An-Najah National University

Faculty of Graduate Studies

Psychological Distress Among Infertile Women Attending Razan Center In West Bank In Palestine: Quantitative Study

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الاهـــــداء

إلى من علمني النجاح والصبر

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الإقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان :

Psychological Distress Among Infertile Women Attending Razan Center in the West Bank in Palestine: Quantitative Study

أقر بأن ما اشتملت عليه هذه الرسالة إنما هي نتاج جهدي الخاص، باستثناء ما تمت الإشارة إليه حيثما ورد، وأن هذه الرسالة ككل، أو أي جزء منها لم يقدم لنيل أية درجة أو لقب علمي أو بحثي لدى أية مؤسسة تعليمية أو بحثية أخرى .

Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification

Student's Name: **اسم الطالب:**

Signature: **التوقيع :**

Date : **التاريخ :**

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Abbreviations	
O-C	**Obsessive-Compulsive**
DEP	**Depression**
INS	**Interpersonal Sensitivity**
PSY	**Psychoticism**
ANX	**Anxiety**
PHA	**Phobic Anxiety**
PI	**Paranoid Ideation**
H	**Hostility**
SPSS	**Statistical Package For Social Sciences**
WHO	**World Health Organization**
FSH	**Follicle-Stimulating Hormone**
SD	**Standard Deviation**
SOM	**Somatization**
IVF	**In Vitro Fertilization**
PST	**Positive symptom Total**
PSDI	**Positive Symptom Distress Index**
GSI	**Global Severity Index**
SCL90-R	**Symptom Check List 90 Revised**

Psychological Distress Among Infertile Women Attending Razan Center in the West Bank: Quantitative study

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Abstract

Aim of the Study: This study focuses on infertility and its impacts on Palestinian women mental health status. It was comes to assess psychological distress quantitatively in women suffering from infertility living in the West Bank in Palestine.

Method: A descriptive design was used to investigate the impacts of infertility on Palestinian women's mental health status and to investigate the most prevalent psychological problems among infertile women. The Symptom Checklist-90-R, a standardized instrument for the measurement of current psychological symptom status, was administered on Eighty eight women diagnosed with infertility and to improve the validity of our study, local control group was added; this group consisted of 100 women who attend family planning clinic, women between the ages of 18 and 42 years were taken as a convenience sample. All these respondents filled the Derogatis SCL.90-R (a self report measure of mental health symptomatology) by themselves.

Data analysis: The SCL-90-R was analyzed using Statistical Package for Social Sciences (SPSS) version 16 ;the calculations of means, standard deviations, the ratio percentiles, a Kruskall-Wallis Tests carried on analyze the collected data by Derogatis's SCL.90-R.

RESULTS: Analyses of the SCL-90-R indicated that participants in the study group differed in their psychological symptom status when compared with controls. Infertile women in the current study have more psychological distress as represented through the 3 indices and 9 symptom dimensions of the SCL-90-R, than fertile women , the results showed there were a statistical significant differences among the two groups of participants in relation to GSI; PSDI ; paranoid idea ;obsessive-compulsive; interpersonal sensitivity; depression symptoms ; anxiety symptoms ; and phobic anxiety .

The results of the study demonstrated , that the duration of infertility , causes of infertility ,age and place of residence did not show any significant effect on mental health of infertile women . Other independent variables were found to be significant under some circumstances, such as employment and scientific qualifications.

Summary: This was the first study in Palestine that explored mental health status of the infertile women. In addition, the present study could be the first study of its kind in the Arab countries as far as the literature showed, which investigated the psychological distress among infertile women by using the Symptom Checklist-90-R, a standardized instrument for the measurement of current psychological symptom status.

When compared with controls, female partners of infertile couples experienced elevated levels of psychological distress, despite the negative feelings that were reported by many respondents; very few had ever

consulted a mental health professional or sought counseling. Special consideration should be given to the emotional needs and psychological distress of infertile Palestinian women. The Psychological aspects of infertility should be given more attention, and be considered in all stages of treatment and medical interventions to decrease the psychological suffering of the infertile couples and to prevent developing of any psychological distress.

Chapter One
Introduction

1.1. Family systems

The Webster's New Universal Unabridged dictionary defines family as "parents and their children" or "persons related by blood or marriage"

Parenthood, especially for married couples is seen as a moral obligation that has its roots in religious beliefs and cultural norms. Negative psychosocial consequences of childlessness are common and severe **(Dyer, 2007).**

Human beings want to have children not only for the joy of it, but as a deep desire to continue their generation and leave a valuable memory of themselves **(Ehsanpour et al, 2009).**

In the West, having children is widely viewed as a choice to be weighed carefully with other life goals. Personal happiness and the possibility of giving and receiving love within the parent-child relationship play into the decision of having a child. Also adherence to social norms, desire and need for social security and power. While within Arab culture, having a big number of children is very natural and inheritance .In countries with no social security system, many families depend on children for economic survival and childless couples risk severe economic deprivation and social isolation without children to assist them in old age **(Van Balen, 2002).**

In Palestine, Society and family often pressure women to be married and after they are married to bear children. Not only are couples expected to have children, but also they are expected to have children "on time,"

usually about 2 to 3 years after marriage. In many cultures, women's bodies are frequently the locus through which social, economic, and political power is exercised, where the role or status of women is defined by their reproductive capacity, womanhood is defined through motherhood and infertile women usually carry the blame for the couple's inability to conceive. Childless women are frequently stigmatized, resulting in isolation, neglect, domestic violence and polygamy **(Wiersema et al., 2006).**

In Islam, the religious and cultural perspectives of infertility could be challenging for some clients. The Islamic religion believes that most things come from Allah(God) and expresses acceptance of God's Will by utterances like 'Insha'Allah' , which means God Willing, 'Al-hamduli-llah' meaning thanks be to God. Also infertility had been addressed in Quran as "to Allah (God) belongs the Kingdom of heavens and the earth , "He" creates whatever He pleases, He gives daughter to whom He pleases and gives sons to whom He pleases to some "He" gives both son and daughter and make burden whom He wills" (Holy Quran). An infertile couple might be consoled because Allah wishes for them to be childless **(Lubke , &AL-Sharqawi, 1991).**

In Arab culture, it is customary to identify adults by placing the prefix 'Abu' or 'Om' with their child's male name, for example, "Abu Ahmad "or" Om Mohammed" meaning" Father of Ahmad"or "Mother of Mohammed" respectively. This custom service is a reminder to the infertile couple of

their social obligations to procreate and results in personal frustration (Aliyeh, 2007).

Men and women are reacting differently towards infertility, where childlessness is usually accepted in the Arab culture as due to the wife's health problems, infertile wives are said to experience greater emotional disturbances than their husbands because, during the process of female socialization, pregnancy and childbirth are considered as the most important function of the wife. Females therefore, take more responsibility for fertility evaluation even when they are sure that their husbands are the cause of their childlessness. Some of the investigations and treatments for artificial reproductive technology ddddare performed on females, so they directly face the success or failure of treatment **(Pottinger et al., 2006).**

In cases of male factor infertility, the first reaction is immense shock and alarm that disrupts temporarily the life of the husband. He is hit in his identity male ego, he doesn't react in the same way as women because male socialization discourages them from expressing such feelings openly. As due it will make him less of a male in their eyes. However, if there is evidence that the man is the cause of the reproductive impairment, he would be more distressed than his wife impairment, and he would be more distressed compared his wife **(Greil, 1997).**

Several studies had provided sufficient evidence that one's state of mind had the potential of severely impacting on the state of the body. On the other hand, the body's infertile condition could influence one's thoughts and

perceptions, and resulting emotions, coping abilities and experience of stress **(Weissman, 2003; Domar, 2004).**

Reproduction is considered one of the main basic necessities of humans, and psychological crisis may occur when something interferes with their ability to reproduce.

The process of undergoing an infertility work up and subsequent treatment impact upon the individual on several levels, physically, psychologically, spiritually and financially **(Weissman, 2003)**.

Despite the endless medical research of infertility, the psychosocial aspects of infertility had not been adequately addressed **(Cwikel, Gidron &Sheiner, 2004).**

Fido (2004) confirmed that no study had specifically assessed the relationship of psychological factors and infertility in Arab women.

This was the first study in the Palestinian society that set to explore the mental health state of the infertile women. In addition, the present study could be the first of its kind in the Arab countries as far as the literature reviewed shows, which investigated the psychological distress experience among women and focused on the state of their mental health.

1.2. Infertility: definition and types

Regrettably, not all couples desiring biological children are successful in achieving a pregnancy or carry a pregnancy to live birth. This inability to

have biological children is called infertility, the inability to conceive or carry to live birth a pregnancy after one year of regular sexual relations without the use of contraceptives **(Makar and Toth, 2002).**

To make it more clear two types of infertility were identified, primary and secondary ones according to world health organization (WHO)guidelines, primary infertility means that infertility occurs in the absence of a prior history of pregnancy, while secondary infertility means that infertility occurs following a prior pregnancy **(Row, Comhaire,Hargreave &Mahmoud,2000).**

Empirical data provided some estimates of the primary causes, with approximately 30-40 % due to female factors, 30 % due to male factors,

40 % due to combined factors, and a residual of 10-15 % for which no explanation could be determined with current technology **(Freya, 2007).**

1.3. Causes of Infertility

When it comes to causes , there are many possible causes of infertility and often the problem stems from a combination of factors in either one or both partners.

Environmental toxins, declining health conditions, medical problems, inappropriate timing of sexual intercourse, stressful lifestyles, personal problems, vocational pressures, and general mental health all have been blamed as contributors to Infertility in both sexes **(Mahlstedt, 1987).**

1.3.1. Causes of Female Infertility

1. Adhesion (scar tissue) from previous surgery or pelvic infections;
2. Anti-sperm antibodies;
3. Block fallopian tubes (tubal obstruction);
4. Cervical mucus that does not allow the sperm to enter the uterus and fallopian Tubes (cervical factors);
5. Endometriosis;
6. Hormonal abnormalities;
7. Irregular ovulation or failure to release an egg;
8. Maternal age;
9. Repetitive miscarriages;
10. Unexplained infertility; and
11. Uterine lining which is inadequately prepared Sadock (2004).

1.3.2. Causes of male Infertility

1. Abnormal sperm motility;
2. Anti-sperm antibodies;
3. Suboptimal sperm or lack of sperm;
4. Passage, or vas deferens, is blocked; and

5. Problems with ejaculation **(Freya, 2007).**

1.4. Incidence and Prevalence of infertility

According to the world health organization (WHO) it was estimated that 8–12% of couples around the world experience difficulty conceiving a child, thus, affecting 60 to 80 million people **(WHO, 2004).**

Good documentation of the prevalence of infertility is lacking, it is generally believed that more than 70 million couples suffer from infertility worldwide and majority being residence of developing countries ,6.9% to 9.3% are in less developed countries while the prevalence of infertility in "more developed" countries is ranged from 3.5 % to 16.7% **(Boivin et al .,2007).**

In sub-Saharan Africa, the prevalence differed widely from 9% in Gambia **(Sundby et al., 1997)** 11.8% in Ghana **(Geelhoed et al., 2002),** while 21.2% in Northwestern Ethiopia **(Haile, 1990),** and between 20% and 30% in Nigeria **(Larsen, 2000)**. Even less data were available from Asia and Latin-America.

The European Society of Human Reproduction and Embryology (ESHRE) Capri Workshop Group had estimated that at least 1500 In Vitro Fertilization (IVF) cycles per million people were needed to meet demands **(Hammoud et al .,2009)**. Denmark had been reported to have the highest IVF treatment ratios, with 1251 IVF cycles per 100,000 women of reproductive age. New Zealand was amongst the lowest at 328 per 100,000,

while Australia ranked third with 954 cycles per 100,000 women of reproductive age. While the United Kingdom had 396 per 100,000 and the United States had the lowest IVF treatment ratios with only 237 cycles per 100,000 women of reproductive age **(Lancaster, 2006).**

When it comes to Arab World, there was a lack of relevant research and knowledge about the prevalence of infertility in Arab world.

In Palestine good documentation of the prevalence of infertility in both gender is lacking. But the Palestinian central Bureau of Statistics (PCBS) extrapolated Prevalence of women infertility in Palestine, that of every 100 married women, around five of them reported primary infertile, 8.4% of married women aged 15-49 in the Palestinian Territory reported infertility: 8.4% in the West Bank and 8.3% in Gaza Strip. Of those, 4.8% were reported as having primary infertility: 4.5% in the West Bank and 5.2% in Gaza Strip. And the rate of secondary infertility among married women was 3.6% in the Palestinian Territory: 3.9% in the West Bank compared to 3.1% in Gaza Strip **(PCBS, 2010).**

These statistics highlight reasons for much needed attention in this unexplored area of research, mainly exploring the psychosocial experience of this condition, which could be considered as having significant psychological effects.

1.5. Significance of study

Despite Palestinians have high population growth rate, infertility still poses a reason for a concern and remains a major reproductive health problem. According to (PCBS) data in 2010, decline in the crude birth rate during the last decade in the Palestinian Territories was observed. The birth rate had been estimated at 42.7 births per one thousand of the population in 1997 and declined to 32.8 in 2010. However, there were regional discrepancies where the crude birth rate in the West Bank decreased from 41.2 births per 1000 population in 1997 to 30.1 per 1000 population in 2010. In Gaza Strip, the crude birth rate dropped from 45.4 in 1997 to 37.1 per 1000 population in 2010.

Infertility was not just a medical condition to be treated with fertility drugs, surgery or assisted reproductive technology, but was often a crisis that profoundly affected nearly all aspects of one's personality and life **(Dyer et al., 2005)**. For that we need to identify the impact of infertility, possible to change the medical models that viewed infertility as a medical problem to be solved. Society needs to be aware of the immense impact of the crisis of infertility, not medically, but psychology also.

This study would highlight the aspects of psychological well-being which were impacted on (positively or negatively) through the experience of infertility.

Furthermore data would highlight the impact that infertility had on the overall mental health and might assist in the development of mental health programmers and community based interventions.

The prospeded outcomes would be significant not only in the development of mental health program, but also to community mental health nurses. Mental health nurses should be equipped with the knowledge and skills that were necessary to help people adjust to daily life problems and related difficulties. Also, possible we need for additional and continuous training for nurses who are employed in the fertility settings, to make them more aware about the psychological and social domains and their impacts on clients.

On the otherhand, this study is considered to be the first of its kind in Palestine, regarding the psychological effects of infertility, also it is considered as the first of its kind in the Arab world.

1.6. General Aim

The present study comes to focus on infertility and its impacts on Palestinian women mental health status. The general aim of this study is to explore the psychological problems of infertile women and to investigate their mental health status; particularly, psychological distress.

1.6.1. Specific aims include the following

Since no information are available about the psychological distress of infertile women, thus the present study would be undertaken to:

1. Assess psychological distress of infertile women attending infertility clinic in Palestine;
2. Identify the impact of infertility on the women's mental health;
3. Propose recommendations for helping infertile women who suffer from mild or severe mental health problem; and
4. Highlight therapeutic roles of community mental health nurses with infertile women, their families, and society in general.

1.7. Research Question

What is the mental health state of the Palestinian infertile women and the psychological characteristics in the comparison of fertile women?

1.8. Hypotheses of the study.

1- There are no statistical significant differences in the mental health state of Palestinian infertile women at the level of (α=0.05 of) that could be attributed to age, place of residence , qualification, employment status, time of infertile, and the cause of infertility.

2- There are no statistical differences at the level of significance (α=0.05) in mental health status of Palestinian infertile women and fertile ones.

Definition of Concepts:

- **Psychological distress:** is largely defined as a state of emotional suffering that may impact on the social functioning and day-to-day living of individuals **(Wheaton 2007)** ,characterized by symptoms of depression (e.g., lost interest; sadness; hopelessness) and anxiety (e.g., restlessness; feeling tense) **(Mirowsky, 2002)**. These symptoms may be tied in with somatic symptoms (e.g., insomnia; headaches; lack of energy) that are likely to vary across cultures **(Kleinman 1991, Kirmayer 1989)**.

- **Mental health status**: is the psychological, emotional, social, and physiological state of the individual **(Zahran, 1982).**

- **Infertility:** For couples of reproductive age who have sexual intercourse without contraceptive methods, infertility is defined as the inability to establish a pregnancy within a specified period of time, usually 1 year. (Inhorn,, 2003).

-The Symptom Checklist 90 (SCL-90): is a psychiatric self-report inventory. The 90 items in the questionnaire are scored on a five-point Likert scale, indicating the rate of occurrence of the symptom during the time reference. It is intended to measure symptom intensity on nine different subscales **(Derogatis , 1983).**

Chapter Tow

Literature Review

2.1. Assisted Reproductive Technology

For the couple having trouble conceiving, their best opportunity for evaluation and treatment lies within the domain of assisted reproductive technologies. Assisted reproductive technologies (ART) or reproductive-aiding technologies are all clinical treatments and laboratory procedures used in the United States since 1981 to help women become pregnant, most commonly through the transfer of fertilized human eggs into a woman's uterus. Since 1981, several new birth technologies had offered hope to those who had experienced the disappointments in their quest for children.

