devastated with pain from loss, no backup plan because no embryo to freeze, fears this may not work but thinks that one embryo is better than none – excited this could be happening, maybe a baby in there, accepted lack of control and is relieved someone else is in control, anxious, read a lot before transfer, does not necessarily found chat rooms supportive – too much variation to relate. Maybe there is a baby in there - what if? At 5 days embryo development, discarded the inadequate embryos, “those were my embryos” , fertilization was a milestone, lots of ups and down Hope and doubt, over analysis of symptoms, Anxiety increased, wonders how she will handle negative test, ups are up more than down are down at this point. Anytime she is moving forward to meet her girl – Hopeful, she aware since embryo transfer finds herself rubbing her abdomen, admits guarded excitement fearful to let her mind go and just think positive, describes her journey as individual – different than anyone else, with different needs, admit if this

IVF fails it is not the end of the road for her, lives day to day, aware of change since transfer – tries to take care of self responsible for embryo - tries to rest, ate, sleep, take care of herself to help, Dominant feelings Hopeful and anxious overall, expecting Anxiety to get worse, less than she thought right now, surprised that she is calmer than expected – Anxiety, dominant thoughts – Hopeful, cautiously optimistic, need support especially from husband, aware of being alone – “up to me” to have embryo grow and implant – no one else can do it. Aware of signs physical symptoms since transfer does not know to interpret them as good or bad, aware of embryo placed there is an emotional aspect to what happened, She describes waiting with suspended time, auto pilot , numb, waiting, time is suspended.

11.29.09 Received Kate’s journal in the mail, shared the outcome of her pregnancy test.

Triangulation of data – Kate’s interviews are consistent with her journal, themes/ descriptions are supported

11.30.09 E-mail from Michelle transfer went okay on 11/28, interview #1 on 12/2.

12.02.10 Interview with Michelle, 3 days after her transfer, very anxious, speaks really fast, very emotional weepy most of the time, still dealing with why me? I am good girl - resents others having kids over her, then feels guilt for feeling. Feels crampy - Happy with two transferred, want to freeze some, protective, nervous, rubbing abdomen, positive overall , getting more anxious after bed rest, fears waiting, wants support that understands stages.

12.03.09 Second interview with Paige scheduled for 12/5.

12.05.09 Second interview with Paige lasts two and a half hours:

Reviewed themes she agrees and compares how she felt the last interview until now, mostly happy, excited, Hopeful, optimistic, then adds cautiously optimistic, anxious, she is waiting, misses communication with clinic used to every second day and now none, accepted her lack of control, aware of the presence within her, went from baby last interview to saying embryo now, overanalyzes everything – thoughts, physical symptoms. Very aware of body changes, Isolation, information seeking for facts not emotional comfort, preparing for news of pregnancy test results. Feel less attached and more doubtful of success, doesn't feel a lot different physically and this worries her, time moved aster after bed rest and went back to work, OMG stark realization test is in two days, surprised a decrease in Hope she thought it would grow all week. She is hoping for some sign to reassure her, finds it harder to stay positive now, Hope started to change (lessen) around 6-7 days after transfer and doubt grew, overall feeling is not Hopeless, but there is a “loss of Hope”, plan - prepare for worse and Hope for best, cautious wants to self protect because of past losses, waiting, time is somewhat suspended but at same time she is aware that it is progressing, felt a little a little twitch – thinks it is a positive sign but then rethinks that maybe it is negative. Talks a lot about the what ifs? And the Ups and Downs, working keeps her occupied and bring as sense of normalcy, out of her hands, still worries although she knows there isn't anything she can do. She describes that she is hardened because of past losses and pessimistic about the possible success of someone else's pregnancy, realizes attachment is less now, she has been thinking about the embryo as baby, but makes a conscious effort to put that to the side – self protect cannot go there, so much awareness and knowledge that there cannot be only excitement only, she is surprised that attachment has not grown , and thinks she may even

purposefully remind herself to detach from embryo but is still Hopeful, knows that this embryo is healthy – has a good chance of carrying it to term no chromosome 22 defects, Surprised how fast Anxiety set in – aware that it has come, now that pregnancy test is near time has slowed down again, heightened awareness of time, expected optimism to grow and but opposite happened optimism did not last and Anxiety grew , optimism lessened. She says that she expected to feel Hope, Anxiety, and doubt, but had no idea about when they would come and in what proportion. She says that she has extreme thinking at times, Anxiety, excitement, worry, physical strain, stress are most dominant feelings. She says she has been Hopeless at times but for very short periods, sometimes feels as though she is suspended in her own emotions.

12.9.09 Second interview with Michelle schedules for 12/11.

12.11.10 Reviewed themes with Michelle, feelings: Anxiety, happy, sad, numb.

Isolation – lack of support from friends, trying to plan for future but has no control, perceptions of time – Michelle agreed, and added info.

