

Infertility's Effect on Stress, Anxiety and Depression from an Adlerian Perspective

A Research Paper

Presented to

The Faculty of the Adler Graduate School

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Adler Graduate School

In Partial Fulfillment of the Requirements for

The Degree of Master of Arts in

Adlerian Counseling and Psychotherapy

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May 2013

Abstract

Many men and women face psychological challenges when faced with the inability to conceive a child. Currently in the United States, infertility affects around 7.3 million men and women. Internal, societal and familial pressures to have biological children can have an adverse effect on one's mental health. Even with a growing number of men and women experiencing infertility it is still a topic that is not widely researched or discussed. The mental health community should be aware of the challenges infertile men, women and their partners face in order to better support this community. This research discusses current and major findings regarding the mental health of women and men diagnosed as infertile. Research regarding infertility, stress, anxiety, depression and how infertility affects women and men's mental health will be highlighted. This research will also address infertility from an Adlerian perspective and offer research regarding therapeutic techniques that may prove helpful.

Table of Contents

Abstract.....2

Table of Contents.....3

Introduction.....6

What is Infertility.....6

Causes of Infertility.....7

 Causes of Infertility in Men.....7

 Causes of Infertility In Women.....8

Testing for Infertility.....10

Treatment for Infertility.....10

Relationships among Stress, Anxiety, Depression and Infertility.....11

 Stress.....11

 Anxiety.....12

 Depression.....12

How infertility is connected to stress, anxiety and depression.....13

 Women.....14

 Men.....15

An Adlerian Perspective on Infertility and Mental Health.....15

 Adler’s Life Tasks.....17

 Self.....17

 Striving for perfection/Feelings of Inferiority.....18

 Organ Inferiority.....19

 Love/Sexual.....19

Community.....20

Work.....21

 Workplace Discrimination.....21

Spirituality.....22

 Religious Discrimination.....22

Therapeutic Techniques and Interventions.....23

 Adlerian Therapeutic Techniques23

 Life Style Analysis.....23

 Genogram.....24

 Mistaken Beliefs/Basic Mistakes.....24

 Life Tasks.....25

 Encouragement.....25

 Non-Adlerian Therapeutic Techniques for Individuals.....26

 Mind/Body Approach.....26

 Therapeutic Techniques for Couples.....28

 Stages of Infertility Counseling for Couples.....29

 Purpose of Therapy.....30

 Adlerian Brief Couples Therapy.....30

 Relationship.....31

 Assessment.....31

 Insight.....31

 Reorientation.....31

Analysis of Findings.....32

Author's Reflection.....33

References.....35

Infertility's Effect on Stress, Anxiety and Depression from an Adlerian Perspective

With the number of men and women facing challenges with infertility on the rise, how infertility affects a person's mental health needs to be addressed. It is important that therapists are aware of how mental health can be negatively affected by infertility. Therapeutic and medical treatment modalities used to treat individuals and couples facing infertility need to be reviewed for their effectiveness.

Despite growing research in the field of infertility, questions still remain regarding the relationship between infertility and stress, anxiety and depression in infertile men, women and couples. Further research is needed on this subject as men and women continue to have trouble conceiving children. More focus needs to be placed on the infertility community in regards to mental health in order to better understand the complex emotional issues they face.

It is this researcher's belief that infertility is directly correlated to high stress, anxiety and depression levels in men and women trying to conceive. This literature review will define infertility and discuss the origin of stress, anxiety and depression as they are related to infertility. This review will also begin to identify the connection between infertility and a person's mental health from an Adlerian Perspective. Finally, this review will discuss best practices in individual and couples therapy as it relates to infertility from an Adlerian view as well as some non-Adlerian approaches.

What is Infertility?

The American Society for Reproductive Medicine (ASRM) describes infertility as the result of a disease (an interruption, cessation, or disorder of body functions, systems, or organs) of the male or female reproductive tract which prevents the conception of a child or the ability to

carry a pregnancy. The duration of unprotected intercourse with failure to conceive should be about 12 months before an infertility evaluation is undertaken, unless medical history, age, or physical findings dictate earlier evaluation and treatment (American Society for Reproductive Medicine, n.d.).

Estimates from a large national sample suggest that 10% to 15% of non-surgically sterile American women ages 15-44 experience current fertility impairment (Chandra & Stephen, 1998). According to the Mayo clinic, 1/3 of infertility is on the man's side, 1/3 is female infertility and 1/3 of infertility is caused by both the female and the male (Harms, 2011). One in eight American couples will experience infertility and over 1.1 million women will undergo fertility treatments in a given year. According to the ASRM infertility continues to be on the increase (American Society for Reproductive Medicine, 2013).

Over 61 percent of those men and women will hide infertility from their family and friends. Reasons for this can include shame and feelings of inferiority (Perrine & Wolfe, 2010).

Causes of Infertility

Infertility can be caused by many different factors. As previously discussed infertility can occur equally in men, women or both. In 20% of all cases, the cause of infertility is idiopathic or unexplained (Anderson, Nisenblat, & Norman, 2010).

Causes of Infertility in Men

There are six main causes of infertility in males. The first one is abnormal sperm production or function. Sperm can be affected by repeated infections, genetic defects or undescended testicles (Harms, 2011).

There can also be an issue with the delivery of sperm. Factors that affect this can be problems with premature or painful ejaculation as well as certain genetic diseases, such as cystic

fibrosis. Structural problems of the testicle could also pose issues with the delivery (Harms, 2011).