Infertility treatment other than ART, such as ovarian stimulation followed by natural conception or IUI, was much more common than ART. Although the scientific literature indicated that the efficacy of these treatments was lower than that of ART (pregnancy rates generally below 15%; for a review of trials of ovarian stimulation and IUI) **(Hughes,1997)**, their higher frequency made it likely that just as many or more children were conceived through these forms of infertility treatment.

At the time of the study, IVF pre-treatment included follicular stimulation with daily injections of "Gonadotrophin" (recombinant FSH), following down regulation with, in most cases, Gonadotrophin releasing hormone (GnRH) agonist (standard/long protocol) or in combination with a GnRH antagonist (short protocol). When follicular maturation was obtained, as monitored by regular examinations with trans-vaginal ultra-Sonography, oocyte retrieval was performed 34-36 hours after an injection

of 10,000 IU HCG. Fertilization *in vitro* was performed either by IVF or ICSI. Embryo transfer (ET), in most cases of a single embryo (82 %), was performed 2 - 3 days later. Good quality spare embryos were cryopreserved to be transferred later in subsequent cycles. Luteal support was given with intra-vaginal progesterone. The pregnancy test result (HCG in urine) was assessed at home by the woman 16 –19 days after oocyte retrieval. The couple reported the result of the pregnancy test to the clinic. The IVF treatment with a long protocol lasted approximately 6 - 7 weeks from onset until the pregnancy test was assessed.

ARTs were considered the most stressful techniques used to treat infertility **(Eugster & Vingerhoets, 1999)**. The waiting period between embryo transfer and pregnancy test as well as the failure of such pregnancy attempts were described as presenting great strains for infertile patients **(Verhaak et al ., 2007)**. Undergoing ART presented a physical and emotional burden associated with high levels of depressive symptoms, anxiety, and distress **(Chen et al., 2004)**. In addition, stress surrounding infertility may be attributed to any number of specific issues, including prevention or postponement of an important life goal (having a child), the cyclic nature of treatment, the side -effects of fertility medications, or marital conflicts related to infertility **(Mahlstedt, 1985).**

2.1.1. Psychological response to infertility treatment medication

Fertility drugs, often taken to prepare for ART, had side- effects such as hot flashes, abdominal discomfort, and ovarian enlargement. Ovarian

hyper-stimulation, in which the ovaries temporarily become swollen and painfully filled with cysts, might result from multiple injections of Gonadotropins, which were used to stimulate egg-containing follicles in the ovaries **(American Society for Reproductive Medicine,2006).**

Oral birth control pills were typically used as part of the IVF treatment cycle to down-regulate the hypothalamus, to prevent premature ovulation during IVF cycles. Prevalence rates of depression in women taking oral birth control pills range from 5% to 50%, depression being most common in progesterone-dominant pills.

However, because of the estrogen in oral birth control pills, some studies had reported the induction of rapid cycling mood in women with bipolar disorder when taking these pills **(Jensvold, 1996)** .

Gonadotrophin releasing hormone (GnRH) was a hypothalamic hormone used for down regulation during IVF treatment to prevent premature ovulation. Adverse effects from GnRH treatment included menopausal symptoms such as hot flashes, headache and mood changes **(Toren et al., 1996)**. The mood changes induced by GnRH treatment were usually not severe enough to fulfill the criteria for major depression **(Eyal et al., 1996)**.YG1`symptoms **(de Klerk et al., 2007).** Women usually expressed high expectations and hope for a successful outcome when IVF was

initiated and disappointment and symptoms of depression following treatment failure **(Verhaak et al., 2005)**. Thus, infertility and undergoing IVF treatment with hormone therapy was demanding and could cause stress symptoms and emotional reactions of crisis, grief and depressive symptoms.

Patients most at risk for developing severe psychotic symptomatology appeared to be women with pre-existing disorders, because they were more likely to experience mood shifts in response to normal hormonal changes (e.g., ovulation, premenstrual period). However, psychotic episodes had also been reported in women without a pre-existing history of psychiatric disorders **(Rasgon, Bauer & Glenn et al., 2003)**. Bromocriptine Mesylate was infertility treatment medication that had been shown to trigger hypomania or mania, hallucinations, delusions, confusion, and behavioral changes in women with bipolar disorder on psychotropic medications **(Altmark, Tomaer &Sigal, 1987).** Also Clomiphene was another infertility treatment. Typically, the psychosis began while Clomiphene was being taken (days 2 to 7 of stimulation), indicating that the mechanism of action of the psychiatric side effect was a direct effect of Clomiphene citrate on the central nervous system (rather than an indirect effect of the medication on hormone levels) **(Williams &Zappert,2006).** Psychotic symptoms (including thought disturbances, hallucinations, and

transient neurologic difficulties) appeared to have abated rapidly when Clomiphene treatment was terminated **(Siedntopf & Kentenich, 1998)**. It might be that stimulation with hormone-regulating medications (e.g. Clomiphene citrate and GnRH analog), in connection with the physical and emotional distress of infertility treatment, might be a triggering factor for some patients, resulting in severe psychiatric episodes, even in individuals with no history of a psychiatric diagnosis. A physician giving IVF treatment to a patient who had psychiatric disorders had to give special attention to her mental condition, and the patient and her partner should be fully informed about the possible mental effects of the treatment, particularly if she had a history of pre-existing psychiatric diagnoses.

2.2. Grief Reaction

Grief was a common reaction in couples after a diagnosis of infertility **(Menning, 1980).** Infertility represents many losses, such as, the loss of fertility and reproductive ability and the loss of a child and biological offspring **(Mahlstedt, 1985).** However, this led to many associated losses, including the lack of a pregnancy experience; loss of a successful pregnancy and birth experience; loss of genetic continuity; loss of one's self-image as a fertile person; thus, grief was a normal reaction to a distressing situation, such as a loss **(Lindemann, 1994)**. However, when the loss was of a potential, not an actual loss, the couple might not realize they were allowed to grieve **(Menning, 1980)**. The duration of normal grief

reactions depended on the grieving process, which was considered important for successful adjustment to the infertility crisis **(Menning, 1980)**.

While not all persons experience infertility as a crisis, research indicated that infertility represented a difficult and painful grieving process for the infertile approximately 30–40% of couples undergoing IVF treatment would remain childless after treatment **(Olivius, Friden, Lundin, &Bergh, 2002; Pinborg, 2009).** Grief was one of the main experiences of being childless in women 2 years after ending unsuccessful IVF **(Johansson &Berg, 2005).**

Infertility was not just a medical condition to be treated with fertility drugs, surgery or assisted reproductive technology, but was often a crisis that profoundly affected nearly all aspects of one's personality and life **(Cullberg,2006).**A crisis evoked emotional reactions that were classified into four main phases: the initial phase (shock, surprise, denial); the reactive phase (frustration, anger, anxiety, guilt, grief, depression, isolation); the adaptive phase (acceptance) and a resolution phase (planning for future solution) **(Cullberg,2006).**

The grieving process might be hampered or prolonged; thus, causing complicated or pathological grief. Symptoms that were not characteristic for normal grief reactions were excessive guilt, suicidal ideation and feelings of worthlessness **(American Psychiatric Association, 2002).** Complicated grief occurs when grief reactions persist more than two

months after a loss and it was a psychiatric illness that required evaluation and treatment, and was consistent with the definition of major depression **(American Psychiatric Association, 2002)**

2.3. Gender Differences in Reactions to Infertility

The desire to have a child is determined by multiple factors, including age, marital status, parity, gender, culture, religious beliefs and the degree of reproductive autonomy and access to contraception in a particular setting **(Hadley&Hanley,2011)**. Stereotypically, women are presumed to desire children; and therefore, to experience grief when the life goal of motherhood is unrealized, but men, having more diverse life opportunities, have been described as being 'disappointed but not devastated' by the inability to have a child **(Greil,1997).**

A survey in England investigated the motivations for parenthood in 874 childless couple's .Unlike women; men did not report a biological drive for fatherhood and were more likely than women to identify continuation of the family name and the pleasure of having a child as reasons to reproduce **(Langdridge &Sheeran, 2005).**

A checklist used to assess the nature and intensity of motives for having a child among 50 couples attending public infertility treatment clinics in South Africa. This study found that the most commonly cited motives in men and women were to enhance happiness, experience parenthood and increase well-being. This study also noted that men and

women desired children with similar intensities **(Dyer et al., 2008).**Another study about attitudes towards parenthood in a sample of Australian men 5 years after receiving infertility diagnoses. Of these participants, 84% desired parenthood as much as their partners did. Fewer than half agreed with the Meaning of Parenthood Scale item that it would be more disappointing for a woman than a man not to have a child, and only 10% agreed that fertility demonstrated through fatherhood reflected masculinity **(Fisher ,Baker,&Hammarberg, 2010).**

Infertility was potentially humiliating and emasculating to men, had a profound adverse impact on masculinity and was more stigmatizing for men than it was for women **(Dudgeon&Ihorn, 2003)**. Men could conflate infertility, virility and sexual potency, which could therefore lead to perceived personal inadequacy. Gannon et al (2004) investigated media reports concerning male infertility and found that the media construct stereotypical masculinity and male infertility was conflated with impotence. Men might also engage in extra-marital affairs and were likely to experience sexual dysfunction manifested as erectile dysfunction, ejaculatory disorders, loss of libido and a decrease in the frequency of intercourse **(Stanton, Hennen, Affleck, &Mendola, 1991).**

Infertility is stressful for women **(Ittner,Himmel,&Kochen, 2000),** and when infertile men's reactions have been compared to women, less distress and negative effects had been reported **(Kowalcek et al ., 2001).** Studies on the stress of infertility had also attempted to differentiate the

grief experience for men and women and had found that women were more likely to blame themselves **(Watkins& Baldo, 2004)** and to describe a greater sense of loss of control **(Gibson, 2002).** On the other hand, men's responses tend to be related to their partner's self-esteem **(McEwan, Costello, &Taylor, 1987).**

2.4. Significance of motherhood in woman's life

There is evidence that men and women experiencing infertility react differently and manage this crisis in different ways **(Newton, 2006).** Many women perceive the inability to conceive to be one of the most upsetting life events **(Freeman et al., 1985)** and tend to show their emotional reactions more visibly than men. This perception may be even stronger in cultures that value motherhood very strongly or where motherhood is the only role option for women. The general natural ability of womanhood and the primitive function of a woman are to bear children. This can be considered a core characteristic upon which a woman's self concept is formed. It can be understood as being her primary role as a female **(Kitzinger & WilImott, 2002).** For the adolescent female, becoming an adult means becoming an adult woman and thus, taking on the expected characteristics of womanhood.

Braverrnan (2006) a female grows up assuming she is fertile; and ironically has been actively using contraception to prevent pregnancy. Since one's general expectation is that one could control having a baby, it makes sense to presume one should be able to control fertility. For the

infertile partner in a couple, feelings of guilt and responsibility can rise. Infertility robs us of our choices and control, leaving an individual vulnerable to depression and feeling hopeless. Infertility alters an individual's perception of his/ herself, of his/her concept of identity. As a result of the strong link between femininity and motherhood, women may experience an identity crisis as there is a conflict between their ideal sense of self as a woman who can become a mother and their real self as being infertile **(Kikendall, 1994).**

Infertility places a heavy burden upon one's self-esteem. Many women report feeling less feminine after a diagnosis of infertility. Infertile women perceive their bodies as defective, also friends or family can reinforce the defective self-image the infertile woman holds **(Braverman, 2006).**

Male infertility tends to be associated with a more significant taboo than female infertility **(Mason, 1993).** Thus, it is not surprising that men indicate high levels of stress when male factor infertility is diagnosed **(Glover et al., 1996).** Furthermore, life without children has different implications for men and women. Men's social life, as a result of having the bread-winner's role in many societies, changes little if they do or do not have children. The role of women is more strongly intertwined with the role of motherhood. Also, women's social life alters as female friends become mothers and change their focus in life. This impacts the quality of their friendship, with many infertile women losing contact or isolating themselves from friends who have become mothers.

2.5. Psychological reactions to infertility diagnoses

Men and women tend to describe emotional reactions according to typical gender roles **(Boden, 2007).** But the Women reportedly experience greater psychosocial distress, more somatic difficulties, lower self-esteem, higher levels of depression, and greater interpersonal sensitivity related to their infertility **(ACOG, 1993)**. Infertile wives are said to experience greater emotional disturbances than their husbands because, during the process of female socialization, pregnancy and childbirth are considered as the most important function of the wife. Females; therefore, take more responsibility for fertility evaluation even when they are sure that their husbands are the cause of their childlessness. Some of the investigations and treatment for artificial reproductive technology are performed on females, so they directly face the success or failure of treatment (**Pottinger et al., 2006).**

Men are said not to react in the same way as women because male socialization discourages them from expressing feelings openly. However, if there was an evidence that the man is the cause of the reproductive impairment, he would be more distressed than his wife **(Mikulincer, 1998)**. While women often show their emotions openly and weep, men distance themselves emotionally. However, men's lack of emotional and verbal expressions is not necessarily an indication that they do not suffer **(Hammer Burns, 2006).**

Infertility can damage Self-image and impaired sense of integrity and health can result from psychological damage caused by this inability to produce off spring an individual's responses to infertility are seen as depending on personality attributes, as well as support systems, adaptability, cultural expectations, knowledge about reproductive processes, and the attitudes of the involved clinicians. **(Kaplan & Sadock, 2000).**

Research suggested that women and men experience different psychological reactions to infertility **(Morrow, Thoreson & Penney, 1995)**. Some authors suggested that the differences in reactions to infertility depend on who carries the primary diagnosis. In a study from Taiwan, Lee et al. (2001) compared infertility distress, marital and sexual satisfaction among husbands and wives related to gender infertility diagnoses. No differences were noted among husbands regardless of male or female diagnosis, but found higher distress among wives with female infertility. Women experiencing infertility have been found to be more depressed, anxious, guilty, and frustrated than men.

Nachtigall , Becker and Wozny (1992) investigated 36 volunteer couples undergoing infertility treatment in America. The authors assessed whether emotional responses varied by sex-specific diagnoses. They found that men with male factor infertility experienced more ‘negative emotional responses’, including a sense of loss, stigma and reduced self-esteem, than men whose partners were infertile or who were in couples in which fertility

difficulties were unexplained. Furthermore, men who are diagnosed as responsible for the couple's infertility report lower overall life satisfaction, heightened distress, and higher treatment-related anxiety after being diagnosed as the party responsible for the couple's infertility.

On another study in Turkey, which assessed 60 couples with primary infertility who had experienced at least 3 years of fertility treatment. The result that women in the infertile couples in both of these studies had higher symptom scores than men, but the differences were not significant. Anxiety related to treatment procedures increased among men, but not women, and was interpreted as desensitization associated with repeated exposure to intrusive treatments in women **(Tu¨zer et al; 2010)**.

Men associate not having a child with not fulfilling their social role of establishing a family and of 'protecting' their wives, also the men reported experiencing high levels of anxiety, feeling "less of a man," and blaming themselves for the infertility. Women, however, seem to view childlessness as a stigmatizing condition and as a threat to their sense of self, their social role and their ability to be successful as a woman (not being a complete woman) **(Watkins, 2004).**

2.6. Marital Effects of Infertility

Problems with infertility can have profoundly negative effects on a couple's relationship and sexual functioning. Partners may also become isolated from each other and believe that the other does not understand.

Each feels inadequate about his or her masculinity or femininity due to problems with conceiving. Each may feel anger and guilt and wonder, “why me?” Both may feel grief over life experiences that they can never have: namely pregnancy, birth, and conceiving and rearing their own biological children. Intercourse itself may evoke these uncomfortable feelings and become an emotionally painful, rather than pleasurable, and the couple experience fraught with anxiety about failing to conceive **(Cooper-Hilbert, 1999)**.

Sexuality and sexual activity are also important means of expressing feelings of closeness and intimacy in partnership. While assisted reproductive technology offers couples an opportunity to achieve a pregnancy when other measures have failed, they sometimes serve a source of stress. During infertility treatments, the pleasurable experience of sexual intimacy may be negatively affected and this may contribute to marital distress **(Monga et al., 2004)**. A long duration of infertility **(Berg and Wilson, 1991)** and repeated experience of treatment failure **(Guerra et al., 1998)** appeared to be important risk factors in predicting distress, which may lead to relationship dissatisfaction.

Depression, anxiety and health complaints are more commonly seen in infertile women than men **(Adashi et al., 2000).** Also women experience marital and sexual relationships are less positively than men after infertility diagnosis and during infertility treatments **(Monga et al., 2004).** While, men have reported lower overall life satisfaction, heightened distress and

higher treatment-related stress after being diagnosed as responsible for the couple's infertility, many studies from within the United States have suggested that infertility is often associated with sexual problems in men. One recent U.S. study demonstrated a high rate of erectile dysfunction, depressive symptoms, and dysfunctional sexual relationships among male partners of infertile couples **(Shindel et al., 2008)**.

Lee. Sun and Chao (2001) explored the effect of a gender-specific infertility diagnosis on the responses of couples in Taiwan. The purpose of this research was to compare the differences in marital and sexual satisfaction, as well as distress, in husbands and wives based on an infertility diagnosis. No differences in marital and sexual satisfaction were found between wives and husbands with unexplained infertility. Only wives with a diagnosed female infertility expressed higher distress to infertility than their husbands.