Beginning to focus on emotional feelings rather than physical cramps, took a pregnancy test 9 days post transfer, could not wait any longer, time feels too long, searches books and internet for info, likes the chat room because anonymity, husband main support but less able to understand, friends try but can't understand all of her friends and family have no problems getting pregnant, awareness of body has increased, day before pregnancy test was most Anxiety, increased over last few days, realistic but Hopeful, cautious optimism, desperate to be pregnancy found waiting as agonizing - suspended, lonely, friends think turkey baster – they do not know, aware and attach embryos, talks about

anticipating the test results, obsessed over what is happening, Hope and doubt is up and down, not as crazy as she thought

12.13.09 Received Michelle's journal and pregnancy test results in an e-mail.

Triangulation of data – Michelle's interviews are consistent with her journal, themes/ descriptions are supported

12.18.09 E-mail from Paige with her pregnancy results, her journal was attached.

Triangulation of data – Paige's interviews are consistent with her journal, themes/ descriptions are supported

12.30.09 Received transcript of interview #1 with Kate, tape was fuzzy at times – I could hear Kate okay, I at further from the tape than Kate did – she wanted to sit in a love seat and my chair was too far away. Also Kate's interview was the first one that I had gone past 90 minutes, and when the tape was full I turned tape #1 over and so I missed some of what she said at the beginning. From then on I labeled two tapes for each interview and placed them beside the tape recorder. Kate's first interview lasted over two hours. I realize that the more pain and loss the women have experiences the longer the interviews to get to that point, and it I am okay if they just want me to listen – I am getting more comfortable in the interview role. I really connected with Kate – we were from a similar background. I don't want to get too involved but the women do become part of you. I will acknowledge this up front – so I Hope that it does not have undue influence on my work. I am in awe of their willingness to share their intimate stories with me.

01.3.10 Received transcript from Kate's 2nd interview, this interview was also around two and a half hours. Sound quality is about the same on the tape.

01.09.10 Received first transcript of Michelle's interview, lasted about two hours long, sound quality much better as I made adjustments in where I placed the tape.

01.13.10 Transcript from Michelle's second interview back, lasted nearly two hours.

02.01.10 Transcript from Paige's second interview back, lasted two and a half hours – good quality tape.

02.02.10 Transcript from Paige's second interview back, good quality tape, lasted two and one half hours.

02.04.10 The themes have remained the same – I am at 99% data saturation – can never be sure so I will not say 100%, but I am confident. I noticed that under Isolation that Michelle shared that she feared her friends may belittle her so she did not tell them, Kate felt that culturally she did not have any support and though that many African Americans did not have the opportunity to enroll in IVF, likely related to their financial status, Kate also mentioned that because her husband has a child he could never understand what she wants because he already has it. The communication aspect from the clinic nurses and doctors is a big part of vulnerability especially around the time of finding if there are any embryos to freeze, now all 6 women have commented about this. Hope is highest at beginning, then doubt grows highest at end relative inverse relationship between the two creates Anxiety, unpredictable are the deep plummets into Despair, does not last long but is absolute and purely dark when they have it. Hope is never pure bit it does sustain them throughout the entire process.

02.04.10 Writing my analysis – feel good about content of data, rich text, reviewing van Manen's existential or life worlds as guide/framework to interpretation, I remain intrigued by the women who is embodied in her body, embodying an embryo, not

pregnant but more than non-pregnant there is an attachment – not much emphasis on literature about embryo attachment in the pre-pregnant woman! Someone called to be in my study, I will include her – it is hard to turn down a participant, I don't think there will very much new revealed but it will reassure me of saturation.

02.05.10 I contacted each of the primary nurses and the research coordinator at the clinic, I am confident with the analysis that saturation has been met – I have asked them not to give out any more recruitment handouts after this date.

02.11.09 I received a phone call from a 42-year-old nurse about being in the study, she already had her egg retrieval but because they only got one egg they will postpone her IVF until she repeats the stimulation to see if they can get more eggs to try and fertilize for a possible transfer – she was really upset I listened to her for an hour. She will contact me when she knows more about her next stimulation – if it is not too close to my defense I will include her.

02.14.10 E-mail from Julia with pregnancy status update. New e-mail from a woman wanting to be in the study, Stacy wants to be in the study but only had one egg retrieved so her IVF is on hold. She will not repeating her stimulation until mid-April which is too late to be in the study. Update from Sarah via e-mail re: pregnancy status. Update from Beth re: pregnancy status.

02.15.10 Update from Michelle re: pregnancy status. Update from Paige re: pregnancy status. I realize that it is very difficult to separate the past with the present – it all meets and explodes during this time of Waiting. All their hard work comes together – very stressful time for the women. I am very empathetic and perhaps even sympathetic – it is hard not to feel their pain or share their tears.

02.17.09 I have not heard back from woman, I know that she wanted to participate, I assume that she did not proceed with stimulation as expected.