General health and lifestyle issues can be a contributing factor to male infertility. Healthy sperm function can be negatively affected by poor nutrition, lack of exercise as well as alcohol and drug use. Obesity and stress are also contributing factors to male infertility. In relation to general health, age can be a factor as sperm quality begins to decrease in men over the age of 40 (Harms, 2011).

The last two factors contributing to male infertility are an overexposure to certain environmental factors such as pesticides and other chemicals as well as damage related to cancer and its treatment. Radiation and chemotherapy treatment for cancer can have an effect on sperm production. Often, treatments for testicular cancer can include removal of one of the testicles which can affect the amount of sperm produced. Other activities such as frequent exposure to heat can elevate body temperature which in return lowers sperm count (Harms, 2011).

Causes of Infertility in Women

There are several known causes of why a woman may be infertile. One of the most common reasons is a damaged or blocked fallopian tube which could be caused by a sexually transmitted infection (Harms, 2011).

Another common factor for female infertility could be endometriosis or the development of pelvic adhesions (Harms, 2011). Endometriosis is a common health problem in women. Endometriosis occurs when this tissue grows outside of the uterus on other organs or structures in the body. Endometriosis is usually found on the ovaries, fallopian tubes, and outer surface of the uterus and can damage the function of the reproductive system (Endometriosis Fact Sheet, 2013).

Ovulation disorders can prevent the ovaries from releasing eggs. Without an egg, there can be no pregnancy. The most common ovulation disorder is Polycystic ovary syndrome, a condition in which the body produces too much of the hormone androgen causing ovulation problems. Other issues with ovulation can be caused by injury, tumors, excessive exercise and starvation (Harms, 2011).

Hormonal issues can also play a part in a woman's infertility and can include such problems as an elevated prolactin level, an underactive or over active thyroid, or early menopause. Elevated levels of prolactin can cause ovulation to not occur (Harms, 2011). Thyroid disorders can disrupt the menstrual cycle and early menopause can deplete follicles necessary for ovulation.

As more information about the effects of stress on the body is documented, there is more information on how stress can affect a women's infertility. Stress can affect infertility in both men and women by suppressing luteinizing hormone, increasing serum cortisol levels preventing implantation of a fertilized egg and reducing egg quality (Domar, 2004).

Current research shows that infertility is currently on the rise given the above factors and does not show any signs of slowing down (American Society for Reproductive Medicine, 2013). Idiopathic infertility which accounts for 20% of cases is most recently being linked to higher levels of stress, anxiety and depression but research is limited in this area (Domar, 2004).

Testing for Infertility

With multiple causes of infertility in both men and women, how is it diagnosed? Couples are advised to seek medical help if they are unable to conceive after 1 year of unprotected intercourse if they are under the age of 35 and six months if they are over the age of 35. As

already noted, couples are generally advised to seek medical help if they are unable to achieve pregnancy after a year of unprotected intercourse (American Pregnancy Association, 2013).

The doctor will conduct a physical examination of both partners to determine their general state of health and to search for physical disorders that may be contributing to infertility. The doctor will usually interview both partners about their sexual habits in order to determine whether intercourse is taking place properly for conception. If no cause can be determined at this point, more specific tests may be recommended. For women, these include an analysis of body temperature and ovulation, x-ray of the fallopian tubes and uterus, and laparoscopy. This testing cycle takes place over a women's full menstrual cycle and a woman can expect multiple office visits over that month. For men, initial tests focus on semen analysis (American Pregnancy Association, 2013).

Treatment for Infertility

As there are many causes for infertility, there are also many treatments for women and men to help them conceive a child. For men these treatments generally include addressing the issues surrounding sexual function and increasing sperm count with medication (Mayo Clinic, 2013).

For women, there are multiple medications that will help with ovulation if a woman has an ovulation disorder. In cases where these medications do not work there is Assisted Reproductive Technology (ART). The most common form of ART is in vitro fertilization IVF. IVF is a process in which mature eggs are retrieved from a woman during a surgical procedure, fertilized by sperm in a lab and then placed into the woman's uterus (Mayo Clinic, 2013). ART has a high cost involved and is not covered by most insurance.

With all infertility treatments, there are complications that are involved. These complications can include; multiple pregnancies, over stimulation of the ovaries, low birth weight as well as birth defects (Mayo Clinic, 2013).

Relationships among Stress, Anxiety, Depression and Infertility

In order to discuss the relationship among stress, anxiety, depression and infertility, it seems important to first define stress, anxiety and depression as it affects men and women.

Stress

Stress is something that is a part of everyday life, it is challenging to describe. Hans Selye coined the term stress over 50 years ago. Selye was a physician who happened to notice during medical school that patients were coming with different diseases often suffered from identical symptoms which led him to discover General Adaptation Syndrome which details how the body deals with stress placed upon in. He had used “stress” in his initial letter to the editor of Nature in 1936, who suggested that it be deleted since this implied nervous strain and substituted alarm reaction (Rosch, 2013).

Stress can be defined as the brain's response to any demand. Many things can trigger this response, including change. Changes can be positive or negative, as well as real or perceived. They may be recurring, short-term, or long-term. Some changes are major, such as marriage or divorce, serious illness, or a car accident. Other changes are extreme, such as exposure to violence, and can lead to traumatic stress reactions (National Institute of Health, 2009 p 1).

