Republic of Iraq
Ministry of Higher Education
and Scientific Research
University of Babylon
College of Nursing

Psychological Aspects of Miscarriage Women by Viral Infection

A thesis Submitted

By

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To

The Council College of Nursing, University of Babylon in Partial Fulfillment of the Requirements for the Degree of Master in Nursing Sciences

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May, 2022 A.D *Shawwal,1443 A.H*

﴿ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا ۖ إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ ﴾

صدق الله العظيم

سورة البقرة آية (32)

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Dedication

To

My father and mother , who dreamed to see me the best in this world.

My husband who has been a constant source of support in my life and encouraged me to go on every adventure especially this one.

My beloved children, the source of my happiness.

My brothers, sisters, and friends with all love and respect.

Suhad

2021

Acknowledgements

Firstly, I would like to praise **Allah (the Great and Almighty)** prophet Mohammed, AL-Emam Ali and his immaculate household for giving me the strength and patience in completing this work and enabled me to fulfill this project.

I would like to thank **Prof. Dr. Amean A. Yasir** dean of Nursing College/ Babylon University.

I would like to thank Chairman and members of Psychiatric and Mental Health Nursing Branch.

I would like to submit my sincere thanks to my academic supervisor **Dr. Abdul Mahdi A. Hasan** and **Dr. Nada Khazal Kadhim Hindi** for his helpful comments, valuable suggestions, advice and encouragement.

I would like to thank **College of Nursing and Deanship**

My thank extended to **Babylon Health Directorate and all Women** who agree to participated in the study

I gratefully acknowledge the endless generosity of the **Experts** in reviewing and evaluating the study instrument.

I would also like to recognize the positive efforts and assistance of the **Library Staff** in the College of Nursing /University of Babylon.

Finally ….

I pray to Allah (the Great and Almighty)

To bless them all.

Abstract

Background: Women who suffer recurrent miscarriages face many problems in their lives, including negative psychological effects such as anxiety, stress and depression. This study do more to enhance psychosocial support for these women to reduce anxiety and depressive symptoms. Therefore, the study aimed to assess the psychological aspects of miscarriage by viral infection and to identify the socio- demographic factors associated with them.

Methods: A descriptive analytical study was conducted on a sample of 118 women who miscarried due to a viral infection selected by non-probability sampling. The credibility of the questionnaire was then presented to experts to prove its validity and investigated through a pilot study. The total number of items included in the questionnaire was 42 items distributed into three aspects (depression, anxiety, stress). Data were collected using semi-structured interview and analyzed by applying descriptive and inferential statistical data analysis method.

Results: The results of the study indicated that (63.6%) of the women showed a high level of psychological aspects. Analysis of variance confirmed differences in psychological aspects with woman's age ($p = 0.017$), gravid ($p = 0.000$), miscarriage ($p = 0.000$), and live children ($p= 0.000$).

Conclusions and Recommendations: Psychological aspects among the aborted women were significantly higher and were influenced by the woman's age, gravida, number of miscarriages, and number living children. Healthcare professionals should do more to enhance psychosocial support for these women to reduce anxiety and depressive symptoms and increase interest in the issue of abortion to discover appropriate solutions through workshops, seminars, intellectual meetings and conferences.

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List of Abbreviations

Item	Meaning
APGAR	Appearance,pulse,grima activity and respiration
BCE	Before the Common Era
BMI	Body mass index
CDC	Centers for Disease Control and Prevention
CPC	Centers for disease control and prevention
CMV	Cyto megalo virus
D.f	Degree of freedom
DNA	Deoxyribonucleic acid
EPL	Early pregnancy loss
F	Frequency
HEPB	Hepatitis B
HHV	Human herpes virus
HPV	Human papilloma virus
HS	Highly significant
HSV	Herpes simplex virus
IVF	In vitro fertilization
K	Number of items
M.S	Mean of score
NICE	National institute of health and care excellence
NO.	Number
NS	Non-significant
P	Pages
PTSD	Posttraumatic stress disorder
P-value	Probability value
RCT	Randomized controlled trial

RPL	Recurrent pregnancy loss
S	Significant
S.D	Standard Deviation
SPSS	Statistical Package of Social Sciences 20
UK	United kingdom
WHO	World Health Organization

Symbol table

%	Percentage
E_i	Expected frequency
O_i	Observed frequency
σ_{ii}	Variance (not standard deviation) of item i
σ_{ij}	Estimated covariance between items i and j
$\sum$	Sum

Chapter One
Introduction

Chapter One

Introduction

1.1.Background

Pregnancy and birth are often considered joyous occasions, pregnancy loss is often a frightening and terrible experience for women and their families (Nynas *et al*., 2015). Most women will go through a period of extreme emotional suffering following a miscarriage, which will manifest as grieving symptoms such as sadness, yearning, social isolation, and guilt.

Pregnancy loss is a substantial source of psychiatric morbidity and a risk factor for mental disease (Kulathilaka *et al*., 2016). Its importance in a woman's life is often misunderstood. Untreated anxiety following a miscarriage is linked to a higher chance of developing depression (Bellieni & Buonocore, 2013).

A miscarriage happens when an embryo or fetus is removed or evacuated from the womb, resulting in the death of the embryo or fetus. This can occur naturally, as in a miscarriage, or intentionally (Katz, 2012). The term "abortion" refers to a procedure that can happen at any point during the pregnancy. A miscarriage or induced abortion occurs before the 20^{th} week of pregnancy, when the fetus is considered non-viable (Olaitan *et al*., 2017).

A high number of women die worldwide as a result of birth and pregnancy-related problems, with roughly 99.0% of maternal deaths occurring in low- and middle-income countries (WHO, 2016). One of the most common causes of maternal death is miscarriage. According to a recent study based on 115 nations from 2003 to 2009, 7.9% of maternal deaths were attributed to miscarriage (Say *et al*., 2014). The number of miscarriage-related deaths could be significantly greater, although there's a potential of underreporting. One of the most prominent contributing

reasons to maternal mortality in low- and middle-income countries is miscarriage, which is caused by a variety of factors (Yogi *et al*., 2018).

Worldwide, "an estimated 44 million miscarriage were done in 2008, with more than half of them being unsafe. Each year, 47,000 women are expected to die as a result of complications associated to a failed miscarriage around the world. If more individuals had access to sex education, contraceptive knowledge and supplies, and legal, miscarriage many of these fatalities could have been avoided" (Sedgh *et al*., 2012).

The World Health Organization (WHO) identified the primary reasons for miscarriage as saving a woman's life. Rape, incest, fetal disability, economic or social circumstances, and, if requested, the protection of the woman's bodily and emotional health Different countries have passed different laws relating the above-mentioned causes of miscarriage based on their culture, customs, religious beliefs, and viewpoints. As a result, national policies miscarriage and laws are fairly extensive (WHO, 2013).

According to the United Nations, 97 percent of states have approved miscarriage as a life-saving procedure for women. " 57 countries increased the number of legal reasons for abortion between 1996 and 2013, while eight countries lowered the number of legal reasons for miscarriage " (Berer, 2017).

The Iraqi government donated cash directly to family planning between 2005 and 2013. The Iraqi government, on the other hand, is one of the countries that has lowered the number of abortion-related deaths. The Iraqi government approved most causes of miscarriage in 1996, but the law changed in 2005 and 2013 to allow miscarriage only in select circumstances, such as the preservation of a woman's life (DESA, 2013).

Miscarriage is divided into two types: Accidental trauma or natural reasons such as chromosomal structure and numerical aberrations,

pregnancy-related chronic disorders, and environmental variables and microbial infections (Viruses) are the most common causes of spontaneous miscarriage also. An induced abortion is one that is carried out on purpose (Gerdts *et al*., 2016).

Therapeutic and elective miscarriages are the two types of induced miscarriages. Throughout history, induced miscarriage has been a contentious issue; anthropologists have discovered evidence of it in every known civilization (Boah *et al.*, 2019).

On the one side, is miscarriage renowned as the leading cause of maternal death, with life-threatening consequences like hemorrhage, fever, infection, psychological illnesses like regret, remorse, smoking, alcoholism, self-destructive behaviors, and even suicide (Steinberg & Rubin, 2014).

Over 200 million pregnancies occur each year around the world, about a third of which are unwanted and nearly 20% of which result in miscarriage (Lamina, 2015). Women who have undergone an miscarriage endure medical effects such as infections, fever, discomfort, and bleeding, as well as blockage, uterine perforation, and anesthetic issues, according to national miscarriage data (Tsur *et al.*, 2016). Psychological concerns include negative responses, sleep disorders, remorse, sexual dysfunctions, and despondency (Singh *et al*., 2018).

Many facets of people's lives are linked to miscarriage , including social, economic, emotional, and psychological dimensions, particularly for women who are direct victims of miscarriage (O'Donnell *et al*., 2018).

However, research have found that there isn't a direct link between miscarriage and its repercussions. Instead, large disparities arise in terms of miscarriage's socioeconomic and demographic characteristics, as well as whether the miscarriage

was legal or illegal, among women seeking care (Boyle, 2014).

The psychological repercussions of miscarriage were influenced by the quality of family life, the number of children, planned or unplanned pregnancies, beliefs, and heredity (Astbury-Ward *et al.*, 2012).

Because pregnancy is a natural process that all women go through, women's psychological diseases are more common between the ages of 18 and 45, when they are preparing for pregnancy and childbirth (Borrero et al., 2015).

Some women, however, are exposed to viral infections during pregnancy, which causes them to become anxious, tense, and unstable, making them vulnerable to miscarriage, in which they lose their fetus, and this process can be repeated numerous times, ending in repeated miscarriage. It could be detrimental to a woman's quest for femininity and social empowerment through procreation and education (Robinson, 2014).

A woman pregnant who has had many miscarriages suffers more than others in the onset of psychological repercussions due to the disappointments, pain, and loss of hope inherent in the circumstance. It generates concern, sadness, guilt, fury, and other negative effects, and the reality is that women who have had many miscarriages confront a host of issues and scenarios as a result of the miscarriage, especially if it occurs multiple times, resulting in further difficulties (Lederer & Wetzel, 2014).

For several months, some women may have depressive symptoms. Such women believe in personal responsibility when it comes to miscarriage (Sharifi *et al.*, 2013).

This emotion, coupled with self-blame, has been connected to feelings of anxiety and sadness, as well as post-damaging disorder syndrome after a miscarriage (Gearing *et al.*, 2015). Pregnancy loss in the past has been linked to depression and anxiety in later pregnancies. Some women are not properly evaluated for grief or anxiety after a miscarriage,

leaving them undiagnosed and untreated, increasing the risk of psychiatric disorders (Rayan *et al.*, 2016).

1.2.Important of the Study

Women's mental health and reproductive outcomes are topics that the general public is interested in since a large number of women miscarry each year (1.6 million). In 2007, 57 percent of women aged 20 to 30 experienced miscarriages, as previously mentioned (Ortiz-Prado *et al.*, 2017).

In terms of mental health effects, miscarriage research findings have been generally ambiguous. When other key coexisting risk factors are considered, some studies conclude that miscarriage has no effect, while others conclude that miscarriage has a bigger than estimated negative impact on women's mental health (Van-Harreveld *et al.*, 2014).

. According to the most recent figures, over 56 million miscarriages happened per year worldwide between 2010 and 2014. In the same time period, the global miscarriage rate is predicted to be 35 per 1,000 for married women and 26 per 1,000 for single women (Sedgh *et al.*, 2016).

Apart from physical issues, the psychological implications of miscarriage, which can arise months after the treatment, are receiving more attention. Terminating a pregnancy for medical reasons is a difficult decision that can have long-term consequences for both the mother and her family. The outcomes of studies on the psychological effects of abortion on women have been ambiguous. A number of research have found no evidence of an increased occurrence of psychological repercussions (Coleman, 2018).

It is critical to assess women's mental health after miscarriage in order to provide information to physicians who may encounter women in this cohort who are experiencing negative mental health outcomes as a result of their miscarriage. On order to provide an exact estimate of the true

impact of miscarriage in women's life, it is also necessary to determine how many of these psychological mental health problems may be linked to miscarriage alone (Hanley & Mintzes, 2014).

The psychological impacts of miscarriage have been the focus of scientific research as well as public debate around the world for decades, and they have sparked significant debate. Given the relevance of this issue to women and the significant public health implications, it is a crucial topic to work on from the standpoint of health policy (Farren *et al.*, 2016).

As a result, psychological effects emerge between the miscarriage woman's behavior, her psychological state, her relationships with others, and her feelings of guilt, leading to the emergence of psychological disorders such as depression, anxiety, and stress. As a result, the woman's psychological state following the miscarriage necessitates psychiatric follow-up, as well as family assistance and unity of support and assurance. This research can only be carried out by looking for direct and genuine sources of psychological effects, and it aims to shed light on the phenomena of miscarriage induced by infection, as well as the extent to which it affects women in terms of psychological repercussions.

1.3.Problem Statement

Psychological Aspects of Miscarriage Women by Viral Infection

Viruses appear to be the most frequently involved pathogens, since some of them can produce chronic or recurrent maternal infection. In particular, cytomegalovirus during pregnancy can reach the placenta by viremia, following both primary and recurrent infection, or by ascending route from the cervix, mostly following reactivation (Nigro *et al.*, 2011).

Miscarriage is one of the problems that pregnant women face, since recurrent miscarriage occurs three times or more before the twenty-first week of pregnancy. Its health, the nature of the future, and how to deal with the stress that causes worry, which is a typical psychological phenomenon

in the present world, lead to psychiatric problems in people (Akbarzadeh *et al.,* 2016).

The reflection of the wife's psychology negatively affects the husband, the life partner, because that wife carries a complex that threatens the stability of her marital life, in that the husband aspires to connect with another in order to satisfy the paternity instinct that is one of the life laws, psychological aspects are one of the most common manifestations of spouses (Millar, 2020).

Nynas *et al.* (2015), it has been demonstrated the usefulness of screening for depression and anxiety in those who have experienced a miscarriage. Mood disorders can develop even if the majority of women in this stage become pregnant again. Women who are having trouble conceiving may have even more concerns. Most women and doctors agree that post-abortion intervention is desirable, and that proper care is essential. Managing sadness and anxiety symptoms after a miscarriage might help patients feel better in the future.

1.4.Objectives of the Study

1. To assess the psychological aspects(depression, anxiety and stress) of miscarriage women's with viral infection.
2. To find out the association between psychological aspects and socio-demographic characteristic.

1.5.Definition of Terms

1.5.1.Psychological Aspects

Theoretical Definition

The psychological aspect refers to how symptoms and conditions, such as chronic pain, impact a person's mental and emotional state of health and how the mind can influence and, in fact, override, the intensity, duration and frequency of pain that a person experiences (Crofford, 2015)

Operational Definition

The degree to which the miscarriage woman obtains as a result of the interrogation for her expression of their depression, anxiety and stress levels.

1.5.2.Miscarriage

Theoretical Definition

The removal of a fetus from the uterus before it reaches the viability stage (in human beings, usually about the 20th week of gestation) (WHO, 2014).

Operational Definition

Is expulsion of an embryo or fetus due to viral infection.

Chapter Two
Literature Review

Chapter Two

Literature Review

2.1.Psychological Impact of Miscarriage: Overview

Miscarriage or early pregnancy loss can have psychological consequences. Despite the fact that women can suffer long-term psychiatric symptoms as a result of a miscarriage, the possibility of mental illness is rarely acknowledged, and its significance must be addressed (Randolph *et al.*, 2015).

Women who have had one or more miscarriages may develop a psychological disorder months or years after the incident. According to some evidence, men and women might be affected for up to 15 years after a loss (Christiansen, 2017; Daugirdaitė *et al.*, 2019).

Despite the fact that miscarriage is recognized as a public health issue, research into the psychological health of women following a loss is still insufficient. Women who have had a miscarriage may acquire posttraumatic stress disorder (PTSD) (Kersting & Wagner, 2012).

Emotional suffering, emotional expressiveness, and a lack of social support are all risk factors for developing PTSD after a miscarriage (Dencker et al., 2019). Even if stress levels are low after the miscarriage, PTSD symptoms like as flashbacks, intrusive thoughts, dissociation, and hyper-arousal might develop later (Mevorach-Zussman *et al.*, 2012).

Miscarriage is also linked to clinical depression. Clinicians have previously prescribed sedatives as a solution. Women and their partners may experience more intrusive thoughts if they have a recurrent miscarriage (Jensen *et al.*, 2019).

Miscarriage has an emotional impact and might lead to mental health issues. Primary maternal preoccupation is one of the disorders that can develop. As a result of an early pregnancy loss, this psychological trauma might emerge. Anxiety might arise as a result of a miscarriage as

well. The medical care these women undergo is said to have added to their distress (Qu *et al.,* 2017).

After a loss, intrusive thoughts may arise. As a result of a miscarriage, panic disorder and obsessive thoughts may emerge (Li *et al.*, 2012). Women may endure discomfort and psychological repercussions, but they respond by engaging in "compensatory behaviors" like increasing alcohol use. Because women often perceive their responsibility to be supportive, their loss may go unnoticed (Due *et al.*, 2017).

2.1.1.Depression

The feeling of a woman after an miscarriage is the same as her feeling upon the death of a loved one, which is the feeling of loss and loss, and even if the woman has not yet seen her child, but during pregnancy the woman's relationship with her child is strengthened and when the Miscarriage is another, the woman still remembers this fetus that was lost (Maguire *et al.*, 2015).