In a study by Smith et al (2009), for men with male factor infertility or in couples with unexplained infertility, there were lower levels of sexual quality of life, assessed by enjoyment, sense of attractiveness to the intimate partner and intrusiveness of thoughts about fertility problems and wanting a child during intercourse. Also in the study by Tu¨zer et al (2010) in Turkey, fewer men (20%) than women (44%) reported that sexual interest had decreased since infertility diagnosed. Men with male factor infertility feel the need to give their partners compensatory affection.

In Europe, Canada, and the United States, the response of infertile husbands was different from that of their wives in marital adjustment, self-image, and sexual relations **(Lee & Sun, 2000).**And this, supported on another study conducted by the Department of Psychiatry, University of California, tested a theoretical model of adjustment of men and women's approaches to infertility and the effect on marital communications. Results indicated that wives were more involved in trying to have a baby, having children was more important to wives than husbands and experienced a greater loss of self-esteem than did their husbands .Also this study concluded, that positive changes in couple communication about infertility led to a more positive effect of infertility on the marriage **(Pasch, Dunkel-Schetter & Christensen, 2002).**

The effect of infertility on marital relationships can also be modified by personal coping strategies, sharing and communication between spouses and partners' involvement in infertility treatment **(Pasch et al., 2002; Schmidt et al., 2005).**

Schmidt et al (2005) assessed 'marital benefit' or the extent to which childlessness had strengthened the relationship among those who had not experienced a pregnancy. Approximately 50% of the 1081 male respondents agreed that childlessness had marital benefits. Men who used active coping strategies such as expression of feelings, seeking of advice and did not keep their infertility secret described greater marital benefits.

2.7. Anxiety and depression

Infertility is a stressful life event ,the examination of the psychosocial aspects of infertility provided findings indicating that a predictor of a decreased probability in achieving a viable pregnancy could be attributed to psychological factors such as anxiety and depression, as well as feelings of disappointment and frustration, which are undoubtedly experienced if a pregnancy is not easily achieved**(Cwikel, Gidron and Sheiner ,2004)** , Grief reactions are common among infertile females and males, and the mourning process is considered important in order to resolve the infertility crisis . However, in many women and men, these normal grief reactions are sustained and turn into pathological grief with marked vegetative symptoms, anhedonia, suicidal ideation, cognitive impairment, or psychotic features (e.g., paranoid delusions or excessive punitive thoughts), which is largely consistent with the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 4^{th}.edition) definition of major depression **(Williams and Zappert, 2006).**

Previous studies suggested that the prevalence of symptoms of depression and anxiety disorders among women participating in infertility treatments is relatively high. At least, mild depression has been reported in 12–54% of women during infertility treatments **(Matsubayashi et al., 2001; Fassino et al., 2002; Volgsten et al., 2008).** Also, 12–23% of women have been reported to have anxiety disorders **(Volgsten et al., 2008).**

Anxiety disorders (e.g., phobias, obsessive-compulsive disorder) and disorders with concomitant anxiety symptoms (e.g., depression) are prevalent among infertile men and women, which is understandable because anxiety symptoms typically increase during times of stress, leading to exacerbations of pre-existing conditions, triggering of phobic reactions, or an initial full-blown anxiety disorder in response to infertility diagnosis and treatment**(Williams and Zappert, 2006) .** Research has reported that 23% of infertile women met the criteria for generalized anxiety disorder, a higher rate than controls **(Boivin&Takefiman, 1995).** Higher rates of adjustment disorder with anxiety have also been reported. Elevated anxiety levels have also been reported in both infertile men and women, often leading to increased depression following repeated treatment cycles, particularly in women **(Williams and Zappert, 2006)**. The greatest levels of anxiety and distress have been reported to be in the first and last treatment cycles **(Price and Heil, 1988).**

The prevalence of psychiatric disorders, based on DSM-IV criteria, has been found in one study of infertile women before IVF treatment, indicating that the prevalence of major depression and generalized anxiety disorder was 17 % and 23%, in women respectively **(Chen,2004).**

Fassino et al (2002) found a significant difference in Hamilton depression (Ham-D) scores between two groups of women who had been attempting pregnancy for less than 2 years and fertile controls. Both infertility groups reported a significantly higher Ham-D than controls.On another study used

the Mini International Neuropsychiatric Interview, as well as Hospital Anxiety and Depression Scale (HADS) to assess the prevalence of psychiatric disorders in 112 women consecutively presenting treatment. The result 26.8% of the women met criteria for a mood disorder, 17% for major depression and 9.8% for dysthymia Chen et al (2004).

Anxiety symptoms in infertile women were encountered in 26 % of women at evaluation prior to IVF and in 22 % of women six months later using the State-Trait Anxiety Inventory (STAI) **(Anderson, Sharpe, Rattray,&Irvine, 2003).** Increased rates of depressive symptoms in females prior to IVF have also been reported in a recent review **(Williams, Marsh, &Rasgon, 2007),** whereas another review reported no difference in depression levels between infertile females and norm groups prior to IVF **(Verhaak et al., 2006).**

Few studies reported on depressive and anxiety symptoms among males. The prevalence of depressive symptoms in infertile men according to the BDI varied between 3.5 % prior to IVF and 8 % after failed IVF **(Verhaak, Hearn, &Yuzpe, 1990).**

Furthermore, anxiety symptoms in infertile men were encountered in 9 % of men at evaluation prior to IVF and in 11 % of men six months later using the STAI **(Anderson, Sharpe, Rattray,&Irvine, 2003).**

In North America, Peterson et al (2006) used the Fertility Problem Inventory27 to assess ‘infertility stress’ and found that Global Stress scores

in 506 men were lower than those in 520 women prior to initiation of treatment. Men in infertile couples had lower levels than women of 'infertility related concerns' about life satisfaction, sexuality, self-esteem and social participation **(Anderson, Sharpe, Rattray,&Irvine, 2003).**

In Sweden, reactions to infertility were investigated in 91 couples prior to initiation of treatment. Men were less likely than women to think about infertility, found it difficult to separate infertility from the rest of their lives or felt a sense of failure **(Hjelmstedt et al., 1999).**

One previous study of Chinese women undergoing assisted reproductive treatment, (ART) indicated that the prevalence of major depression and of generalized anxiety disorder (GAD) were 17 and 23.2%, respectively **(Chen et al., 2004).**

At initiation of treatment, 113 Australian men had lower mean depression (Centre for Epidemiologic Studies-Depression Scale: 22 6.365.7 versus 9.167.9) and anxiety scores than women **(Beaurepaire et al., 1994)**.

Edelman and Connolly (2000) found a similar pattern in 246 couples in England: the mean Beck Depression Inventory (BDI) scores were lower among men than women as were STAI State Anxiety scores. In the United States, a study of 162 couples, found that fewer men than women reported at least mild depression and anxiety, **(Wichman et al., 2011)**

Fido (2004) confirmed that no study has specifically assessed this relationship of psychological factors and infertility in Arab women.

Researchers postulate that with all important causal "confounders" such as gender, age, education and general health status controlled, any significant difference in psychological profile could be attributed to infertility. The Hospital Anxiety and Depression Scale (HADS) were used to examine the psychological status of Kuwaiti infertile women and an age-matched sample of healthy pregnant women as a control group. The comparison showed that infertile women exhibited significantly higher psychopathology in all HADS parameters in the form of hostility, anxiety, tension, depression, self-blame, and suicidal ideation.

2.8. Stress and infertility

The relationship between stress and infertility remains poorly understood, the question regarding whether stress can cause infertility, as well as whether stress reduction can enhance pregnancy rates in infertile couples, is still very controversial, one factor which leaves little doubt it that infertility causes considerable stress **(Weissman, 2003).**

The relationship between stress and infertility can be viewed as either causative (where stress causes infertility) or reactive (where infertility causes stress). The studies in which researchers have examined the possibility that stress causes infertility have been found to contradict each other. Some studies showed a relationship and others do not **(Braverman, 2006).**

Assisted reproductive technologies like in vitro fertilization and intracytoplasmic sperm injection are complex and stressful. A cycle of in vitro fertilization typically requires nine to 12 days of self injection with potent fertility drugs to stimulate the production of oocytes (eggs), retrieval of oocytes via trans-vaginal ultrasonography, fertilization of oocytes in the laboratory with partner or donor sperm, and transfer of the resulting embryo to the uterus. Couples then wait two to three weeks to find out whether implantation and a pregnancy have occurred. Patients expect assisted reproductive technologies to be stressful**, (Boivin and Takefiman, 1995)** and 30% of couples end treatment prematurely because of its psychological burden (**Olivius, Friden, Borg &Bergh, 2004)**.

Emotional distress would likely exert its effect on the chance of pregnancy, the hormonal communication between the brain, the pituitary, and the ovary are believed to be disrupted when women are experiencing stress. This interferes with both the maturation of an egg and the ovulation process **(Lancastle and Boivin, 2005).** When an individual, specifically a woman, is under stress, she is likely to experience several neurochemical changes. This can alter the ordered release of hormones that regulate the maturation and release of an egg. There is a direct link between the reproductive tract and the brain. The brain is directly connected by nerve fibers to both the fallopian tubes and the uterus. The ovary's ability to produce hormones and healthy eggs is influenced by the autonomic nervous system. When a woman is under stress is that spasms occur in both the fallopian tubes and the uterus, which can interfere with movement and

implantation of a fertilized egg **(Smeenk et al., 2001).** Thus, the stress can affect infertility both by the altered regulation of pituitary hormones and from the abnormal nervous-system influences on the ovaries and fallopian tubes **(Domar, 2004).**

Infertility and undergoing IVF treatment are stressful life events and can lead to stress symptoms, psychosomatic stress reactions and adjustment disorders.

Adjustment disorders are more prevalent among infertile women than controls after evaluation and prior to fertility treatment **(Sbaragli et al., 2008)**. An adjustment disorder is a maladaptive reaction to an identifiable stressful event which is assumed to diminish when the stress ceases. Adjustment disorders are characterized by emotional reactions to stressful events similar to depression, but they spontaneously resolve after adjustment over time without specific treatment **(Baumeister, 2009).** However, symptoms of an adjustment disorder do not correspond to normal grief reactions. Adjustment disorders are limited to a time period of less than six months after a stressful event **(American Psychiatric Association, 2002)**. Stressful life events are reported more frequently in females than in males and are suggested to increase the risk of developing major depression **(Nesse, 2000).**

Stress-management programs have been found to reduce anxiety, depression, fatigue, and anger, all of which are commonly part of the lives of people struggling with infertility. It seems that the chance of becoming

pregnant increases as these negative emotions diminish. The mind body approaches appear to reduce anxiety and increase relaxation, seemingly aiding couples with unexplained infertility. Relaxation and stress responses may help normalize menstrual cycles, improve the health of both egg and sperm, and increase the likelihood of fertilization and implantation. Reduced stress also means an improved quality of relationships and life for the couple **(Domar, 2004).**

Conclusion

This chapter provided a comprehensive overview of the existing literature on all the key constructs that are applicable to the present research (from the researcher knowledge and ability). The large prevalence and significance of infertility as a potential life stressor were emphasized. which was affecting all aspects of their lives: marital, social, physical, emotional, financial, and spiritual. Furthermore, numerous studies reported that infertility leads to emotional distress such as depression, anxiety, guilt, social isolation, and decreased self-esteem in women.

Findings from the previous studies enhance our understanding of how depression among women with infertility is related to infertility stress .

Also ,female take more responsibility for fertility evaluation even when they are sure that their husband are the cause of their childless .some of investigation and treatment for artificial reproductive technology is

performed on female. Infertile women, in comparison with control group, showed higher scores on the depression and anxiety scales

From overview of literature, researchers have developed a greater understanding of the relationship between infertility and psychological distress. Findings from these quantitative studies consistently indicate that infertility is associated with increased psychological distress for women, also majority of studies examining the coping strategies of infertile men and women rely on general measures of psychological distress (e.g., depression, anxiety) and marital adjustment as outcome variables. Very few qualitative studies evaluate the specific issues confronting infertile women, so as to increase our understanding of their specific problems and needs. The role of emotions among infertile patients in general, and among highly distressed infertile patients in particular, must be better understood. On the other hand, there has been little research examining gender-specific aspects of infertility or psychological interventions for infertile patients. The issues of importance to infertile men, for example, were not captured in the present study. Infertile women and men ought to be analyzed separately as there appear to be differences between the issues confronting them as groups.

Chapter Three

Methods

Methods and Procedures

This chapter specifies the steps used to carry out this study. In this chapter, the researcher presented a study design; study population and sampling; eligibility criteria; data collection; data analysis; and ethical consideration of research.

3.1 Study Design

It is descriptive, quantitative, and comparative study designs. Our chosen design is primarily based on a descriptive approach where our primary goal was to identify the impact of infertility on women's mental health and to investigate the most prevalent psychological distress among infertile women. While quantitative research is concerned primarily with the measurement of facts about people and establishing relationships between variables **(Couchman & Dawson, 1995)**. This study method involves the use of a self-administered questionnaire designed to gather specific data via a self-reporting system. SCL.90-R self-reporting check-list is an acceptable tool for data collection of the mental health status of infertile couples.

3.2 The Distribution of the Sample

Data were collected from samples of 88 women attending to infertility clinic at Razan center. In order to improve the validity of our study, the control group comprised 100 women attending to local family planning clinic. Clinics were selected in order to recruit control from the same local districts in which the infertile subject reside.

- 46 of women contacting Razan center in Ramallah and 50 pregnant women contacting family planning center in Ramallah.

- 42 of women contacting Razan center in Nablus and 50 pregnant women contacting family planning center in Nablus.

3.3 Study Population and Sample of the Study

The population of the study composed of basically 88 women diagnosed with infertility attending Razan center, in order to improve the validity of our study, local control group would be added; this group consisted of 100 women who present to family planning clinic, the study was conducted only in Razan center; which had two branch; ones in Nablus, and the second in Ramallah, so that all districts of the West Bank and all residential localities were represented in the sample. There were participants from the north, the south, and the middle regions of the West Bank. 188 women were selected by using non probability, convenience, and disproportional quota technique.

3.3.1 Inclusion Criteria for Study Group

1. The sample consists of women suffering from primary and secondary infertility, at least for one year ;
2. Being at least 18 years of age ;and
3. Not receiving any other psychological treatment for the duration of the study;

3.3.2 Exclusion criteria for Study Group

Women suffering from infertility for less than one year.

3.3.3 Inclusion criteria for Control Group

Women have children without any medical treatment (fertile women).

3.3.4 Exclusion criteria for Control Group

Women suffering from psychological problem.

3.4 The site of Study

Data was obtained from Razan centers in Nablus and Ramallah governorates, provided IVF services for cases who are from suffering from infertility different governorates of West Bank. There are seven of such centers which provided treatment for infertility in the West Bank. They are; Razan, Al Hibah, and Al Amanah centers in Ramallah governorate; Al-Hanan, and Beit Ebrahim centers in Hebron governorate; Razan center in Nablus governorate; and Al -Haia center in Bethlehem governorate.

Razan center was the first center in Palestine in the area of its specialization to (infertility treatment and in vitro fertilization), where established in 1995 in Nablus governorate. Also another branch for Razan center, was established in 2004 in Ramallah governorate.

Razan center was chosen for this study because it is the first center in West Bank for infertility treatment, and had two centers, one in Nablus

governorate that covers the North region of the West Bank as there are no centers for infertility treatment in North, and the second center in Ramallah governorate that deals with cases from Middle and Southern parts of the West Bank. The center administrators have shown their readiness to collaborate with this study.

3.5 Tools of the Study

A self-reporting checklist was used to evaluate the mental health status of the women under study. Self-reporting questionnaires and scales are suitable for evaluating thinking patterns of human being , personal feelings and behaviors, and to differentiate among people with different traits and needs **(Polit & Hungler, 1995; Brehem & Kassin, 1992)**

The Derogatis Symptom Check List 90-Revised (SCL.90-R) which was developed by R. L. Derogatis (1983) through clinical research was used for data collection. This tool that had been used by many physicians and psychologists for the assessment or research purposes, and it can be easily used by paraprofessionals and nurses **(Derogatis, 1983).**

The SCL-90 measures psychological status and assesses for the presence of any psychological and psychiatric symptom among participants. The SCL-90 is a standardized norm-referenced tool that differentiates non-patient respondents from individuals with psychiatric disorders and related signs **(Derogatis, 1983).**

The “SCL-R” testing tool consisted of 90-symptom check-list, close-ended questions that evaluate the mental status and the presence of emotional distress among participant. Answers for each item of the test are coded on a 5-point scale that ranges from 0-4; where zero represents the absence of symptom presence “Not at all” or “no complaint” and four stands for “Extremely” for symptom presence (**Derogatis, 1983, p. 2).** The SCL90-R is scored and interpreted in terms of nine primary symptom dimensions and three global indices of distress **(Derogatis, 1983)**. The following were the symptom dimensions: (SOM, O-C, INS, DEP, ANX, H, PHA, PI, and PSY) and three global categories comprising the GSI(fundamental psychological stress), the PSDI (intensity of response), and the PST (number of stress-inducing symptoms)(appendix-3) . Higher scores on the scales of the SCL-90-R mean a higher degree of pathology.

