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The Effect of Family Structure and Family Support on Women's Coping with Fertility Treatments – A Systematic Review

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Abstract

Introduction: The use of innovative fertility treatments contributed to the creation of new family structures that did not exist before, such as single-sex families and single-parent families. In the past, the only acceptable way to have a child was within marriage, nowadays the "ticking biological clock" drives many women in the late 30s to seek fertility treatments to fulfill their dream of become a mother.
Aim: To examine three main family structures: married couple, one-parent family and single-sex family, as well as the coping of women undergoing fertility treatments, the difficulties they experience during treatment and their support systems.
Materials and Methods: a questionnaire that evaluates coping with the fertility treatments and their support systems, if they exist. The questionnaire was distributed to 450 women aged 20-45 undergoing fertility treatments. In addition, interviews of 15 patients overall (5 of each family structure)
Results: sample was divided into 3 groups of women: married, single and with female partner. single women conducted more treatments (73.3%) in comparison with married women (65.3%) and women with female partner (54.7%). women with female partner reported higher partners' support in comparison with married women ($F(1,298) = 121.57$, $p < .01$).
Conclusions: family structure affects women's coping with fertility treatments. Married women reported more emotional support from their family than single women and women with female partner, hence, they reported fewer negative emotions and more hope regarding the treatments. On the other hand, results showed that women with female partner reported higher partners' support in comparison with their married counterparts.

Introduction

Over the past decades, processes of industrialization, urbanization, liberalism, democracy, and individualism, as well as gains in women's status have led to significant changes in the family unit, such that the traditional family structure has become less common, and increasingly more diverse family structures have emerged. Severalpatterns have emerged:

Marriage rates have declined while divorce rates have risen.

The age of marriage is increasing.

The overall fertility rate over the last decades has declined.

The traditional family is in decline because of the rise of alternative family structures, which in turn is a result of:
An 80% increase of female single- parent familiesCohabitation without marriage

The rise of same-sex family units[1].

Although the use of successful innovative fertility treatments has also contributed to the rising of new family structures, many report repercussions for other areas of life, such as marital relations and social relations, sense of well-being, general quality of life and workplace behavior[2].

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Fertility treatments affect all women emotionally despite their differing circumstances, be they couples who are experiencing difficulties conceiving, or single women and lesbians who chose this method as a way of bringing children into the world. Coping with fertility treatments and their consequences can be emotionally disruptive to individuals or both partners[3].

The literature acknowledges the difficulties resulting from fertility treatments, a significant amount of the research describes the psychological effects and distress due to fertility treatments among heterosexual couples, their way of coping, gender-based outcomes, and associated marital and sexual consequences. However, very little is known about the difficulties, way of coping and psychological effects among single mothers and lesbians undergoing fertility treatments. This current study examined the traditional family unit (married couples) compared with lesbian couples and single mothers in their way of coping during fertility treatments as well as their support systems.

Changes in familial structure

Many revolutionary changes have occurred in the twentieth century, including in the role of family. Marriage age has increased as has the percentage of men and women who never marry, and family stability has decreased[4].Increasingly, both women and men wish to first establish themselves in the job market before forming a family. Likewise, more nontraditional family forms are on the rise as well, such as cohabitation, single- women households, and same-sex families. with these changes, these mothers face new adaptation challenges[5].

Types of Families

Two prominent new family types are ones headed by lesbian mothers or heterosexual mothers who are single by choice[6].

Same- sex families

A same-sex family is composed of two people of the same sex, who have a permanent intimate connection. As a familial structure, a family of two lesbian mother-parents is not new, but the way in which lesbian families are created has changed[7].Same-sex female couples who wish to reproduce must rely on a sperm-donor to provide gametes, (sperm donation) and with increased access to the fertility treatments, there are more families today that are headed by lesbians[8].

Single mothers by choice

The most recent type of single-parent family to have emerged is of single women who intentionally become mothers without a partner, usually called solo mothers, or single-parents by choice. These women are mainly heterosexual women in their late 30's and 40's, who are educated and financially independent. They decide to become single mothers when they feel the allotted time for having a child might run out before they are likely to find a partner and before their fertility decreases[9]. these women thus choose to turn to fertility clinics for a sperm donation in order to realize their desire to become mothers [10].