Some women may suffer comparable, though less significant, hormonal fluctuations after miscarriage, which could lead to sadness. It's yet unclear whether these hormonal changes can trigger a depressive episode (Mutiso *et al.*, 2018).

It's worth noting, though, that most women have some form of psychological anguish following a miscarriage, and that roughly one out of every ten women meets the criteria for serious depression (Zhu *et al.*, 2018).

A previous history of depression, a lack of social support, and being childless are all risk factors for depression after a miscarriage (Giannandrea et al., 2013).

Feeling gloomy or blue, losing interest in one's customary hobbies, and feeling hopeless are all symptoms of depression. If any of these

symptoms appear after a miscarriage, you should seek medical attention immediately (Volgsten *et al.*, 2018).

At one month, 493 women (67 percent) completed an evaluation, 426 women (58 percent) completed an assessment at three months, and 338 women (46 percent) completed an assessment at nine months. After one month, 29 percent of women who had an early pregnancy loss fulfilled the criteria for posttraumatic stress, and 18 percent met the criteria after nine months. After one month, 24 percent of the women reported moderate to severe anxiety, and 17 percent after nine months. After one month, 11% of the women had moderate to severe depression, and after nine months, 6% of the women had moderate to severe depression (Farren *et al.*, 2021).

2.1.1.A. Signs of Depression

General physical and psychological symptoms can be observed on a depressed person, which are as follows:

1. **Physical symptoms:**

Kapfhammer (2022), mentioned that depression has several symptoms that can physically affect a person, including:

1. The patient feels headache, tiredness, and weakness, as he complains of back pain.
2. Complaining of chest constriction, malaise, and delusion of illness.
3. Loss of appetite, which leads to weight loss.
4. A change in psychomotor activity following the change in mood, as its movements are slow and heavy.
5. Low or no sexual desire.
6. Menstrual disorder in women.

2. **Psychological symptoms:**

According to Cénat *et al.* (2021), the symptoms of psychological depression include:

1. Isolation, silence, stillness, mental wandering, introversion, withdrawal, and pessimism.
2. Lack of self-control, lack of self-confidence and feelings of inadequacy.
3. A dark view of life, accompanied by dark thoughts.
4. Neglecting personal hygiene and appearance.
5. Slow thinking and response and difficulty concentrating.
6. Apathy, lack of motivation, and social mismatch.

3. Behavioral symptoms:

According to what Ismail *et al.* (2018), said about the behavioral problems that accompany depression include:

1. Avoiding people, not caring about them, and not leaving the house.
2. Screaming for the slightest reason with many disagreements.
3. Loss of self-control.
4. Inability to raise his eyes, walking arched back.

2.1.1.B. Types of Depression

Neurotic depression:

It refers to a disorder that is not accompanied by hallucinations and delusions. It is also called depressive response, where the patient is dominated by a state of worry and sadness, not enjoying the joys of this world and the desire to get rid of life with a decline in activity and lack of enthusiasm and production, accompanied by insomnia and sleep disturbance (Paykel, 2022).

Qin *et al.* (2018), found that neurotic depression, in turn, is classified into several types, which are:

a. Seasonal depression: It is a seasonal mood change, which appears in the winter and is conditionally linked to the winter climate, and what is characterized by clouds and coldness.
b. Simple depression: There are mild symptoms of sadness and delay, and its occurrence may be due to family or occupational problems, and its main symptoms appear in the form of sadness and a feeling of weakness and helplessness in front of life situations and problems.

Therefore, after a miscarriage, a woman suffers from some psychological disorders represented by sadness and hopelessness, which must be dealt with in a proper and quick manner, so as not to exacerbate the crisis to enter into severe bouts of depression because the loss of the child and the dreams related to it, exhaust her psychological state, and make some unable to bear this shock (Farren *et al.*, 2018).

Psychotic depression:

Refers to a disorder accompanied by psychotic symptoms, such as hallucinations, hallucinations, and a lack of insight, agitation, a sense of grandeur and persecution, and it is further divided into types, Park *et al.* (2015), namely:

a. Bipolar depression: where the patient alternates episodes of intense sadness, then bouts of joy excessive joy, movement, activity and vitality.
b. Postpartum depression: It is a pattern of depression that may affect some targeted women after childbirth, and it usually has some indications during pregnancy itself, and may be associated with a lot of pain during pregnancy and childbirth.
c. Depressive stupor: It is one of the most dangerous types of depression, and it is a state of regression of the individual to a stage primitive childhood, where he is bedridden, never talks, and does not

participate in anything, where he must be helped to carry out his daily activities.

2.1.1.C. Depression and Miscarriage:

Some studies have shown that depression after repeated miscarriages persists in women for about three years, even after the birth of a healthy child. Having a healthy baby after losing the fetus several times in earlier stages will end the problems, frustration and anxiety that women experienced, but this is not the case, out of 333.13 pregnant women, 21% suffered miscarriages several times, 108 of them suffered from having a stillborn baby. It was found that all the women in this study suffered from anxiety and depression during pregnancy and after Miscarriage (Farren *et al.*, 2020).

The natural properties that protect some women from depression for long periods after flexibility. Their exposure to repeated miscarriages is not yet known, perhaps these are biological characteristics or they are more where the history of pregnancy loss represents a risk factor for post-Miscarriage depression, in addition to other risk factors such as personal or family history with depression (Farren *et al.*, 2021).

2.1.2.Anxiety

Anxiety is as old as humanity; The human being who lived in prehistoric times, his primitive life was not devoid of sources of anxiety, although his struggle at that time was limited to confronting predators and trying to conquer. He has one source, but today there are many sources of concern. The mere maintenance of balance and psychological peace has become necessitated a tremendous effort and a continuous confrontation on multiple fronts against the sources of anxiety and tension (Tuan, 2013).

Anxiety is described as: “the curse of our age” and we are all exposed to it. Because modern life strives without companionship to pressure us hard, and there is no one who does not feel disturbed

sometimes because he cannot bear some of the burdens of his daily life and its confusions that exceed the strength of his endurance and energy (Csikszentmihalhi, 2020).

Women were recruited from three London hospitals' prenatal clinics for a prospective cohort study. At 1, 3, and 9 months after the loss, participants got emailed surveys that included the Hospital Anxiety and Depression Scale and the Posttraumatic Stress Diagnostic Scale. Women experience high levels of posttraumatic stress, anxiety, and depression after early pregnancy loss. Stress declines over time but remains at clinically important levels at 9 months (Farren et al., 2020).

Typically, women who experience a miscarriage do not receive any medical or psychological follow-up. Obviously, the emotional symptoms a woman may feel following a miscarriage might influence her quality of life and capacity to function, but we must also consider the long-term consequences of these events. Some studies, but not all, suggest that a mother's stress and worry can affect her capacity to conceive (Tavoli et al., 2018).

2.1.2.A. Types of Anxiety

Not all types of anxiety are considered pathological or evidence of a psychological disorder. Anxiety in itself is a natural phenomenon, a feeling, feeling, and an acceptable and expected reaction under certain circumstances, and sometimes it helps the vital functions of the heart, as well as the preservation of vital functions (Peterson, 2018).

Many scholars have worked on dividing anxiety into several types, and some of them relied on dividing anxiety on the causes that led to the emergence of anxiety, such as Freud, and some of them adopted on the effects of anxiety, but whatever was the basis for the division of anxiety, the researcher finds that there is almost unanimity among psychologists in

dividing anxiety into objective anxiety, neurotic anxiety, and moral anxiety (Domaradzka & Fajkowska, 2018).

1. Conscious or Objective Anxiety:

It is the type in which the person realizes that its source is external, and it is a reaction to perceiving an external danger, or harm that the person expects in the future, and scientists call it several names such as anxiety, real, rational, or real. This type of anxiety is closer to fear, because its source is clearly defined in the human mind (Hudson et al., 2015).

Also, he worries a stronger, the individual realizes its reasons, and its motives, and it appears on a picture of fear, or it resorts to the realization of the individual of the danger of what is in the environment, and this situation is the function of preparing the individual to meet this danger, or with it, or with it, Anxiety is aroused by a realistic stimulus in the external environment that is perceived by the ego in a threatening manner, and therefore this anxiety is akin to fear (Melini et al., 2020).

2. Nervous Anxiety:

It arises as a result of the repressed trying to escape from feeling and access to feeling and awareness, and the concern here serves as a warning to the ego to mobilize its defense so that the repressed does not succeed to the area of awareness and feeling, and if the objective anxiety is related to external stimuli in the environment, then this concern is due to an internal factor, which is the instinctive defenses of the id, which are about to be overcome in the face of a violent confrontation and a violent confrontation because it is a violent confrontation. It makes him vulnerable to self-punishment from the superego (Stekel, 2013).

It has three main forms: it may be in the form of general anxiety, and this type represents anxiety in its lowest form, as it is not linked to any

specific topic, and all that is there is that the person feels a state of dark fear. It may be in the form of pathological fears about specific topics or specific situations as a cause for concern, and the intensity of fear among these individuals is not at all commensurate with the real danger expected from the subject or the worrying situation. Fears may be in the form of a threat and fear, anticipating the occurrence of this threat, which does not exist (Hu et al., 2016).

3. Moral Anxiety and Guilt

It is a type of fear of conscience and arises from conflict with the higher self; This is the result of warning or blaming the superego for the ego, when the individual comes or thinks of performing a behavior that contradicts the standards and values represented by the superego apparatus, meaning that this type is caused by an internal source like it, such as the neurotic anxiety that results from his defenseless impulses and calmness. In feelings of shame, sin, shame and disgust, and this anxiety reaches its utmost degree in some types of nervousness, such as obsessive-compulsive neurosis, which accompanied it from the tyrannical control of the higher ego, and it fears the fear of others (Chatzidakis, 2015).

It also arises when the individual tries to deviate from what he learned from his parents of principles and morals, and also when he thinks of satisfying the desires of the id, which requires him to give him something socially forbidden (Breggin, 2015).

Others types

1. Required anxiety: Do not think that every anxiety is bad, but rather there is a natural anxiety, for a person must be worried about falling from the top of a tall building, or walking in a street where he is roaming, or a dam in which he enters a traffic cage. Anxiety is natural, as it benefits us and others (Hickman et al., 2020).

2. Acceptable anxiety: There is anxiety that affects all people, such as fear of war or worry about a friend who is traveling or a sick child... This is acceptable unless it reaches the point of continuing to affect the life cycle (Rhodes et al., 2015).
3. Rejected anxiety: It is worry about the present and constant fear of the future. If this is overwhelmed, it will be rejected. Including persistent obsessions in the human mind (Borkovec et al. 2019).

2.1.2.B. Signs of Anxiety

First: Physical symptoms: These include: Excessive beating or rapid heart rate, episodes of dizziness and fainting, numbness in the hands, arms, or feet, nausea or upset stomach, agitation, or aches in the chest. Physical exercise, fast heart rate at rest, bad dreams, and excessive stress (Smith et al., 2020).

Second: Psychological symptoms: These are: spontaneous panic attacks, depression and nerve weakness, excessive irritability, inability to perceive and distinguish, forgetting things, mixing thinking, and an increased tendency to aggression (Firth et al., 2017).

The four main ways that throw women into the anxiety trap by Harris et al. (2022) and include:

1. The psycho-social path: where women learn from an early age to entrust the man with the task of decision-making. She finds great difficulty when circumstances force her to take charge of her own affairs if she encounters any problem, so she becomes more anxious.
2. The instinctive and instinctive way: The woman is created and has an innate predisposition to anxiety, and it increases when she becomes a mother, fully responsible for taking care of her child, taking care of him, and keeping him in the most perfect health.
3. The societal path: The great dichotomy that afflicted the entity of the woman, and the multiplicity of roles that our society requires of her

today, between a wife, a lover, a mother, and a breadwinner, and with her desperate efforts to fulfill all these roles, causes her to suffer psychological pressures, causing severe anxiety.

4. The physiological way: the structure of a woman's body seems to "predispose her" to anxiety, as a result of disorders the hormonal conditions associated with the premenstrual period, hysterectomy, or postpartum period. Scientists have discovered that there is a difference in functions between the brains of men and women.

2.1.3.Stress

Stress problem is linked to miscarriage. Emotional suffering, emotional expressiveness, and a lack of social support are all risk factors for developing stress disorder after a miscarriage (Bellieni & Buonocore, 2013).

Even if mild levels of stress are present after the miscarriage, stress symptoms such as flashbacks, intrusive thoughts, dissociation, and hyperarousal can develop later. Stress can make miscarriage more difficult (Jeve & Davies, 2014).

Miscarriage is a traumatic experience, and because stress is a risk factor for subsequent miscarriage, its occurrence can become part of a vicious cycle. Lower stress levels are linked to better outcomes in subsequent pregnancies, whereas higher stress levels increase the likelihood of miscarriage (Hunter *et al.*, 2017).

Stress symptoms defined as ‘‘the degree of discomfort from the specific symptom as reported by the patient.’’ It is important to note that ‘‘stress’’ was not differentiated according to whether it resulted from the disease itself or from its treatment (Beck *et al.*, 2011).

The area of maternal health and obstetrics is permeated with the life and joy of the families, even though there are some unfortunate situations in the midwifery context. One of those situations is spontaneous

miscarriage, which is an unexpected termination of pregnancy. The loss of a desired pregnancy implies many losses, such as the loss of motherhood, self-esteem, the loved one, social status and an imagined and anticipated future, especially when it is the first child. After a spontaneous miscarriage (SA), the woman experiences difficult moments of stress and significant psychological and emotional frailty, which should be better understood to enable better care to be provided (Camarneiro et al., 2015).

The emotional side effects of an miscarriage will vary from one woman to another. Some women repot a sense of relief after having an miscarriage. The question most people have is, (what are the potential emotional and psychological risks following an miscarriage). Emotional and psychological effects are common than physical side effects and can range from mild regret to more serious complication like depression. It is important to discuss these risks with a trained professional who can address your questions and concerns. The intensity or duration of these effects will vary form one person to another. Potential side effects include (regret, anger, guilt feeling, shame, sense of loneliness or isolation, loss of confidence, insomnia, relationship issues, eating disorders, depression and anxiety) (Foster et at ., 2015).

Mental health aspects of miscarriage have been a topic in scholarly work, policy, and clinical care. miscarriage and mental health concluded that miscarriage in the first trimester does not harm women’s mental health. made this conclusion because most research on miscarriage and mental health has either focused on first-trimester miscarriage or has not ascertained gestational age at the time of miscarriage. Studies that have not identified the gestational age are assumed to address how first-trimester miscarriages relate to mental health because most miscarriages occur in the first trimester (Farren et al., 2018).

Approximately 42 million women worldwide obtain legal, induced miscarriages each year. While many women experience emotional relief after miscarriage, over 30% experience significant psychological stress that does not remit over time. Psychological stress after miscarriage includes higher rates of suicidal behavior, depression, anxiety, post-traumatic stress, and substance abuse disorders15 after miscarriage, compared with other pregnancy outcomes. Specifically, young women under age 25 years are at highest risk for developing mental health problems after miscarriages, with one study estimating that psychological stress after miscarriage (PAD) occurs in up to 40% of these cases (Susie, 2022).

After suffering a miscarriage, it is normal for a woman to experience some level of grief. Grief can be defined as a dynamic, pervasive, highly individualized process with a strong normative component. Although the level of grief may vary between different cultural groups, it is painful and disruptive to the woman's life. The grief experienced after a miscarriage is intense for the first few days and gradually subsides over the following four to six weeks, and finally resolves over a period of three to four months. The emotions and symptoms commonly associated with grief are sadness, loss of appetite, sleeplessness, increased irritability, and inability to return to activities of daily living. These are the typical symptoms of grieving, as well as those of depression, so can be a source of confusion for the woman (Adolfsson, 2011).

The miscarriage experience, although not uncommon, is an unwelcome event and can be traumatic for a woman. Many women describe the experience of miscarriage as if they had actually lost a baby or a part of themselves. Women who experience a miscarriage acknowledge that it is a source of increased stress and they describe the experience in terms of sorrow, depression, anxiety, self-blame and guilt. Between 25%

and 50% of the women who have experienced a miscarriage has been determined to have posttraumatic stress symptoms (Ockhuijsen, 2014).

Research in the early 1990s in this area relied on quantitative approaches to measure the psychological outcomes of early miscarriage. These studies reported that women experienced varying degrees of grief, depression and anxiety. found that women experienced the emotion of anxiety rather than depression up to 12 weeks after early miscarriage. However, other studies indicate that miscarriage may have an emotional impact and have long-term sequelae for women (Farren et al., 2018).

Psychological stress can be defined as a state of emotional suffering characterized by symptoms of depression and anxiety, and may encompass depression, anxiety and low mood. Maternal depression and anxiety are known to have negative consequences for the mother, family relationships, and her child, and are an important facet of postpartum health. It could be hypothesized that the disruption to life caused by an unplanned conception carried to live delivery may increase likelihood of stress (Rallis et al., 2014).

Psychological stress following miscarriage was often un-recognized by medical professionals attending the women. Further, a high percentage of patients' express anger and dissatisfaction with the medical care they received. that 40% of the miscarrying women were pre dominantly or totally dissatisfied with care after miscarriage, and that dissatisfaction centered particularly on professional psychological support rather than care in a medical/technical sense. In a survey performed in Hong Kong involving 288 women who had had a miscarriage, more than half of the patients (52.7%) regarded professional psychological support as being necessary, yet half of these patients were dissatisfied with the support they received (Lau, 2017).