02.19.10 Full descriptions of Themes:

Data analysis was accomplished using Van Manen's (1997) six steps phenomenological method and approach to transcription analysis. Van Manen (1997) refers to four basic lifeworld existentials of all human beings: lived space, lived body, lived time, and lived human relation. These four elements or existentials of lifeworlds are part of the context in which a phenomenological study occurs; therefore, a conscious effort to consider the four lifeworld elements during the data interpretation was made by the researcher.

Bracketing of the investigator's knowledge, values, and preconceptions was also employed.

Van Manen's approach to data analysis is not a prescriptive step-by-step methodology, as the steps may occur in any order or simultaneously. In an effort to communicate the message the participants are sharing in a manner that is faithful to phenomenology, the researcher included the following non-sequential interplay of six steps advanced by Van Manen (1997, pp. 30-31):

(1) Turning to a phenomenon which seriously interests us and commits us to the world;  
turning to the phenomenon of lived experience by re-learning to look at the world in a non-judgmental way. The researcher interviews six women who are the source of experiential knowledge in an effort to describe their lived experiences while undergoing IVF in the days following embryo transfer until determining if they are pregnant. The women shared their experiences with the researcher by participating in two interviews



and providing the researcher with a copy of contents from keeping a daily journal during the experience of the phenomenon under study.

(2) Investigating experience as we live it rather than as we conceptualize it. The researcher will acknowledge and attempt to bracket preconceived ideas and beliefs about the phenomenon under study. The researcher must suspend personal past experiences with IVF to listen to the women's stories and to prevent bias. Ideas which were bracketed include: the embryo as a baby, the pain and stress associated with IVF, desperation to be a mother, and the idea of how attached one becomes to her children. To bracket the researcher's thoughts and to explore the experiences of these three women during the window of time in which she is acutely aware of the presence of her embryo within her body, without knowing if she is pregnant, is to study this phenomenon as the women themselves are experiencing it. The interviews and journals were transcribed in a Microsoft Word document.

(3) Reflecting on the essential themes which characterize the phenomenon the researcher engaged in micro thematic analysis (Max van Manen, 2000)

<http://www.phenomenologyonline.com/inquiry/35.html>

The transcripts of each woman's descriptions were read through several times to obtain an overall feeling for them- what were the words or phrases that stand out from the text as important to capturing the experiences of these women when they were undergoing IVF - focusing in the time from their day of embryo transfer until finding out if they are pregnant. The women's descriptions were read line-by-line and words or events that appeared central to the women's overall description were identified. Words and phrases

that pertain directly to the phenomenon under study were identified and color coded by hand.

Notes were hand written on the transcripts to help with data analysis. Phrases and words were extracted from the description of the women's experiences. These phrases were then grouped into common themes. Reflected on the essential themes from the women's descriptions to characterize their lived experiences of the phenomenon.

(4) Describing the phenomenon through the art of writing and rewriting involved identifying the overall themes common to each of the participant's transcripts and integrating them into an in-depth description of the phenomenon to capture the essence of the women's experiences - reflected upon the themes and the women's words were used to support and describe the essence of the topic. Objectivity of the researcher was helped by bracketing throughout the research and maintaining an audit trail.

(5) The researcher maintained a strong pedagogical relationship to hermeneutics by consistently referring to Van Manen's (1997) text "Researching Lived Experience: Human Science For An Action Sensitive Pedagogy".

(a.) obtaining data from the women who have key knowledge and experience by conducting two interviews, using open-ended questions, and by maintaining a daily journal beginning on the day prior to the embryo transfer and ending on the day before finding out the results of their first scheduled pregnancy test;

(b.) listening carefully to the women's language and voices;

(c.) remaining faithful to the women's descriptions;

(d.) performing verbatim transcriptions;

(e) being constantly aware of researcher bias; and

(f.) allowing the research process to unfold free of predetermined rules – this involved reading and re-reading the text, developing common themes, reflecting on themes, and going back and forth between the text and common themes to develop overall themes.

(6) The researcher balanced the research context by considering parts and whole. The women's descriptions of their lived experiences were considered in context of the lifeworlds: body, time, place, and relationships. Interpreting meaning from the descriptions and themes required the researcher to give careful thought to each of these areas in order to wholly capture the essence of the phenomenon.

#### Analysis notes through van Manen's Lifeworld

Consistent with van Manen's (1997) phenomenological method, the essential themes identified in this study offer an interpretation of the meaning the women gave to their experience of waiting for a pregnancy result following their embryo transfer during IVF. This interpretation is not an absolute worldview of all women but offers one way to understand a phenomenon which had not been well understood. The awareness of the embodied embryo not only impacts the conscious experience of the women but also their unconscious experience or reflection, shaped by their embodied selves in their present environment, leaving the women to reestablish their identity. To aid the interpretation of the women's experiences of embodying a non-implanted embryo, during the time she waits for her pregnancy test, the women's experiential accounts of IVF is placed in a more structured context of van Manen's (1997) Lifeworld Existentials.