There are many different types of stress that affect both men and women. Daily stress can occur from everyday issues such as work or school or sudden stress brought on by loss of a job or a divorce. Traumatic stress is stress that is brought on by a major event such as an assault or

major accident (National Institute of Health, 2009). It has been estimated that 80 percent of chronic health problems can become worse with stress (Domar, 2004 p. 20). Both men and women suffer from stress and over time, continued strain on the body from routine stress may lead to serious health problems, as well as depression and anxiety disorders (National Institute of Health, 2009).

Anxiety

Anxiety disorders include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, generalized anxiety disorder, and phobias (social phobia, agoraphobia, and specific phobia). Approximately 40 million American adults ages 18 and older, or about 18.1 percent of people in this age group in a given year, have an anxiety disorder (Kessler, Chiu, Demler, & Walters, 2005).

Anxiety disorders frequently co-occur with depressive disorders or substance abuse. Most people with one anxiety disorder also have another anxiety disorder. Nearly three-quarters of those with an anxiety disorder will have their first episode by age 21.5 (Kessler, Berglund, Demler, & Walters, 2005).

Depression

Using data from the National Comorbidity Survey, Kessler, McGonagle, Swartz, Blazer, and Nelson (1993) reported that the lifetime rate of major depressive episode among men was 12.7%, while the rate for women was 21.3%. A more recent National Comorbidity Survey Replication found almost identical lifetime prevalence rates of major depressive Disorder: 13.2% for men and 22.5% for women (Kessler et al., 2003). Based on the given information, this means that one in five Americans may suffer from depression at some point in their life. Symptoms of

depression include but are not limited to “loss of interest in usual activities, anxiety, thoughts of suicide, isolation and persistent feelings of guilt or worthlessness” (Domar, 2004, p. 32).

How infertility is connected to stress, anxiety and depression

Infertility is a stressful event in the life of a human being. In comparison to patients with other medical conditions, psychological symptoms associated with infertility are similar to those related to cancer, hypertension and cardiac rehabilitation (Khademi, Alleyassin, Aghahosseini, Ramezanzadeh, & Abhari, 2011). As previously discussed, chronic stress can lead to depression and anxiety in women and men.

Many human's feel it is in his/her nature to procreate and see this as a basic function of life. What happens when a human is not able to fulfill their one basic function of life? The value that humankind places upon fertility is borne out in accounts and symbolic representations since the beginning of recorded history. The Book of Genesis tells of God's commandments to be fruitful and multiply and the story of Sarai's infertility. In some cultures, it has been considered legitimate grounds for divorce or suicide (Born, 1989, p. 447)

Couples struggling with infertility face a wide range of emotional and mental health concerns. Most people assume that they will be able to procreate, “the vast majority of husbands and wives were taken by total surprise when they became aware of their infertility (Greil, 1991, p. 2). Society can be preoccupied with pregnancy and there is a strong emphasis on families and children in everyday life that can remind men and women of their infertility through television shows, movies and commercials (Getz, 2012). These messages can lead women and men to believe that they are not a functioning part of society.

Trauma is defined by the American Psychological Association as an emotional response to a terrible event like an accident, rape or natural disaster. Immediately after the event, shock and denial are typical. Longer term reactions include unpredictable emotions, flashbacks, strained relationships and even physical symptoms like headaches or nausea (American Psychological Association, n.d.). Infertility could realistically be labeled as a traumatic life event.

Most people understand how awful and against nature it is for a parent to lose a child. But infertility is not understood in that way—although the trauma is quite similar. It is the death of one's anticipated and imagined life and has great psychological repercussions (Getz, 2012, p. 1).

Women. Research shows that women struggling with infertility can have as much stress and anxiety as those suffering from a terminal illness (Domar, 2004). In a study comparing the scores of the Beck Depression Inventory, infertile women, in comparison with the control group, showed higher scores on the depression and anxiety scales (Khademi, Alleyassin, Aghahosseini, Ramezanzadeh, & Abhari, 2011).

Approximately 10 percent of infertile women meet the criteria for a major depressive episode, 30-50 percent report depressive symptoms, and 66 percent report feeling depressed after infertility treatment failure. The majority of infertile women report that infertility is the most upsetting experience of their lives. Infertile women report equivalent levels of anxiety and depression as women with cancer, HIV status or heart disease (Domar, 2004, p 28).

Fertility is a natural concept in American society and often represents life, good health and strength. For many centuries a woman's value was based on her ability to procreate and

spawn healthy children to become kings, work on the farms or help with the family business. If a woman was unable to do this, she could be left by her husband or more extremely she could have been killed. While these extreme concepts of fertility are different today, one could argue that a human's primal desire to create and raise children remains at the very core of their being.

Men. Male factor infertility is proposed to have such a social stigma that it produces much negative social stress, and a culture of secrecy and protectiveness (Peronace, Boivin & Schmidt, 2007). Men with male factor infertility reported higher levels of distress, increased anxiety and increased social isolation. It has also been suggested that men are so affected by male factor infertility; wives take the blame for the problem (Peronace et al., 2007). Men may feel left out of the process if the woman is undergoing fertility treatments. If the infertility is because of his sperm function, the male can feel a blow to his masculinity (Pacey, 2011).