Early pregnancy loss leads to symptoms of grief such as sadness, yearning, social isolation and guilt. A sense of loss is common while some women experience guilt and anger after spontaneous miscarriage. These features are present even when the pregnancy was not planned. The partner and other family members too can experience psychological stress. Grief is a normal response to loss. In some, bereavement can result in complicated grief and depression. Longer-lasting psychological, social, and health status changes follow the initial depressive, but not the grief reactions. Depression after spontaneous miscarriage is often unrecognized by medical professionals (Kong et al., 2013).

The miscarriage is a physically and emotionally difficult experience. The recovery time depends on how far along the pregnancy was at the time of the miscarriage. Also Physical, and spiritual health are deeply intertwined and have a profound effect on one another. On the other hand, when women feel spiritually connected and fulfilled, everything in their life including physical and emotional pain, are easier to deal with. They feel lighter and happier. There's no denying it when they feel connected and balanced spiritually they feel better physically and emotionally (Farren et al., 2018).

Signs of miscarriage are pain in the lower back, pain in the abdomen and vaginal bleeding with or without abdominal cramps. Diagnosis is performed after a pelvic examination followed by transvaginal ultrasound. The treatment varies depending upon the nature of the miscarriage, The experience of miscarriage may also be traumatic for her, because she incurs physical pain and bleeding as well and may be required to undergo a further procedure, as in a D&C (Mouri et at., 2021).

2.2.Miscarriage: An Overview

Miscarriage is one of the most prevalent but understudied complications of pregnancy. The majority of the time, the impacts of a

miscarriage on a woman's health are minor and go unnoticed. However, in the most acute situations, discomfort, bleeding, and the possibility of haemorrhage are all possible signs. Loss and grief are also prevalent, and individuals who are impacted can suffer psychologically and mentally (Engelhard et al., 2001).

Miscarriage, or the termination of a pregnancy, has been practiced since ancient times. Miscarriage has been performed or attempted using a variety of methods, including the ingestion of abortifacient herbs, the use of sharpened tools, abdominal pressure, and other approaches (Dawood et al., 2003).

Miscarriage laws have changed over time, as has their enforcement. Miscarriage-rights campaigns were successful in repealing Miscarriage laws in several Western countries during the twentieth century. While Miscarriage is still legal in much of the Western world, anti-Miscarriage activists frequently question its legality (Alijotas-Reig, 2009).

The Vedic and smrti laws of India indicated a concern about the three upper castes' male seed, and religious tribunals prescribed various penances for the woman or excommunication for a priest who performed an Miscarriage (Damian, 2010).

In the epic Ramayana, the practice of Miscarriage was described as being carried out by surgeons or barbers in those days. The sole indication of the death sentence being enforced for Miscarriage in ancient legislation may be found in the Code of Assura, c. 1075 BCE, and it is only inflicted on a woman who obtains an Miscarriage against her husband's desires. The Egyptian Ebers Papyrus, written about 1550 BCE, is the first documented evidence of induced Miscarriage (Bianco et al., 2006).

The term miscarriage' refers to the termination of a pregnancy when the endometrial lining is more than 15mm on an ultrasonographic examination. Furthermore, some ovular-placental tissues are not entirely

ejected during a miscarriage, necessitating surgical excision via curettage, Oxytocin, and even blood transfusions in some cases (Hennessy et al., 2020).

For most women, a miscarriage is a one-time occurrence that will be followed by a successful pregnancy (spontaneous miscarriage, hereafter referred to as miscarriage). A small percentage of women who want to have children (0.5–1%) may have three or more miscarriages in a row, a condition known as recurrent miscarriage (Clark et al., 2010).

Early miscarriage is described as a pregnancy loss that happens during the first trimester of pregnancy (less than 12 weeks gestation) and affects up to one out of every five pregnancies. 'Late miscarriage' happens in the second trimester (12–24 weeks of pregnancy) and is rare, happening in about 1-2 percent of pregnancies. Stillbirth is defined as fetal mortality after the 25th week of pregnancy (Feodor et al., 2014).

Miscarriages, also known as spontaneous Miscarriages, occur when a baby's development inside the womb is disrupted (Katz, 2012). Miscarriages are caused by a variety of factors that aren't fully understood. Miscarriages, on the other hand, are thought to occur when the baby's genes or chromosomes are faulty. A miscarriage can also be caused by specific health issues in the mother, according to Tur-Torres et al. (2017):

1. Diabetes that is uncontrolled or undiagnosed
2. Diseases caused by viruses or bacteria, particularly sexually transmitted infections
3. Hormone imbalances, such as thyroid or adrenal gland disorders
4. Autoimmune diseases such as lupus and others.

2.3.Incidence of Miscarriage

There are two main approaches for calculating the rate of Miscarriage: The number of Miscarriages performed annually per 1000 women aged 15 to 44 (some sources specify a range of 15–49) is referred

to as the Miscarriage rate(WHO, 2012); and the Miscarriage proportion (the number of Miscarriages per 100 pregnancies) (pregnancies include live births, miscarriages) (Sedgh et al., 2012).

Medical reporting of Miscarriage is unreliable in many locations where Miscarriage is outlawed or has a high social stigma. As a result, estimations of the rate of Miscarriage must be made without regard to standard error (Sedgh et al., 2012).

In recent years, the number of Miscarriages done around the world appears to have stayed steady. The majority were forced, such as viral infections, which accounted for 41.6 million in 2003 and 43.8 million in 2008 (Saccone et al., 2017).

The global Miscarriage rate was 28 per 1,000 women per year, compared to 24 per 1,000 women in developed countries and 29 per 1,000 women in underdeveloped countries(Carp, 2012). According to the same 2012 study, the estimated rate of Miscarriage for known pregnancies in 2008 was 21% worldwide, 26% in industrialized nations, and 20% in developing countries (Wang et al., 2019).

On average, nations with restrictive Miscarriage laws and those with more liberal Miscarriage access have equal rates of Miscarriage. Restrictive Miscarriage rules, on the other hand, are linked to an increase in the number of Miscarriages conducted for medical reasons such as viral infection (Bearak et al., 2020).

The rate of Miscarriage with viral infections in developing countries is partly due to lack of access to modern contraceptives; According to the Guttmacher Institute, providing access to contraceptives would reduce unsafe Miscarriages by 14.5 million fewer deaths than unsafe Miscarriages annually worldwide by about 38,000 (Sedgh et al., 2015).

The rate of lawful induced Miscarriage varies greatly over the world. In nations having complete statistics in 2008, it ranged from 7 per

1000 women per year (Germany and Switzerland) to 30 per 1000 women per year (Estonia), according to a report by Guttmacher Institute staff. In the same group, the percentage of pregnancies that terminated in termination owing to viral infection ranged from roughly 10% (Netherlands, and Switzerland) to 30% (Estonia), however it could be as high as 36% in Hungary and Romania, whose numbers were deemed inadequate (Sedgh et al., 2016).

According to a research conducted in the United States in 2002, around half of women who miscarried were using some type of contraception at the time of conception. Half of those who used condoms and three-quarters of those who used birth control pills reported inconsistent use; 42 percent of those who used condoms reported failure due to slippage or breakage. Because minority women "had considerably higher rates of hazardous pregnancies and losses," according to the Guttmacher Institute, "most Miscarriages in the United States are conducted by minority women" (Parmar *et al.*, 2017).

2.4.Classification of Miscarriage

There are two types of miscarriage: early (before 13 weeks) and late (beyond 13 weeks) (between 13 and 24 weeks). Depending on the history and examination findings, miscarriage can be further categorized (McNamee *et al.*, 2012).

2.4.1.Threatened Miscarriage

When there is vaginal bleeding but the cervix is closed and an ultrasound shows a viable intrauterine pregnancy, it is called a threatening miscarriage. The term "threatened" refers to the possibility of a miscarriage. Early in pregnancy, minor vaginal bleeding is usual. The majority of threatening miscarriages do not lead to the termination of the pregnancy (Wahabi *et al.*, 2018).

2.4.2.Inevitable Miscarriage

Inevitable miscarriage refers to unexplained vaginal bleeding and abdominal pain during early pregnancy. Signs and Symptoms: Bleeding is heavier than with a threatened miscarriage and abdominal cramps more severe (Saraswat *et al.,* 2014).

2.4.3.Incomplete Miscarriage

When there is vaginal bleeding, an open cervix, and products of conception visible on examination, it is considered an incomplete miscarriage (San *et al.,* 2021).

2.4.4.Complete Miscarriage

When the products of conception have passed, the cervix is closed, and an ultrasound indicates an empty uterine chamber, it is considered a complete miscarriage (Jurkovic *et al.,* 2013).

2.4.5.Recurrent Miscarriage

When a miscarriage occurs more than three times in a row, it is called a recurrent miscarriage. Recurrent miscarriage is caused by hormonal imbalances, uterine structural defects, uterine muscle ruptures, or uterine infection. To determine the reasons of these situations, a thorough medical evaluation and comprehensive examinations are required, including ultrasound and radiography of the uterus and its appendages (Cavalcante *et al.,* 2019).

2.5.Causes of Miscarriage

Recurrent miscarriage can be caused by a variety of factors, some of which can be managed. Even after comprehensive studies, some couples are never able to pinpoint a cause. About 50–75 percent of recurrent miscarriage cases are unsolved (Colley *et al.,* 2019).

2.5.1.Chromosomal Disorders

Unviable pregnancies are miscarried as a result of a balanced translocation or Robertsonian translocation in one of the couples. This explains why, if a woman has had multiple miscarriages, a karyogram is frequently conducted on both spouses (Moorthie *et al.,* 2018). Random spontaneous as well as recurrent pregnancy loss may be caused by aneuploidy. Aneuploidy is increasingly common as people become older, indicating poorer germ cell quality (Gomez *et al.,* 2021).

2.5.2.Lifestyle Factors

Life style factors considered a problems have been linked to an increased risk of miscarriage in general and are rarely mentioned as particular causes of RPL, patients with RPL should make every attempt to address these issues. Chronic toxicity exposures, such as smoking, alcohol, and drugs, are of particular concern (Larsen *et al.,* 2013).

2.5.3.Anatomical Conditions

A 15% of women who have had three or more recurring miscarriages have an anatomical basis for their inability to carry the baby to term (Agenor & Bhattacharya, 2015). The ability to carry a kid to term is influenced by the uterus' anatomy. Anatomical differences are rather prevalent, and they can even be congenital (Cavalcante *et al.,* 2019).

2.5.4.Cervical Conditions

A weak cervix in the second trimester might become a recurring issue. Premature pregnancy loss due to cervical incompetence results in miscarriages or preterm births. Cervical insufficiency is thought to be a factor in roughly 8% of women who have recurrent losses in the second trimester (Sneider *et al.,* 2016).

2.5.5.Endocrine Disorders

Women with hypothyroidism have a higher chance of miscarriage. Diabetes mellitus that is undiagnosed or poorly treated causes more miscarriages. Women with polycystic ovarian syndrome had a faster rate of weight loss, which could be due to hyperinsulinemia or excess androgens. RPL may be triggered by insufficient progesterone production during the luteal phase (Larsen *et al.,* 2013).

2.5.6.Thrombophilia

The higher incidence of miscarriage in women with thrombophilia is a good example (propensity for blood clots). Factor V Leiden and prothrombin G20210A mutations are the most common problems (Arachchillage *et al.,* 2019Anticoagulant therapy appears to boost the chances of carrying a pregnancy to term in certain preclinical trials, but these findings need to be verified before anticoagulant medication is used in clinical practice (Nahas *et al.,* 2018).

2.5.7.Ovarian Factors

A luteal phase deficiency is a complicated issue. The reasoning behind the hypothesis is that the corpus luteum produces insufficient progesterone to keep the early pregnancy going. An endometrial biopsy has typically been used to assess this scenario, but recent research have found that this method is no longer viable (Dean *et al.,* 2018). Although there are few studies on the effectiveness of progesterone supplementation, it is routinely used on an empirical basis (Ali *et al.,* 2020).

2.6.Microbial Infections Associated Miscarriage

2.6.1. Miscarriage Associated Bacterial Infections

Infections are thought to be responsible for between 0.5 and 5% of recurrent miscarriage occurrences. Mycoplasma, ureaplasma, Chlamydia trachomatis, Gardnerella vaginalis, Streptococcus agalactiae, Neisseria gonorrhoeae, and Listeria monocytogenes are the most common

pathogens suspected. In persons with immunodeficiency or symptoms of chronic endometritis/ cervicitis on inspection, an infectious evaluation may be necessary. Aside from that, there is evidence that routine infectious assessment is reasonable and effective (Cicinelli *et al.,* 2014).

2.6.2.Miscarriage Associated Viral Infections

A variety of human pathogenic viruses (Human Herpes Viruses/HHV) belong to the Herpes family of DNA viruses, which can remain dormant in the host and reactivate. HSV-1 (HHV1) and HSV-2 (HHV-2) are two members of this family that develop latency in neural cells and can cause herpes genitalis or labialis when reactivated (Giakoumelou et al., 2016) PCR can be used to detect herpes viruses in serum samples (Cockerell *et al.,* 2014). The cytomegalovirus (CMV) (HHV-5) is a highly common virus that most people contract throughout their childhood. CMV mostly infects myeloid cells and is never completely removed from the body.

1.HSV-1 and HSV-2

The HSV1 and/or HSV2 DNA was found in 43.5 percent of 95 frozen trophoblastic tissue samples from Greek women who had spontaneous pregnancy loss versus 16.7% of women who had an abortion (n = 35, P = 0.03, Fisher's exact test). HSV DNA was found in the trophoblast of 18 of the 25 HSV positive cases using in situ hybridization. Although the scientists did not differentiate between the two kinds of HSV, they concluded that HSV appears to play a role in early miscarriage (Kapranos & Kotronias, 2009).

A more recent Korean study backs up these findings (Kim, *et al.,* 2012). The authors of this study screened 500 pregnant women's sera for HSV-2 and found that 85 (17%) were positive. The authors compensated for the fact that the majority of the women in both groups tested positive for rubella, varicella zoster (HHV-3) and hepatitis B (HEPB). HSV-2

seropositive women were 38.8% likely to have suffered a miscarriage, compared to 29.6% of the control group (P 0.05).

2. Human CMV/HHV-5

59 women had peri-conceptional CMV infection, which occurred between 4 weeks before the last reported menstrual period and up to 3 weeks after the period's predicted date. Four of the ladies suffered miscarriages before having an amniocentesis to confirm an infection in the uterus. The remaining patients either chose to abort their babies or chose to end their pregnancies. Because no controls were included in this study, no conclusions about miscarriage could be drawn (Hadar *et al.*, 2010).

Data from a Malaysian study (Saraswathy *et al.*, 2011) Anti-CMV IgG antibody was found in 84 percent of healthy pregnant women as well as women who had a bad pregnancy outcome, including 17 miscarriages.

3.Human papillomavirus

Human papillomaviruses (HPV) are a group of approximately 150 tiny DNA viruses, some of which are responsible for sexually transmitted illnesses (Cutts *et al.*, 2007). In the general female population of reproductive age, sexually transmitted HPV infection is prevalent at a rate of 11.7 percent (Bruni *et al.*, 2010). According to the CDC, sexually transmitted HPV prevalence among women 14–59 years old in the United States was 42.5 percent in 2003–2006, based on positive servicovaginal swab tests (Hariri et al., 2011). Cervical cancer has been linked to persistent infection with high-risk strains of HPV (the most common being HPV 16/18 worldwide), whereas genital warts have been linked to others (HPV 6/11) (Masoumalinejad & Zinatizadeh, 2018).

Recent research examining the effects of HPV infection on miscarriage has shown mixed results (Perino *et al.,* 2011; Skoczyński *et al.,* 2011). A Chinese research evaluating the impact of HPV on the pregnancy outcome of IVF patients found no difference in miscarriage rates between women with abnormal cervical cytology who had a positive high-risk HPV test (n = 56) and those who tested negative for high-risk HPV (n = 56) , (Rui et al., 2013).

4.Rubella

Rubella is a common childhood illness that can cause miscarriage and significant fetal abnormalities if caught during the first 16 weeks of pregnancy. According to the most recent WHO progress report, a vaccination has been available for several years, resulting in a considerable reduction in new infections (Reef *et al.,* 2011). Regardless of this success, it is crucial to remember that there are still many unvaccinated pregnant women in Europe and around the world who do not have access to immunization and are at risk of having a negative pregnancy result owing to rubella (Hübner *et al.,* 2017).

2.7.Complication of Miscarriage

According to an American Academy of Sciences estimate, nearly 600,000 women, 99 percent of whom live in developing nations, die each year from fever as a result of Miscarriages and sexually transmitted illnesses (Larsen *et al.,* 2013).

Whether automatically or simulated, and in the best of health, not without a proportion of even a few of the complications that may occur during the Miscarriage process or immediately after, and in other cases these complications may occur after a period of time, and continue to leave their mark on the woman's health and psyche in the future, and they are referred to as complications that remain for life (Cavalcante *et al.,* 2019).

As a result of the presence of remains remaining and adhered to the uterus, one of the most serious immediate repercussions of Miscarriage is uterine bleeding, which can linger for several weeks and cause anemia in women. It is required to re-check the uterus and examine a sample of what it contains in order to determine the true reason of this recurrent bleeding (Dugas & Slane, 2021).