*Lived space (spatiality).* The women's lived space was their perceived sense of space and it shaped how they felt. It is the world in which the women lived during IVF experience. Invisible boundaries: being a woman with infertility in a society. Spatiality

was not a conscious reflection; rather it was already there prior to considering it. During the time of this study the women perceived their space in their home, at the fertility clinic, and in their work environments. Sometimes the women described a getting away space - going to the beach or getting away for the weekend. In this space the women found a distancing separation from familiar space.

The fertility clinic is where the women experienced procedures related to diagnosis of infertility. The invasive procedures related to IVF occurred in the space of the fertility clinic. Role of patient, where they went for treatment to get better. In their home the women described a sense of solace, safe, know their role. Here the women lived their lives. In this space they were free to laugh and cry. It is the place where they are both a woman and a wife and it also where they dream of their nursery and Hopes to experience motherhood, the place they want to bring their baby to. The women spoke of their work place as a space of escape. It is where they found a role not connected to their infertility. A break from their constant world of infertility where not see as a women trying to get pregnant or childless, her they were in a role of control – dentist, minister, etc

*Lived time (temporality).* The women described time as a countdown day-by-day but these days were not described as 24 hours, days were experienced as long, dragging out, suspended, and sometimes speeding by when the day for the pregnancy test became close. They lived with their past, they lived in waiting in their present, and they lived in the future for motherhood. During the phenomenon under study their temporal way of being collided: the past losses, the IVF procedure of the present, and their dreams for the future created an eruption of emotions. A accumulation of their life's work. Constant need to re-establish herself, dreamed of future identity as a mother.

*Lived human other (relationality or communality).* The women described their lived relations with whom they shared their interpersonal space. These included their husband, friends, family, co-workers, and the healthcare workers at the fertility clinic. These interactions were evident in their descriptions of physically encountering pregnant women, mothers, children, or babies. Transcending the physical limits of corporeality the women meet others in their bodies, not only the body that appears not pregnant, but mentally they are non-pregnant - which have been identified as infertile, childless.

The women formed unique attachment with their embryo(s) - transcend the physical limitation of the embryo to that of a human. They visualize what the baby will look like, if there is one baby or two; for some women they actually experience the baby sitting in a car seat inside of her. Relationship with God or some higher being, the omnipotent other, was present when they discussed fate, God's plan for them, and searched for their unknown destiny. For the women in this study lived human relation was experienced as being alone.

Lived relation also referred to the women's relationships with the healthcare workers at the clinic and how they gave their trust to them. The women depended on the relationship with the nurses and doctors because it was imperative to the success of their IVF procedure. Need to communicate the clinic can give them Hope or not.

*Lived body (corporeality).* The women live in the world as embodied in a human form. They experience life through their gendered body, revealing they are female and not visibly pregnant, while concealing they are infertile or carrying an entity – the embryo within. Women experience their infertility and what is happening to their bodies as a woman, which is much different from that of a man. Live in constant awareness of

their expected role in society to conceive, carry, and bring forth new human life. The inability to become pregnant, and to be identified by others as infertile or with a self identify as infertile, leaves the woman trapped in a defective body –vessel. See themselves in the eyes of others – a reflection. A multi-layered complexity, an embodied embryo(s) within an embodied woman - her awareness of the embodied embryo influences the embodied mind. It is the presence of the embryo within her body that influences her perceptions of the mind and is the catalyst that brings about waiting.

The Cartesian duality of mind and body is not new to medicine. Early approaches to medicine have long been critiqued for its focus on treating the diseased part and not the whole person. This traditional approach to medicine received much criticism and changed to a more acceptable holistic approach of viewing the person as mind, body, and soul or spirit, and not as a leg or uterus - nursing has built its current philosophy, i.e. the hysterectomy in 201 is unacceptable. It is clear from the analysis in the study that women who experience IVF ascribe meaning from their every-day life as a whole person and was made clear by the eight subthemes which traverse mind, body, and spirit. Although unpopular – make a case for a re-focus on the part - the embryo. By failing to acknowledge the significance of the embryo it could be suggested that the overall meaning of the women’s experience is lessened. Little emphasis or acknowledgment has been given to the role of the embryo in shaping the woman’s experience. From the women’s experiences it is clear that the eight subthemes are directly related to the part – the embryo, which influences the mind the woman’s mind. Increase re: meaning of the relationship between the embodied embryo and the women’s sense of self may lead to new discoveries, and understanding about the psychological impact of these two weeks

during IVF on the women's perception of experiencing an embodied embryo that exists, while simultaneously experiencing a pregnancy that never was, and the child that may never be. May help with loss and grief after failed IVF

03.08.10 Chapter V reviewed and back from chair.

03.11.10 E-mail from Michelle re: status of her fertility.

03.16.10 Chapter VI back from chair – good to go.

APPENDIX G  
GUIDE TO DATA ANALYSIS

Analysis Code Key

Theme	Participant					
Waiting	Sarah	Beth	Julia	Paige	Michelle	Kate
Occurrences in data Interviews and Journals Includes Wait and Waiting	15	19	37	67	35	15