Research also shows that sperm quality diminishes when men are faced with emotional distress. Studies have shown that after a year or two of infertility men are 8 times more likely to have a low sperm count (Domar, 2004, p. 30). Some studies confirm a negative influence of increased stress on the semen volume, on the percentage of normal sperm shapes and on sperm concentration (Collodel et al., 2008). Men become stressed due to infertility which can then increase then increase issues with infertility.

An Adlerian Perspective on Infertility and Mental Health

Adlerian, or Individual Psychology was founded by Alfred Adler; (1870-1937). Adler was an ophthalmologist whose passion for human behavior had him pursue a career change to begin work as a psychiatrist (Carlson, 2008). In his earlier days, Adler was colleague of Sigmund Freud but began developing a more subjective approach to human behavior as well as his own

therories and concepts and thus Adlerian Therapy, or Individual Psychology was born (Ansbacher & Ansbacher, 1964).

Adlerian Psychology has great respect for all people and is a simple, practical as well as a powerful approach to facilitating change (movement) in those who have become discouraged. Characteristics of Adlerian therapy include ideas that therapy is brief and time limited, present and future oriented and integrative and eclectic. According to Adler, human behavior was driven by the human need to find a place in the world (Carlson, 2008). Adler's theory was that every individual has an area in his or her body that is considered weak. Adler labeled this as organ inferiority and believed that all humans were born motivated by these feelings of inferiority to strive for greater things (Durbin, 2004).

The healthy individual will strive to overcome his or her inferiority through involvement with society. One is concerned about the welfare of others as well as oneself and develops good feelings of self-worth and self-assurance. On the other hand, some are more concerned with selfishness than with social interest. They may express this selfishness in a need to dominate, to refuse to cooperate, wanting to take and not to give. From these unhealthy responses, the person develops an inferiority complex or a superiority complex (Durbin, 2004, p. 1).

Further discussion of organ inferiority as well as feelings of inferiority and how it relates to infertility will be discussed in the next section.

Adler's Life Tasks

Although no research was found from Alfred Adler directly discussing infertility, one can gather that many Adlerian concepts play a role when dealing with this issue. In order to better

understand the emotional and mental impact of infertility on men and women from an Adlerian perspective it is important to examine Adler's Life Tasks.

While looking at the research the case has been made that infertility significantly impacts a person's level of stress, anxiety and depression. From the Adlerian view, when an individual and/or couple faces infertility, they face challenges in all five areas of Adler's life tasks; self, love/sexual, community, work, spirituality; (Mosak & Maniaci, 1999).

When someone is having decreased satisfaction with in a life task, he/she will likely exhibit signs of depression, anxiety and a lowered sense of self-worth. An individual facing decreased satisfaction with all five life tasks, may very well be struggling with feelings of depression, anxiety and stress. Adlerians view depression as something that serves a purpose for an individual and that it can be used to protect one's self-image. Adlerian theory also views chronic depression as a person being void of pleasant events over a long period of time (McBrien, 1985). Adlerians view anxiety as a way for individuals to avoid a challenge in order to keep their self-esteem intact (Mosak & Maniaci, 1999). Within these life tasks there are additional Adlerian concepts playing a role. These concepts include striving for perfection, goal oriented behavior and masculine protest.

Self. When couples are experiencing infertility the self-esteem of both partners can suffer greatly. Infertility may often times cause women to doubt their womanhood, and can give them a loss of. Based on a research study conducted at the University of Pennsylvania, women will often imagine themselves as mothers long before they start trying to conceive. When this imagined self as a mother becomes threatened, it can lead to a woman's loss of control of her ability to self actualize (Getz, 2012). "Women experiencing infertility can often feel traumatized, crazy and alone" (Getz, 2012, p. 1).

Men are often overlooked when it comes to discussing feelings surrounding infertility. Many times men worry about their inability to contribute to their genetic line and by not producing they are letting down the family. These concerns can lead to erectile dysfunction causing further complications in the quest to conceive (Clay, 2006).

Men may feel that they are not masculine if they are unable to conceive. According to Born, (1989) “67 percent of women and 46 percent of men surveyed indicated that infertility had a somewhat negative or very negative effect on their sexual self-image” (p. 7). Men and women may punish themselves for things they have done in the past that may or may not have any correlation to their infertility. Adler believed that society viewed strength and power as being masculine and anything weak was viewed as feminine. This concept of masculine protest was what Adler deemed to be the cause of many “psychic disturbances” (Mosak & Maniaci, 1999, p. 5). Adler saw men become discouraged, overcompensate or withdraw from life because they were unable to meet the standards of a “real” man (p. 5).

Striving for perfection/Feelings of Inferiority. The concept of striving for perfection is a large part of Adlerian theory and is thought to be inherent in all people. The purpose of this behavior can be both positive and negative as individuals work towards solving problems in their lives. It is how this urge to strive is used in order to achieve our goals in life that can cause negative effects to an individual (Ansbacher & Ansbacher, 1964). “We all strive to reach a goal by the attainment of which we shall feel strong, superior, and complete” (Ansbacher & Ansbacher, 1964). When an individual fails to meet his/her perceived perfection, feelings of inferiority or feeling less than others can surface. Because the goal is perfection, not creating a child can be perceived as failure. These feelings of inferiority can dominate a person’s life and

the more an individual feels inferior, the more powerful the urge to conquer the goal will be (Ansbacher & Ansbacher, 1964).