The degradation of the lining caused by adhesions that form around the tubes as a result of internal uterine infections is a post-Miscarriage complication that can lead to ultimate menopause. Alternatively, contaminated Miscarriage might result in irreversible acute and chronic sterility (Lash & Ernerudh, 2015).

2.8.Miscarriage Associated Psychological Health

Miscarriage or early pregnancy loss can have psychological consequences. Despite the fact that women can suffer long-term psychiatric symptoms as a result of a miscarriage, the possibility of mental illness is rarely acknowledged, and its significance must be addressed (Randolph *et al.,* 2015).

Women who have had one or more miscarriages may develop a psychological disorder months or years after the incident (Christiansen, 2017). According to some evidence, men and women might be affected for up to 15 years after a loss (Daugirdaitė *et al.,* 2019).

Despite the fact that miscarriage is recognized as a public health issue, research into the psychological health of women following a loss is still insufficient. Women who have had a miscarriage may acquire posttraumatic stress disorder (PTSD) (Kersting & Wagner, 2012).

Emotional suffering, emotional expressiveness, and a lack of social support are all risk factors for developing PTSD after a miscarriage (Dencker *et al.,* 2019). Even if stress levels are low after the miscarriage,

PTSD symptoms like as flashbacks, intrusive thoughts, dissociation, and hyper-arousal might develop later (Mevorach-Zussman et al., 2012).

Miscarriage is also linked to clinical depression. Clinicians have previously prescribed sedatives as a solution. Women and their partners may experience more intrusive thoughts if they have a recurrent miscarriage (Jensen *et al.*, 2019).

Miscarriage has an emotional impact and might lead to mental health issues. Primary maternal preoccupation is one of the disorders that can develop. As a result of an early pregnancy loss, this psychological trauma might emerge. Anxiety might arise as a result of a miscarriage as well. The medical care these women undergo is said to have added to their stress (Qu *et al.*, 2017).

After a loss, intrusive thoughts may arise. As a result of a miscarriage, panic disorder and obsessive thoughts may emerge (Li et al., 2012). Women may endure discomfort and psychological repercussions, but they respond by engaging in "compensatory behaviors" like increasing alcohol use. Because women often perceive their responsibility to be supportive, their loss may go unnoticed (Due *et al.*, 2017).

2.9.Psychiatric Morbidity and Subsequent Pregnancies after Miscarriage

Women who have had a miscarriage are likely to become pregnant again in 50 to 80 percent of cases. A recurrent pregnancy is a period of intense and often conflicting emotions, as couples try to balance being hopeful while still being concerned about the possibility of another miscarriage (Blackmore *et al.*, 2011).

After a loss, 68 percent of women were still upset two years later, and 64 percent said it influenced their decisions regarding future babies. Getting pregnant again, contrary to common perception, is not a protective factor against depression or anxiety. Mood problems that arise after a

prenatal loss do not always go away with the delivery of a healthy child (Barat *et al.*, 2020).

A previous pregnancy loss is also linked to despair and anxiety throughout subsequent pregnancies. Those with a history of miscarriage had a higher risk of anxiety and depression during the first trimester than primigravid participants, according to a study of over 20,000 pregnant Chinese women. Regardless of maternal age, education, BMI, income, or domicile, conception fewer than 6 months after their loss did not lessen anxiety throughout the first trimester (Gong *et al.*, 2013).

Those who have had a previous miscarriage experience higher levels of pregnancy-related worry during the first trimester, which is linked to issues such as vaginal bleeding, exhaustion, hospitalization, and low APGAR (Appearance, Pulse, Grimace, Activity, and Respiration) scores in the newborn. Although contentious, research suggests that anxiety or depression in the first trimester of a pregnancy is a risk factor for perinatal problems (Blackmore *et al.*, 2011).

It's difficult to manage prenatal care in women who have had previous miscarriages. These women are not only at a greater risk for psychiatric issues, but they may also battle with maladaptive coping methods, which exacerbates their predicament. Mothers prefer to downplay the relevance of previous losses in order to be optimistic about the present pregnancy, whereas males have frequent thoughts about the previous loss (Chalana & Sachdeva, 2012).

2.10.Women Status after Miscarriage

A miscarriage is typically described as "heartbreaking." A miscarriage can have an impact on the woman, her spouse, partner, siblings, grandparents, entire family, and friends. Almost everyone who has had a miscarriage goes through a period of mourning (Andalibi & Forte, 2018).

Immediately following a miscarriage, there is frequently a significant emotional impact (Robinson, 2014). When an ectopic pregnancy is aborted, some people may experience the same loss. It can take weeks for some people to realize they've lost something (MacWilliams *et al.*, 2016).

Providing family support to families who have lost a child can be difficult since some people find comfort in talking about their miscarriage while others find it terrible to talk about. The baby's father may feel the same sense of loss (Engel & Rempel, 2016).

Men may find it more difficult to express their pain and loss. After a few weeks of miscarriage, some women are able to start planning their next pregnancy. Others may find it difficult to arrange another pregnancy (Cesare *et al.*, 2020). There are organizations that provide information and counseling to those who have experienced a miscarriage (Meredith *et al.*, 2017).

Miscarriage trauma causes psychological suffering in women, and the prevalence of clinically significant depressive symptoms is generally underestimated. Subjects interviewed 6 to 8 weeks after a miscarriage had significantly higher levels of depression than a control group of non-pregnant women (Sejourne *et al.*, 2010)..

Furthermore, 20% of them were deemed to be outwardly symptomatic for depressed disease. Around 11% of Chinese women reported serious depression and 1.4 percent were diagnosed with anxiety disorders six weeks after a miscarriage; nevertheless, the incidence of major depression was lower than in research conducted in Western cultures (Lok *et al.*, 2014).

Women are at a dramatically elevated risk for mild depressive episodes six months after miscarriage, with the majority developing symptoms within the first month (Bellhouse *et al.*, 2019).

The uncertainty that women feel following a miscarriage contributes to a high level of anxiety, which may be more psychologically burdensome than melancholy. Waiting for menstrual cycles to resume, the desire to conceive, the possibility of repeated miscarriage, and anxiety about their reproductive potential are all concerns (Ptettyman *et al.,* 2013).

Anxiety was more common and strong than depression 12 weeks after miscarriage. 6 Anxiety was found to be more prevalent than depression at all three endpoints in a 2007 study conducted at 1, 6, and 13 months after a miscarriage (Cumming *et al.,* 2007).

2.11.The Role of Nurses in Management of Women Following Miscarriage

Because the bulk of study evidence suggests that the long-term repercussions for certain women may be severe, it is vital that therapy does not stop as soon as the miscarriage or accompanying fetal evacuation is confirmed (Sejourne *et al.,* 2010).

Bergner *et al.* (2008), conducted a longitudinal quantitative examination of 232 women who had miscarried in the first trimester. They discovered that maladaptive or ineffective coping mechanisms, as well as psychosocial risk factors, predicted higher melancholy seven months after a miscarriage, and that this trend continued into a subsequent pregnancy.

A pattern of anxious grief was also linked to psychopathology in a later pregnancy. Women who are poorly supported socially from their partners or social networks had stronger grieving reactions than those in supportive relationships, according to studies. Healthcare practitioners should assess isolation in women following miscarriage (Murphy et al., 2012 It's no surprise, however, that research has linked marital pleasure to a lower risk of psychopathology after a miscarriage (Van den Akker, 2011).

Because medical, nursing, and midwifery professionals are primarily responsible for miscarriage diagnosis and treatment, they may be unfamiliar with psychological and psychiatric examinations and hence fail to detect psychological and psychiatric illness in the populations they serve (Cheung *et al.*, 2013).

There is currently no standardized psychological examination for evaluating psychological morbidity in women and men following a miscarriage. However, since anxiety and depression are present in the majority of women and men in the studies, a number of generic measures, such as the General Health Questionnaire or the Hospital Anxiety and Depression Scales, combined with questions about grief reactions and trauma symptoms, or the Perinatal Grief Scale, could provide some insight into these couples' psychological needs (Quenby *et al.*, 2021).

It is past time for healthcare practitioners to gain a better understanding of the psychological and social impacts of miscarriage, and to recognize and support it as a real and serious loss (Farren *et al.*, 2018).

Those who have had a miscarriage report low levels of satisfaction if the healthcare providers' attitudes were perceived to be negative, if contact with healthcare involved 'entering and exiting a medical facility quickly,' or if information was insufficient and follow-up care did not consider their psychological needs, according to evidence outlined in recent reviews (Farren *et al.*, 2020).

Women could be sent to a mental health expert for a more thorough evaluation by medical and allied healthcare providers. Psychologists that specialize in women's health, for example, may be the best people to examine and help women who have lost their fertility. Supportive treatment that encourages adaptive coping skills could be provided, allowing for a faster recovery from the loss (Campillo *et al.*, 2017).

There is some evidence that counseling programs for couples who have had a stillbirth or a neonatal loss are beneficial (Nynas *et al.*, 2015). There are no such therapy programs for persons who have had a miscarriage. One RCT compared the efficacy of early (4 months after miscarriage) or delayed (1 year after miscarriage) counseling care to a control condition, and found a specific caring effect in improving overall emotional disturbance, and both the control and intervention arms resulted in increased self-esteem and decreased psychological symptoms at 1 year (Swanson, 1999).

A small-scale RCT comparing the effectiveness of interpersonal counseling vs usual care found that the counseling group had a significantly lower rate of negative psychological effects than the usual care group (Neugebauer et al., 2006).

2.11.Previous Studies

Broen et al. (2004)

"Psychological impact on women of miscarriage versus induced abortion: a 2-year follow-up study".

Objective: To compare the psychological trauma reactions of women who had either a miscarriage or an induced abortion, in the 2 years after the event. Further, to identify important predictors of Impact of Event Scale (IES) scores.

Method: A consecutive sample of women who experienced miscarriage (N = 40) or induced abortion (N = 80) were interviewed 3 times: 10 days (T1), 6 months (T2), and 2 years (T3) after the event.

Results: At T1, 47.5% of the women who had a miscarriage were cases (IES score 19 points on 1 or both of the IES subscales), compared with 30% for women who had an induced abortion (p = .60). The corresponding values at T3 were 2.6% and 18.1%, respectively (p = .019). At all measurement time points, the group who had induced abortion

scored higher on IES avoidance. Women who had a miscarriage were more likely to experience feelings of loss and grief, whereas women who had induced abortion were more likely to experience feelings of relief, guilt, and shame. At T3, IES intrusion was predicted by feelings of loss and grief at T1, whereas avoidance at T3 was predicted by guilt and shame at T1.

Van den Akker (2011)

"The psychological and social consequences of miscarriage".

Objective: Identification and estimation of medically defined miscarriages, and describes research highlighting the psychological effects and individual social context of miscarriage.

Methods: Specifically, issues of culture and social psychological interpretations of miscarriage are discussed in this article, and suggestions for improvement of follow-up care are discussed.

Results: The research reviewed shows there is a need for immediate and longer term recognition of the psychosocial effects of miscarriage and support for women, particularly those not supported within their social network, and emphasizes the need to be culturally aware when addressing health policy and healthcare needs of different populations undergoing similar reproductive losses.

Qu et al. (2017)

"The association between psychological stress and miscarriage: a systematic review and meta-analysis".

Objective: The study aimed to investigate whether maternal psychological stress and recent life events are associated with an increased risk of miscarriage.

Methods: A literature search was conducted to identify studies reporting miscarriage in women with and without history of exposure to psychological stress (the only exposure considered). The search produced

1978 studies; 8 studies were suitable for analysis. A meta-analysis was performed using a random-effects model with effect sizes weighted by the sampling variance.

Results: The risk of miscarriage was significantly higher in women with a history of exposure to psychological stress (OR 1.42, 95% CI 1.19–1.70). These findings remained after controlling for study type (cohort and nested case-control study OR 1.33 95% CI 1.14–1.54), exposure types (work stress OR 1.27, 95% CI 1.10–1.47), types of controls included (live birth OR 2.82 95% CI: 1.64–4.86). It is found no evidence that publication bias or study heterogeneity significantly influenced the results. Finding provides the most robust evidence to date, that prior psychological stress is harmful to women in early pregnancy.

Farren et al. (2018)

"The psychological impact of early pregnancy".

Objectives: The study aims to investigate three questions. (1) What is the evidence for depression, anxiety and post-traumatic stress disorder (PTSD) following a miscarriage or an ectopic pregnancy in women and/or their partners? (2) What is the intensity and duration of these conditions, and how do they compare to those without losses? (3) Which patients have been found to be at highest risk of psychopathology? Answers to these questions are salient not only in day-to-day clinical interactions with those experiencing EPL, whose psychological needs may not be prioritized, but should also form the basis for tailoring healthcare policy in terms of screening for and treating the associated psychological morbidity.

Methods: The following databases were searched, from the start of each database up to July 2017: MEDLINE (Ovid interface, 1948 onwards), Embase classic + Embase (Ovid interface, 1947 onwards), and PsychINFO (Ovid interface, 1806 onwards). Search strategies were developed using medical subject headings (MeSH). The concepts of psychological

morbidity (anxiety, depression or PTSD) and pregnancy loss (miscarriage or ectopic pregnancy) were first expanded with the Boolean operator ‘or’, then linked together using.

Results: Findings found evidence of significant depression and anxiety in the first month following EPL in women. Partners were also shown to display depression and anxiety, albeit to a generally lower level. There is also evidence of post-traumatic stress symptoms relating to the EPL in three studies.

Tavoli et al. (2018)

"Quality of life and psychological distress in women with recurrent miscarriage: a comparative study".

Objectives: This study aimed to evaluate quality of life and psychological distress in Iranian women with recurrent miscarriage and to compare it in women without miscarriage.

Methods: This was a comparative study of quality of life among women with and without recurrent miscarriage. Cases were selected from patients with complain of recurrent miscarriage and comparison group were selected from women attending to two teaching hospitals for annual screening. Quality of life (QOL) was measured using the 36-Item Short Form Survey (SF-36). In addition the Hospital Anxiety and Depression Scale (HADS) were used to measure anxiety and depression. Comparison was made between two groups using the independent samples t-test and chi-square.

Results: The findings demonstrated that women with recurrent miscarriage reported extensive functional disability, and lower level of well-being compared to women without recurrent miscarriage. The findings have some implications for prenatal care and suggest that appropriate treatment of recurrent miscarriage is essential.

Sabit & Fadhil (2022)

"Assessment of stress level among women with spontaneous abortion".

Objectives: The aim of the study was to assess stress level among women with spontaneous abortion and find out the relationship between stress level and some women's sociodemographic and reproductive characteristics.

Methods: A non-probability selection strategy was used to select a purposive sample of 150 aborted women for a descriptive correlational study. This study started on 1st October 2022, to 25th April, 2022. The reliability of the questionnaire was achieved through a pilot study and then presented to experts to prove its validity. The data was analyzed by the application of a descriptive and inferential statistical data analysis approach.

Results: The study results indicated that 40% of women are experiencing severe stress level while 38.7% are experiencing mild stress level (M±SD= 10.06±7.827).

So that the study recommended that the health care institutions should develop support plans and open a section concerned with mental health. The health staff communicates with aborted women to reduce the stress that aborted women face from abortion and make these sections specialized for psychological support for aborted women.

Chapter Three
Methodology

Chapter Three

Methodology

Scientific research technique is a collection of scientific standards, criteria, and controls that are followed when conducting a research. As a result, scientific research methodology is a key aspect of how successful scientific research is built and organized. One of the most important controls of scientific research is that it is organized and accurate, so that everyone who reads it and looks at its lines benefits from it. As a result, we should discuss the various scientific research methods that a researcher can employ during the course of conducting a well-structured scientific research. The study design, as well as all other scientific steps taken by the researcher from the beginning to the end of the investigation, will be described in this chapter.

3.1.Study Design

The descriptive analytical study design technique entails questioning individuals of the study population with the sole purpose of describing the examined phenomena in terms of its nature and degree of presence. The descriptive cross-sectional method entails questioning study participants about psychological issues. Because the study's problem is current, and it will be studied through direct interrogation, and the goal of this study is to stop at the limit of description of the study variables (Psychological Aspects), the descriptive analytical approach is the best choice. It is based on the study of the phenomenon and the statement of its characteristics and size, as well as the collection and interpretation of data.

The following items are included in the descriptive analytical study design:

1. The study goal was to find out what psychological aspects there were.

2. The study spatial borders were Babylon Hospital for Maternity and Paediatrics, as well as AL- Imam AL-Sadiq Hospital.
3. Time limits: The research took place over a period of November 1 st 2021-May 15 th 2022
4. Women were the subjects of the research.

3.2.Administrative Arrangements

Before collecting the study data, the following official clearances were sought from appropriate authorities:

1. Approval of the study by the University of Babylon/ College of Nursing Council (Appendix A2).
2. In order to formally visit the Hospital, official approvals were obtained from the Babylon Health Directorate (Training and Development Division) (Appendix A2).
3. Hospitals have given their official clearance, which includes:
   A. Babylon Hospital for Maternity and Pediatric.
   B. AL-Imam AL- Sadiq Hospital

3.3.Ethical Considerations

Ethical obligations are one of the most important things that the researcher must follow and abide it when doing the study. Before the starting of collecting the data from the community that has been identified for the study, the researcher should clarify the main purpose and desired goal of conducting this study for the sample to be including in the study, as well as adhere to the strict confidentiality of the data taken from the study sample and pledge to use it for scientific purposes related to the study only.