Sub theme	Participant					
<b>Waiting in Hope</b>	<b>Sarah</b>	<b>Beth</b>	<b>Julia</b>	<b>Paige</b>	<b>Michelle</b>	<b>Kate</b>
Expressions of excitement evident with progress towards goal of motherhood – high quality and quantity of eggs, successful transfer, ability to cryopreserve embryos, perceived signs and symptoms of pregnancy	x	x	x	x	x	x
Rollercoaster of high and lows						

<b>Waiting in Anxiety</b>	<b>Sarah</b>	<b>Beth</b>	<b>Julia</b>	<b>Paige</b>	<b>Michelle</b>	<b>Kate</b>
Expressions of Anxiety and stress intensify as the pregnancy test approaches, occurrence of unexpected events	x	x	x	x	x	x

<b>Waiting in Awareness</b>	<b>Sarah</b>	<b>Beth</b>	<b>Julia</b>	<b>Paige</b>	<b>Michelle</b>	<b>Kate</b>
Expressed as awareness of feelings, self, body, embryos, attachment, time	x	x	x	x	x	x

<b>Waiting in Doubt</b>	<b>Sarah</b>	<b>Beth</b>	<b>Julia</b>	<b>Paige</b>	<b>Michelle</b>	<b>Kate</b>
Expressions of the unknown	x	x	x	x	x	x
Diagnosis - Am I pregnant? Searching for reassurance, Intensifies as pregnancy test becomes closer,						



Waves of highs and lows

Karma

**Waiting in Desperation** Sarah Beth Julia Paige Michelle Kate

x x x x x x

Absence of Hope

Engage if obsessive thoughts or  
Frenzy of activity; Unable to function  
Acting against medical advice  
Desperate to grab onto any Hope

**Waiting in Isolation** Sarah Beth Julia Paige Michelle Kate

x x x x x x

Feel "alone"

Isolated from MD and Nurses at  
Fertility clinic – increased communication  
And contact  
Desire support from others but feels  
That no one can understand  
Desires specific support groups by stages

**Waiting in Vulnerability** Sarah Beth Julia Paige Michelle Kate

x x x x x x

Live with past loss  
Depend on communication with  
Infertility clinic  
Sadness over current embryo loss  
Influenced by communication with  
MD, nurses, and staff at fertility clinic  
Social vulnerability  
Loss of individual control

**Waiting in Anticipation** Sarah Beth Julia Paige Michelle Kate

x x x x x x

Try to plan for the unknown future  
Anticipate receiving phone call with results  
Imagine and plans for  
positive and negative outcome scenarios  
Self protect to prepare for worse outcome  
Fear childlessness  
Fear self-blame and future regrets

## Sample of Coding

Researcher: Will you share what it has been like for you since that day that they called you in for your transfer, any dominant feelings that you have noticed?

Kate: Stress.

Researcher: Stress?

Kate: Yes...uh, I guess it is a worried stress kind of, you know, am I pregnant? I'm questioning, did it take, is it working, just the Anxiety of you know, the unknown, is the kind of stress I am describing. You know, and thinking about how many more days I have to go until I find out and then what happens after that. I think it's the Anxiety and stress of where am I, did it take and are my eggs developing, am I pregnant, those thoughts.

Researcher: You mentioned that you started with 10, no 12, and then went to 7....

Kate: No, went to 5 that fertilized.

Researcher: 5 that fertilized, o.k. and then by the time you came in, 2 were ready to transfer and you were able to freeze 2...

Researcher: No, which is why I was upset yesterday because my transfer was Monday the 16<sup>th</sup>, and....

Researcher: They were 6 days old then, right?

Kate: 5 days old...and so, you know Tuesday went by, nothing, so yesterday I called to find out because I didn't hear anything and I was told that they didn't make it so, I don't know what that means...but nobody called me, nobody alerted us and I don't know that we would have had any options at that point where, you know, because at 5 days, you know, everything was fine and so I don't know what transpired between that 5<sup>th</sup> and 6<sup>th</sup> day, who made the decision, you know, I just felt violated because we weren't contacted

and I felt like it was our right to make a decision, perhaps we would have chosen to freeze at five days if we could versus going that 6<sup>th</sup> day or, if it looked like there would be....I just felt like we should have been consulted in that process. Outside of that, no one called us, I called in and left a message and the nurse called me back, it wasn't my nurse, my nurse is out, certainly not blaming them but what she told me was, well, you'll get a letter in the mail....and I said, are you kidding, I'll get a letter in the mail, this is very personal to me, you know, so you want to notify me by mail, you called me all up until this point, but something as important as the last two embryos didn't survive, you are going to send me a letter in the mail....

Researcher: So, were you under the impression that they had been frozen?

Kate: Yes, yes...we were under the impression that they had been froze...just because no one had called us, I just called to follow up....

Researcher: Just on your own, to follow up... and then you were surprised?