Nontraditional Families in Israeli society

Even though Israel is an industrialized country, the traditional family structure continues to dominate Israeli society. While in Western countries, the diversity in family structures has increased considerably, the traditional nuclear family continues to be one of Israeli society's hallmarks. Parenthood is viewed positively, and heterosexual marriage is considered the most legitimate framework within which to have children. Untraditional families headed by lesbians or single mothers by choice, are considered minorities and are relegated to the fringes of Israeli society. The decision to have children outside a traditional family framework is often received by family members and friends with mixed emotions and insufficient support[11].Israel is at a crossroad: Though it adheres to traditional nuclear family norms, alternative family models have emerged as a result of post-modern social processes[11].

Fertility and Birth Policy in Israel

Israeli society embraces a pronatalist ideology, and the subject of fertility and birth has enormous social and cultural significance. Parenthood is perceived as one of the indexes of success and is considered the basic human calling. Israelis expect the state to do more than simply enable having a family. There is an expectation to provide medical services that make it possible to exercise parenthood as a right. The state acknowledges its duty to fund fertility treatments to an extent that does not exist in other countries[12].

Israel's pro-birth policy manifests in-laws and policies guaranteeing childbirth services and free hospitals, birth stipends for new mothers, and significant child pensions for large families. It is not surprising that in such a social, political, and cultural environment, women in Israel who do not have children are stigmatized, and their only recourse is to seek in-vitro fertilization (IVF) or other fertility treatments[13].

Infertility

Women under 35 are considered infertile if they have been performing intercourse regularly for 12 months without using any contraceptives. Women aged 35 to 40 are considered infertile if they have failed to conceive after 6 months of regular intercourse without using any contraceptive methods; and women 40 are considered infertile even if they have tried to conceive for less than six months[14].This phenomenon, which arose with the new millennium, is estimated to affect9%–12% of couples of fertile ages around the world[15].

Men's and women's fertility is age dependent. In women fertility begins to drop already in their early 30's and typically plummets sharply at the end of their 30's, once the number of eggs remaining in the ovary[16].Today, age-dependent fertility has become more common due to a wide variety of reasons, including the delay of marriage and the age women begin to build a family rising to 30[17].

Common Causes of Infertility

The distribution of male and female cause of infertility according to the WHO is as follows: 20% of causes were attributed to male factors, 38% were attributed to female factors and 27% identified in both partners[18].

Female related causes:

The most common identifiable female factors, which accounted for 81% of female infertility were:
25% exhibit erratic ovulation or do not ovulate at all.

Endometriosis, an anatomic deformity that causes pelvic adhesions and damage to the ovarian tissue is found in 15%.An obstruction in a fallopian tube or both preventing the normal passage of the egg and the semen effects 11%.PCO (polycystic ovary syndrome) is a common hormonal disorder that affects 5%-10% of women [18].Additional factors: include womb abnormalities, certain vaccinations- for example against celiac disease and genetic factors (Turner syndrome).With advancing female age' there is an increase in the percentage of women with age-related infertility [19].According to data from the American Society for Reproductive Medicine, a woman in her 30s has a 25% monthly chance to conceive, whereas a woman in her 40s has only a 5% chance each month.

Male related causes

Male infertility can be due to a variety conditions. While some of these conditions are reversible, other conditions are not reversible. The common factors are:30-40% of various medical reasons, such as insufficient sperm count, morphology, or motility remain unidentified despite careful testing. sperm transport disorders. Account for 10%–12%.Varicocele- in an expansion of testicle veins in the scrotum.

Retrograde ejaculation –is a condition in which sperm enters the bladder instead of getting outside, and there is nearly no ejaculation. Additional clauses include genetic factors, such as Klinefelter syndrome, acquired testicle disorder and medical drug and radiation [20].

Unexplained infertility

Approximately 30% of cases of couples who are unable to become pregnant with identifiable reason, are regarded as unexplained infertility and a multifocal phenomenon of reproduction [21].There is no uniform definition of unexplained infertility in the literature; likewise, administration of therapy depends on length of infertility duration of infertility and age of the woman's spouse[22].