Before the starting of gathering the data from the sample who are participating in the study, the researcher gave a brief explanation about the scientific background of the research and the purpose of conducting the study. Women were verbally informed about the study aims and were

asked to participate and this participation was voluntary. After their agreement to participate in the study, anonymous questionnaire was handed to them to maintain a complete confidentiality for the participants.

3.4.Setting of the Study

The study was carried out in Hilla City/Babylon Governorate, at two hospitals included the Babylon Hospital for Maternity and Paediatric and AL- Imam AL- Sadiq Hospital.

3.4.1.Babylon Hospital for Maternity and Pediatric

Babil Hospital for Women and Children is a hospital specialized in providing medical services for children and newborns, located in the city of Hilla in Bab Al-Mashhad area within Al-Fayhaa residential sector. The foundation stone was laid in 1979 and its construction was completed in 1985. The hospital provides medical care services for its patients from birth to 14 years of age, as well as for pregnant and non-pregnant women who have gynecological diseases. The hospital includes maternity and surgical rooms, as well as a pediatric intensive care unit.

3.4.2.AL-Imam AL- Sadiq Hospital

Al-Imam Al-Sadiq Hospital (Turkish Hospital) is one of the Governmental Hospitals of Babylon Governorate. The hospital is affiliated with the Iraqi Ministry of Health. The hospital consists of 492 inpatient beds, a number of clinics and specialized centers, and 18 operating theaters includes maternity and surgical rooms. The hospital opened in 2017. It includes a lot of consultants, which receives many diseases, including gynecology consultant.

3.5.Sample of the Study

The non-probability (Purposive) sample was selected to carry out the study which consists of (118) women obtained during the one-and-a-half month sampling period. The sample was taken from the gynecological

consultant for women who had miscarriage due to viruses, diagnosed by a specialized gynecologist, and their consent was taken before participating in the research, and then the questionnaire was presented to the women to answer the questions and this was done in the clients' reception room .These sample is distributed throughout two hospitals as shown in figure (3-2) is selected according to the following criteria include:

3.5.1.Inclusions criteria:

1. Women who are come to gyencological consultant complain compilcations of miscarriage by viral infection aborted and diagnosed with viral infection.
2. Women who are agree to be included in study sample.

3.5.2.Exclusion Criteria:

1. Women who are selected for pilot study.
2. Women who had abortion without diagnosis.
3. Women who disagree to take part or refuse to participate in the present study

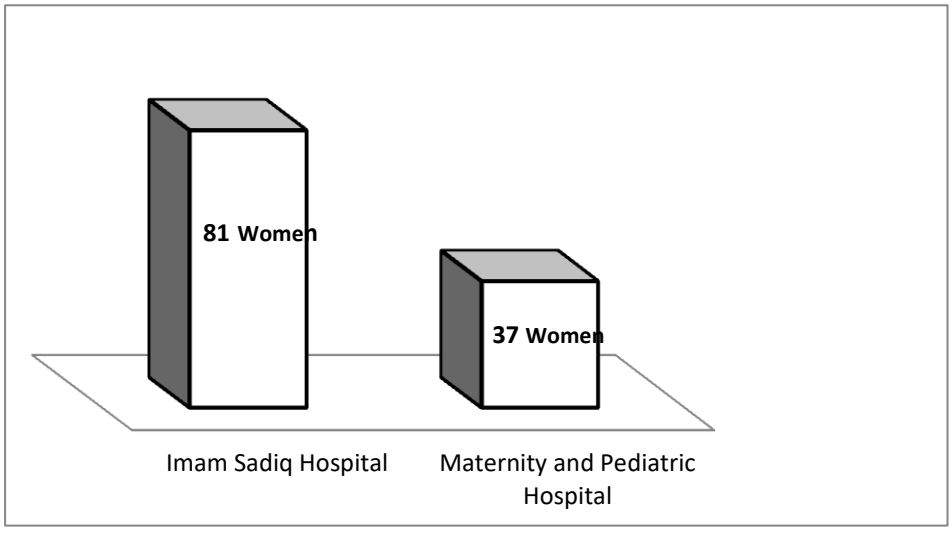

Figure3-1:Distribution of Sample according to Hospitals

3.6.Study Instrument

The questionnaire is one of the means to help collect data that contribute to achieving the results expected by the study, so the researcher designed this questionnaire, which aims to clarify the study objectives and significance by obtaining answers to the study's questions (Appendix B).

This questionnaire consists of two parts which include the following:

Part I: This section composed of socio-demographic information which include women age, education level, occupation, , income/month, residents, gravid, number of miscarriage, duration of last miscarriage and number of living children.

Part II: This section deals with the psychological aspects (***DAS-42***) adopted and developed by Antony et al. (1998), and consist of (42-items) measures the depression, anxiety and stress as the following:

1. ***(D)***depression which composed of 14-items measured on 3-point of Likert Scale (3×Never, 2×Sometime and 1×Always).
2. ***(A)***anxiety which composed of 14-items measured on 3-point of Likert Scale (3×Never, 2×Sometime and 1×Always).
3. ***(S)***stress which composed of 14-items measured on 3-point of Likert Scale (3×Never, 2×Sometime and 1×Always).

The researcher adhered to the rules of writing the questionnaire due to the importance of the type of information that the researcher is keen to be sufficient and comprehensive for all aspects of the problem and can be relied upon and trusted. To vague and complex answers. The type of

questions was of the closed type, which required answering with reference to what was appropriate.

3.7.Validity of the Questionnaire

Content validity is determined through the use of panel of (11) experts. They are selected as follow

1-Three experts are specialized in mental health nursing from the University of Bagdad/ College of Nursing

2-Two experts are specialized in mental health nursing from the University of Karbala / College of Nursing

3-Two experts are specialized in mental health nursing from the University of Babylon / college of Nursing

4-Two experts are specialized in community health nursing from the University of Babylon / college of Nursing

5- One expert is specialized in mental health nursing from the University of Kufa/ college of Nursing

4-One expert is specialized in medical psychiatry from the University of Kufa/ College of Medicine.

To ensure the questionnaire's validity, it was submitted to 11 specialists in diverse Departments of Nursing (Appendix C). Experts were invited to provide their thoughts and ideas on each study questionnaire item in terms of linguistic relevance, relationship to the dimensions of the study variables allocated to it, and applicability to the study community's setting.

The experts responses indicated that minor changes should be done to some items and they were made according to their suggestions , then the final draft was completed to be ready for conducting the study.

3.8.Pilot Study

This preliminarily study was conducted to determine the stability and credibility of the study tool, clarity and its efficiency which confirmed, and standard time required to collect data for each subject which can be

estimated during the interview procedures and to difficulties identification that may encounter. pilot study was conducted during the period Febraury 1st 2021-Febraury13 th 2022

The pilot study aimed to achieve the following objectives.

1. Adequacy of research tools development and testing
2. Evaluation of the instrument's viability.
3. Identifying any logistical issues that may arise as a result of the proposed methods.
4. Assessment of proposed data analysis approaches for the detection of potential issues.
5. The researcher's time estimate during data collecting.

Results of pilot study

1. The questionnaire is reliable.
2. The time required for answering the questionnaire ranged from (15-20) minutes.
3. The instrument items were clarify and understood the phenomenon underlying of the study (Table 3-1).

Reliability of the Questionnaire:

The reliability of the study instruments means making sure that the answer will be almost the same, if it is repeatedly applied to the same people, at different times. The researcher applied it to a random exploratory sample of 10 Women as composed 10% of original sample. Where the members of this sample were later excluded from the original sample on which the final study was conducted. Reliability coefficient using the test coefficient of Alpha Cronbach as shown below.

Table3-1:Reliability of the Studied Questionnaire

Reliability	
Depression=14 items	**0.827**
Anxiety=14 items	**0.822**
Stress=14 items	**0.791**
DAS=42 items	**0.813**

agreement to participate in the study, anonymous questionnaire was handed to them to maintain a complete confidentiality for the participants.

3.9.Methods of Data Collection

The data was carried out from Febraury 15th to April 1st. The questionnaire has been interviewed with study participants. After obtaining the approval of the Babylon Health Directorate and verifying the validity and reliability of the questionnaire.

The researcher interviewee the participants (Women), explained the instructions, answered their questions regarding the form, urged them to participate and thanked them for the cooperation. The interview techniques was used on individual bases, and each interview (20-25) minutes after taking the important steps that must be included in the study design.

3.10.Statistical Data Analysis Approach

In order to statistically analyze the data collected from the study sample to arrive at the results, the researcher used the *SPSS-20* and Microsoft Excel (2010) program to analyze this data and deal with it

statistically, to find the relationships between the variables, and obtain the final results of the research based on a set of statistical tests.

3.10.1.Descriptive approach

Descriptive statistics includes a set of mathematical and statistical methods that are adopted to describe the main features of a data quantitatively by using tables and charts. Descriptive statistics always aim to present and describe the data which is required to be processed, organized, summarized and categorized, as well as presenting them in a simple and clear manner that makes it easier for the recipient to recognize and understand its content. The analysis was performed through the use of:

A. Statistical tables "Frequencies and percent" which are:

$$\% = \frac{\boldsymbol{Frequency}}{\boldsymbol{Sample\ Size}}\ x100$$

B. Statistical Mean "*M*±".

The average score can be calculated by using the following:

$$M.S = \frac{\sum \text{ri} = 1\text{Fi x Si}}{\sum \text{ri} = \ 1\text{Fi}}\ x100$$

The overall responses according to total mean of score which follow:

$$\boldsymbol{total\ mean\ of\ scores} = \frac{\boldsymbol{Maximum\ total\ sores - minimum\ \ total\ sores}}{\mathbf{3}}$$

M= 42-84 refers to High Psychological Aspects

M= 85-126 refers to Moderate Psychological Aspects

M= 127-168 refers to Low Psychological Aspects

C.Standard Deviation test ±*SD*.

$$SD = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(Xi - \bar{\chi})^2}$$

D.It uses a correlational coefficient "Cronbach alpha" used in estimating the internal consistency of the study tool, which can be calculated by using the following:

$$\alpha = \frac{K}{K-1}\left[1 - \frac{\sum_{i=1}^{K}\sigma_{ii}}{\sum_{i=1}^{K}\sum_{j=1}^{K}\sigma_{ij}}\right]$$

3.10.2.Inferential approach

1. **Independent Sample t-test**

The unrelated sample The *t-test* examines the means of two independent groups to see if statistical evidence exists that the related population means are-significantly different.

$$t = \frac{\mu_A - \mu_B}{\sqrt{\left[\frac{\left(\Sigma A^2 - \frac{(\Sigma A)^2}{n_A}\right) + \left(\Sigma B^2 - \frac{(\Sigma B)^2}{n_B}\right)}{n_A + n_B - 2}\right] \cdot \left[\frac{1}{n_A} + \frac{1}{n_B}\right]}}$$

$(\Sigma A)^2$: Sum of data set A, squared (Step 2).
$(\Sigma B)^2$: Sum of data set B, squared (Step 2).
μ_A: Mean of data set A (Step 3)
μ_B: Mean of data set B (Step 3)
ΣA^2: Sum of the squares of data set A (Step 4)
ΣB^2: Sum of the squares of data set B (Step 4)
n^A: Number of items in data set A
n^B: Number of items in data set B

2. Analysis of Variance

For equality of means, is used (ANOVA test when the mean parameter varies).

Source of variance	Sum of square	d.f	Mean square	F
Between Groups	$SS_B = \sum \frac{(\sum xP1)^2}{n} - \frac{(\sum xP)^2}{n}$	$df_B = K\text{-}1$	$\frac{MS\beta}{MS\beta}$	
Within Groups	$SS_w = \sum \frac{(\sum xP1)^2}{N} - \frac{(\sum xP)^2}{N}$	$df_w = N\text{-}k$	$\frac{SSw}{DFw}$	$\frac{MSB}{MSW}$
Total	$SS_T = \sum \frac{(\sum xP1)^2}{N} - \frac{(\sum xP)^2}{N}$	$df_t = N\text{-}1$		

P-value (≤0.05)

The following are shortcuts for measuring important in comparison to the level:

NS:>*0.05 Non significantly*-differences.

S:<*0.05 Significantly*-differences.

3.11.Limitations

- Lack of national research studies on the phenomenon underlying the present study.
- Difficulty obtaining samples in hospital clinics.

Chapter Four Results of the Study

Chapter Four

Results of the Study

This chapter extensively introduces the outcomes of the research in tables and these refer to the objectives of this report, which are as follows:

Table 4.1.Descriptive Statistic Analysis of Demographic Variables

	Classification	Freq.	%
Age/years (*M± SD= 28.19±7.582*)	<20 years old	19	16.1
	20-29 years old	58	49.2
	30-39 years old	23	19.5
	≥40 years old	18	15.3
Education level	Illiterate	16	13.6
	Elementary school	33	28.0
	Intermediate school	21	17.8
	Secondary school	48	40.7
Occupation	Employment	37	31.4
	Housewife	75	63.6
	Students	6	5.1
Financial status	Sufficient	52	44.1
	Certain limit	34	28.8
	Insufficient	32	27.1
Residents	Urban	81	68.6
	Rural	37	31.4
Gravida	<3	36	30.5
	3-5	66	55.9
	>5	16	13.6
No. miscarriage	<3	39	33.1
	3-5	66	55.9
	>5	13	11.0
Duration	<6 month	66	55.9
	>6 month	52	44.1
No. children	No	67	56.8
	1	40	33.9
	>1	11	9.3

Finding show participants age, the mean age is 28, the age 20-29 years old were recorded the highest percentage (*n=58*; 49.2%), followed by those who are aged 30-39 years old (*n=23*; 19.5%), followed by those who are aged <20 years and old (*n=19*; 16.1%) and those who are aged ≥ 40 years old (*n=18*; 15.3%).

Respected to the education level, the secondary school were predominated (*n=48*; 40.7%), followed by those who are elementary school (*n=33*; 28%), followed by those who are intermediate school (*n=21*; 17,8%) and those who are illiterate (*n=16*; 13.6).

In regard with occupation, more than half of participants were housewives (*n=75*; 63.6%), followed by those who are employees (*n=37*; 31.4%) and those who are students (*n=6*; 5.1%).

Financial status related findings, women exhibit a sufficient financial (*n=52*; 44.1%), followed by those who are a certain limit (*n=34*; 28.8%) and those who are insufficient (*n=32*; 27.1%).

In deals with residents, the urban residents were highly (*n=81*; 68.6%) as compared those who are rural (*n=37*; 31.4%).

In terms of gravida, women expressed 3-5 pregnancy time (*n=66*; 55.9%), followed by those who are <3 (*n=36*; 30.5%) and those who are >5 (*n=16*; 13.6%).

Number of miscarriage related findings, most of women had 3-5 miscarriage (*n=66*; 55.9%), followed by those who are <3 (*n=39*; 33.1%) and those who are >5 (*n=13*; 11%).

The duration of last miscarriage, more than half of participants they had miscarriage for less than 6 month (*n=66*; 55.9%) as compared with those who are more than 6 month (*n=52*; 44.1%).

In terms of number of living children, women exhibit no had living children (*n=67*; 55.9%), followed by those who had one child's (*n=40*; 33.9%) and those who had more than one child's (*n=11*; 9.3).

4.2.Psychological Aspects among Miscarriage Women (*DAS-42*)

Table4-2-1.Psychological Aspects related to Depression

List	Depression Items	Responses	Freq.	%	*M.s ± SD*	*Ass.*
1	I couldn't seem to experience any positive feeling at all	Always	20	16.9	*2.48±0.984*	*Moderate*
		Often	43	36.4		
		Sometime	33	28.0		
		Never	22	18.6		
2	I just couldn't seem to get going	Always	57	48.3	*1.94±1.060*	*High*
		Often	22	18.6		
		Sometime	27	22.9		
		Never	12	10.2		
3	I felt that I had nothing to look forward to	Always	52	44.1	*1.98±1.037*	*High*
		Often	28	23.7		
		Sometime	26	22.0		
		Never	12	10.2		
4	I felt sad and depressed	Always	2	1.7	*3.28±0.774*	*Low*
		Often	17	14.4		
		Sometime	44	37.3		
		Never	55	46.6		
5	I felt that I had lost interest in just about everything	Always	19	16.1	*2.44±0.911*	*Moderate*
		Often	42	35.6		
		Sometime	42	35.6		
		Never	15	12.7		
6	I felt I wasn't worth much as a person	Always	69	58.5	*1.71±1.013*	*High*
		Often	27	22.9		
		Sometime	9	7.6		
		Never	13	11.0		
7	I felt that life wasn't worthwhile	Always	76	64.4	*1.75±1.108*	*High*
		Often	9	7.6		
		Sometime	19	16.1		
		Never	14	11.9		
8	I couldn't seem to get any enjoyment out of the things I did	Always	12	10.2	*2.65±0.861*	*Moderate*
		Often	35	29.7		
		Sometime	53	44.9		
		Never	18	15.3		
9	I felt down-hearted and blue	Always	0	0.0	*3.35±0.698*	*Low*
		Often	15	12.7		
		Sometime	46	39.0		
		Never	57	48.3		
10	I was unable to become enthusiastic about anything	Always	8	6.8	*2.77±0.919*	*Moderate*
		Often	42	35.6		
		Sometime	37	31.4		
		Never	31	26.3		
11	I felt I was pretty worthless	Always	76	64.4	*1.66±1.029*	*High*
		Often	17	14.4		
		Sometime	13	11.0		
		Never	12	10.2		
12	I could see nothing in the future to be hopeful about	Always	42	35.6	*1.99±0.929*	*High*
		Often	44	37.3		
		Sometime	23	19.5		
		Never	9	7.6		
13	I felt that life was meaningless	Always	71	60.2	*1.77±1.081*	*High*
		Often	17	14.4		
		Sometime	16	13.6		
		Never	14	11.9		
14	I found it difficult to work up the initiative to do things	Always	7	5.9	*2.77±0.851*	*Moderate*
		Often	38	32.2		
		Sometime	48	40.7		
		Never	25	21.2		

"(M.s) Mean of scores, (SD) Standard deviation, Level of Assessment (High= 1 – 2, Moderate= 2.1 – 3, Low= 3.1 – 4)"

The mean score and standard deviations of the items reveals that women are experienced moderate level of depression as indicated by moderate mean scores among all items except, the items number (2, 3, 6, 7, 11, 12 and 13) the responses were high level of depression as indicated by low level of mean, as well as, the items number (4 and 9) the responses were low level of depression as indicated by high level of mean.