The Derogatis SCL. 90-R is accompanied by a set of standardized written instructions for interpretation. Demographic data about each participant in the study were presented in the first bag of the symptom checklist (Appendix -1-). The documentation sheet for socio-demographic data includes: demographic and social information, i.e. questions on age, family status, duration of partnership, educational and professional status, residential status and occupational stress. This questionnaire was used for the description of the samples.

3.5.1. Definition of the SCL. 90-R indices

There are three indices of the SCL, 90-R, these indices were used to communicate the level or depth of the individual's psychopathology. The three indices were described as follows according to Derogatis (1983):

1. Global Severity Index (GSI): represented the best single indicator of the current level or depth of the disorder and should be utilized in most instances where a single summary measure is required. It combined information on numbers of symptoms and intensity of perceived distress.

2. Positive Symptom Distress Index (PSDI): was a pure intensity measure that helped in identifying the severity of symptoms.

3. Positive Symptom Total (PST): was simply a count of the number of symptoms the participant reports as positive **(Derogatis, 1983 p.11)**.

3.6. Reliability of the SCL.90- R

Reliability measures on SCL-90 are of two types, internal consistency and test retest. Interrater reliability is not relevant as this is a self-report.

Internal consistency coefficients (Cronbach's α) have been reported for the SCL-90 subscales and global indices across such different populations as control groups **(Derogatis, 1983)**, psychiatric inpatients **(Rauter, Leonard and Swett , 1995),** and substance abuse inpatients **(Zack ,Toneatto and Streiner ,1998)** .The internal consistencies have been good. For example,

coefficient α in a study with 209 symptomatic volunteers ranged from 0.77 to 0.90 (Derogatis et al. 1976).

So that study tool was tested by using Chronbach Alpha test which was (.967), this result is acceptable for the study purposes.

3.7.1. Validity of SCL.90-R

Validity means the extent to which an instrument measures what it intended to measure (Jacobson, 1988). Comparisons were made between the SCL-90 and other scales and tests such as the MMPI, Wiggins, Cluster scale and others. Results reflected a high degree of convergent validity for the SCL.90-R (Derogatis, 1983).

Construct validation of the SCL.90-R was tested by Derogatis (Derogatis, 1983), with very good results. These researchers concluded that the empirical analysis matched the theoretical structure of the SCL.90 quite well on just about all the 9 dimensions (Derogatis ,1983). In addition, criterion validity for the SCL.90-R was high according to tool developers and the external validity of the SCL.90 is good with high generalizability potentials (Derogatis, 1983).

3.7.2. Content validity

The investigator of the current study selected Derogatis SCL-90-R because it was reliable by several Palestinian and Western researchers; translated to Arabic, and had high validity as reported by its developers.

The selection of questionnaire was approved by the Ethics Committee of Medical Faculty of Heidelberg University.

The SCL.90-R was effectively used by Walker et al (1998), to test the mental effects of sexual trauma on children; the SCL-90 was used successfully by Najah Manasra (2003) in her study about the effect of remaining unmarried on self- perception and mental health status. Todd et al (1997) studied this tool to examine if it is effective for evaluating adolescents' and adults' emotional state. Todd and his colleagues declared that, "the SCL–90–R", Derogatis is efficient and widely used for both clinical and research purposes. In addition, the SCL.90-R was effectively used by Moore et al (1987), to evaluate psychosomatic symptoms in parents after the death of a child. Khamis (1998), also used two dimensions (Depression and Anxiety), of the SCL. 90-R in her study of the mental health status the Palestinian women in the Occupied Territories.

3.8. Data Collection

A. Timing of data collection

The data collection started in June 2011, and ended in May 2012. Data collection started in the northen region, Razan center in Nablus followed by the southern region, Razan center in Ramallah.

B. Time needed for filling the questionnaire

Completing the questionnaire required 15-40 minutes with an average of 27 minutes. With regards to the interview, highly educated respondents needed less time to complete the questionnaire than less educated ones.

3.9. Data Analysis:

The Statistical Package for the Social Science (SPSS) was used to analyze data related to SCL.90-R. The means and standard deviations of the SCL.90 were calculated for the three indices and the 9-dimension symptoms, using the Derogatis (1983) manual from Dr. Najah Manasra thesis.

Kruskall-Wallis test was used to determine the differences of mental health status of women, responses in relation to their demographic variables, which included, age, residence, level of education, region of living, employment, living arrangements, and agreement or disagreement to be interviewed. Data was organized into groups and numerical ranks. This test

was used to test differences between two or more groups whereas some of the variables were ordinal.

3.10. Ethical Considerations:

Approval for the study obtained from IRP of An-Najah University and a from Razan centers for infertility in Nablus and Ramallah. Issues of confidentiality and voluntary participation was taken in consideration during sample recruitment. Also women's kindly were asked to sign an informed consent form before proceeding ahead, after they have read a participant sheet.

3.11. Limitation of study

Taking into consideration the sensitively of the subject of the study in the Palestinian society, one can say that data collection generally went well. Completion of the SCL-90-R questionnaire was done with minimal difficulties. In general, the respondents were willing to complete the questionnaire, although some were reluctant to do so even after explaining the purpose of the study and emphasizing the confidentiality of information. It was difficult to tell how many refused to participate in this study, twelve male who filled questionnaire from fifteen male. The men refused to participate in study because of stigma and sensitivity of subject. Another limitation in this study, when approaching the infertility clinic the majority of the client presented is female. So that the male excluded from study because the number not enough so that the study included just female and the title of study was changed from psychological characteristic of

infertile couples attending Razan center to psychological distress among infertile women attending Razan center in Palestine.

Another limitation of this study was that the study population was selected from two infertility centers (Razan centers). Although there were other centers for infertility treatment in the middle and south of the West Bank, but because of time constrains and difficulties in accessibility made it difficult to involve all infertility centers in this study.

Using convenience sampling techniques breached one of the main conditions of the generalizability of research; which is also another limitation.

Chapter Four

Results

4.1 Demographic Data:

4.1.1 The Distribution of the whole sample:

The total numbers of sample 188 women's were studied from the West Bank, detailed psychological questionnaire will be communicated with 100 couples at the time presenting to infertility clinic. The control group consisted of 100 couples presenting to local family planning clinic. But one of study limitation is 12 men accepted to participate through the sample respondents but the researcher excluded them because the number is not enough compared with women. The total number of infertile women is 88 with (46.8%) and 100 fertile women with (53.2%).

Table (4-1) show the distribution of the sample according to the variable of fertility versus infertility.

Table (4-1): The distribution of the study sample according to the variable of fertility vs. infertility.

Fertility	No.	Percentage%
Fertile Women	100	%53.2
Infertile Women	88	46.8%
Total	**188**	**100%**

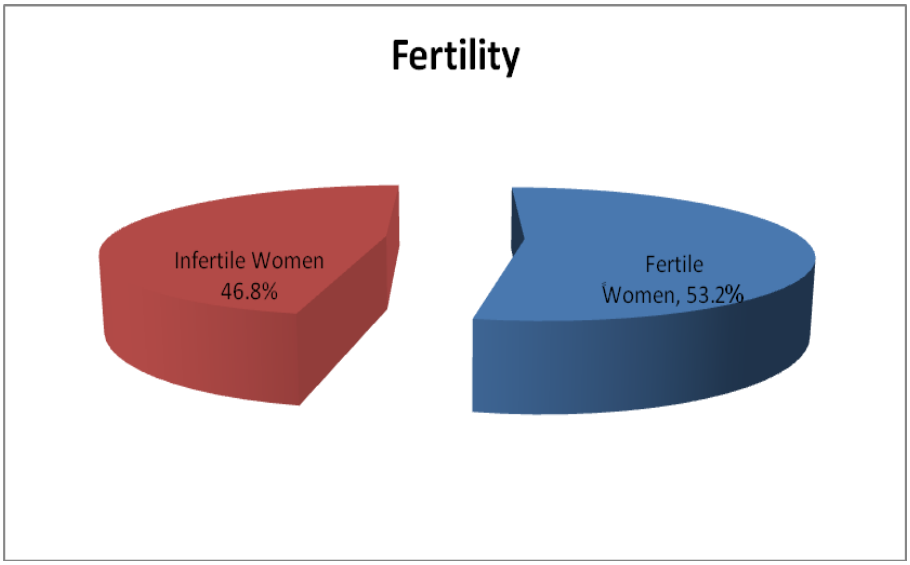

Figure (4-1): Shows the distribution of the study sample according to the percentages of women fertility versus infertility

4.1.2 Age of the respondents:

Only women whose ages were between 18 and 42 years were included in the present study. The age range 18-42 years was selected for number of reasons. The respondents of this study were grouped into four age groups. Twenty seven (37.5%) respondents belonged to age group less than 25 years; 33 (30.7%) in the age group 25-30; 14 (15.9%) respondents belonged to the age group 31-36 and 15 (15.9%) in the age group 37 and more (see table 4-3). Table (4-2) explained the distribution of the respondents who were fertile by age group

Table (4-2): The distribution of the fertile women according to the age.

Age(year)	No.	Percentage %
Less than 25 years	49	49
25-30 year	34	34
31-36	14	14
37 and more	3	3
Total	**100**	**100**

Table (4-3): The distribution of the infertile women according to the number and percentages of age variable.

Age	No.	Percentage %
Less than 25 years	27	37.5%
25-30 year	33	30.7%
31-36	14	15.9%
37 and more	14	15.9%
Total	**88**	**100**

4.1.3 Educational level of participants:

About half (50%) of the infertile women of this study had completed 12 years of education or less than 12 years and 7 (8%)of respondent earned college level . However, 31 (35.2%) respondents earned B.A degree. In addition, 6 (6.8%) participants earned master degree. Table (4-4) showed the distribution of the fertile women by education. And figure (2) shows the distribution of the infertile couples by education.

Table (4-4): The fertile women distribution according to Education Level .

Education	No.	Percentage %
Secondary and less	24	24%
Diploma	16	16%
B.A	54	54%
M.A	6	6%
Total	**100**	**100%**

Table (4-5): The distribution of the infertile women according to the Education.

Education	No.	Percentage %
Secondary and less	44	50%
Diploma	7	8%
B.A	31	35.2%
M.A	6	6.8%
Total	**88**	**100%**

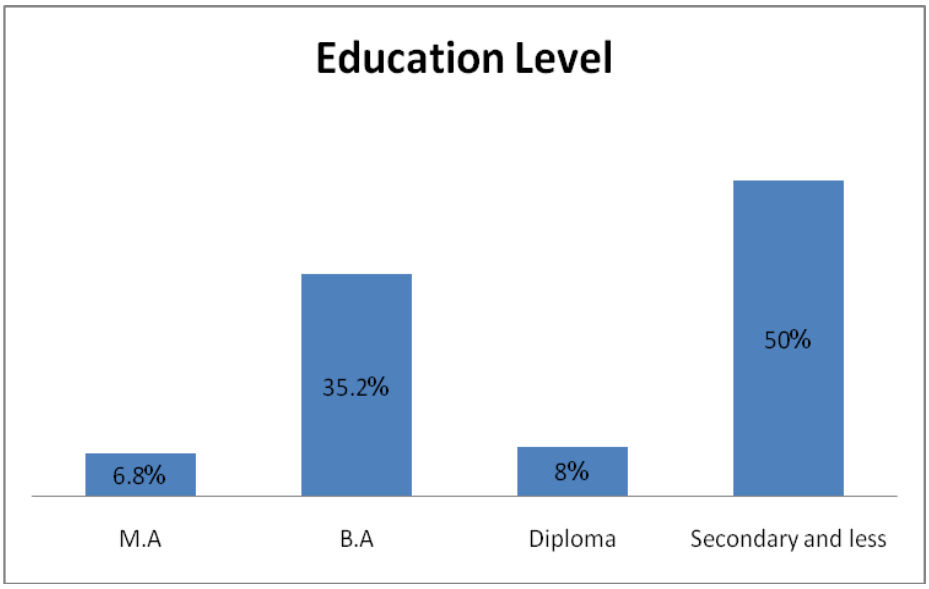

Figure (4-2): Shows the distribution of the percentages of infertile women according to Education Level.

4.1.4 Work and employment:

Employment status in the current study was classified in to two categories, that included of (48%) of fertile women were employed professional and paraprofessional need minimum of college degree, (52%) respondents were housewives or unemployed. While infertile women (27.3%) were employed in professional or paraprofessional jobs that needed a minimum of college degree; and (72.7%) were unemployed or housewives.

Table (4-6): Fertile women distribution according to work status.

Work Status (Fertile)	No.	Percentage %
Employed	48	48%
Unemployed	52	52%
Total	**100**	**100%**

Table (4-7): Infertile women distribution according to work status.

Work Status (Infertile)	No.	Percentage%
Employed	24	27.3%
Unemployed	64	72.7%
Total	**88**	**100%**

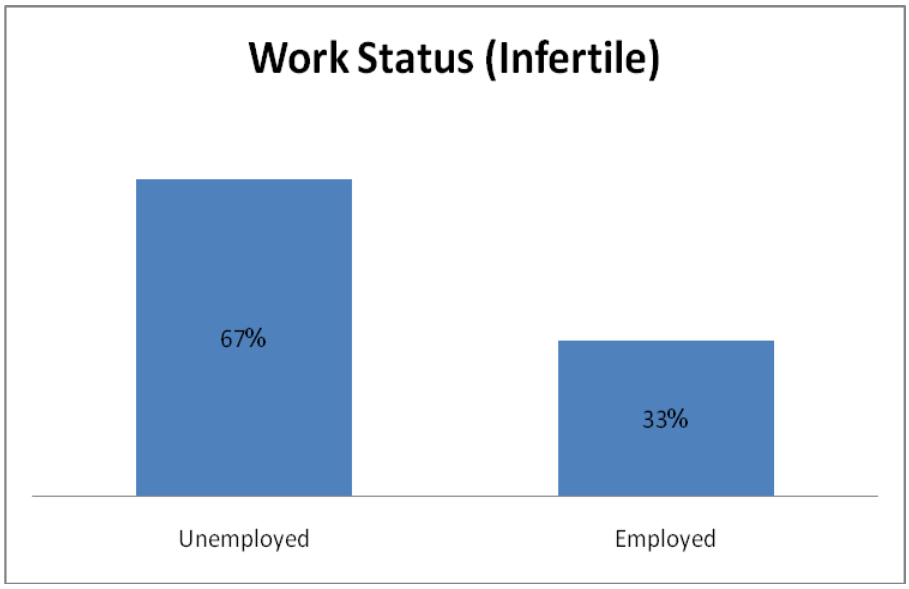

Figure (4-3): Infertile women distribution according to work Status

4.1.5 Place of residence:

Table (4-9) summarized the distribution of the participants by region of living. The respondents lived in the northern region of the West Bank, (26.1%) lived in Nablus, (6.8%) lived in Tulkarem , (10.8%) lived in Jenin and (4.5%) lived in Qalqelia. On the other hand, (25%) lived in Ramallah according to the middle region of residence in the West Bank, (3.4%) lived in Jerusalem, infertile women lived in the southern region distributed as (14.9%) lived in Hebron , (5.7%) lived in Bethlehem and (1.1%) lived in Jericho . Table (4-8) shows the distribution of the fertile women by region of Residence. Because the sample of the present study was not random, the rates of the respondents varied from that of the Palestinian population in the West Bank, which decreases the chance for generalization.

Table (4-8) The distribution of the study sample according to Place of residence (Fertile).

Place of residence	No.	Percentage %
RAMALLAH	43	43%
TULKAREM	5	5%
JENIN	9	9%
SALFEET	11	11%
QALQEELIA	2	2%
JERICHO	1	1%
NABLUS	29	29%
Total	**100**	**100%**

Table (4-9): The distribution of the study sample according to Place of residence (infertile).

Place of residence	No.	Percentage %
RAMALLAH	22	25%
TULKAREM	6	6.8%
JENIN	9	10.2%
SALFEET	2	2.3%
QALQEELIA	4	4.5%
JERICHO	1	1.1%
JERUSALEM	3	3.4%
NABLUS	23	26.1%
BETHLAHEM	5	5.7%
HEBRON	13	14.9%
Total	**88**	**100%**

4.1.6 Distribution of the study Sample according to the duration of infertility:

Table (4-10) showed the highest frequency (49) to be from one to five years duration of infertility which reflected 55.7% of the sample size, then 17of respondent are from 6-8 years duration of infertility which reflected 19.3% of the sample size, (15.9%) of respondents are less than one year duration of infertility and (9.1%) were more than ten years duration of infertility.

Table (4-10): The distribution of infertile women according to duration of infertility.

Duration of infertility	No.	Percentage %
Less than one year	14	15.9%
1-5 years	49	55.7%
6-10 years	17	19.3%
More than 10 years	8	9.1%
Total	**88**	**100%**

4.1.7 Distribution of the study Sample according to the cause of infertility:

Table (4-11) showed that 48.9% of husbands representing the total respondents were the cause of infertility; while 25% of the total respondents were representing the wife cause; 26.1% of respondents representing that the cause is unknown.

Table (4-11): The distribution of infertile women according to the cause of infertility.