Words used in the dictionary to describe infertile are “unproductive”, “not capable” and “barren” (www.dictionary.com). Many men and women often put off having children because they are anything but unproductive. Today, more couples are delaying starting families because they are focusing more on education and careers and want to be able to provide a more stable life for their children (Jayson, 2009). To those individuals and couples, infertility may represent failure and it may feel like an insult to their sexuality (Shapiro, 2010). One can conclude that given their drive to succeed and their ability to achieve what they want, not being able to conceive a child would give them the feeling that they are unproductive and not capable.

Organ Inferiority. Adler has described organ inferiority as “an inherited weakness of an organ or organ system” (Mosak & Maniacci, 1999 p. 34). Although organ inferiority is primarily focused on a child’s weakness at birth, one can argue that the woman or man diagnosed with the infertility issue can feel a strong sense of organ inferiority. These feelings of inferiority have been known to cause withdrawal as well feelings of inadequacy (Mosak & Maniacci, 1999).

Every defect, no matter how trivial, is regarded by Adler as the expression and symptom of a general constitutional and hereditary weakness which focalizes in that organ (Mosak & Maniacci, 1999).

Love/Sexual. Infertility puts a strain on a marriage or relationship. According to marriage and family therapists, sex and money are the top two causes of marital strife. With infertility, people are dealing with both (Domar, 2004). Infertility treatments are costly. The American Society of Reproductive Medicine (ASRM) lists the average price of an in vitro fertilization (IVF) cycle in the U.S. to be \$12,400 (Resolve: The National Infertility Association, 2006).

Many couples experiencing infertility are on a rigorous schedule for intercourse which can make sex feel like a chore and more robotic. In a study conducted on marital adjustment and emotional distress in infertile couples, the author found that various forms of sexual distress have been reported. One third of the infertile couples in this study reported that their sex lives had suffered during treatments (Collins, 1992).

Couples are typically not equipped to deal with the stress of infertility because no couple thinks they will have trouble conceiving. Conception is such a natural function of life. Many times they do not know other couples they can relate to and so they suffer alone without the proper tools needed to get through the stress and pain infertility causes (Domar 2004).

Community. A strong tenet of Adlerian psychology is the concept of belonging. “The desire to feel belonging to others is the fundamental motive in man” (Dreikurs, 1949, p. 21). Infertility can cause couples to withdraw and feel a disconnection from their community, their friends and social events in which they once participated. Women tend to bond and connect with those people they share common interests with and typically women of childbearing age socialize with other woman of childbearing age (Getz, 2012).

As friends begin to have children, infertile women and men may question where they belong in their social network, which can increase isolation. Baby showers and events where there will be children may be painful event. In order to avoid this pain, couples may begin to avoid these situations and become even more isolated. This can lead to more feelings of depression.

According to Getz (2012), women experienced a lack of empathy and support as well as insensitivity from close friends. This study also indicated that this caused strained as well as the dissolution of many friendships. According to the *Lexicon of Adlerian Psychology*, the more

developed a person's community feeling is, the less diminished the inferiority feeling of that person which would indicate successful adaptation (Griffith & Powers, 2007). This would support that the more these couples isolate themselves from their community and social networks, the more inferior they will feel about themselves and their situation.

Work. Work can take a back seat when couples are undergoing fertility treatments. They are often needed at multiple appointments throughout the month. Trying to balance those appointments with their time at work can create a lot of stress. Work can seem less important and be perceived as something that is getting in the way of their treatments.

Workplace Discrimination. Women undergoing infertility treatments have long been discriminated against in many instances within the workplace. Infertility treatments require woman to attend multiple clinic visits per month. If a woman decides to do in vitro fertilization or IVF she will need to attend multiple doctors' appointments for blood draws, monitoring of the ovaries as well as one full day for the actual in vitro process (Resolve, 2006).

Many employers were not and still are not understanding of all of these appointments and women have often times been fired, or reprimanded for absenteeism. The added stress that their job is in jeopardy can cause complications in their treatment. Fortunately, things are changing and new laws are being created to protect woman going through treatments.

According to the *Wall Street Journal*, states are starting to recognize infertility as a medical problem. As of 2008, 13 states have laws mandating insurance plans to pay for in vitro fertilization. More employees are also seeking time off for treatment under the federal Family and Medical Leave Act (Shellenbarger, 2008).

Spirituality. Spirituality means something different to everyone. For some, it's about participating in organized religion and for other people it's more personal like a private prayer, yoga, meditation, quiet reflection, or even long walks ("Spirituality," 2013).

Many people experiencing infertility feel that their higher power may be punishing them for the things they have done (Domar, 2004). They may also be angry at their higher power for not blessing them with a child. When couples get angry with something that has provided them with a sense of peace, it is viewed as another loss of support.

Religious discrimination. Men and women many also run into discrimination within their place of worship. Many couples facing infertility turn to medical treatments in order to better their chances of conceiving a child. A common treatment is in vitro fertilization (IVF). IVF is defined as "A laboratory procedure in which sperm are put in a special dish with unfertilized eggs to achieve fertilization. The embryos that result can be transferred into the uterus or frozen (cryopreserved) for future use" (MedicineNet, 2012, p. 1).

For some religious organizations such as the Catholic Church, IVF is looked at as a sin. Doctors try to fertilize as many embryos as possible in order to have the highest chance of success. Due to regulations and the desire to keep multiples at a minimum, not all of the embryos will be implanted. This results in embryos being frozen for another IVF procedure or being discarded. In the eyes of the Catholic Church, the discarding of these embryos is considered abortion as life begins at conception.