Table4-2-2:Overall Psychological Aspects related to Depression

Depression Level	Freq.	%	*M ± SD*
High (*M=14-28*)	47	39.8	*32.60±9.922*
Moderate (*M=29-42*)	56	47.5	
Low (*M=43-56*)	15	12.7	
Total	118	100.0	

M: Mean for total score, SD=Standard Deviation for total score

The analysis of psychological aspects related to depression was demonstrate that women are experienced depression with average of *32.60±9.922*; the women experienced moderate level of psychological aspects related to depression (*n=56*; 47.5%).

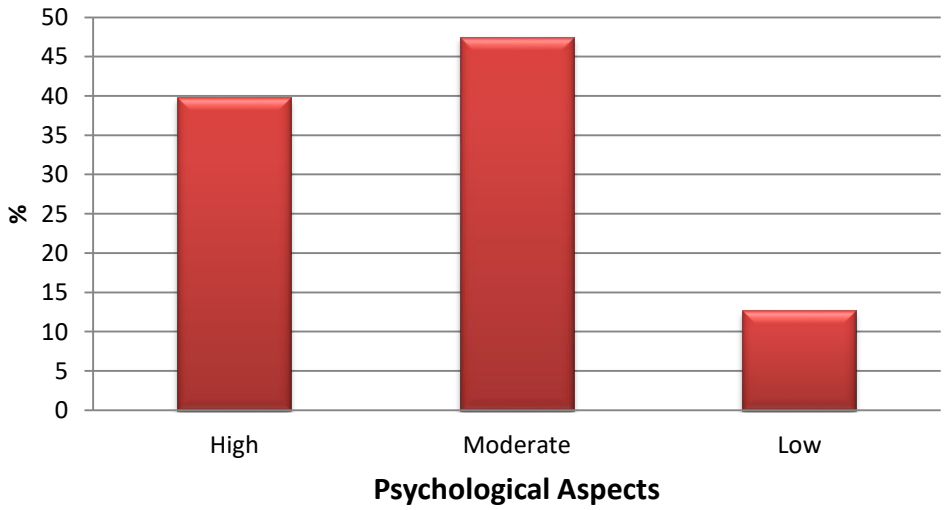

Figure4-1:Psychological Aspects related to Depression

Table4-2-3.Psychological Aspects related to Anxiety

List	Anxiety Items	Responses	Freq.	%	*M.s ± SD*	*Ass.*
1	I was aware of dryness of my mouth	Always	82	69.5	*1.59±0.989*	*High*
		Often	11	9.3		
		Sometime	16	13.6		
		Never	9	7.6		
2	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	Always	93	78.8	*1.41±0.860*	*High*
		Often	6	5.1		
		Sometime	14	11.9		
		Never	5	4.2		
3	I found myself in situations that made me so anxious	Always	93	78.8	*1.39±0.848*	*High*
		Often	9	7.6		
		Sometime	10	8.5		
		Never	6	5.1		
4	I was most relieved when they ended	Always	77	65.3	*1.82±1.202*	*High*
		Often	5	4.2		
		Sometime	16	13.6		
		Never	20	16.9		
5	I had a feeling of faintness	Always	85	72.0	*1.50±0.903*	*High*
		Often	12	10.2		
		Sometime	15	12.7		
		Never	6	5.1		
6	I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion	Always	99	83.9	*1.29±0.754*	*High*
		Often	8	6.8		
		Sometime	6	5.1		
		Never	5	4.2		
7	I felt scared without any good reason	Always	101	85.6	*1.33±0.847*	*High*
		Often	2	1.7		
		Sometime	8	6.8		
		Never	7	5.9		
8	I had difficulty in swallowing	Always	78	66.1	*1.65±0.998*	*High*
		Often	11	9.3		
		Sometime	21	17.8		
		Never	8	6.8		
9	I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)	Always	77	65.3	*1.85±1.235*	*High*
		Often	3	2.5		
		Sometime	16	13.6		
		Never	22	18.6		
10	I felt I was close to panic	Always	78	66.1	*1.68±1.075*	*High*
		Often	13	11.0		
		Sometime	13	11.0		
		Never	14	11.9		
11	I feared that I would be 'thrown' by some trivial but unfamiliar task	Always	100	84.7	*1.30±0.779*	*High*
		Often	5	4.2		
		Sometime	8	6.8		
		Never	5	4.2		
12	I was intolerant of anything that kept me from getting on with what I was doing	Always	90	76.3	*1.39±0.796*	*High*
		Often	13	11.0		
		Sometime	11	9.3		
		Never	4	3.4		
13	I was worried about situations in which I might panic and make a fool of myself	Always	96	81.4	*1.37±0.855*	*High*
		Often	7	5.9		
		Sometime	8	6.8		
		Never	7	5.9		
14	I experienced trembling (e.g., in the hands)	Always	80	67.8	*1.64±1.017*	*High*
		Often	9	7.6		
		Sometime	20	16.9		
		Never	9	7.6		

"(M.s) Mean of scores, (SD) Standard deviation, Level of Assessment (High= 1 – 2, Moderate= 2.1 – 3, Low= 3.1 – 4)"

The mean score and standard deviations of the items reveals that women are experienced high level of anxiety as indicated by low mean scores among all items.

Table4-2-4:Overall Psychological Aspects related to Anxiety

Anxiety Level	Freq.	%	*M ± SD*
High (*M=14-28*)	89	75.4	*21.27±11.862*
Moderate (*M=29-42*)	22	18.6	
Low (*M=43-56*)	7	5.9	
Total	118	100.0	

M: Mean for total score, SD=Standard Deviation for total score

The analysis of psychological aspects related to anxiety was demonstrate that women are experienced anxiety with average of *21.27±11.862*; the women experienced high level of psychological aspects related to anxiety (*n=89*; 75.4%).

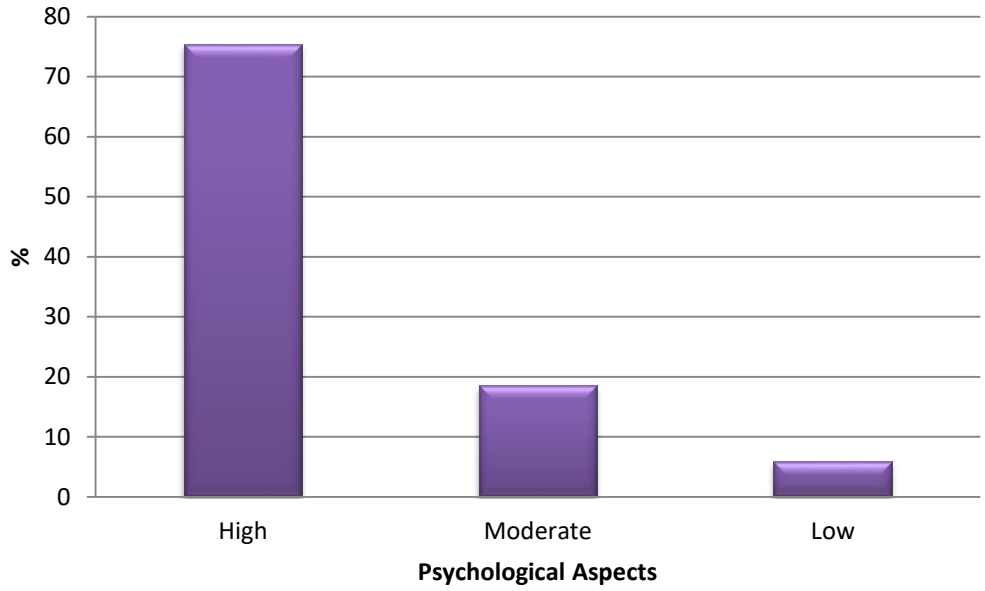

Figure4-2:Psychological Aspects related to Anxiety

Table4-2-5.Psychological Aspects related to Stress

List	Stress Items	Responses	Freq.	%	*M.s ± SD*	*Ass.*
1	I found myself getting upset by quite trivial things	Always	51	43.2	*2.44±1.362*	*Moderate*
		Often	6	5.1		
		Sometime	18	15.3		
		Never	43	36.4		
2	I tended to over-react to situations	Always	61	51.7	*2.26±1.380*	*Moderate*
		Often	4	3.4		
		Sometime	14	11.9		
		Never	39	33.1		
3	I found it difficult to relax	Always	72	61.0	*1.93±1.265*	*High*
		Often	8	6.8		
		Sometime	12	10.2		
		Never	26	22.0		
4	I found myself getting upset rather easily	Always	67	56.8	*2.07±1.314*	*Moderate*
		Often	5	4.2		
		Sometime	16	13.6		
		Never	30	25.4		
5	I felt that I was using a lot of nervous energy	Always	73	61.9	*1.83±1.171*	*High*
		Often	11	9.3		
		Sometime	15	12.7		
		Never	19	16.1		
6	I found myself getting impatient when I was delayed in any way (e.g., lifts, traffic lights, being kept waiting)	Always	86	72.9	*1.64±1.136*	*High*
		Often	6	5.1		
		Sometime	8	6.8		
		Never	18	15.3		
7	I felt that I was rather touchy	Always	88	74.6	*1.66±1.171*	*High*
		Often	1	.8		
		Sometime	10	8.5		
		Never	19	16.1		
8	I found it hard to wind down	Always	66	55.9	*1.96±1.197*	*High*
		Often	10	8.5		
		Sometime	22	18.6		
		Never	20	16.9		
9	I found that I was very irritable	Always	66	55.9	*2.12±1.336*	*Moderate*
		Often	3	2.5		
		Sometime	17	14.4		
		Never	32	27.1		
10	I found it hard to calm down after something upset me	Always	66	55.9	*2.00±1.254*	*Moderate*
		Often	12	10.2		
		Sometime	14	11.9		
		Never	26	22.0		
11	I found it difficult to tolerate interruptions to what I was doing	Always	86	72.9	*1.65±1.142*	*High*
		Often	5	4.2		
		Sometime	9	7.6		
		Never	18	15.3		
12	I was in a state of nervous tension	Always	62	52.5	*2.16±1.348*	*Moderate*
		Often	10	8.5		
		Sometime	10	8.5		
		Never	36	30.5		
13	I was intolerant of anything that kept me from getting on with what I was doing	Always	83	70.3	*1.69±1.158*	*High*
		Often	7	5.9		
		Sometime	9	7.6		
		Never	19	16.1		
14	I found myself getting agitated	Always	69	58.5	*1.94±1.218*	*High*
		Often	7	5.9		
		Sometime	21	17.8		
		Never	21	17.8		

"(M.s) Mean of scores, (SD) Standard deviation, Level of Assessment (High= 1 – 2, Moderate= 2.1 – 3, Low= 3.1 – 4)"

The mean score and standard deviations of the items reveals that women are experienced high level of stress as indicated by low mean scores among all items except, the items number (1, 2, 4, 9, 10 and 12) the responses were moderate stress as indicated by moderate mean score.

Table4-2-6:Overall Psychological Aspects related to Stress

Stress Level	Freq.	%	*M ± SD*
High (*M=14-28*)	72	61.0	*27.41±14.898*
Moderate (*M=29-42*)	27	22.9	
Low (*M=43-56*)	19	16.1	
Total	118	100.0	

M: Mean for total score, SD=Standard Deviation for total score

The analysis of psychological aspects related to stress was demonstrate that women are experienced stress with average of *27.41±14.898*; the women experienced high level of psychological aspects related to stress (*n=72*; 61%).

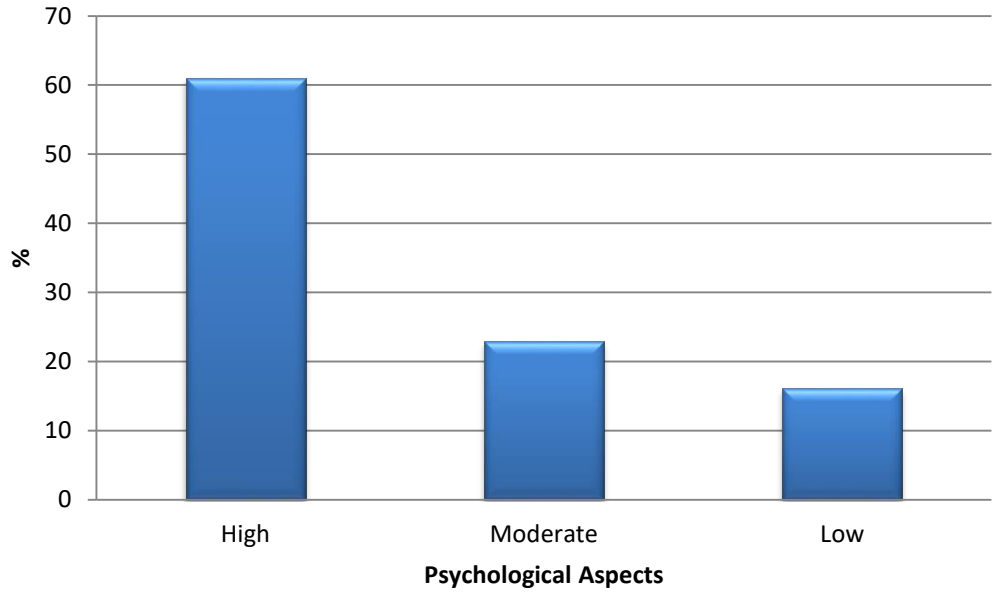

Figure4-3:Psychological Aspects related to Stress

Table4-2-7:Overall Psychological Aspects

Psychological Aspects	Freq.	%	*M ± SD*
High (*M=42-84*)	75	63.6	*81.32±30.306*
Moderate (*M=85-126*)	35	29.7	
Low (*M=127-168*)	8	6.8	
Total	118	100.0	

M: Mean for total score, SD=Standard Deviation for total score

The analysis of psychological aspects by the overall was demonstrate that women are experienced psychological aspect with average of *81.32±30.306*; the miscarriage women experienced high level of psychological aspects (*n=75*; 63.6%).

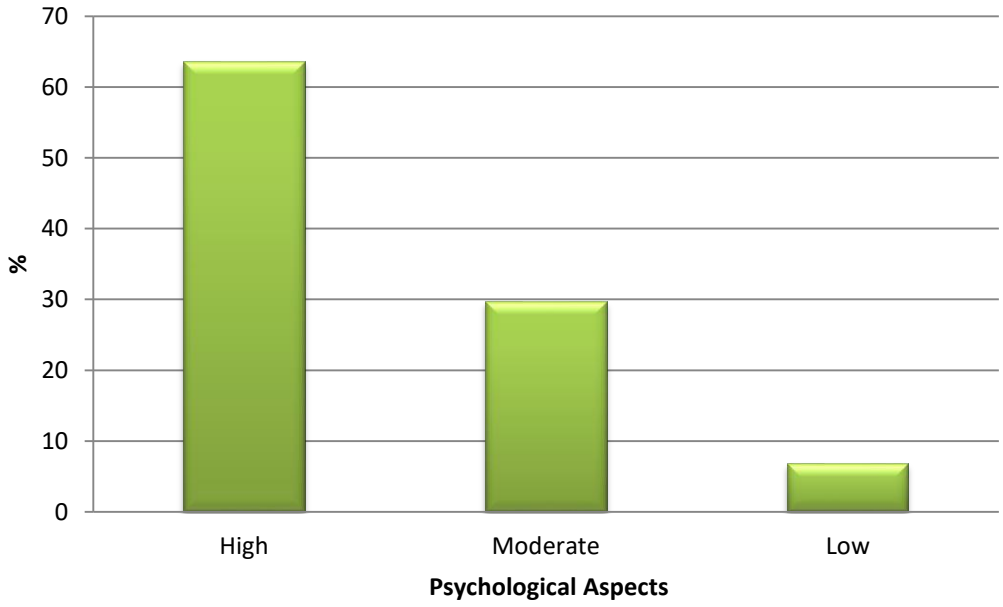

Figure4-4:Overall Psychological Aspects among Miscarriage Women

4.3.Significant Differences in Psychological Aspects with regards Women Socio-demographic Variables

Table 4-3-1:Significant Differences in Psychological Aspects with regard Women Age Groups (*n=118*)

Women Age	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	5.206	3	1.735	3.551	.017
	Within Groups	55.712	114	.489		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were significant differences in psychological aspects with regards women age (*p<0.05*).