Evaluation of Infertility

Evaluation of basic infertility can be performed by a family doctor or an experienced gynecologist. A family doctor usually refers the patient to a specialist for fertility for fertility treatments whereas many gynecologists occasionally begin treatments even prior to referral to a fertility specialist. Evaluation of both partners is must be performed in parallel[23].Taking a woman's history and performing a physical examination to identify potential causes for infertility may help diagnosing women. Abnormal ovulation is a common cause for infertility and therefore is also a key component in diagnosis [23].

Evaluation of male infertility is frustrating both to a patient and therapist as etiology or specific treatments can only be found for a small number of men. Disorders in most men are characterized by abnormalities such as: reduced number of sperm cells, motility, or ability to fertilize an egg[24].

Criteria for Fertility Treatments

After isolating the cause of infertility, a treatment is given to correct reversible causes and overcome irreversible ones. Typically, at the beginning of a consultation, a couple is advised to make some lifestyle changes such as stopping smoking, reducing excessive caffeine and alcohol consumption, and regulating the frequency of their sexual intercourse[19].Since the cause of infertility is more common among women, it is customary to thoroughly examine the female spouse and treat her before the male spouse's diagnosis is completed. Treatment for the female spouse can often compensate for infertility in her partner caused, for example, by a low to medium drop in sperm parameters, and result in pregnancy even without treating the male partner[20].

Israel's funding criteria for funding fertility treatments for all its citizens – married couples, single women, lesbian women, Jews, or Arabs – are the broadest in the world. Women up to the late age of 45 who have attempted conceiving with their own eggs are entitled to funding, and women who are receiving egg donations are entitled to funding even longer[17].

Treating Infertility

In selecting ovulation induction as a treatment, the cause of an ovulation must be considered as well the treatment's effectiveness, the potential risks and complications, which must be individually assessed for each woman[25].Occasionally, inducing is combined with intra-uterine insemination (IUI) when infertility involves male-related causes as well[26].

Intra-Uterine Insemination (IUI)

IUI is a process in which processed and concentrated sperm is inserted directly into the uterine cavity. The clinical use of IUI is based upon the hypothesis that placing a great number of sperm cells inside the uterine cavity improves the chance of conceiving. For women who have undergone ovulation induction, including those with unexplained infertility problems or light or mild endometriosis, pregnancy rates are considered higher when IUI is used as complementary procedure instead of timed intercourse[27].

Donor insemination

In the past, insemination from sperm donation was mainly used in cases of male infertility, However, over the years, the indications for IUI from a donor have expanded and it has become an alternative approach for, among others, single women without a male spouse and lesbian couples. The ethics committee of the American Society for Reproductive Medicine (ASRM) has approved the rights of women – both single and lesbian, – to gain access to their fertility services. Insemination from a sperm donation is usually used for achieving pregnancy among women without a male spouse such as single or lesbian women[28].

Number of Treatment Cycles Before Transition to IVF

Women who have undergone insemination from a donor without a fertility diagnosis can continue inseminations in natural cycles, ovulation induction with clomiphene or gonadotrophinsis then used. After completing between 3–4three and four cycles of ovulation induction (depending on the age of the woman) without achieving pregnancy, IVF should be considered[28].Couples who have not been diagnosed with obstacles that prevent conception (bilateral obstruction) of the fallopian tubes or severe sperm problems are offered between three and six treatment cycles of ovulation induction with IUI before moving to IVF treatments[29].

IVF

In IVF, the most common technique today, an initial encounter occurs between an ovum and a spermatozoon in laboratory conditions, as an alternative for their natural place of encounter –in the fallopian tube in a woman's body[30].

IVF indications

IVF is the first treatment line when there is complete obstruction in both fallopian tubes, it has also become available to women whose infertility is related to one or more of the following

Severe infertility of male factor
Low ovary reserve / ovary failure
Infertility after treatment failure with less invasive treatments (problems with ovulation, endometriosis, and unexplained infertility.