Kate: Yes, I was very hurt honestly, it brought me to tears, just to hear it, one because we have been through this extreme process and, two, that meant that for us, we are not financially able to go through this process again at this point so we were hoping that we would be able to have those eggs frozen so that if this initial process didn't take, we would have an opportunity to have it again without having to go through it.....

Researcher: ....so you would have the opportunity to...for the future...

Kate: Right, right...

Researcher: oh, you were surprised...I understand....you weren't notified, you were completely surprised because you were so elated, that you thought it was ideal...to have two fertilized and two for a back up kind of....

Kate: Right, right..

Researcher: So, a lot happened then...

Kate: Yeah... So, I couldn't sleep last night, I tossed and turned which builds my Anxiety even more because, at least we had, you know, perhaps a second or even maybe a third option, you know, if this transfer doesn't take, then that's gone now so it's pretty much if we're pregnant now, great, if we're not, we're not and I don't know if or when we will be able to, just because we have a lot of issues going on...

Researcher: and it is stressful....it is a huge emotional time...just a lot of stuff

Kate: um-huh....

Researcher: Not just a lot of money....

Kate: Yeah

Researcher: Which is enough in itself, but....

Kate: the shots, and the constant drawing of blood, I told them they have like two gallons of my blood around here so, you know, calling and waiting for someone to call you back and then instructions changing every day and, you know, it is a huge emotional toll...not just physically as I am not a person who has really been sick and I don't really take medications so the medication portion has been huge for me, having to take this antibiotic or this pill, then so my body, my stomach will ache and you know, I have to constantly eat something because it is not settling well and, you know, it is making me constipated and I want to (inaudible)...

Researcher: No, no....

Kate: You know, just the whole experience itself, but for me also, just all the different medications, when the box came, my husband actually got it, he was home, and when I came home I was, like, “oh my God, I’m really suppose to take all this stuff”...

Researcher:: Overwhelming?

Kate: Yes, 60 packs of needles and I was just like oh my God, what is all this, and sorting through it, do you have everything, well, I don’t know, what did you order for me?, you know...

Researcher: Right, you don’t know what that means...

Kate: Exactly, so...

Researcher: It’s interesting because all of a sudden there is all this stuff, syringes, all this stuff....

Kate: you know, my treatment team is really great, you know, this is common knowledge for them and you know, I’ll have to stop Dr. Whitesides (the doctor) sometimes and say, explain to me like I’m 4 years old, you know, can you boil things down for me, sometimes, like I would save their messages, I wouldn’t answer purposefully so they would leave me a message so I could replay it over and over, to really grasp what they were saying because it’s like, o.k, take this, stop taking this, do this, do this, and it’s like a five second message with all these instructions and I would need like extra time to process it so I like saved all of them so I could keep going through it and, also, like I could hear it and then my husband would say, “well what did they say” and I would be like, “I don’t know (laughing)...and I would have to go back and listen to it again..

Researcher: That’s true, yeah...because sometimes ....

Kate: you try to hear the important part and miss....

Researcher: I think it's very common for two people to go into a doctor's office and will leave having heard two totally different things, and they both heard the same thing...

Kate: I know, because my husband always comes with me and I look at the doctor and we both hear something different....and I think how we process is different, for him it has been listening to the process of it all, for me it is internalizing, what am I going to have to do, what am I going to experience, what is going to happen to me and my body...and so on. That, I think, is the difference in how you know we heard the information that is given to us because, you know, sometimes I feel bad for him but not really (Laughing), you know, it is weird going through it but I really feel like I'm going through it because you know, he gives me my shots and things like that and he holds my hand and he comes to every doctor's appointment even if they are drawing blood and he is very supportive and emotionally involved in a process that ultimately is my body, you know, that all of this is happening to me....so, I feel like he understands but he can't quite possibly understand because of where he stands, so...

Researcher: Do you feel that he feels that he is your core support?

Kate: Yes

Researcher: So, do you feel that that is kind of what a woman goes through, that no one can really understand, the man is there as much as he can be, but ....

Kate: Yes, I have two girlfriends that I talk to that know we are going through this process, my own family don't know, it's just my two girlfriends and I find that I don't really explain it explicitly to them because it is not something that they are going to grasp anyway, you know...

Researcher: The procedure part or the emotional part?

Kate: Um, emotionally I talk about it, just because that's where they're coming from, the emotional part...they don't know what the procedure is, they don't understand the process so, it is moreless letting me getting out, this is where we are, and I will give just the most basic, "they will take my eggs and, you know, take his sperm and you know, put them together"...just barely basic, not the technicalities of what it is of what is really happening...and, then moreless our conversations are, well, how do you feel about this, you know, how are you holding up, and I am pretty honest about it...but even talking to them about it I think that, unless you have been through it, you know, they hear and maybe understand and be empathetic to what I am saying but they can't really feel, at least in my mind, really grasp the feeling that I have because they have not gone through this process and I think, you know, probably any other medical condition unless you are experiencing it first hand or you have had something like it, then you can really identify with, oh yeah, that procedure...that one was really horrible, you know, this is how I felt and you feel that the person can really engage in that or identify exactly what you are feeling at that point. Outside of that, I think that just they care about me and you know they want to hear if I'm sad and they want to try and cheer me up but, to really understand what it means to have to get up and get a Progesterone shot every morning, you know, while I'm trying to shuffle to get myself to go to work, to try to motivate myself to get that shot or, you know, just lying in bed and you know holding my abdomen wondering, you know, "am I pregnant", you know, not because it is a tv commercial for the pregnancy test...it's more real like, is this my only shot, will I ever actually be pregnant...I can go on and on (laughing)...it's hard you know, and you