Cause of infertility	No.	Percentage%
Male	43	48.9%
Female	22	25.0%
Other	23	26.1%
Total	**88**	**100%**

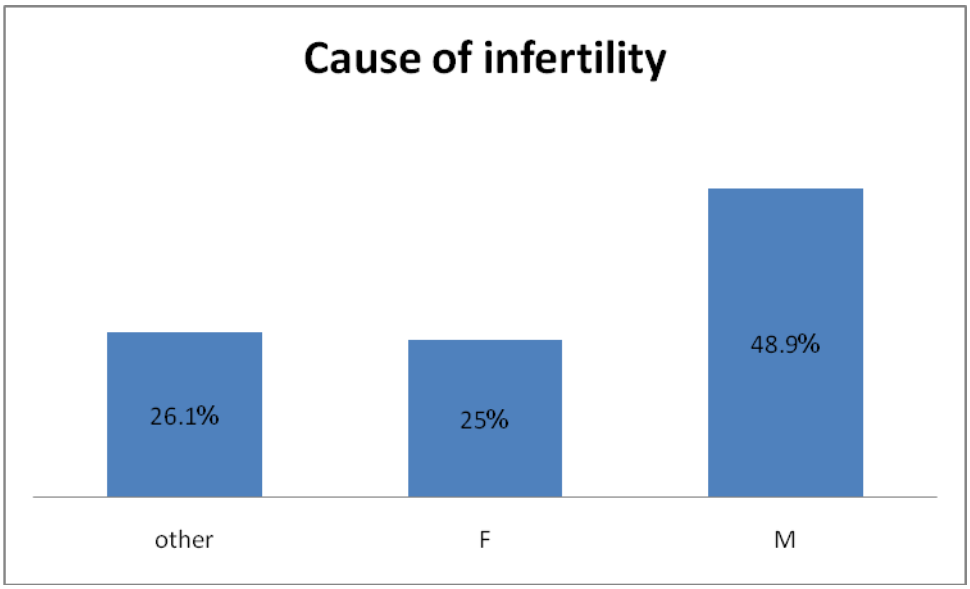

Figure (4-4): the distribution of infertile women according to the Cause of infertility

4.2 Testing validity of study hypothesis:

This part is dedicated to test the validity of the study hypothesis and the effect of factors like ,age, work , employment status, educational level, place of residence, duration of infertility and the cause of infertility .

4.2.1 Research question one:

What is the mental health status of Palestinian infertile women and the psychological characteristics in comparison to fertile women?

This question was answered through the results of SCL-90-R. The following scale represented the level of mean scores of symptoms and was taken as a base for diagnosis:

- 0-0.49 represented symptom not at all present;
- 0.50-1.49 represented mild symptom;

- 1.50-2.49 represented moderate symptom;
- 2.50-3.49 represented severe symptom; and
- 3.50 and above represented very severe symptom

After coding of the data obtained from the 188 respondents, simple calculations of the severity of symptoms of GSI, PSDI, and the 9 symptoms dimensions were made in order to identify the prevalence of psychological state of infertile women and their mental health status in the comparison with fertile women in West Bank of Palestine. Table (4-12) shows the descriptive statistics of the 9 dimensions and the 3 indices of SCL.90 for fertile and infertile respondents.

Table (4-12) shows the descriptive statistics of the 9 dimensions and the 3 indices of SCL.90 for fertile and infertile respondents.

9 Dimensions and 3 indices	Fertile		Infertile	
	Mean	S.D	Mean	S.D
GSI	.92	.45	1.19	.63
PST	45.70	19.67	53.14	21.89
PSDI	1.80	.34	1.96	.45
Somatization	1.16	0.65	1.27	0.71
Obsessive-compulsive	1.07	0.58	1.26	0.69
Interpersonal sensitivity	0.98	0.58	1.31	0.74
Depression	1.00	0.58	1.33	0.78
Anxiety	0.86	0.52	1.24	0.78
Hostility	0.83	0.52	1.14	0.77
Phobic Anxiety	0.74	0.56	0.92	0.71
Paranoid Ideation	0.86	0.65	1.20	0.89
Psychoticism	0.49	0.47	0.84	0.69

According to table (4-12) it is clear that the mean score of all 9 dimensions and GSI indicator for fertile and infertile women represent criteria of mild symptom except Psychoticism for fertile women which represents symptom not at all present. Moreover, the mean score of PSDI indicator represents the criteria of moderate level for fertile and infertile women. On the other hand, it is clear that the mean score of all dimensions and indices for infertile women is higher than fertile.

Table (4-13) shows frequencies and percentages of 9 symptom dimensions and 2 indices as classified to severity of complaint for 88 infertile respondents

Dimensions	Not at all present		Mild symptoms		Moderate symptoms		Severe symptoms		Very severe symptoms		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
GSI	12	13.6	46	52.3	28	31.8	2	2.3	----	----	88	100
PSDI	----	-----	12	13.6	65	73.9	11	12.5	----	----	88	100
Somatization	12	13.6	46	52.3	27	30.7	3	3.4	----	----	88	100
Obsessive-compulsive	13	14.8	39	44.3	33	37.5	2	2.3	1	1.1	88	100
Interpersonal sensitivity	15	17	36	40.9	30	34.1	7	8	----	----	88	100
Depression	13	14.8	41	46.6	25	28.4	9	10.2	----	----	88	100
Anxiety	14	15.9	42	47.7	25	28.4	6	6.8	1	1.1	88	100
Hostility	14	15.9	48	54.5	21	23.9	3	3.4	2	2.3	88	100
Phobic Anxiety	29	33	43	48.9	14	15.9	----	----	2	2.3	88	100
Paranoid Ideation	22	25	29	33	29	33	7	8	1	1.1	88	100
Psychoticism	32	36.4	43	48.9	9	10.2	4	4.5	----	----	88	100

Table(4-14) shows frequencies and percentages of 9 symptom dimensions as classified to severity of complaint for 100 fertile respondents

Dimensions	Not at all present		Mild symptoms		Moderate symptoms		Severe symptoms		Very severe symptoms		Total	
	number	%	number	%	number	%	number	%	number	%	number	%
GSI	22	22	68	68	10	10	---	---	---	---	100	100
PSDI	----	----	17	17	79	79	3	3	---	---	100	100
Somatization	17	17	48	48	33	33	2	2	---	---	100	100
Obsessive-compulsive	15	15	56	56	28	28	1	1	---	---	100	100
Interpersonal sensitivity	23	23	56	56	20	20	1	1	---	---	100	100
Depression	19	19	61	61	19	19	1	1	---	---	100	100
Anxiety	26	26	64	64	9	9	1	1	---	---	100	100
Hostility	20	20	65	65	14	14	1	1	---	---	100	100
Phobic Anxiety	41	41	48	48	11	11	---	---	---	---	100	100
Paranoid Ideation	29	29	50	50	19	19	2	2	---	---	100	100
Psychoticism	57	57	39	39	4	4	---	---	---	---	100	100

The researcher was curious to see if there were significant differences between the respondents who were infertile and those who were fertile. As it is obvious, tables (4-13) and (4-14) show among those who were infertile 31.8% of the respondents reported moderate levels of GSI compared to (10%) fertile and 2.3% infertile respondents reported having severe GSI compared to (0%) fertile. Moreover, 73.9% of infertile respondents reported moderate levels of PSDI compared to (79%) fertile and 12.5% infertile respondents reported having severe PSDI compared to (3%) fertile.

Furthermore, 30.7% of infertile respondents reported moderate levels of Somatization compared to (33%) fertile and 3.4% infertile respondents reported having severe somatization compared to (2%) fertile.

37.5% of infertile respondents reported having moderate levels of obsessive-compulsive compared to (28%) fertile respondents and 3.4% infertile respondents having severe and very severe Obsessive-compulsive compared to (1%) fertile respondents. 34.1% of infertile respondents having moderate levels of interpersonal sensitivity compared to (20%) fertile respondents and 8% infertile respondents having severe interpersonal sensitivity compared to (1%) fertile respondents. 28.4% of infertile respondents having moderate levels of depression compared to (19%) fertile respondents and 10.2% infertile respondents having severe depression compared to (1%) fertile. 28.4% of infertile respondents having moderate levels of anxiety compared to (9%) fertile respondents and 7.9%

infertile respondents reported having severe and very severe anxiety compared to (1%) fertile respondents. 23.9% of infertile respondents reported having moderate levels of hostility compared to (14%) fertile and 5.7% infertile respondents reported having severe and very severe hostility compared to (1%) fertile. 15.9% of infertile respondents reported having moderate levels of phobic anxiety compared to (11%) fertile and 2.3% infertile respondents reported having very severe phobic anxiety compared to (0%) fertile. 33% of infertile respondents reported having moderate levels of paranoid ideation compared to (19%) fertile and 9.1% infertile respondents reported having severe and very severe paranoid ideation compared to (2%) fertile. As for the last dimension symptom 10.2% of infertile respondents reported having moderate levels of Psychoticism compared to (4%) fertile and 4.5% infertile respondents reported having severe Psychoticism compared to (0%) fertile.

The data indicated that infertile respondents who reported moderate levels of distress is higher than those of fertile respondents in the 9 symptom dimensions except Somatization symptom, and PSDI, which means the participants who reported moderate levels of distress in any of the nine symptom dimensions they might need psychiatric treatment or interventions if their emotional status did not improve by itself. However, the percentages of infertile respondents who complained of severe and very severe levels of distress are higher than those of fertile respondents in the 9 symptom dimensions and 2 indices. Also, those who had severe symptomatology might have benefited from professional help.

4.2.2. Results of the study Hypothesis:

In the following section, a comparison among the infertile women respondents of the current study was done based on six independent variables. These variables were: women age, place of residence, qualification, employment status, time of infertile, the reason of infertile, in addition to the comparison between the differences in the mental health state and the psychological characteristics of the Palestinian infertile and fertile women. 9 dependent variables and two indices GIS, PSDI were tested: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, against seven independent variables.

Because the distribution of the nine dimensions of the SCL-90.R and the two indices were not normal, Kruskall-Wallis test was used to evaluate the relationship between the seven independent variables in relation to Mental Health Status and the psychological characteristics of infertile Palestinian women represented the 9-symptom dimensions and 2 indices.

4.4.1The First Hypothesis: There are no significant differences in the mental health status and the psychological characteristics at the level of (α=0.05) of significance amongst those Palestinian women who were infertile and fertile in relation to the 9-symptom dimensions and 2 indices.

In order to examine the significant differences, Kruskall-Wallis test was used to make the comparison between mean ranks to the 9-symptom dimensions and the 2 indices in relation to the Palestinian infertile and fertile women .Table(4-15) showed the results.

Table (4-15)Mean ranks to the 9-symptom dimensions in relation to the Palestinian infertile and fertile women

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	Psychoticism
Fertile	100	83.42	84.71	90.14	86.67	83.37	83.9	81.35	83.51	88.42	81.61	80.87
Infertile	88	107.10	104.45	98.34	101.44	106.22	105.61	108.54	106.99	99.28	109.15	109.99
Test												
Kruskall-wallis		8.867	6.203	3.49	8.32	7.50	11.78	8.81	1.89	12.08	13.50	1.07
df		1	1	1	1	1	1	1	1	1	1	1
Asymp. Sig.		0.003**	0013*.	.062	.004**	.006**	.001**	.003**	.169	.001**	.000**	.301

It is clear that, there was a statistically significant difference among the two groups of participants in relation to GSI (P=0.003), PSDI (P=0.013), at the level of .05 of significance. The participants who were infertile had the highest mean ranks (107.10, 104.45) respectively, also obsessive-compulsive (P=0.004) was statistically significant at the level of .05 of significance. The participants who were infertile had the highest mean ranks (101.44), thus, they scored the highest for obsessive-compulsive. The group of respondents who were infertile had the highest mean ranks for interpersonal sensitivity with (P=0.006 and mean ranks=106.22). According to depression symptom dimension interfile women had the highest mean ranks with (P=0.001 and mean ranks=105.61), also infertile women had the highest mean ranks according to anxiety symptom dimension with (P=0.003 and mean ranks=108.54). Infertile women scored the highest mean ranks in regards to phobic anxiety with (P=0.001 and mean ranks=99.28) which was the lowest in mean ranks. Paranoid ideation had the highest mean ranks of all symptoms dimensions to the advantage of infertile women with (P=0.000 and mean ranks=109.15). Thus, the null hypothesis was rejected; infertile women of the present study had higher psychological complaint in the dimensions mentioned above than fertile women.

However, from the above table that infertile women were not significantly different in their mean ranks than fertile women in regard to somatization

(P=0.062); hostility (P=0.169); psychoticism (P=0.301). Thus, the null hypothesis was accepted for these three dimensions.

4.4.2The Second Hypothesis: There are no significant differences in the mental health state and the psychological characteristics at the level of(α=0.05) of significance amongst those Palestinian women who were infertile in relation to age group.

In order to examine the significant differences, Kruskall-Wallis test was used to make the comparison between Mean ranks to the 9-symptom dimensions and the 2 indices in relation to age group. Table(4-16) showed the results.

Table (4-16) Mean ranks to the 9-symptom dimensions and the 2 indices of infertile women in relation to age group

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	Psychoticism
Less than 25 years	27	43.76	38.21	40.21	39.61	47.31	42.50	41.78	43.54	43.63	47.61	48.04
25-30 years	33	44.44	45.14	46.18	43.47	44.08	43.31	44.70	44.27	44.48	44.02	43.76
31-36 years	14	51.75	52.86	50.86	54.64	45.36	51.09	51.07	49.43	49.11	43.46	43.21
37 and more	14	38.82	46.57	43.43	39.93	36.07	40.54	39.23	41.96	38.43	40.68	40.71
Test												
Kruskall-wallis		1.834	3.194	3.742	1.891	1.765	1.800	0.704	1.279	.0751	0.892	1.863
df		3	3	3	3	3	3	3	3	3	3	3
Asymp. Sig.		0.606	0.363	0.291	0.595	0.623	0.615	0.872	0.734	0.861	0.827	0.601

It is clear from the above table that there was no significant differences in the mental health status and the psychological characteristics at the level of ($\alpha \leq 0.05$) of significance amongst those Palestinian women who were infertile in relation to age group in regard to GSI (P=0.606), PSDI (P=0.363), somatization (P=0.291); obsessive-compulsive (P=0.595) ; interpersonal sensitivity (P=0.623); depression (P=0.615); anxiety (P=0.872); hostility (P=0.734); phobic anxiety (P=0.861); paranoid ideation (P=0.872); psychoticism (P=0.601). Thus we accepted the null hypothesis because there is no significant difference in mental health at the level ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to age group.

4.2.3The Third Hypothesis: There are no significant differences in the mental health status and the psychological characteristics at the level of ($\alpha \leq 0.05$) of significance amongst those Palestinian women who were infertile in relation to place of residence.

In order to examine the significant differences Kruskall-Wallis test was used to make the comparison between mean ranks to the 9-symptom dimensions and the 2 indices in relation to place of residence. Table (4-17) shows the results.

Table (4-17)Mean ranks to the 9-symptom dimensions and the 2 indices of infertile women in relation to place of residence

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	Psychoticism
RAMALLAH	22	47.52	49.36	47.75	46.05	43.16	47.02	48.95	43.00	43.86	47.64	47.80
TULKAREM	6	38.00	36.33	31.08	40.25	41.70	39.58	32.00	41.33	37.83	38.75	40.58
JENIN	9	33.11	36.61	36.94	36.44	30.94	33.00	34.83	39.33	45.00	33.44	33.33
SALFEET	2	60.00	27.25	70.75	63.00	65.00	61.75	64.25	53.75	71.00	52.00	56.50
QALQEELIA	4	38.13	38.25	34.25	38.88	40.63	38.88	36.00	45.38	40.00	48.38	44.50
JERICHO	1	67.00	84.00	71.50	44.50	26.50	85.50	46.50	74.50	77.00	68.50	73.50
JERUSALEM	3	50.83	45.33	41.67	52.67	56.67	44.33	50.83	56.33	44.17	46.67	46.00
NABLUS	23	45.46	45.46	46.91	43.10	46.02	46.55	44.83	44.78	41.02	41.93	42.57
BETHLAHEM	5	57.90	47.40	43.50	53.40	60.00	55.20	51.80	52.10	49.50	62.90	60.10
HEBRON	13	39.81	44.04	44.23	38.65	41.85	35.50	41.00	41.92	43.81	42.27	41.46
Test												
Kruskall-wallis		6.278	5.916	6.935	4.107	7.428	8.753	5.966	3.425	5.039	6.439	6.171
df		9	9	9	9	9	9	9	9	9	9	9
Asymp. Sig.		0.712	0.748	0.644	0.904	0.593	0.640	0.734	0.945	0.831	0.695	0.723

It is clear from the above table that ,there were no significant differences in the mental health status and the psychological characteristics at the level of ($\alpha \leq 0.05$) of significance amongst those Palestinian women who were infertile in relation to place of residence in regard to GSI (P=0.712), PSDI (P=0.748), somatization (P=0.644); obsessive-compulsive (P=0.904) ; interpersonal sensitivity (P=0.593); depression (P=0.460); anxiety (P=0.743); hostility (P=0.945); phobic anxiety (P=0.831); paranoid ideation (P=0.695); psychoticism (P=0.723).Thus, we accepted the null hypothesis because there were no significant difference in mental health at the level ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to place of residence.