Uterine-related causes source such as Asherman's Syndrome or irreversible deformation of uterine cavity[29].

According to the State Health Law, IVF treatments will be financed by HMOs for couples who do not have children in their current marriage (up to two children), as well as for a woman without children who wishes to start a family headed by an independent parent (single-parent family).

IVF treatments are given to women

As early as the age 18 but not over 45
Who are already 39 years of age, as a first option for fertility treatments.

At any age, after four consecutive treatment cycles, in which a stage of embryo transfer has not been achieved, or after eight IVF cycles without achieving a clinical pregnancy[31].According to the Fertility and Sterility report, Israel's healthcare system provides the highest number of IVF cycles provided by of any healthcare system. Anywhere [32].

Factors Affecting IVF Success

Several factors can affect the success of IVF (age, diagnosis of infertility, obstetric history), however, a woman's age is one that chiefly determines success of IVF treatments. Even though IVF might overcome fertility problems, especially among young women, it cannot compensate the age-dependent fertility drop among older women, particularly those above 40 years of age[29].Additional factors: include ovary response (number and quality of the eggs), infertility duration, which is inversely proportional to IVFsuccess, number of unsuccessful previous treatment cycles, hydrosalpinx, smoking andobesity[30].

Risks of IVF Treatments

Controlled ovarian stimulation (COS) has negative implications and risks, which include the following: ovarian hyperstimulation (OHSS) a rare but severe complication related to COS, occurring in about 1%–5% of treatment cycles. to a medium to severe degree[31].multifetal pregnancy, which occurs in about 30% of all pregnancies in patients who have undergone ovarian stimulation[33].ovarian torsion - an acute abdominal condition requiring immediate intervention[34].extrauterine pregnancy, which occurs after IVF treatment in 2.1%–8.6% of total clinical pregnancies[35].ovarian cancer, which has been reported a few times in connection with possible increased incidence after prolonged treatment with ovulation elements. However, additional studies have not confirmed these reports, and data is still being collected[36].

Egg Donation

Though IVF is more effective in older women, success rates among women aged 40 and above, are low, usually less than 20% per treatment cycle. Treatment options are limited for women over the age of 42, who have not been able to conceive with other treatments (including IVF) or who have premature ovarian failure, known as early menopause[37].The high success rate of conception from an egg donation in older women supports the claim that the quality of the egg is the main obstacle to pregnancy among older women. Due to low egg quality the likelihood of miscarriages. is higher[16].

Infertility and Treatment as Stress Factors

Most people take for granted the ability to conceive at any point in their life that they choose. If unsuccessful, many of couple's experience stress and distress, anxiety, and anger, feelings of unattractiveness and cognitive damage. They understand that enduring fertility treatments will challenge them physically and psychologically[38].Fertility treatments entail complex mental coping: In addition to being demanding and difficult to undergo, they are damaging to one's self-image, spousal relations, and the fabric of life. This crisis is called reproductive trauma in the literature and can be associated with intensified psychological distress in both women and men. One of main distress symptoms reported among fertility patients is depression[39].

The psychological and emotional stress occurring before, during, and after IVF treatments is multidimensional, and all phases of the treatment are threatening daily injections, drawing blood, the ultrasound, egg retrieval and the possibility of failure at each [40]. Patients who have difficulty accepting their infertility and who have no children, tend to experience more anxiety and depression when they are informed that a treatment has failed[41].

Emotional Distress as a Result of Fertility Treatments

The belief that psychological factors play a role in infertility is long-standing, and there is evidence that high stress levels might influence the success of fertility treatments. Psychological pressure seems to be more common inthe spouse with the fertility problem. An initial strong emotional response, which can be experienced as a crisis, is usually followed by a period of acceptance. This period can also be characterized by sharp ups and downs in mood. The anticipation that the fertility treatments will be successful inspires encouragement and happiness, but these feelings can quickly switch to bitter disappointment and despair if the treatment fails[42]

Patient stress and anxiety increase during waiting intervals for example, a waiting period before for the results of the pregnancy test, before the eggs are retrieved and the embryo transferred. Patients experience high emotional distress when they are informed that a treatment failed. One or two women out of 10 experience significant clinical levels of depression symptoms[41].Many IVF patient patients report depression symptoms even before beginning their treatment cycle, which are no doubt tied to their earlier failed treatments[42].