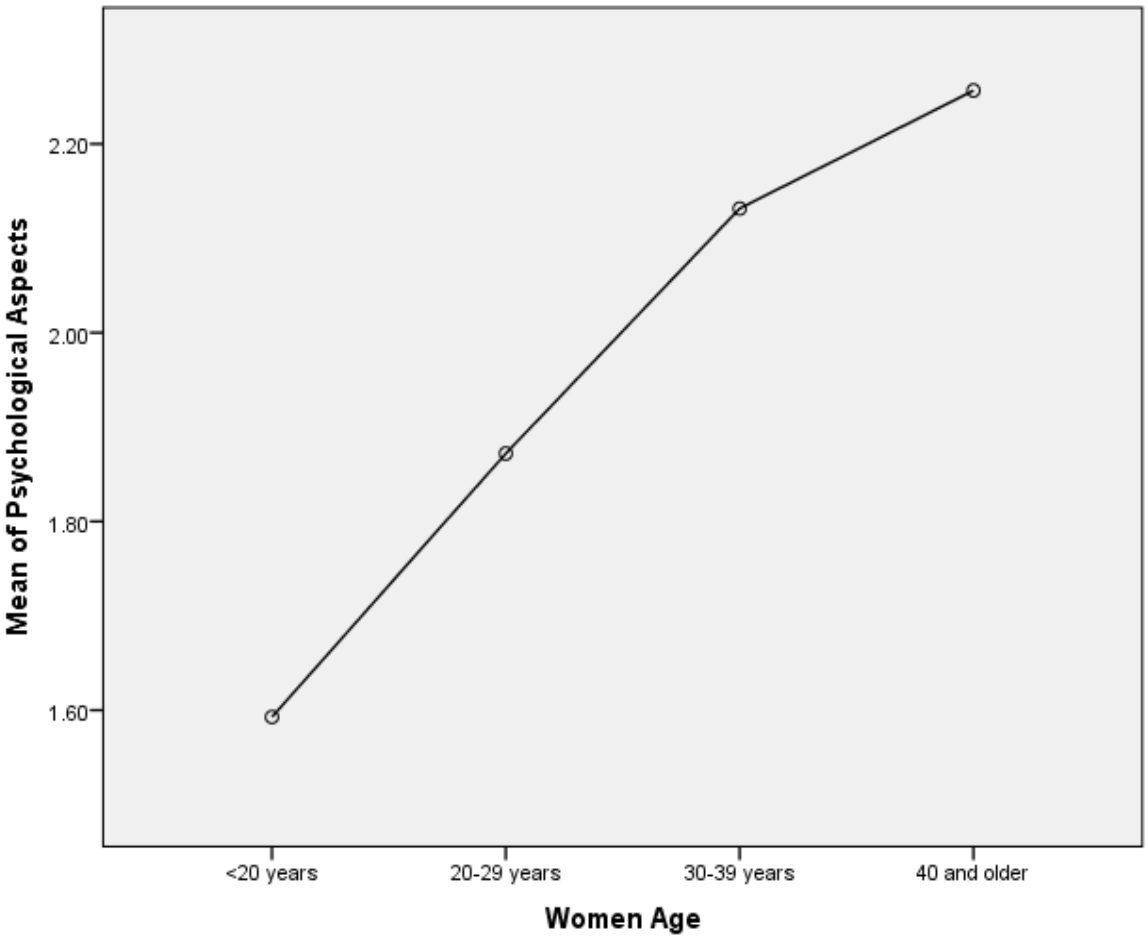

Figure 4-5.Distribution of Psychological Aspects according to Age Groups

Table 4-3-2:Significant Differences in Psychological Aspects with regard Women Education Level (*n=118*)

Education	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	.497	3	.166	.312	.816
	Within Groups	60.422	114	.530		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were no-significant differences in psychological aspects with regards women education level (*p>0.05*).

Table 4-3-3:Significant Differences in Psychological Aspects with regard Women Occupation (*n=118*)

Occupation	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	.938	2	.469	.899	.410
	Within Groups	59.981	115	.522		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were no-significant differences in psychological aspects with regards women occupation (*p>0.05*).

Table 4-3-4:Significant Differences in Psychological Aspects with regard Women Financial Status (*n=118*)

Financial Status	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	.824	2	.412	.788	.457
	Within Groups	60.094	115	.523		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were no-significant differences in psychological aspects with regards women financial status (*p>0.05*).

Table 4-3-5:Significant Differences in Psychological Aspects with regard Residents (*n=118*)

Variables	Residents	Mean	SD	t-value	d.f	*p≤ 0.05*
Psychological Aspects	Urban	1.9794	.76601	.962	116	*.338*
	Rural	1.8417	.61225			

SD: Standard deviation, t: t-test, d.f: Degree of freedom, Sig: Significance, p: Probability value, No-sig.: Not significant.

Findings demonstrated there were no-significant differences in psychological aspects with regards those who are urban and rural (*p>0.05*).

Table 4-3-6:Significant Differences in Psychological Aspects with regard Women Gravida(*n=118*)

No. Pregnancies	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	10.695	2	5.347	12.244	.000
	Within Groups	50.224	115	.437		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were high-significant differences in psychological aspects with regards Gravida (*p<0.00*).

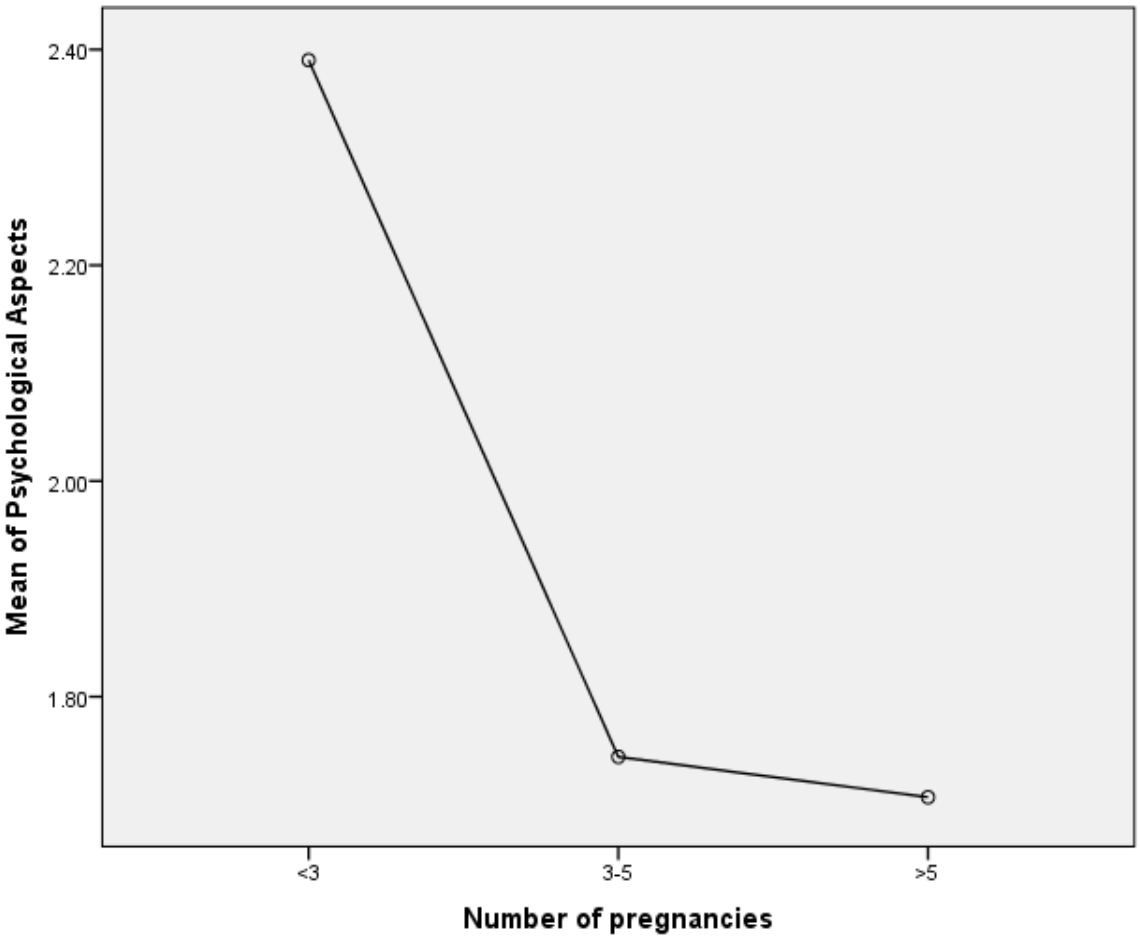

Figure4-6.Distribution of Psychological Aspects according to Gravida

Table 4-3-7:Significant Differences in Psychological Aspects with regard Women Number of Miscarriage (*n=118*)

No. Miscarriage	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	12.923	2	6.462	15.483	.000
	Within Groups	47.995	115	.417		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were high-significant differences in psychological aspects with regards number of miscarriages (*p<0.00*).

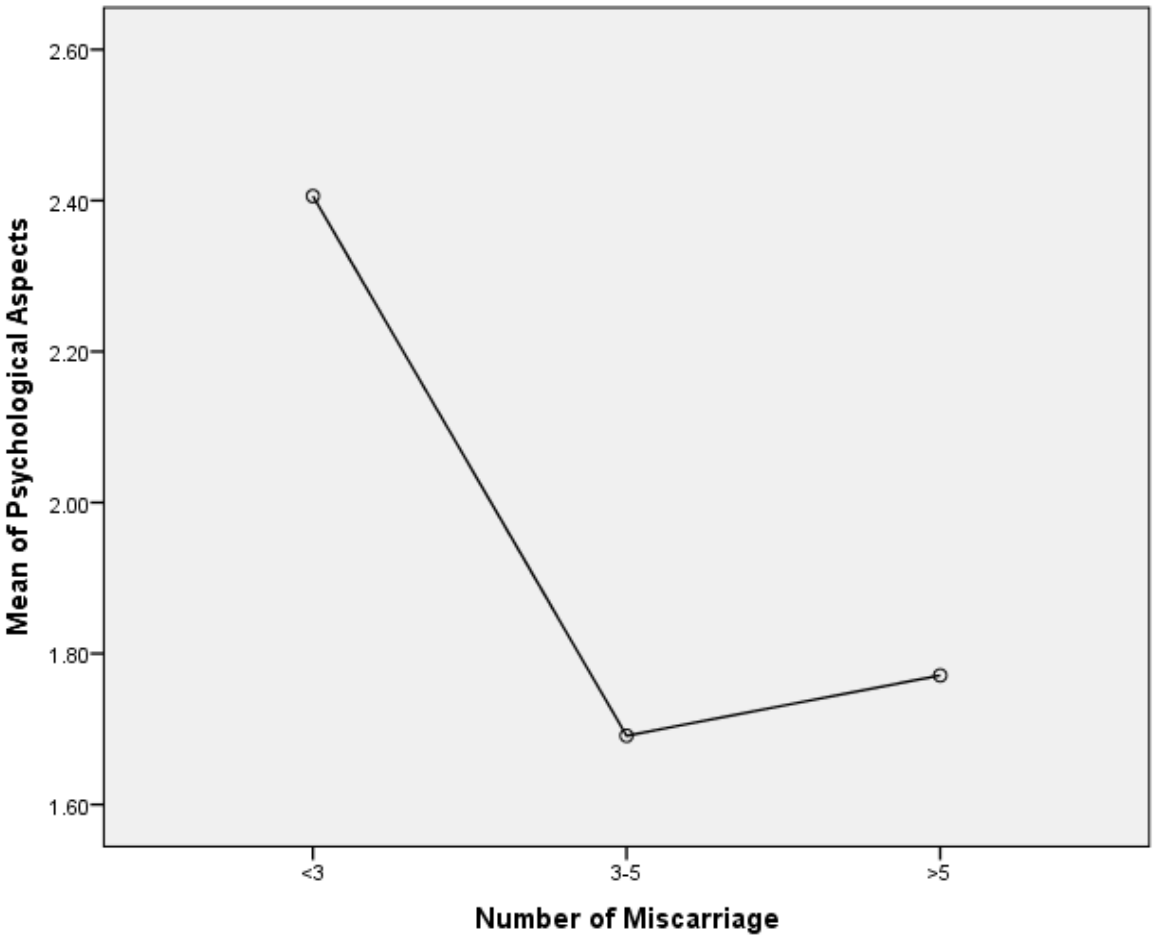

Figure4-7.Distribution of Psychological Aspects according to Number of Miscarriage

Table 4-3-8:Significant Differences in Psychological Aspects with regard Women Duration of Last Miscarriage (*n=118*)

Variables	Duration	Mean	SD	t-value	d.f	*p≤ 0.05*
Psychological Aspects	<6 month	1.9722	.80925	.609	116	*.544*
	>6 month	1.8906	.59667			

SD: Standard deviation, t: t-test, d.f: Degree of freedom, Sig: Significance, p: Probability value, No-sig.: Not significant.

Findings demonstrated there were no-significant differences in psychological aspects with regards duration of last miscarriages (*p>0.05*).

Table 4-3-9:Significant Differences in Psychological Aspects with regard Women Number of Living Children (*n=118*)

No. Living Children	Source of variance	Sum of Squares	d.f	Mean Square	F	*p≤ 0.05*
Psychological Aspects	Between Groups	13.239	2	6.620	15.966	.000
	Within Groups	47.679	115	.415		
	Total	60.918	117			

d.f: Degree of freedom, F: F-statistic

Findings demonstrated there were high-significant differences in psychological aspects with regards number of living children (*p<0.01*).

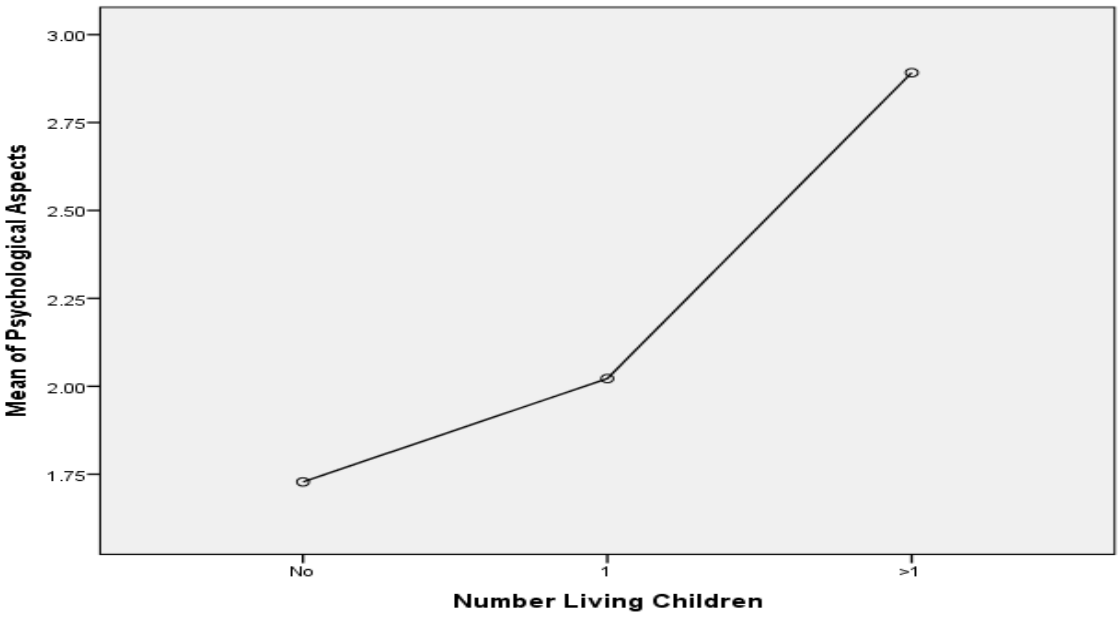

Figure4-8.Distribution of Psychological Aspects according to Number of Living Children

Chapter Five
Discussion

Chapter Five

Discussion of the Study Results

The study aimed to assess the psychological aspects among miscarriage women by viral infection and investigate the associated socio-demographic variables. This chapter extensively introduces the outcomes of the research in tables and these refer to the objectives of this report, which are as follows:

5.1.Socio-demographic Characteristics of the Study Sample

Findings show participants age, the mean age is 28, the age 20-29 years old were recorded the highest percentage (49.2%), followed by those who are aged 30-39 years old, followed by those who are aged <20 years and old (*n=19*; 16.1%) and those who are aged ≥ 40 years old. These findings come in line with Shurack (2015), due to the youth category of the sample and might be the culture nature that the usual marriage age and reproduction of them is the twentieths.

With respect to the education level, the secondary school were predominated as considered informal educated, followed by those who are elementary school, followed by those who are intermediate school and those who are illiterate these findings in agreement with Kandeger *et al.* (2017), the majority of studied sample was secondary school. Those results were lower than Kotta *et al.* (2018), the majority of studied sample was college graduated. The differences were depending on geographical location and cultural environment.

In regard with occupation, more than half of participants were housewife, followed by those who are employment and those who are students, due to low level of education as a result, most of them work as housewives. While, in study of Dos Santos Mutta and Angerame Yela (2017), exhibit that 70% of women were work outside of home due to the educational level enables them to get a job other than housewives.

In deals with residents, the urban residents were highly as compared those who are rural and those come with Chae (2017), due to that the urban population is larger than the rural population.