4.4.4 The Fourth Hypothesis: There are no significant differences in the mental health status and the psychological characteristics at the level of ($\alpha \leq 0.05$) of significance amongst the studied Palestinian women who are infertile in relation to education.

In order to examine the significant differences, Kruskall-Wallis test was used to make the comparison between mean ranks to the 9-symptom dimensions and the 2 indices in relation to education. Table (4-18) shows the results.

Table(4-18)Mean ranks to the 9-symptom dimensions the 2 indices of infertile women in relation to scientific qualification

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	psychoticism
Secondary and less	44	40.65	46.91	38.51	35.72	41.64	40.37	40.08	39.90	38.80	43.83	43.47
Diploma	7	44.50	45.29	53.36	45.57	40.93	43.57	47.43	41.93	58.29	46.29	46.43
B.A	31	44.85	38.26	45.65	48.00	44.03	45.06	43.58	47.50	42.82	40.48	41.21
More than B.A	6	70.92	58.17	72.17	74.33	64.33	65.00	70.83	65.75	70.67	68.08	66.83
Test												
Kruskall-wallis		7.424	3.967	10.379	14.395	4.380	5.101	7.993	6.116	10.880	5.967	5.232
df		3	3	3	3	3	3	3	3	3	3	3
Asymp. Sig.		0.060	0.265	0.016*	0.002 **	0.223	0.165	0.046*	0.106	0.012.*	0.113	0.156

It is clear that, there were a statistically significant differences among four groups of participants in relation to Somatization (P=0.016) at the level of .05 of significance. Infertile women who gained more than B.A scientific qualification had mean ranks with (72.17). Obsessive-compulsive has statistically difference with (P=0.002) at the level of .05 of significance. Infertile women with more than B.A scientific qualification had mean ranks with (74.33), thus they scored the highest for obsessive-compulsive which was the highest mean ranks of significance according to the four symptom dimensions. The group of respondents of infertile women who got more than B.A scientific qualification had the mean ranks for anxiety with (P=0.046 and mean ranks=70.83).According to phobic anxiety symptom dimension of interfile women with more than B.A scientific qualification had the mean ranks with (P=0.012 and mean ranks=70.67) , which was the lowest mean ranks of significance according to the four symptoms dimensions. Therefore, the null hypothesis was rejected for groups of education for these dimensions. Educated infertile women who got more than B.A scientific qualification of the present study had highest psychological complaint in the dimensions mentioned above than those who had low level of education.

However, the above table showed there is no significant differences in the mental health status and the psychological characteristics at the level of (α=0 .05) of significance amongst those Palestinian women who were infertile in relation to scientific qualification in regard to GSI (P=0.060),

PSDI (P=0.265), Interpersonal sensitivity (P=0.223); depression (P=0.165); hostility (P=0.106); paranoid ideation (P=0.113); Psychoticism (P=0.156). Thus we accepted the null hypothesis because there is no significant difference in mental health status at the level ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to scientific qualification in regard to GSI (P=0.060), PSDI (P=0.265), Interpersonal Sensitivity (P=0.223); depression (P=0.165); hostility (P=0.106); paranoid ideation (P=0.113); Psychoticism (P=0.156).

4.4.5 The Fifth Hypothesis: There are no significant differences in the mental health status and the psychological characteristics at the level of (α=0.05) of significance amongst those Palestinian women who were infertile in relation to work status.

In order to examine the significant differences, Kruskall-Wallis test was used to make the comparison between mean ranks to the 9-symptom dimensions and the 2 indices in relation to work status. Table (4-19) shows the results.

Table (4-19) Mean ranks to the 9-symptom dimensions of infertile women in relation to work status

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	Psychoticism
Employed	24	46.94	37.27	50.33	53.85	43.17	44.77	48.72	48.04	47.42	42.63	43.50
Unemployed	64	43.59	47.21	42.31	39.49	44.32	43.71	42.30	43.17	42.70	45.20	44.88
Test												
Kruskall-wallis		300.	2.643	1.724	5.744	.036	.031	1.094	.638	.610	.178	.051
df		1	1	1	1	1	1	1	1	1	1	1
Asymp. Sig.		0.584	0.104	0.189	0.017*	0.849	0.860	0.296	0.424	0.435	0.673	0.822

**Statistically Significant at level $\alpha \leq 0.05$

There was a statistically significant differences among Infertile women of participants in relation to obsessive-compulsive symptom dimension (P=.017) at the level of (α= 0.05) of significance. Employed infertile women had the highest mean ranks with (53.85). Therefore, the null hypothesis was rejected for employed women for obsessive compulsive.

The above table showed that there were no significant differences in the mental health status and the psychological characteristics at the level of 0.05 of significance amongst those Palestinian women who were infertile in relation to work status (employed, unemployed) in regard to GSI (P=0.584), PSDI (P=0.104), somatization (P=0.189); interpersonal sensitivity (P=0.849); depression (P=0.860); anxiety (P=0.296); hostility (P=0.424); phobic anxiety (P=0.435); paranoid ideation (P=0.673); psychoticism (P=0.822). Thus we accepted the null hypothesis because there is no significant difference in mental health at the level (α≤ 0.05) amongst those Palestinian women who were infertile in relation to work status for these dimensions.

4.4.6 The Sixth Hypothesis: There are no significant differences in the mental health status and the psychological characteristics at the level of (α=0.05)of significance amongst those Palestinian women who are infertile in relation to duration of infertility.

In order to examine the significant differences, Kruskall-Wallis test was used to make the comparison between mean ranks to the 9-symptom

dimensions and the 2 indices in relation to treatment period of infertility. Table (4-20) shows the results.

Table (4-20) Mean ranks to the 9-symptom dimensions and the 2 indices of infertile women in relation to duration of infertility.

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	psychoticism
Less than 1 year	14	43.39	34.21	43.96	40.46	45.32	41.25	42.86	37	46.21	40.68	43.04
1-5 years	49	44.47	44.45	45.88	45.73	41.81	42.60	43.46	46.77	45.45	46.39	46.34
6-10years	17	47.53	51.29	43.91	43.35	50.76	49.71	48.41	43.56	45.09	47.82	46.88
More than 10 years	8	40.19	48.38	38.25	34.64	40.44	45.06	39.88	45.75	29.13	32.56	30.75
Test												
Kruskall-wallis		0.493	3.657	0.638	1.476	1.782	1.196	0.785	1.644	3.090	2.625	2.775
df		3	3	3	3	3	3	3	3	3	3	3
Asymp. Sig.		0.920	0.301	0.888	0.688	0.619	0.754	0.853	0.649	0.378	0.453	0.824

**Statistically Significant at level $\alpha \leq 0.05$

It is clear from the above table that there were no significant differences in the mental health state and the psychological characteristics at the level of .05 of significance amongst those Palestinian women who were infertile in relation to treatment period of infertility in regard to GSI (P=0.920), PSDI (P=0.301), somatization (P=0.888); obsessive-compulsive (P=0.688) ; interpersonal sensitivity (P=0.619); depression (P=0.754); anxiety (P=0.853); hostility (P=0.649); phobic anxiety (P=0.378); paranoid ideation (P=0.453); psychoticism (P=0.428).thus the null hypothesis was accepted .

4.4.7 The Seventh Hypothesis: There are no significant differences in the mental health status and the psychological characteristics at the level of(α= 0.05) of significance amongst those Palestinian women who are infertile in relation to the causes of infertility.

In order to examine the significant differences, Kruskall-Wallis test was used to make the comparison between mean ranks to the 9-symptom dimensions and the 2 indices in relation to the cause of infertility. Table(4-21) shows the results.

Table(4-21) Mean ranks to the 9-symptom dimensions and the 2 indices of infertile women in relation to the cause of infertility.

Dimensions	N	GSI	PSDI	Somatization	Obsessive-compulsive	Interpersonal sensitivity	Depression	Anxiety	Hostility	Phobic anxiety	Paranoid ideation	psychoticism
Male cause	43	45.23	45.33	44.12	43.03	43.98	43.09	46.02	44.19	44.81	48.23	46.65
Female cause	22	45.25	44.27	47.82	45.55	44.89	46.90	43.18	41.18	44.30	38.70	41.68
Other	23	42.41	43.17	42.04	42.45	43.16	43.04	41.09	48.26	42.24	43.07	43.17
Test												
Kruskall-wallis		0.208	0.109	0.595	0.195	0.052	0.367	0.600	0.882	0.159	2.131	0.637
Df		2	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.		0.901	0.947	0.734	0.907	0.975	0.832	0.741	0.644	0.924	0.345	0.727

**Statistically Significant at level $\alpha \leq 0.05$

It is clear from the above table that there was no significant differences in the mental health status and the psychological characteristics at the level of 0.05 of significance amongst those Palestinian women who were infertile in relation to the cause of infertility in regard to GSI (P=0.901), PSDI (P=0.947), somatization (P=0.743); obsessive-compulsive (P=0.907) ; interpersonal sensitivity (P=0.975); depression (P=0.832); anxiety (P=0.741); hostility (P=0.644); phobic anxiety (P=0.924); paranoid ideation (P=0.345); psychoticism (P=0.727). Thus the null hypothesis was accepted.

4.5 Summery of hypothesis results:

First hypothesis: there were a statistically significant differences among the two groups of participants in relation to GSI (P=0.003), PSDI (P=0.013), obsessive-compulsive (P=0.004); interpersonal sensitivity (P=0.006), depression symptom (P=0.001), anxiety symptom with (P=0.003), and phobic anxiety with (P=0.001). On the other hand, infertile women were not significantly different in their mean ranks than fertile women in regard to somatization (P=0.062); hostility (P=0.169); psychoticism (P=0.301). Thus, the null hypothesis was accepted for these three dimensions. Thus, the null hypothesis was rejected; infertile couples of the present study had higher psychological complaint in the dimensions mentioned above than fertile couples.

Second hypothesis: there was no significant difference in mental health at the level of ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to age group. We accept the null hypothesis.

Third hypothesis: There was no significant difference in mental health at the level of ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to place of residence. We accept the null hypothesis.

Fourth Hypothesis: There was a statistically significant differences among four groups of participants in relation to Somatization (P=0.016), obsessive-compulsive (P=0.002), anxiety (P=0.046), phobic anxiety symptom (P=0.012) at the level of 0.05 of significance. Therefore, the null hypothesis was rejected for groups of education for these dimensions.

While, there was no significant difference in mental health at the level of ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to scientific qualification in regard to GSI (P=0.060), PSDI (P=0.265), interpersonal sensitivity (P=0.223); depression (P=0.165); hostility (P=0.106); paranoid ideation (P=0.113); psychoticism (P=0.156). Thus we accept the null hypothesis.

The Fifth Hypothesis: there was a statistically significant differences among Infertile women of participants in relation to obsessive-compulsive symptom dimension (P=0.017) at the level of ($\alpha = 0.05$) of significance. Therefore, the null hypothesis was rejected for employed women for obsessive compulsive, While, there was no significant differences in the

mental health state and the psychological characteristics at the level of 0.05 of significance amongst those Palestinian women who were infertile in relation to work status (employed, unemployed) in regard to GSI (P=0.584), PSDI (P=0.104), somatization (P=0.189); interpersonal sensitivity (P=0.849); depression (P=0.860); anxiety (P=0.296); hostility (P=0.424); phobic anxiety (P=0.435); paranoid ideation (P=0.673); psychoticism (P=0.822). Thus, we accepted the null hypothesis for these dimension.

Sixth Hypothesis There was no significant differences in the mental health state and the psychological characteristics at the level of (α=0.05) of significance amongst those Palestinian women who were infertile in relation to treatment period of infertility. The null hypothesis is accepted.

Seventh Hypothesis: There were no significant differences in the mental health state and the psychological characteristics at the level of (α= 0.05) of significance amongst those Palestinian women who were infertile in relation to the cause of infertility. Thus the null hypothesis was accepted

Chapter Five

Discussion of study result

5.1 Discussion of demographic data:

In this study, the total number of infertile women is 88(46.8%) and 100 pregnant women (53.2%). The highest percentage between The respondents were lived in the northern region of the West Bank; were lived in Nablus (26%), while the respondent were lived in the middle region, the highest percentage between respondent were lived in Ramallah(25%) . so these percentages would be acceptable, because the population density in Nablus and Ramallah are more than other region

37.5% of the infertile women respondents were found in the age category less than 25 years; 30.7% had ages of 25-30 years; 15.9% belonged do the age group 31-36 years and 15.9% in the age group 37 and more years. The group age of less than twenty five display highest percentage, this may due to early marriage when the couples get married at young age and failed to conceive they seek treatment early even before a year. According to Palestinian central Bureau of Statistics (2011) the median age of females at first marriage was 18.0 years in 1997, whereas the median age at first marriage in the West Bank was 19.9 for females in 2009. Society and family often pressure women to be married and after they are married to bear children. Not only are couples expected to have children, but also they are expected to have children “on time,” usually about 1 to 2 years after marriage. So that in our culture the women seek treatment early even before years, on the other hand most of our sample

highly educated ;31 (35.2%) infertile women respondents finished B.A degree . So , they start seeking help early.

Many studies show that woman's age correlates well with fecundity. Even when ovulation occurs regularly, treatment success declines sharply after age thirty-seven .This reflected that the older the woman, the less chance to bear children **(Sadock and sadock, 2004).**

Literature offers scientific research in terms of biological limitations in terms of ability to bear children, as age increases. Results appeared to show that after the age of thirty a woman's sense of purpose is likely to be re-evaluated and her strivings redirected towards motherhood. The sense of urgency is an added component when an individual considers the biological shortcoming of older age, thus inviting another possible detrimental factor to the cause of infertility, identified as distress.

Education for Palestinian women has improved in the last ten years **(Daraghmeh, 1991; Heiberg & Qvensen, 1994).** Women represent 42.5% of the university graduates and 51% of community college graduates **(Palestinian Central Bureau of Statistics, 1998 p. 68)** and this agree with the result of this study, thirty five point two percent of the infertile women earned university degrees; eight percent of participant earned college degrees and 50% completed secondary education . This finding strongly supports current view in our society that highly educated women sometime tend to postpone having children and thus they discover their possible infertility later. and this agree with result of other study which

found that infertility was more common among highly educated women **(Rostad ,Schei and Sundly, 2006)** while another study has been reported from the United States **(Jain and Hornstein ,2005)** where infertility is significantly more common among women with little education. Infertility may be more common among women with lower levels of education; there are a number of plausible explanations for this, including high-risk sexual behavior due to a lack of empowerment and the inability to negotiate safe sex or a lack of understanding of possible reproductive health implications.

The demographic data of the participants indicated high levels of education, on the other hand the results show that high percentage of infertile unemployed 64(72.7%) were unemployed or housewives. The ability to achieve high-quality education and the desired career is naturally a great and desirable goal for most people. So, that may be in the present study educated women unemployed, unemployed women stay home most of the time; have no purposes or goals in life; and feel useless and powerless. It is important to be employed and financially independent, but this is even better if the individual is working at a respected job that provides higher wages and social status, especially for women who work to support themselves.

Furthermore, absence from work may rise psychological consequence of anxiety and depression by more tending to problem **(Csemiczky,Landgren and Collins , 2000)**. Additionally in our country, the infertile women with economic hardship have future fear that there is not a child to take care of.

While employed women who did not have children believed that having a child would diminish their work prospects. The prevalence of this view increased as educational level increased. And this agrees with the study of **(Miettinen & Rotkirch 2008)** which found 30% of females aged 25-34 having a permanent employment contract also thought that uncertainty in their career was their reason to postpone having children.

The highest frequency (49%) to be from one to five years duration of infertility which reflected 55.7% of the sample, this finding come close to the findings in each of; Bangladesh 4.7 years **(Akhter et al ., 2011)**, Mongolia 4.9 years **(Bayasgalan et al ., 2004)** and in Sudan the infertility duration was 5.2 years **(Elussein et al .,2008).**

Study showed those who had 2–3 years infertility had more depression, anxiety than those who had this problem for a year or more than 6 years. Peak of depression could be seen during third year of infertility. Because after six years there will be a reduction in psychological symptoms in women **(Domar et al., 1992).**

We found that male factor alone accounted for 43 of infertility among couples (48.9%); Female factor was identified in only 25% of couples, while the rate of unexplained infertility was 26%. The most common cause diagnosis in the most of the studies was male factor, but in this study it is the highest compared with other studies **(Ahmad et al., 2010).** The reason for the high percentage of male factor among Palestinian couples is that Palestine lies under the Israeli occupation and accordingly, our population

lived under continuous stress and exposure permanently to toxins (tear gas) and to radiations emitted from Israeli checkpoints.

There were a few studies regarding with the effect of a gender-specific infertility diagnosis on the couples. Infertile women showed higher rates of psychiatric symptoms than their partners, especially in female and unexplained factors **(Wright et al ., 1991).**while the more psychiatric distress among men with male factor infertility compared to men in couples receiving other diagnoses were reported in developed western countries **(Ramezanzadeh et al .,2004).**

5.2. Research question:

What is the mental health status of Palestinian infertile women and the psychological characteristics in comparison with fertile women?