Effect of Fertility Treatment Upon Intimacy

Most fertility patients undergo treatment as a couple, so in addition to each partner's individually facing challenges, their intimate relations are also put to a test. Enduring prolonged difficult experiences that involve suffering and uncertainty can either strengthen or destroy intimacy. The toll treatments might take on couples are decline of their intimacy and in their sex life because of intrusions in the form of thoughts about the longed-for baby during intimate moments, or the intrusiveness of third parties or medical interventions. Either can drain the couple's sex life of love and closeness and render it only a means of conceiving[39].In most cases, infertility has great impact on the couple's emotional state, creating emotional turmoil for the individual and disrupting the couple's intimacy. as a result, problems might arise in the marriage or ones that existed previously might worsen[43].

Emotional Distress among Women

Fertility treatments often involve protracted and intrusive examinations and procedures and adherence drug protocols, which add to the pressure of diagnosis. Though the psychological effect of hormone intake on women during fertility treatments have not been properly researched, fluctuations in mood and the occurrence of depression are known side effects of ovulation induction drugs. Also, women undergoing ovulation induction often complain about psychological problems[44].

One well-known side effect related to fertility treatment is weight gain, caused by an increase in caloric intake, rather than the result of medication. Women tend to eat more for various reasons: high stress, abstinence of various types that are required in order to increase the likelihood that the treatment will succeed, spending increased time at home and less time exercising due to "over-prohibitions" a woman imposes upon herself to assist in success of treatments[45].emotional challenges, such as dealing with physical pain caused by surgical interventions. Furthermore, IVF treatments generate feelings that include but are not limited to discomfort with therapists, sorrow, and despair after a failed treatment cycle, and anxiety regarding maintaining intimacy[46].

Emotional Distress among Men

Like women, men suffer from coping with fertility treatments both physically and psychologically. While much evidence has been collected about women's psychological and emotional adjustment women to infertility, there are no systematic studies focusing on men's or to their response to the accompanying treatments[47].Infertility in men can prompt a life crisis. Although fertility treatments have become common in recent years, men often feel alienated and detached from them. Gender asymmetry is apparent with respect to fertility treatments, which primarily focus on the woman, whereas the man's role is mostly reduced to giving his sperm sample in a timely fashion even if the problem lies with the man[48].It is now known that men and women share similar responsibility for infertility and therefore, greater attention must be given to the mental experiences of men and to men's place not only as a supportive spouse, but as a partner being responsible for infertility[49].

Differences between Men and Women

For 49% of women but only 15% of men, infertility is the most upsetting experience of their lives. A study on the psychological impact of infertility on women versus that on men found that there are still differences between the genders: women are affected emotionally more negatively than men[47].Many studies have attempted to explain the psychopathological mechanisms of psychological distress in infertile couples and have assumed that men's and women's coping and attachment strategies differ because they perceive infertility differently. Women, more than men, perceive their infertility as a threat and loss, which intensifies their distress. The motivation to seek help also differs between the genders: validating their feelings and legitimizing them is enough for women, while men seek information and practical advice[50].

Coping with Infertility and Fertility Treatments

Both men and women might feel that the relationship is threatened. As infertility can be a stressful experience, couples usually make various behavioral or emotional attempts to adjust and to regain control over and manage their lives. Couples may try to relieve the pressure by actively avoiding situations and reminders of their fertility problems. The findings that women's use of active avoidance as a coping strategy adversely affects their relations with their male spouses align with previous studies that show that active avoidance coping increases stress among male spouses.

The gender difference might be the extent of emotional support each of the spouses can offer to the other. Considering that men sense this burden of caring for their wives while they undergo treatments, use of avoidance coping might be perceived by a woman as somehow sharing her suffering and thus create a perception of increased understanding and support[51].It was found that coping strategies aimed at problem management were correlated with higher levels of infertility distress and poor adaptation, while an emotional approach and strategies focusing problem appraisal (positive reinterpretation) were correlated with lower levels of infertility distress and better adaptation[52].