Members of the Catholic Church that are experiencing infertility are facing tough decisions such as going against their religious beliefs and risk being ousted by the congregation or accept the chance of not being able to conceive a child.

Given the traumatic nature of infertility as well as the effect it has on all five of a person's life tasks it seems apparent that there is a direct effect on a person's mental health. Women and men struggling with infertility find themselves faced with many challenges. All of these challenges they face can cause undue chronic stress which we have discovered can lead to anxiety disorders as well as depression.

Therapeutic Techniques and Interventions

It is important for infertile couples to seek both individual as well as couples counseling. Although there is minimal research conducted on Adlerian therapy and infertility, there are many concepts that apply to helping individuals and couples determine mistaken beliefs and better understand the purpose of their anxiety and depression as it relates to infertility.

Adlerian Therapeutic Techniques

Lifestyle analysis. It is important for therapists to begin their session with a Lifestyle Analysis. The lifestyle analysis provides as strong assessment of the client's life style. Lifestyle is defined by Adler as "a singular pattern of thinking, feeling and acting that was unique to that individual and represented the context in which all specific manifestations had to be considered" (Shulman & Mosak, 1995, p. 1). The theory is that when coping behavior is not innate, then they are developed by what is learned in the given environment. One's style of life includes how a person sees the world, his/her conclusions about behavior, moral judgments and personal rules surrounding how to live in general. There are several factors that contribute to shaping a person's lifestyle including ecological factors, constitutional factors, developmental sequences, cultural factors as well as family influences (Shulman & Mosak, 1995).

During the life style analysis a therapist would begin gathering all of the information from childhood through adult hood. The lifestyle includes mapping the client's genogram and

identifying the client's mistaken beliefs/basic mistakes that they have formed from the influences in their lives (Shulman & Mosak, 1995).

Genogram. A helpful technique that many Adlerian therapists use that could be helpful in working with infertile men and women is a genogram. The genogram was developed by Monica McGoldrick and her colleagues at the Multicultural Family Institute. The genogram was created as a diagnostic tool to assist families and individuals recognize familial patterns currently as well as in the past. Genograms explain family history that goes beyond that of a family tree (Kennedy, 2010). Asking each client to list members in his/her family and extended family will give therapists a good picture of whether or not there could be infertility in the family. Genograms also provide insight into pressures put on by families as well as cultural beliefs that lie within the family. "There is so much shame with infertility, which is compounded for those that were raised in an environment of shame, secrets, and/or unresolved childhood trauma" (Getz, 2012, p 2).

Mistaken Beliefs/Basic Mistakes. According to Dreikurs, "basic mistakes are faulty social values related to contemporary standards, norms and social prescriptions for behavior" (Shulman & Mosak, 1995, p. 21). When basic mistakes become distorted they can cause a person to have think negatively about themselves, have distorted goals and ideas (Shulman & Mosak, 1995). Based on current research it would seem fair to conclude that men and women facing infertility could be struggling with distorted views about his/her self, their partners, the world as well as his/her ideals. Such distortions could include, feeling unworthy because he/she cannot conceive a child, feeling like a "real" man or woman would be able to conceive a child or even that life is unfair. A lifestyle analysis will provide an outline of areas for the therapist to focus on with the client.

It would also be important for therapists to ask questions regarding information they received as children regarding sex, infertility and who did or did not talk about these things (Burnett, 2009). Adler would argue that these mistaken beliefs learned as children could be contributing to the way they feel about their own infertility. After gathering this information it would be important to then ask the clients what they would like to change about the different messages they have received from their family, friends and community.

Life tasks. As previous research indicates, infertile individuals can face problems in all of Adler's five life tasks. Given this research, using the life tasks as an assessment tool could prove to be very useful in diagnosing the client's mental health as well as providing a strong foundation for treatment.

Clients would be asked to rate their satisfaction in each of the five areas. A score of 10 would indicate great satisfaction whereas a score of 0 would indicate the lowest level of satisfaction. Therapists would then be able to better explain verbally as well as visually the implication having low satisfaction can have on the wellbeing of themselves as a whole. Treatment would include dissecting each of the 5 areas with the client and discussing with him/her how he/she could boost those levels. This would be done using short term as well as long term planning.

Encouragement. An important concept in Adlerian therapy is that of encouragement. "Adlerian therapy is an optimistic and encouragement-focused approach to psychotherapy" (Carlson, 2008, p. 38). Rudolf Dreikurs believed that an individual's problems presented themselves because of discouragement. The purpose of encouragement in therapy is to provide hope to clients by focusing on their individual strengths and assets as well as focusing on efforts and progress (Carlson, 2008). Using encouragement focused therapy with infertile men and

women may be helpful as research has shown they possess a high level of discouragement. Focusing on reframing what he/she has not done or been able to do with what he/she has done to increase movement would be a way a therapist could provide encouragement while counseling an infertile client. As research has indicated many men and women struggling with infertility may feel inferior or like a failure. Given this information, it would seem to be equally important to help assist the client in recognizing that his/her perceived failure does not make he/she a failure at life.