The result of this study indicated that infertile respondents who reported moderate levels of distress is higher than those of fertile respondents in the 9 symptom dimensions except somatisation symptom, and PSDI. However, the percentages of infertile respondents who complained of severe and very severe levels of distress are higher than those of fertile respondents in the 9 symptom dimensions and 2 indices.

The result showed among those who were infertile 31.8% of the respondents reported moderate levels of GSI compared to (10%) fertile and 2.3% infertile respondents reported having severe GSI compared to (0%) fertile. Moreover, 73.9% of infertile respondents reported moderate

levels of PSDI compared to (79%) fertile and 12.5% infertile respondents reported having severe PSDI compared to (3%) fertile.

This study was in agreement with our study, for example ,a study done in Iran which found that 44% of infertile and 28.7% of fertile women had a psychiatric disorder **(Noorbala et al .,2009).** While in Tehran, psychological disorders were found in around 27.9% of subjects **(Noorbala, Mohammad and Bagneri ,1999).**

In addition **(Lu , Yang and Lu,1995)** reported that 83.8% of disorders were mild, and 52% were of moderate to severe intensity in infertile women significantly more often than in fertile women. In another study show prevalence of psychiatric problems among infertile couples had been estimated to be 25–60 % **(Guerra et al ., 1998).**

Distress, anxiety and depression were general consequences of infertility. Many studies indicated that incidence of major depression is higher at infertile couples than fertile couples and the range was 15-54% **(Domar et al., 1992).** A similar pattern was observed regarding anxiety and it was reported that significant anxiety levels were seen at 8-28% of infertile couples **(Chen et al .,2004).** Such finding are consistent with our study which showed the incidence of depression is higher in infertile women than it is in fertile women, 28.4% of infertile respondents having moderate levels of depression and 10.2% infertile respondents having severe depression. 28.4% of infertile respondents having moderate levels of anxiety and 7.9% infertile respondents reported having severe and very

severe anxiety. Reviewed previous thirty published reports related to psychological disorders and infertility. Significantly higher psychological distress of patients who referred to an infertility clinic than the control group **(Chen et al., 2004)**.

The fact that psychological disorders were more common in infertile women than in fertile women in Palestine indicates the importance of conception in our country.

The participants who reported moderate levels of distress in any of the nine symptom dimensions they might need psychiatric treatment or interventions if their emotional state did not improve by itself. Also those who had severe symptomatology might have benefited from professional help.

4.3.Discussion of the study hypotheses

The First Hypothesis: the result showed that infertile women were not significantly different in their mean ranks than fertile women in regard to somatization (P=.062); hostility (P=.169);psychoticism (P=.301). Thus, the null hypothesis was accepted for these three dimensions.

While , there was a statistically significant differences among the two groups of participants in relation to GSI (P=.003), PSDI (P=.013), obsessive compulsive (P=.004),interpersonal sensitivity with (P=.006) ,depression(P=001),anxiety (P=.003), phobic anxiety with (P=.001) and paranoid ideation(P=,000).

The results of this study also showed that infertile women obtained higher scores for paranoid ideation scale, phobic anxiety, depression, GSI and anxiety, while the lower score for obsessive compulsive and interpersonal sensitivity and PSDI. Thus, the findings in our study are in line with other studies which found significant difference in mental health between infertile women and fertile women . For example a study performed by **(Bagheri ,Bolhri and Shahmohammadi ,1994),** found that somatization, depression, and anxiety had the highest, and panic phobia and psychoticism had the lowest scores in the subjects studied. While in another study Dyer et al(2005) stated that there was a statistical difference in the seven subscales of the SCL-90-R questionnaire between fertile and infertile women, with the highest mean values among the studied groups being for depression and somatization.

On the other hand**(Berg and Wilson ,1991)** reported an increasing in the mean scores for interpersonal sensitivity, depression and psychoticism among infertile women. While **Wischmann et al. (2007)** reported the highest scores for somatization, anxiety, depression and paranoid ideation, and the lowest scores for obsession–compulsion. Also this clear in the results of **Zarghami et al. (2002)** which found paranoid thoughts, interpersonal sensitivity and somatization the highest frequency, while phobia and psychosis the least.

However, this does not resemble the result of other study is which indicate no significant difference between the nine scales of the SCL-90-R

questionnaire among fertile and infertile women **(Seible and Taymor ,1982)**.

The Second Hypothesis: there was no significant difference in mental health at the level ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to age group. Our study in agreement with the study of **Beutel et al. (1999)** who found in their study no a significant relationship between the age of subject and their psychological problems.

This did not resemble what **Fekkes et al (2003)** found in their study a significant relationship between age of subjects and their psychological problems compared to normal population, so that the younger subjects had higher anxiety compared to older subjects. Also **Matsubayashi et al (2001), Beutel et al (1999)** and **Rashidi et al (2008)** found the same results, which showed younger patients significantly have worse health condition. However **Guz et al (2003)** and **Khayata et al (2003)** argued that psycho-cognitive sign of anxiety and depression have a significant relationship with old age.

While **Beutel & Newton (1999),** also found a significant relationship between age and infertility stress, also another study show women aged between 26-30 years are at higher risk of developing psychological disorders **(Noorbala etal ,2007)** . It can be concluded that higher stress in young couple can be related to their worries about the future of their marital life, relatives pressure on them to have children, lack of knowledge about confrontation styles, adjustment for stress control and lack of

treatment experience. While in older couples with longer infertility period, probably the infertility Social support and stress in treatment of infertile couple's problem has faded out or they have treatment experiences and confront the related stress more effectively.

The Third Hypothesis: There was no significant difference in mental health amongst those Palestinian women who were infertile in relation to place of residence. Because most of our Palestinian population live under the same living conditions, the land is small enough to approximate the total population as the same and also the highly development of technology and internet place the different persons within the same culture. No studies were found to confirm this study.

The Fourth Hypothesis: there was no significant difference in mental health at the level ($\alpha \leq 0.05$) amongst those Palestinian women who were infertile in relation to scientific qualification in regard to GSI (P=0.060), PSDI (P=0.265), interpersonal sensitivity (P=0.223); depression (P=0.165); hostility (P=0.106); paranoid ideation (P=0.113); psychoticism (P=0.156). Thus we accepted the null hypothesis. The women with high level education may manage their problems easily.

Our study finding was in line with the result of a study by Boivin et al (2006) on social status and 3 variables of education, career and professional trainings showed that there was no significant relation between social status and stress during treatment. Results of different studies about relationship of age and education with anxiety and/or depression were not similar. Age

and education level have no significant relationship with depression and/or anxiety **(Beutel,1999)**. Another study showed that there was positive correlation between them **(Domar et al .,1992).**

However, there was a statistically significant differences among four groups of participants in relation to somatization(P=0,016), obsessive compulsive(P=0,002) ,anxiety(P=0,046) and phobic anxiety(P=0.012). Educated infertile women who got more than B.A scientific qualification of the present study had highest psychological complaint in the dimensions mentioned above than those who had low level of education. However, other researchers have reported the same results. Al-Sa'adawi (1983) found a high level of depressive symptoms and anxiety among young, better educated, married Egyptian women. Educated and employed women have ambivalent and contradictory attitudes towards work. On one hand, work ensures independence and financial security; while on the other hand, it exhausts them and exposes the women to unfavorable social scrutiny.

The result of this study disagree with the result of a study done in Poland found that infertile women and men with lower level of education are higher levels of anxiety and depression disorder **(Drosdzol and Skozypulec 2009).**

The result of this study show 6 (6.8%) participants finished master degree, on the other hand the result show that high percentage of infertile unemployed 64(72.7%) were unemployed or housewives. So that may be in the present study high educated women unemployed . There are many

possible explanations for the observed finding, may have occurred because unemployed women stay home most of the time; have no purposes or goals in life; and feel useless and powerless. It is important to be employed and financially independent, but this is even better if the individual is working at a respected job that provides higher wages and social status, especially for women who work to support themselves

Fifth Hypothesis: There was no significant differences in the mental health state and the psychological characteristics at the level of (α=0 .05) of significance amongst those Palestinian women who were infertile in relation to work status (employed, unemployed) in regard to GSI (P=0.584), PSDI (P=0.104), somatization (P=0.189); interpersonal sensitivity (P=0.849); depression (P=0.860); anxiety (P=0.296); hostility (P=0.424); phobic anxiety (P=0.435); paranoid ideation (P=0.673); psychoticism (P=0.822). Thus we accepted the null hypothesis for these dimension.

Thus, the findings in our study are in line with those of others. The result of a study by **Boivin et al (2006)** on social status and 3 variables of education, career and professional trainings showed that there was no significant relation between social status and stress during treatment . Also, **Alborzi (2001)** did not find any significant relation between careers and mean score of infertility related stress among women under treatment.

This study differ in their results from other studies like **(Boivin ,2003; Coleman,2006;Noorbala, Mohammad and Bagheri ,1999)**, which found

psychiatric disorders being more common in housewives than in working women . And even the study done by **Ramezanzadeh et al (2004),** which found that anxiety and/or depression were observed more in housewives than outside employees.

However the results of this study also showed that employed infertile women had the highest mean ranks for obsessive compulsive disorder. Therefore, the null hypothesis was rejected for employed women for obsessive compulsive.

This result is in agreement with other study, which found that the rate of psychiatric disorders was higher among working women **(Noorbala,Mohammad and Bagheri , 1999)**. This relation can be related to the interference of treatment stages with social and career situations, or women's idea of the necessity of post operation rest, taking off days from work and their worries about the news going to colleagues.

The Sixth Hypothesis: our study showed there was no significant differences in the mental health status and the psychological characteristics at the level of (α=0.05) of significance amongst those Palestinian women who were infertile in relation to treatment period of infertility. Our results are consistent with **Rashidi et al (2008)** which found quality of life, physical or mental; have no relation with either infertility duration or cause of infertility . Also **(hunt and Monach, 1997)** showed that there is no relation between duration of infertility and depression or psychological factors.

While this results did not correlate with result from our study, in study by **Alvani & Niknam (2000)** a correlation was found between infertility duration and mental health rate and social aspects. In a study by **Khademi et al (2005)** there was a positive relationship between infertility duration and depression scores.While another study demonstrated that women who had experienced infertility for a long or medium range of time presented a significantly lower state of anxiety **(Ardenti,1999)** and there was a trend of decreasing psychological stress with lengthening of infertility time. Based on depression scales, infertile patients who had infertility for an intermediate to a long time showed less symptoms than those who are in their first stage of their problem **(Kee, Jung and Lee ,2000).**

psychological distress in infertile women increase with time **(Berg,1991)** and depression peaks between the second and third year of infertility and does not return to normal range until after 6 years of infertility, they would gradually adjust with infertility using moderate mechanisms such as adoption; or they may continue their lives without any child and consequently, their stress and depression severity would decrease but would never disappear **(Domar,1992).**

The Seventh Hypothesis: There was no significant differences in the mental health state and the psychological characteristics at the level of(α=0 .05) of significance amongst those Palestinian women who were infertile in relation to the cause of infertility. This result was in accordance with the

study of **Kazandi etal (2011)** who didn't find significant relationship between the psychiatric distress and gender-specific infertility reason.

This study differed in their results from other studies like **(Wright et al,1991; Sabourin et al,1991; Tarlatzis et al,1993; Franco et al,2003)** which found that infertile women showed higher rates of psychiatric symptoms than their partners, especially in female and unexplained factors. Women are necessarily more deeply involved in treatment Procedures and it is normal for them to be more affected. One of the characteristics of infertile couples is that women are habitually more affected by the situation of infertility than men **(Franco et al,2003)**. While the risk of depressive symptomatology is lower when a woman thinks that the problem is a male factor. This type of cultural view has been observed in countries with family-based societies.

The more psychiatric distress among men with male factor infertility compared to men in couples receiving other diagnoses were reported in developed western countries **(Newton, Sherrard and Glavac ,1999).** However, a study in Taiwan comparing the differences in responses from husbands and wives based on an infertility diagnosis, reported that husbands, regardless of the diagnosis, showed no difference in psychological responses **(Lee, Sun and Chao ,2001).** We didn't find significant relationship between the psychiatric distress and gender-specific infertility reason.

Chapter six

Conclusions and Recommendations

This chapter includes the main conclusions and recommendations that obtained from our study results.

6.1 Conclusions

In conclusion, data from the present study showed that there was significant difference between infertile and fertile women in relation to GSI, PSDI, obsessive compulsive, interpersonal sensitivity, depression, anxiety, phobic anxiety with and paranoid ideation.

The results of this study also showed that infertile women obtained higher scores for paranoid ideation scale, phobic anxiety, depression, GSI and anxiety, while the lower score for obsessive compulsive and interpersonal sensitivity and PSDI. So that the results of this study showed that infertile women were at higher risk of developing psychiatric disorders.

The results of the study demonstrated , that the duration of infertility , causes of infertility ,age and place of residence did not show any significant effect on mental health of infertile women . Other independent variables were found to be significant under some circumstances, such as scientific qualifications and employment ,There was a statistically significant differences among four groups of educated participants in relation to Somatization , obsessive-compulsive , anxiety , phobic anxiety symptom at the level of 0.05 of significance. Also the result of study demonstrate that there was a statistically significant differences among employed infertile

women of participants in relation to obsessive-compulsive symptom dimension at the level of (α= 0.05) of significance.

6.2 Recommendations

Based on the findings of this study, we propose the following:

1. Gynecologists should be more aware of the prevalence of psychiatric and personality disorders among infertile women and their need for referral to psychologists or psychiatrists.

2. Counseling methods, especially supportive psychotherapy, should be considered for infertile women in order to improve their mental health and increase their chance of conceiving.

3. Physicians who were able to identify couples who may be at risk for problems with their marital adjustment could then make appropriate referrals to mental or social workers.

4. Treatment of infertile women in all infertility treatment centers should be through the combined and close work of both gynecologists and psychologists, and psychiatric counseling centers should be set up in these centers.

5. Awareness programs could be developed to educate medical professionals about the importance of their role in the experience of infertility for the couple.

6. psychological support should be available to infertile patients at every stage of medical treatment and actively offered to those patients experiencing high levels of distress.

7. Mental health nurses should be equipped with the knowledge and skills that were necessary to help people adjust to daily life problems and difficulties. The mental health nurse is in a position to use her expertise as a counselor, and a change agent with infertile women who have developed emotional problems.

8. Inclusion of the mental health in the reproductive Clinics and concurrent therapy may increase the chance of getting pregnant.

9. Increase the awareness of the general population about the benefits of the social support and how to deal with such people to prevent further complication for their situation.

10. Develop a support groups for the infertile couples and group therapy to minimize their suffer and promote their health condition.

Future researches are suggested:

1-Studying the prevalence of infertility among couples in Palestine .

2-Studying the Issues Confronting Infertile Women in Palestine by using

Qualitative and Quantitative design

3- Studying the effects of larger systems (family, society) on the couple experiencing infertility may be another beneficial area for future research

4. Looking at the impact of extended family and other larger social support networks, organizational influences such as religion, and school, and the larger communities attitudes towards infertility may lead to important knowledge about how these larger systems, and the couple's relationship to these larger systems, effect marital adjustment for couples.

5. Other studies looking at the effect of therapeutic interventions on couples who exhibited the risk factors identified in this study and received treatment would provide a wealth of information about the most beneficial interventions for these couples.

6. Another interesting avenue for future research might be to examine physicians, nurses and other medical personnel who have contact with couples presenting for infertility treatment in regard to their attitudes and behaviors toward these couples.

7. Studying the impact and influence of medical professionals on the couple experiencing infertility could be very informative. Physicians specializing in infertility treatment are especially important individuals in the couples lives as they face infertility. These physicians may often be the primary confidants of the couples with regard to their physical and emotional state

8. A study examining the awareness level and attributions of infertility specialists regarding the emotional factors and risks to marital adjustment for these couples may lead to important new information about ways that these medical professionals can better interact with couples seeking infertility treatment.

9. Study examining male infertility and stigma in Palestine.

10-studying the psychological distress among male attending infertility clinic in Palestine

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Appendix (1)

Questionnaire

Demographic data:

- **Age:**
- **Place of residence :**
- **Duration of marriage:**
- **Educational level:**

1-Secondary school and below

2- college/diploma

3-university

4-Post-graduate or graduate studies.