Coping Strategies after IVF Failure

It was found that after failed IVF treatments, women were more likely to find the following coping strategies: effective: to confront the problem by seeking more details and learning something new in order to cope, to be optimistic, trying to think positively and hoping the situation will improve and relying on oneself, keeping one's emotions private and wanting to be alone in order to think things through. Emotional, palliative, and evasive coping strategies were less efficient[53].Very little if anything can be done by men and women themselves to alter their infertility, Hence, passive coping styles and emotion-focused strategies to relieve the anxiety associated with their condition, which include efforts to focus on something else other than the stress source can also be suitable[54].

Support Systems

The emotional impact of infertility creates problems not only for spouses, but also for their family members and friends, because women, more so than men, disclose the fact of their infertility with others. Their infertility to others. Many people want to be useful and supportive, but do not know how. Despite their good intentions and efforts, they usually say and do the wrong thing, either hurting the other person or themselves. An increasing number of parents, siblings, coworkers, and employers face these situations but do not know how to respond[55].

One of the main reasons family and friends find it difficult to help is that they know so little about the emotional aspects of infertility, the shocking diagnosis, the demanding treatment and the daily disruptive incidents. The emotional overload can cause those who are coping with infertility to become depressed, angry, guilt-filled, and family and friends often add to the pain despite well-intentioned remarks and actions[56].When both partners are hurt, stressed, and depleted of physical and mental energy, they are less capable of fulfilling each other's needs, and they can begin feeling estranged. This is mainly true if their ways of coping are different: for example, if one prefers privacy or feels embarrassed or abandoned, whereas the other is outspoken and wishes to talk to and share with others [56].

Coping of Single Mothers by Choice

The fear that the window of opportunity for childbirth will close motivates women, either with a male spouse or alone, to turn to fertility treatments. Yet, the decision to bring a child into the world in such a way is not simple of the women who seek fertility treatments, approximately 85% do so because of their age and not because it is their preferred choice[57].

Reactions of family members and friends are divided: some are supportive and sympathetic of the woman's decision to have children, which is considered a core value. Others might make offensive remarks, and sometimes the family communicates its disappointment that the woman will not be bringing children into the in the traditional way, within a marital framework or as part of a couple. Others feel sorry for their single-mother daughter because of the great burden she will have to bear, but some admire their daughters for being able to accomplish everything alone [58].

Coping of Same-Sex Mothers

One of the most significant decisions that same-sex couples must make is who will be the first to conceive: Should the younger or older conceive first? This is not a simple decision and can bring to the surface existing conflicts between the partners. Even though both female spouses are fertile and healthy, at least one of the female spouses must undergo various tests, cope with embarrassing and invasive IUI, and possibly, a more complex battery of fertility treatments including injections and hormones and even IVF. Like heterosexual couples, same-sex partners also undergo emotional, and mental overload stress in their relationship. This complex period tests the couple's intimacy, either bringing the partners closer together or pulling them apart[59].In addition to having to overcome the anxiety associated with fertility treatments, lesbians must also contend with the stress related to their status as a minority, sometimes taking the form of discrimination[60].

Summary

As the number of traditional families assisted by advanced human reproductive technologies is increasing, more single women and lesbian couples are also turning to donor insemination. Infertile couples and individuals exhibit stress, anxiety, fear, depression, guilt and despondence, as well as reporting a loss of social status. Yet, numerous women conceal their situation and avoid sharing their fertility problem with their families and relatives, as a result, they are deprived of support and eventually might become socially isolated[54].

Recommendations for Further Studies

Further research of the following topics is recommended:

The study examined the Jewish population. Both the orthodox as well as the Arab population should be examined. Coping with fertility treatments of women according to education and socio-economic status should be examined. The study was conducted in Israel, which extensively finances fertility treatments. other countries where there are no subsidies for the high treatment's costs should be examined. Coping with fertility treatments was examined in young women versus older women in general. Coping with treatments according to age groups should be performed. Since there is no clear distinction between primary and secondary infertility, research on the topic should be conducted concerning its psychological implications compared to primary infertility

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