Non-Adlerian Therapeutic Techniques for Individuals

Although Adlerian therapists are eclectic in their approach and incorporate many different styles into their treatment, there have been specific therapeutic techniques that have been proven helpful in working with infertile couples. Adlerian therapy is integrative and eclectic. It focuses on the individual situation as a whole and can include pieces from many different therapeutic approaches (Carlson, 2008). Much like Adlerian techniques, there are other forms of therapy that look at individual as a whole person. The mind body approach seems to be the most researched and for good reason. There have been positive results from studies that have been conducted in this area of therapy.

Mind/Body Approach. Mind/body approaches to medical and mental health issues are becoming increasingly more main stream as research is showing the correlation between our minds and bodies. The mind can consist of various mental states such as thoughts, beliefs, emotions and attitudes. These mental states can be conscious or unconscious. Mental states have a physiology associated with it and can be positive or negative effect and felt in the physical body. There are many types of mind/body therapies including; Cognitive Behavioral Therapy (CBT), support groups, yoga, Qigong, meditation and hypnosis (Hart, 2010).

Reproduction is regulated by the hypothalamus and the hypothalamus is mediated by the physiology of the relaxation response (Domar, 2004). This theory hypothesizes that relaxation techniques can help with the area of reproduction. It would be important for the therapist to teach the client the importance of mediation and relaxation and how it can help them with treatments.

Recent research indicates that psychological distress may impair fertility and that depressive symptoms may reduce the efficacy of infertility treatment. Several studies conducted within the past three years support the theory that psychological distress can have a significant adverse impact on successive rates in vitro fertilization (IVF). In one of the studies, women with depressive symptoms were half as likely to conceive as women who were not depressed, and in the most recent study of 151 women scheduled to undergo an IVF cycle the chance of a live birth was 93 percent higher in women with the highest positive-affect score. Researchers have concluded that the success rates of high-tech infertility treatment can be adversely affected by psychological stress (Domar, 2013 p. 1).

Research is indicating that mind/body approaches are having a positive impact on men and woman facing challenges with infertility. In a research study conducted by Dr. Alice Domar and team, 55% of women who participated in the mind/body group achieved healthy pregnancy outcomes. These results are positive considering those who participated in only a routine care group had just a 20% rate of healthy pregnancies (Domar, 2013).

In another study conducted in Iran, researchers set out to determine the effectiveness of CBT on the level of depression experienced by infertile couples.

Included in the study were 30 infertile couples randomized to experimental and control groups. The translated manuscript into Persian Beck Depression Inventory-II (BDI-II) was used to assess subjects, before and after counseling. The infertile couples in the experimental group took part in cognitive-behavioral counseling based on Interacting Cognitive Subsystems (ICS) approach in six sessions, once a week. The control group received no treatment during this period. There was no other psychological intervention (Nilforooshan, 2006, p 43).

Their findings were that Cognitive-behavioral counseling based on interacting cognitive subsystems approach is effective in decreasing infertile couples' depression and it would be better to consider it as a part of therapy along with biological therapies related to infertility (Nilforooshan, 2006, p 43).

As CBT was mentioned above as an effective therapeutic approach, it seems important to note that Adler has been recognized by many as one of the “earliest cognitive therapists” (Carlson, 2008, p. 23). “The similarities between cognitive-behavior therapy and Adlerian Therapy are rooted in a shared conceptual framework of examining the rules of life that each person acquires” (Carlson, 2008, p. 23).

Therapeutic Techniques for Couples

While working with individuals struggling with infertility, it seems important to examine the systems or relationships of which he/she is a part.

The human being is an organized system, suspended in multiple systems, large and small, of physical, social, economic, and cultural type, and that his or her mental health depends upon the effectiveness of the systems operations that govern his or her relationship with the larger system in which he or she exists (Nicoll, 1993, p. 136).

Couples counseling for those experiencing infertility is important. As mentioned earlier, the two biggest stressors of marriage is sex and money and infertility affects both. Couples may choose divorce due to the stress or based on the fact that they cannot imagine their life without children. Couples may also choose adoption or to remain childless, decisions that may be met with considerable amounts of grief and loss of a dream to conceive their own biological child.

Stages of infertility counseling for couples

During the therapeutic assessment phase, it is important to understand how long the infertility has been going on, what messages they have received from family, friends and society. Diamond has identified 5 stages of infertility for couples. These five stages are defined as (Diamond et al., 1999).

1. Dawning—increasing awareness of fertility problems
2. Mobilization—initiation of medical diagnostic testing; concern about the possibility of infertility and recognition of a problem
3. Immersion—most complicated phase; increased medical testing and treatment; ongoing uncertainty
4. Resolution
 - i. Ending medical treatment
 - ii. Recognizing and mourning loss of not having a biologically related child
 - iii. Changing focus to other options (e.g., adoption, childlessness)
5. Legacy—addresses the totality and after effects of infertility struggle

Purpose of Therapy for Couples

The purpose of therapy for couples with infertility is to assist them in their journey through the five stages of infertility (dawning, mobilization, immersion and resolution). Each stage can create a new challenge with new more complicated emotions to sort through.

There are many important areas for therapists to focus on when working with an infertile couple. Important areas to focus on include, assisting the couple to strengthen the ability to cope with their given state of childlessness, reducing potential conflicts about handling infertility treatment and helping them improve their communication with each other as well as with their doctors (Stammer, Wischmann & Verres, 2002).