know, our families, we haven't told them just because, as we spoke about, economically it is not something that, well culturally.... it is probably something, it is about economics at a basic level but culturally, it is not just something that we have ever known anybody, you know, that has gone through this process...

**Researcher:** In your whole line of family and friends...

**Kate:** Yeah, family or friends, nobody, and so you know to explain to our family, as most families are, wanting the technical part of it also, not just how are you feeling, well what exactly are they doing....

**Researcher:** Because they won't understand...

**Kate:** Right, right....

**Researcher:** They just think you are going to have a baby....

**Kate:** Right...and of course they want us to have children so, there is that added pressure which, you know, tends to make us band together and only keep it among ourselves, apart from our family because you know, it is hard enough to have the highs and lows for us to deal with, much less to carry the burden of our family's highs and lows also, we would rather just, you know, say "we're just not pregnant" (laughing), or "we're pregnant", than to carry....

**Researcher:** other than how you get there....because it does become an hour by hour situation...

**Kate:** Yeah, like, well we're going to try this process and then have 10 people calling, "well how did that work", "why are they doing that?", so....

**Researcher:** you just get tired of talking to them, you just don't want to do that anymore....



**Kate:** and quite honestly, you know, I am in the middle of my sisters and all of my sisters have kids....

**Researcher:** above and below you...

**Kate:** Above and below me....so I am just like the, not the “enigma” but just you know, it’s like well why don’t you have kids? You know, it’s always kind of been assumed that I don’t want kids....

**Researcher:** well, people have assumed that....

**Kate:** Yeah, although I love children and everybody knows I love children, I am really good with kids but I think because the notion of not being able to have kids is just not....

**Researcher:** It’s not what people think....

**Kate:** No,

**Researcher:** it’s like, oh she must not want them....

**Kate:** Yes, it’s like, you know, my sisters, you breathe on them and they’re pregnant....like, my youngest sister is pregnant now and she didn’t want to have another baby, you know, and so, like it’s so funny talking to her, because she is my baby sister and trying to be emotionally supportive to her, with her not knowing what I am going through, you know, and hearing her not want to have another child, and just....

**Researcher:** you are at the other extreme...

**Kate:** Yeah....

**Researcher:** where all you can offer right now is....

**Kate:** Yeah...

**Researcher:** and like you said, she doesn’t know, yeah...and I don’t know how that would change if she did...like that would be a hard thing too because she....

**Kate:** Yeah, I mean, I don't think in terms of our relationship, we're close and I'm sure that we would still talk about that, I think that she would probably be a little more, a little more discreet about what she said, which is another reason why, you know, I just don't want to involve my family, everybody has their own issues that they are dealing with and I don't think that I could handle, it's hard enough emotionally for us to handle, I don't think that I can handle the constant, you know, highs and lows of their emotions, especially my husband's family, I love them but there's a lot of them and they would be constantly calling and, you know....

**Researcher:** and would probably add to your stress....

**Kate:** It would....

**Researcher:** and where you are right now...I've heard you say, it's all I can do to get me through it....

**Kate:** Right, right....

**Researcher:** So when you say constantly, do you mean your family, the people you work with, your friends....

**Kate:** Actually, the people I work with, there have been a couple of people you have gone through it....

**Researcher:** But you mean closer....

**Kate:** Yeah, I mean my immediate family, my culture, I mean like even an African/American culture because that is primarily what I identify with, with how I was raised...and so this is unknown, it is you know, you just pop up pregnant (laughing), you know, without assistance and I'm going to say that probably economically driven, but I'm going to say mostly economically driven because I had no idea, you know, had I

known a lot of what I know now, I probably would have gotten started a lot earlier, you know, but it has taken for me to, I guess, educate myself about it, to be around people who are educated about it too, I guess to be in a better position in my life where I can be exposed to the medical treatment that's out there, because some of my family don't even have health insurance...you know, so the notion that...

**Researcher:** like some are just trying to get blood pressure medicine....

**Kate:** exactly (laughing), just maintaining the very basic health, that type of thing, so....you know, again that education probably would have brought me in a whole lot sooner but, you know, as I said just not having a whole lot of access, even as a young kid, I didn't get dental treatment at all, it wasn't until I was an adult, working that I received dental treatment...