- **Occupation(job):**
- **Infertility duration:**
- **Causes of infertility:**

1-male factor

2-female factor

3-both

- **Kind of treatment:**

1-hormonal

2-lapracopy

3-IVF

4-IUI

The Derogatis's L. SCL.90-R test:

No	SCL-90-R Symptoms	Not at all	A little bit	moderately	Quite a bit	Extremely
1	Headaches					
2	Nervousness or shakiness inside					
3	Repeated unpleasant thoughts that won't leave your mind					
4	Faintness or dizziness					
5	Loss of interest in sexual subjects or issues					
6	Feeling critical of others					
7	The idea that someone else can control your thoughts					
8	Feeling others are to blame for most of your troubles					
9	Trouble remembering things					
10	Worried about sloppiness or carelessness					
11	Feeling easily annoyed or irritated					
12	Pains in heart or chest					
13	Feeling afraid in open spaces or on the street					
14	Feeling low in energy or slowed down					
15	Thoughts of ending your life					
16	Hearing voices that other people don't hear					
17	Trembling					
18	Feeling that most people cannot be trusted					
19	Poor appetite					
20	Crying easily					
21	Feeling shy or uneasy with the opposite sex					
22	Feeling of being trapped or caught					
23	Suddenly scared for no reason					
24	Temper outbursts you cannot control					
25	Feeling afraid to go out					

	of your house alone					
26	Blaming yourself for things					
27	Pains in lower back					
28	Feeling blocked in getting things done					
29	Feeling lonely					
30	Feeling blue					
31	Worry too much about things					
32	Feel no interest in things					
33	Feeling fearful					
34	Your feeling being easily hurt					
35	Others people being aware of your private thoughts					
36	Feelings that others don't understand you or they are unsympathetic					
37	Feeling that people are unfriendly or dislike you					
38	Have to do things very slowly to insure correctness					
39	Heart pounding or racing					
40	Nausea or upset stomach					
41	Feeling inferior to others					
42	Soreness of your muscles					
43	Feeling that you are watched or talked about					
44	Trouble falling asleep					
45	Having to check and to double check what you do					
46	Difficulty making decisions					
47	Feeling afraid to travel on buses, subway, or trains					
48	Trouble getting your breath					
49	Hot or cold spells					
50	Having to avoid certain					

	things, places, or activities because they frighten you					
51	Your mind going blank					
52	Numbness or tingling in parts of body					
53	Lump in your throat					
54	Feeling hopeless about future					
55	Trouble concentrating					
56	Weakness in parts of your body					
57	Feeling tense and keyed up					
58	Heavy feelings in your arms or legs					
59	Thoughts of death or dying					
60	Overeating					
61	Feeling uneasy when people are watching or talking about you					
62	Having thoughts that are 62not your own					
63	Having urges to beat, injure, or harm someone					
64	Awakening in early morning					
65	Having to repeat actions e.g. touching, counting, washing					
66	Sleep restless or disturbed					
67	Having urges to break or smash things					
68	Having ideas and beliefs that others don't share					
69	Feeling very self – conscious with others					
70	Feeling uneasy in crowds, such as shopping, at a movie. etc					
71	Feeling everything is an effort					
72	Spells of terror or panic					
73	Feeling uncomfortable about eating or drinking in public					
74	Getting into frequent					

	arguments					
75	Feeling nervous when you are left alone					
76	Others not giving you proper credit for your achievements					
77	Feeling lonely even when you are with people					
78	Feeling so restless you couldn't sit still					
79	Feelings of worthlessness					
80	The feeling that something bad is going to happen					
81	Shouting or throwing things					
82	Feeling afraid you will faint in public					
83	Feeling that people will take advantage of you if you let them					
84	Having thoughts about sex that bother you a lot					
85	Idea you should be punished for your sins					
86	Thoughts and images of a frightening nature					
87	The idea that something serious or wrong with your body					
88	Never feeling close to other person					
89	Feeling of guilt					
90	The idea that something is wrong with you mind.					

للتقييم العلمي فأننا نطلب منك \ ي استكمال البيانات التالية:-

<u>معلومات شخصية:-</u>

- العمر : ----------
- مكان السكن \ المنطقة : -
- مدة العلاقة الزوجية او الشراكة الزوجية :.....
- التحصيل العلمي

ثانوية دبلوم بكالوريوس اعلى

- المهنة والوظيفة الحالية : ----------
- منذ متى تتعالج بسبب العقم الخاص بك ؟

.....

- برأيك كيف وصل الامر الى المشكلة الحالية ؟

اسباب عند الذكر اسباب عند الانثى اسباب اخرى

- ما هي

طبيعة العلاج الحالي ؟

هرمونات عملية جراحية(تنظير للبطن) زراعة حقن

Appendix (2)

الرقم	ما مقدار معاناتك من الاعراض التالية	مطلقا	نادرا	احيانا	كثيرا	دائما
1	الصداع					
2	سرعة الانفعال او الاضطراب الداخلي					
3	وجود افكار او خواطر او الفاظ غير مرغوب فيها لا تفارق بالك					
4	الشعور بالإعياء او الاغماء او الدوخة					
5	الشعور بان رغبتك وحياتك الجنسية غير طبيعية					
6	الشعور بالحساسية تجاه الاخرين (سرعة التأثر بملاحظاتهم)					
7	الاعتقاد بان شخصا ما يستطيع السيطرة على افكارك					
8	القاء اللوم على الاخرين في معظم متاعبك					
9	الصعوبة في تذكر الاشياء (نسيان كثير)					
10	الانشغال الزائد فيما يتعلق بالقذارة والإهمال(الاهتمام بالنظافة)					
11	الشعور بسرعة المضايقة و الاستثارة(سهولة الاستفزاز)					
12	الاحساس بالآم في القلب او الصدر					
13	الشعور بالخوف في الاماكن المفتوحة او الشوارع					
14	الشعور بالخمول او قلة النشاط					
15	التفكير في انهاء حياتك					
16	سماع اصوات لا يسمعها الاخرون					
17	رعشة بالجسم					
18	الشعور بعدم الثقة في معظم الناس					
19	ضعف الشهية للطعام					
20	البكاء بسهولة					
21	الشعور بالخجل او الاضطراب مع الجنس الاخر					
22	الشعور بأنك محبوس او مقيد الحركة					
23	رعب مفاجئ بلا سبب					
24	انفعالات مزاجية حادة لا يمكنك السيطرة عليها					
25	الشعور بالخوف من ان تخرج من المنزل بمفردك					
26	لوم نفسك على الاحداث التي تمر بك					

27	الاحساس بالآم اسفل الظهر					
28	عدم القدرة على اتمام اعمالك					
29	الاحساس بالوحدة					
30	الاحساس بالانقباض					
31	القلق على الاشياء بصورة مبالغ فيها					
32	الشعور بعدم الاهتمام بما حولك					
33	الشعور بالخوف					
34	الاحساس بان مشاعرك يمكن ان تجرح بسهولة					
35	الاعتقاد بان الاخرين يطلعون على افكارك الخاصة					
36	الشعور بان الاخرين لا يفهمونك او لا يتعاطفون معك					
37	الشعور بعدم صداقة الناس لك او انهم لا يحبونك					
38	الاضطرار الى اداء اعمالك ببطء شديد حتى تتأكد من دقتها					
39	الاحساس بضربات القلب وزيادة سرعتها					
40	الاحساس بالغثيان او اضطراب المعدة					
41	الاحساس بأنك اقل من الاخرين (الشعور بالنقص)					
42	الشعور بالآم في العضلات					
43	الشعور بان الاخرين يراقبونك او يتحدثون اليك					
44	صعوبة الاستغراق في النوم					
45	الاضطرار الى ضرورة اعادة التاكد من افعالك(تعيد وتزيد)					
46	صعوبة اتخاذ القرارات					
47	الشعور بالخوف عند السفر بالسيارات او الباصات					
48	صعوبة التقاط الانفاس(ضيق تنفس)					
49	الاحساس بنوبات من السخونة او البرودة في جسمك					
50	الاضطرار الى تجنب اشياء او افعال او اماكن معينة لانها تسبب لك الاحساس بالخوف					
51	الاحساس بان ذهنك خالي من الافكار					
52	خدران في اجزاء من جسمك					
53	الاحساس بان شيء يقف في معدتك					
54	الاحساس بالياس من المستقبل (متشائم)					
55	صعوبة في التركيز					
56	الشعور بالضعف في اجزاء من جسمك					

57	الشعور بالتوتر او انك مشدود داخليا					
58	الشعور بثقل في ذراعيك او رجليك					
59	التفكير بالموت (اكثر من المعتاد)					
60	الافراط في تناول الطعام					
61	الشعور بالاضطرابات والضيق عندما يتحدث الناس عنك او يراقبونك					
62	الشعور بان افكارك ليست من صنعك (شخص وضعها براسك)					
63	الشعور بدافع ملح لان تضرب او تجرح او تؤذي شخص معين					
64	الاستيقاظ من النوم مبكرا ولا تستطيع العودة الى النوم بعدها					
65	الاضطرار الى تكرار نفس الافعال كاللمس والعد والغسيل					
66	نوم مضطرب او غير مريح					
67	الشعور بدافع ملح لتكسير او تخريب الاشياء					
68	وجود افكار او معتقدات لديك لا يشاركك فيها الاخرون					
69	الاحساس بالخجل والهيبة في وجود الاخرين					
70	الشعور بضيق في الاماكن المزدحمة كالاسواق او القاعات					
71	الشعور بان كل شيئ عناء في عناء (الدنيا تعب في تعب)					
72	نوبات من الفزع او الذعر بدون سبب معقول					
73	الاحساس بالضيق عند تناول طعام او شراب في مكان عام					
74	الدخول في كثير من الجدل والمناقشات					
75	الشعور بالتوتر عندما تكون بمفردك					
76	الشعور بان الاخرين لا يعطونك ما تستحق من ثناء وتقدير على اعمالك وانجازاتك					
77	الشعور بالوحدة حتى في وجود الاخرين					
78	الشعور بعدم الاستقرار لدرجة لا تمكنك من الجلوس هادئا في مكان					
79	الشعور بانك عديم الاهمية					
80	الشعور بان الاشياء المالوفة تبدو غريبة او غير حقيقية					

	بالنسبة لي(كانها مش هي اللي بتعرفها)					
81	الشعور بالعصبية والتوتر لدرجة انني ابدا بالصراخ وقذف الاشياء التي تقع في يدي					
82	الشعور بالخوف من الاغماء في الاماكن العامة					
83	الاحساس بان الناس سوف ياخذون فرصتك لو مكنتهم من ذلك (يتربصون بك)					
84	اشعر بالتعب وعدم الراحة كلما فكرت في الجنس					
85	افكار تسيطر عليك بانك لا بد من وان تعاقب عليها					
86	اشعر بوجود قوة داخلية تدفعني للقيام باعمال معينة					
87	الاعتقاد بان هناك شيئا خطير قد حل بجسمك(افاعي او ارواح)					
88	عدم الشعور بانك قريب من اي انسان اخر (منعزل في عالم خاص بك)					
89	الشعور بالذنب					
90	الاعتقاد بان هناك تغيرا غريبا قد طرا على افكارك(الهام او قدرات خارقة)					

Appendix (3)

SCL.90- R. Checklist Guide for Analysis

There are nine symptom dimensions for the SCL.90- R (see appendix F); they are:

I. Somatization (SOM): It is composed of 12 items or symptoms, and includes questions 1, 4, 12, 27, 40, 42, 48, 49, 52, 53, 56, and 58.

II. Obsessive - Compulsive (OC): It is consisted of 10 symptoms that include questions 3, 9, 10, 28, 38, 45, 46, 51, 55, and 65.

III. Interpersonal Sensitivity (IS): It is composed of 9 items that include questions 6, 21, 34, 36, 37, 41, 61, 69, and 73.

IV. Depression (DP): It consists of 13 items that include questions 5, 14, 20, 22, 26, 29, 30, 31, 32, 37, 54, 71, and 79.

V. Anxiety (AN): It is composed of 10 items that include questions 2, 17, 23, 33, 39, 57, 72, 78, 80, and 86.

VI. Hostility (H): It is consisted of 6 items that include questions 11, 42, 63, 67, 74, and 81.

VII. Phobic Anxiety (PA): It is consisted of 7 items that includes questions 13, 25, 47, 50, 70, 75, and 82.

VIII. Paranoid ideation (PI): It is consisted of 6 items that include questions 8, 18, 43, 68, 76, and 83.

IX. Psychoticism (PS): It is composed of 10 items that include questions 7, 15, 35, 62, 77, 84, 85, 87, 88, and 90. 490

Additional items:

These are questions 19, 60, 44, 64, 59, 66, and 89. These items are not listed under any particular symptom dimension, but they are important clinically, and are calculated into the global scores of the “90” (Derogatis's, 1983).

The three indices of distress of the SCL. 90 – R:

The SCL.90 – R checklist scale is analysed according to three indices which reflect aspects of psychological disorder (Derogatis's, 1983):

1. Global Severity Index (GSI): is the total of the summed distress scores for all the 9 dimensions divided by 90.

2. Positive Symptom Total (PST): is the number of all non – zero responses made by the respondent.

3. Positive Symptom Distress Index (PSDI): the results of dividing the grand total by the PST.

Appendix (4)

Consent Form

The undersigned, ... (name), born on... ... ...

confirm to have read / been explained requests to participate in research project on “Psychological Distress Among Infertile Women Attending Razan Centre In West Bank: Quantitative Study.

I have been given a copy of your request / project orientation and am willing to participate in the project. I have received both verbal and written information about the study, and I’m aware that my participation is voluntary. I am informed that at any time, without having to explain I might withdraw from the study if I wish. If needed, I can be contacted for a new interview or clarification of ambiguous relationships.

... ...

(Date) (Signature of informant)

The undersigned confirms that she provided information about the project and has handed over the above a copy of the request / project orientation and consent to participation.

... ...

(Date) (Signature of project leader)

Appendix (5)

نموذج موافقة على المشاركة في الدراسة :

الاسم:.....

لقد تلقيت المعلومات المكتوبة والكلامية حول الدراسه التي ستكون حول الضغوطات بين النساء الواتي يعنين من العقم في مركز رزان في الضفة الغربية, وقد تم أخباري انه بإمكاني الانسحاب من الدراسة في أي وقت دون إعطاء أي أسباب .

التوقيع:

التاريخ :

جامعة النجاح الوطنية

كلية الدراسات العليا

الكرب النفسي بين النساء اللواتي يعانين من العقم في مركز رزان في الضفة الغربيه

اعداد

ليالي سعيد قطوسه

اشراف

الدكتور بلال رحال

قدمت هذه الأطروحة استكمالاً لمتطلبات درجة الماجستير لتخصص تمريض الصحة النفسية المجتمعية بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس – فلسطين .

2013

الكرب النفسي بين النساء اللواتي يعانين من العقم في مركز رزان في الضفة الغربيه

اعداد

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الملخص

هدف الدراسة :هذه الدارسه تركز على العقم وتأثير على نفسيه المرأة والهدف الرئيس من الدارسه لقياس الضغوطات النفسيه عند النساء اللواتي يعانين من العقم في الضفة الغربيه في فلسطين

طريقه البحث:دراسة وصفيه تحليليه استخدمت لمعرفه تأثير العقم على الحاله النفسيه للمرأة وكذلك لمعرفه اكثر المشاكل النفسيه شيوعا بين النساء,حيث قمنا باستخدام استبيان قائمه مراجعه الاعراض حيث انه مقياس موثوق به لقياس الحاله النفسيه بين النساء اللواتي يعنين من العقم ,حيث قمنا بتوزيع هذا الاستبيان على 88 من النساء المشخصات بالعقم ولعزيز صحة ومصداقية الدراسة قمنا بمقارنه هذه المجموعه مع 100 امراء حوامل وبدون مشاكل اعمارهن مابين 18–42 سنه وحيث تم اختيار العينه a convenience sampling technique

تحليل البيانات : تم جمع وترميز وتحليل البيانات باستخدام الحزمة الإحصائية للعلوم الاجتماعية (SPSS) كما تم استخدام الحساب المعدل،الانحراف المعياري النسبة الميئينية, Kruskall-Wallis test

النتيجه : نتائج التحليل اوضحت ان هناك فرق في الحاله النفسيه بين النساء المصابات بالعقم بالمقارنه مع النساء الحوامل، حيث ان هناك فروقات ذات دلاله احصائيه بين المجموعتين من ناحيه الوسواس القهري، الحساسيه التفاعليه، البارنوريا التحليليه، القلق، الاكتئاب، قلق الخوف,GSI,PSDI

حيث ان نتيجة هذه الدراسه اوضحت ان ليست هناك تأثير للعمر، مده العقم ، سبب العقم،وكذلك مكان السكن على الحاله النفسيه ولكن هناك فورقات ذات دلاله إحصائية تحت ظروف معينه للعمل وكذلك للتحصيل العلمي.

التوصيات :هذه الدراسة تعتبر الاولى من نوعها في فلسطين والتي تدرس الحاله النفسيه للنساء العقيمات وكذلك تعتبر الاولى من نوعها في الوطن العربي بناء عن نتائج البحث للدراسات السابقه والتي درست الضغوطات النفسيه التي تعاني منها النساء المصابات بالعقم باستخدام استبان قائمه الاعراض ,حيث انه استبيان عالمي موثوق به.

حيث اثبتت نتيجة هذه الدراسة عند مقارنه عينه الدراسة مع مجموعه المقارنه من النساء الحوامل,حيث ان النساء اللواتي يعنين من العقم يعنين من الضغط النفسي ومجموعه من المشاعر السلبيه مع ذلك لم تتم مراجعه طبيب نفسي او استشاري نفسي ولذلك يجب الاهتمام بالحالة النفسيه والعاطفية للنساء اللواتي يعنين من العقم، لذلك يجب اعطاء اهميه اكثر الجانب النفسي للعقم وخاصة في جميع مراحل العلاج والتدخلات الطبية لتقليل المعاناة النفسيه للأزواج وكذلك منع تطور الامراض النفسيه.