It can also be important to help encourage the couple's acceptance of the fact that the physical disorder may not be susceptible to medical therapy and that they may not have a biological child. If and when acceptance has been made in this area, a therapist can then provide support in managing any changes that may be necessary in life style and plans for moving forward with their future (Stammer, Wischmann & Verres, 2002).

Adlerian Brief Couples Therapy

Adlerian Brief Couples Therapy (ABCT) focuses on helping couples overcome feelings of discouragement and inferiority and also helps them to identify any faulty motivations they are bringing to the relationship. ABCT is also a way to identify and define skills they already have and determine why these skills are not being utilized in the relationship. During ABCT the therapist will be looking for major mistakes in thinking and attempt to help couples reframe those automatic thoughts (Carlson, 2008).

ABCT would be helpful in counseling couples with infertility because it would help them to identify those negative feelings they have regarding their situation and would help provide the

couple encouragement for the strengths they already possess. The four objectives for ABCT are relationship, assessment, insight and reorientation (Carlson, 2008).

Relationship. The purpose of the relationship stage is to develop rapport between the couple and therapist in order to allow the couple to feel understood. It is the role of the therapist to help clients to identify the resources they possess which in turn empowers them to be hopeful about the future (Carlson, 2008).

Assessment. During the assessment phase therapists help couples understand the beliefs, feelings and goals that have determined their lifestyles. During this time the therapist will assess what stage of change the couple is in so they can better tailor their approach to treatment (Carlson, 2008). During the assessment phase it seems important that therapist understand how the diagnosis of infertility is effecting this couple and what issues may be causing in their relationship.

Insight. During this third stage, couples are learning what their self-defeating behaviors are and how they have gotten to where they are today. The level of insight of each couple will help drive the level of participation and degree in which the therapy progresses (Carlson, 2008).

Reorientation. In the final stage, therapists will assist couples develop alternatives to their behaviors and situations. Couples will also learn coping strategies in order to maintain their relationship through future periods of stress (Carlson, 2008). During reorientation it would seem important that a therapist assist their clients in making a plan for their infertility. Have the clients discuss with each other how far each of the partners is willing to go and how they will decide to end treatments, adopt or remain childless.

Therapists working with infertile couples should be knowledgeable about the subject and understand all of the psychological implications infertility can have. Organizations such as

RESOLVE can provide great information as well as resources for therapists and clients. It is also important that therapists have a basic knowledge about the medical and alternative methods that are available to clients. Therapists should refer to other therapists or agencies specializing in infertility if they feel they are unequipped to provide meaningful and productive care.

Analysis of Findings

Research has indicated that there are established relationships among life stress and infertility, stress, anxiety and depression levels in those trying to conceive (Khademi, Alleyassin, Aghahosseini, Ramezanzadeh, & Abhari, 2011). As it has been identified, infertility can lead to chronic stress which in turn can lead to depression and anxiety. Research indicates that anxiety disorders frequently co-occur with depressive disorders (Kessler, Chiu, Demler, & Walters, 2005). Some studies also indicate that fertility and fertility treatments can be greatly impacted by stress, anxiety and depression thus perpetuating the cycle of infertility (Domar, 2004). One can then gather that being in this cycle would then further increase the stress, anxiety and depression levels while diminishing the chances of conceiving.

Based on the research infertility can significantly affect a man and woman's five life tasks which Adlerians believe leads to diminished satisfaction with life. These tasks can be affected by emotional as well as physical issues contributing and stemming from the infertility diagnosis. Within the life tasks lie more complications with men and woman possibly struggling with perceived feelings of inferiority, a sense that there is something wrong with his/her body and loss of community.

Research has shown the importance of recognizing infertility's effect on a man and woman's emotional wellbeing and how therapy can be beneficial in helping to sort through the mistaken beliefs and discouragement a client or couple may be facing.

Given the limited amount of scholarly research and the amount of men and women who are infertile, it seems that more extensive research is necessary. Although research in mind body therapies have proven useful in working with infertile clients, there has only been a few studies conducted. Further research would be helpful in order to better understand the physical and psychological effects of infertility.

Author Reflection

Living a life with infertility can be a painful and isolating way for men and women to live. Based on the research reviewed, one can see that infertility is a problem that affects millions of people in the United States as well as across the world both mentally and physically. As research has indicated, infertility can have a negative impact on a man and woman's five life tasks and put them at an increased risk for depression and anxiety which can further complicate fertility treatments and hope for conception.

This writer feels it should be noted that there are many stories, blogs, articles and books dedicated to detailing the personal and emotional distress men and women endure while trying unsuccessfully to conceive. These articles are not deemed "peer reviewed" or scholarly but are they any less relevant? They are not based on research but on human emotion of perceived failure and ambiguous loss. It seems important that mental health professionals familiarize themselves with some of these stories in order to better understand the breadth of the situation our clients may be facing.

It also seems important given this research that more community support groups become available in order to normalize the topic of infertility and decrease the levels of shame and inferiority often felt by this population. With all of the societal, familial as well as internal

messages indicating we as human beings should procreate, it can be challenging for these individuals to see beyond their pain.

With 1 in 8 couples in the United States experiencing infertility, therapists will continue to see more individuals and couples struggling with this issue. It will be increasingly imperative that therapists remain sensitive to the roller coaster of emotions these individuals and or couples go through on a daily basis. It will also be important that mental health professionals working with men and women of child bearing age stay up to date on the latest infertility treatments, resources as well as support groups and ways they can help encourage his/her clients on their journey.

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