**Researcher:** So the whole approach...availability...

**Kate:** Yes...

**Researcher:** the opportunity...

**Kate:** Yes....so, which also plays into our lives, which is really like breaking it down ....

**Researcher:** Now, do they know that....obviously your husband knows and you have a couple friends...

**Kate:** Yes

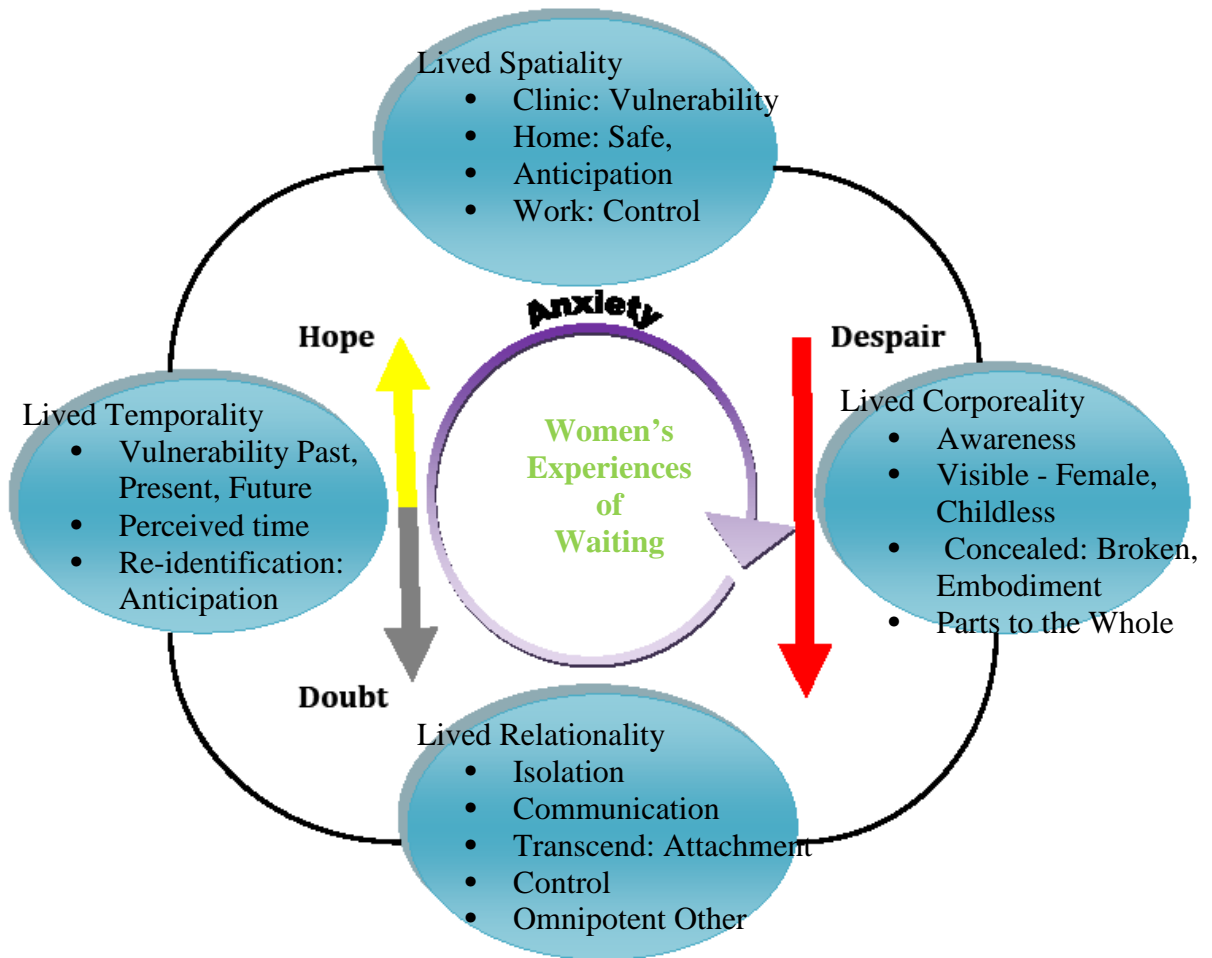
**Researcher:** Now when you actually heard that the transfer was going to take place, what did you feel when you look at that....I guess where I'm going with this, I'm thinking of how you felt then and then the next thing...

**Kate:** When they showed me the picture...I still have the picture, like, these are our babies...you know, and it really honestly, it just made me have an appreciation for God,

because the miracle of just...of how intricate that process is and what, you know, how life begins and you know, just how very much a miracle it is...so, but, you know it was very exciting because it was like, these are our babies, you know, you very rarely even get...even under normal circumstances in pregnancy, you don't get a shot of your eggs, you know, when they are fertilized, you know, you get a sonogram of the baby once it's so far along so, it was exciting to see, I mean to really have an image of what our children, like from the beginning...literally from the beginning and I felt, "wow" if we're pregnant, we will have a chance to show our kids what you looked like in the most primitive form...you know....

APPENDIX H

CONCEPTUAL MODEL OF WAITING



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