Such characteristics are capable of stress and psychological stress, women expressed 3-5 pregnancy time, followed by those who are <3 and those who are >5. Number of miscarriage related findings, most of women had 3-5 miscarriage, followed by those who are <3 and those who are >5. The duration of last miscarriage, more than half of participants they had miscarriage for less than 6 month as compared with those who are more than 6 month. In terms of number of living children, women exhibit no had living children, followed by those who had one child's and those who had more than one child's.

5.2.Psychological Aspects

The analysis of psychological aspects by the overall was demonstrate that women are experienced psychological aspect with average of *81.32±30.306*; the miscarriage women experienced high level of psychological aspects (Table 4-2-7), these results are worrying for women. In analysis of depression, women experienced moderate level of psychological aspects related to depression. In analysis of anxiety, the women experienced high level of psychological aspects related to anxiety. and analysis of psychological aspects related to stress was demonstrate high level of psychological aspects related to stress.

In findings of Rousset et al. (2011), about 12–15 percent of recognised pregnancies end in miscarriage. Studies suggest that after a miscarriage 30 – 50 percent of women experience anxiety and 10 –15 percent experience depression, typically lasting up to four months.

These findings come with evidence that indicate the significant depression and anxiety in the first month following miscarriage in women.

There is also evidence of post-traumatic stress symptoms relating to the miscarriage women (Farren *et al.,* 2018).

According to the National Institute of Health and Care Excellence (NICE) in the UK, grief following miscarriage is "comparable in nature, intensity, and duration" to grief reactions in people suffering other types of major loss (Pundir & Coomarasamy, 2016).

A 2016 study calls attention to the traumatic nature of a lost pregnancy: it found that four in ten women experienced PTSD symptoms within three months following either a miscarriage or ectopic pregnancy. PTSD symptoms reported by the study's participants included nightmares, flashbacks, and re-experiencing feelings associated with the loss. Some women also noted they attempted to avoid situations that would remind them of their loss, such as pregnant friends or relatives (MacWilliams *et al.,* 2016).

Although, World Health Organization (WHO) review concluded that there is not enough evidence to recommend offering psychological support as standard following miscarriage, it suggests that follow-up appointments could help to identify women at risk of developing mental health problems or offer support to those who are already in distress (WHO, 2015).

The experience of miscarriage could further affect maternal mental health in subsequent pregnancies. A study found that women who had experienced a miscarriage previously, even when they also had a living child, experienced more anxiety and pregnancy-specific distress than women with no history of miscarriage (Woods-Giscombé *et al.,* 2010).

5.3.Predisposing Socio-Demographic Factors Associated Psychological Aspects of Miscarriage Women

5.3.1.Psychological Aspects and Women Age

In current study findings there were significant differences in psychological aspects with regards women age (*p<0.017*) (table 4-3-1). From the findings, The levels of psychological aspects were different according to age and gradually as women who are aged <20 years exhibited higher psychological aspects (recorded a lower mean of psychological aspects), followed by women who are aged 20-29 years, women who are aged 30-39 years and women who are aged ≥ 40 years old (Figure 4-5).

This findings is supported by Tavoli *et al.* (2018), findings that the younger women were poor quality of life associated with miscarriage. As confirmed by Nynas et al. (2015) and Kotta *et al.* (2018), the younger women were more depressed and anxious than the older age groups.

Age is an influential factor in psychological aspects, as the more advanced the age, the psychological aspect of the miscarriage woman improves. Because she loses hope of pregnancy and childbearing, and then gives up the attempt, unlike young women, she tries and exerts herself more.

5.3.2.Psychological Aspects and Education Level

In current findings there were no-significant differences in psychological aspects with regards women education level (*p=0.816*) (table 4-3-2). These results indicate that whatever the educational level is graded from illiterate to college or above, it does not affect the psychological aspects because they are at the same level of stress. This findings come in line with Wallin Lundell et al. (2013), there were no differences in stress between levels of education. Therefore, the educational level, no matter what, is not taken into consideration in the management of psychological

aspects. All levels of education should be treated with the same psychological aspects.

5.3.3.Psychological Aspects and Occupation

The findings demonstrated that there were no-significant differences in psychological aspects with regards women occupation (*p=0.410*) (table 4-3-3). This findings come in line with Athey and Spielvogel (2000), stated that the occupation of women no considered factor effect the psychological sequelae in women after miscarriage. Qu *et al.* (2017), the profession of women no associated with their psychological stress. The average psychological aspects do not differ between the working woman and the housewife in study of Farren *et al.* (2021), meaning that there is no difference in psychological aspects according to the profession

The results confirm that there is no difference between the women employees, the housewive, and the student, with regard to the psychological aspects of miscarriage, because most of them are at the same levels of psychological aspects. So the occupation variable is not considered a factor that affects the psychological aspects, whether they are high or low.

5.3.4.Psychological Aspects and Financial Status

The findings demonstrated that there were no-significant differences in psychological aspects with regards women financial status (*p=0.457)* (4-3-5). This findings is supported by Iwanowicz-Palus *et al.* (2021), there were no difference in quality of life among miscarriage women and their economic status. According psychological aspects confirmed that there is no difference between those who are sufficient and insufficient.

That is, the financial status has no effect on the psychological aspects, whatever they are increased or decreased psychological aspects because financial status is not considered a solution for miscarriage. Attali (2016), the psychological problems of abortion in women are not solved by the economic side

5.3.5.Psychological Aspects and Residents

Women expressed that there is no difference in the psychological aspects of abortion among urban residents (*M ± SD= 1.97±0.766*) and rural (*M ± SD= 1.84±0.6.12*) (*t=0.962; p=0.338*) (table 4-3-6). That is, housing does not affect the psychological aspects, whether it is high or low, as it is the same in urban and rural areas. This findings Quenby *et al*. (2021), mentioned that psychological status not differ in rural and urban.

5.3.6.Psychological Aspects and Gravida

The findings demonstrated that there were high-significant differences in psychological aspects with regards Gravida (*p=0.00*) (table 4-3-7). This findings come in line with Major (2008), who exhibited in their findings that Gravida were significantly associated with mental health in regard with abortion.

The results confirmed that there is a significant difference in the psychological aspects regarding the Gravida, the women who had 5 and 3-5 time of pregnancies were more expressed psychological aspects than those who are less than 3 time (Figure 4-7). As women who had more than 5 pregnancies significantly increased level of psychological aspects (as described by low level of mean). This decade is supported by Coleman (2011), expressed a high level of psychological stress were significantly influenced by Gravida.

5.3.7.Psychological Aspects and Number of Miscarriage

The findings demonstrated that there were high-significant differences in psychological aspects with regards number of miscarriages (*p=0.000*) (table 4-3-8). This findings is supported by studies that confirmed the number of abortion influence the psychological health (Horvath & Schreiber, 2017; Steinberg et al., 2014; Bellieni & Buonocore, 2013). From the finings the women who had 3-5 previous miscarriage expressed higher psychological aspects than others (Figure 4-8). That is, the higher the number of miscarriage is significantly increased psychological aspects.

5.3.8.Psychological Aspects and Duration of Miscarriage

The findings demonstrated that there were no-significant differences in psychological aspects with regards duration of last miscarriages (*p=0.544*) (table 4-3-9). This findings is come alone with Biggs et al. (2017), the psychological aspects do not differ between women as long as miscarriage is repeated. As our results showed, there is no difference between those who miscarried before and after six months, as the psychological stress remain the same level because miscarriages are repeated due to a viral infection that recurs miscarriages.

5.3.9.Psychological Aspects and Number of Living Children

The results showed that there were high-significant differences in psychological aspects with regards number of living children (*p=0.000*) (table 4-3-10). Coleman (2011), confirmed that, a woman suffers from psychological conditions if she does not have a child, and she suffers from severe psychological conditions when she is the reason for not having a child. As the Zareba *et al*. (2020), the reason for the deterioration of the psychological state of women is the inability to have children or repeated miscarriage.

The significant difference was in favor of those who have more than one child, as they records less psychological aspects than those who do not have children (Figure 4-9).

Chapter Six Conclusions & Recommendations

Chapter Six

Conclusions and Recommendations

6.1.Conclusions:

In the light of the results discussion and their interpretations, our study concludes that:

1. Women who suffer from repeated miscarriages face many problems in their lives, including negative psychological effects such as anxiety, stress and depression.

2. Psychological aspects among miscarriage women influenced by their age groups (younger age were considered risk factors of psychological aspects).

3. Frequent pregnancies and miscarriages significantly associated with psychological aspects, as the woman who had more than five pregnancies and miscarriages had the most develop psychological problems.

4. Psychological aspects had been significantly affected by number of living children, as a women who had one or more children had fewer psychological problems than those who not had living children.

6.2.Recommendations

The present study could recommend, based on the above stated conclusions that.:

1. Early routine screening for anxiety and depressive symptoms amongst those women with a history of recurrent miscarriage.
2. Health-care professionals should give more effort to enhance these women's psycho-social support to decrease their anxiety and depressive symptoms.
3. Increasing interest in the issue of miscarriage to find out the appropriate solutions through workshops, seminars, intellectual meetings, and conferences.
4. Conducting studies on the role of health and psychological education in clinics and hospitals in dealing with recurrent miscarriages.
5. Conducting viral examination for women who are planning to become pregnancy to avoid miscarriage and its complications.

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Appendices

University of Babylon
College of Nursing
Research Ethics Committee
Issue No:
Date: / /2021

جـامـعة بـابـل
كـلية التمريـض
لجنة اخلاقيات البحث العلمي

Approval Letter

To,
Suhad Hussain Muhaisen

The Research Ethics committee at the **University of Babylon, College of Nursing** has reviewed and discussed your application to conduct the research study entitled **" Psychological Aspects of Miscarriage Women By Viral Infection**

The Following documents have been reviewed and approved:

1. Research protocol
2. Research instrument/s
3. Participant informed consent

Committee Decision:

The committee approves the study to be conducted in the presented form. The Research Ethics committee expects to be informed about any changes occurring during the study, any revision in the protocol and participant informed consent.

Prof. Dr. Salma K. Jehad
Chair Committee
College of Nursing
Research Ethical Committee
18/01/2022

B612

جمهورية العراق

وزارة الصحة والبيئة
دائرة صحة محافظة بابـــل
المديـــر العـــام
مركـــز التدريب والتنمية البشرية
وحدة أدارة البحوث
العدد : ١١٧
التاريخ : ٢٠٢٢/ ١/ ٣١

Ministry Of Health
Babylon Health Directorate
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Babel_Healthmoh@yahoo.com
Tel:282628 or 282621

إلى / مستشفى الأمام الصادق (ع)
مستشفى بابل للنسائية الأطفال

وزارة الصحة
دائرة صحة بابل
مركز التدريب والتنمية البشرية

م/ تسهيل مهمة

السلام عليكم ...

أشارة إلى كتاب جامعة بابل /كلية التمريض / لجنة الدراسات العليا ذي العدد ٥٢٨ في ٢٠٢٢/١/٣٠

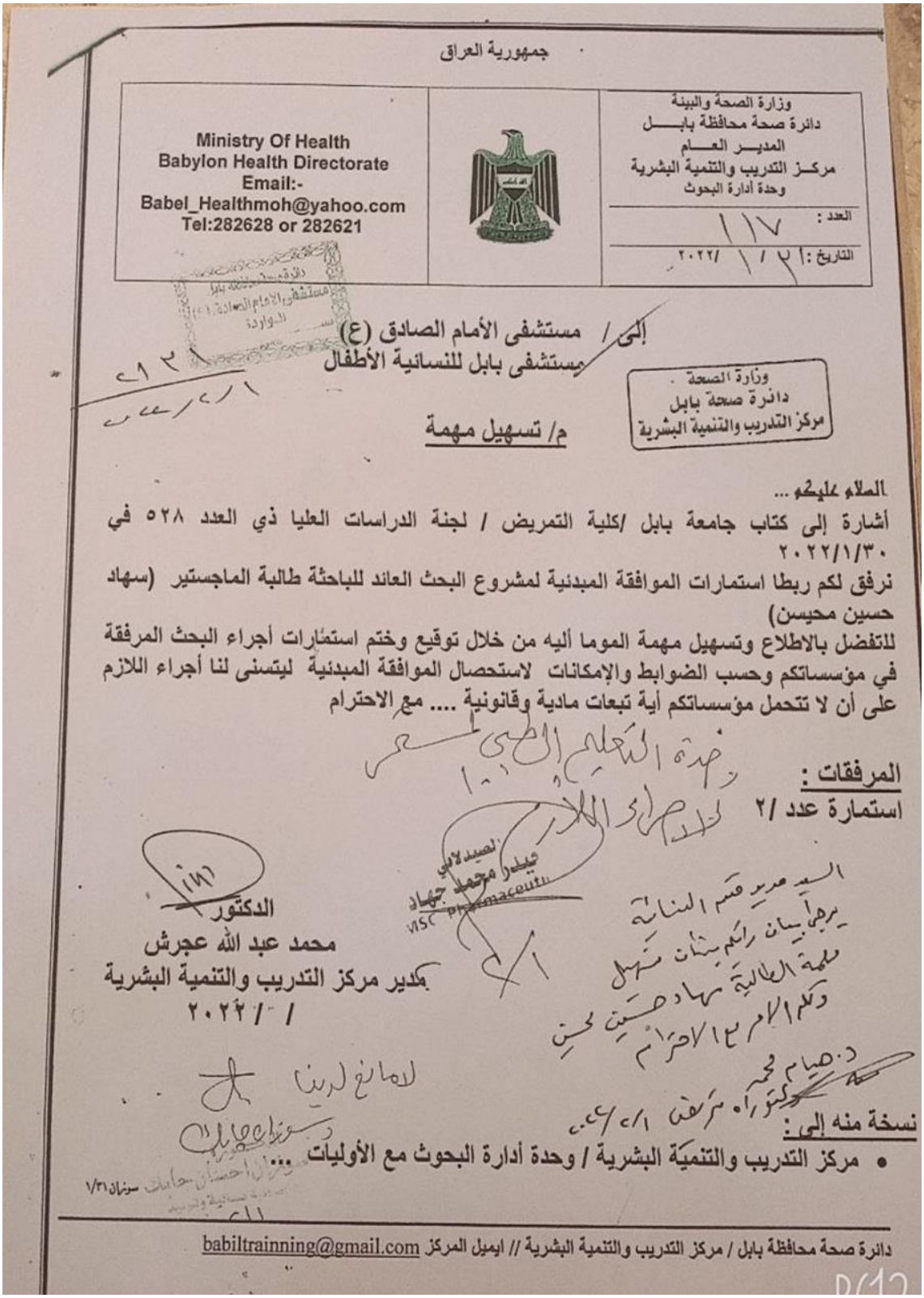
نرفق لكم ربطا استمارات الموافقة المبدئية لمشروع البحث العائد للباحثة طالبة الماجستير (سهاد حسين محيسن)

للتفضل بالاطلاع وتسهيل مهمة الموما أليه من خلال توقيع وختم استمارات أجراء البحث المرفقة في مؤسساتكم وحسب الضوابط والإمكانات لاستحصال الموافقة المبدئية ليتسنى لنا أجراء اللازم على أن لا تتحمل مؤسساتكم أية تبعات مادية وقانونية .... مع الاحترام

المرفقات :
استمارة عدد /٢

الدكتور
محمد عبد الله عجرش
مدير مركز التدريب والتنمية البشرية
/ /٢٠٢٢

نسخة منه إلى :
- مركز التدريب والتنمية البشرية / وحدة أدارة البحوث مع الأوليات ...



جمهورية العراق

وزارة الصحة والبيئة
دائرة صحة محافظة بابـــل
المديـــر العـــام
مركـــز التدريب والتنمية البشرية
وحدة أدارة البحوث

العدد : ١١٧
التاريخ : ٢٠٢٢/١/٢١

Ministry Of Health
Babylon Health Directorate
Email:-
Babel_Healthmoh@yahoo.com
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إلى / مستشفى الأمام الصادق (ع)
مستشفى بابل للنسائية الأطفال

وزارة الصحة
دائرة صحة بابل
مركز التدريب والتنمية البشرية

م/ تسهيل مهمة

السلام عليكم ...
أشارة إلى كتاب جامعة بابل /كلية التمريض / لجنة الدراسات العليا ذي العدد ٥٢٨ في ٢٠٢٢/١/٣٠
نرفق لكم ربطا استمارات الموافقة المبدئية لمشروع البحث العائد للباحثة طالبة الماجستير (سهاد حسين محيسن)
للتفضل بالاطلاع وتسهيل مهمة الموما أليه من خلال توقيع وختم استمارات أجراء البحث المرفقة في مؤسساتكم وحسب الضوابط والإمكانات لاستحصال الموافقة المبدئية ليتسنى لنا أجراء اللازم على أن لا تتحمل مؤسساتكم أية تبعات مادية وقانونية .... مع الاحترام

المرفقات :
استمارة عدد /٢

الدكتور
محمد عبد الله عجرش
مدير مركز التدريب والتنمية البشرية
٢٠٢٢/ /

نسخة منه إلى :
- مركز التدريب والتنمية البشرية / وحدة أدارة البحوث مع الأوليات ...

Ministry of Higher Education and Scientific Research
وزارة التعليم العالي والبحث العلمي
University of Babylon
College of Nursing
جامعة بابل
كلية التمريض
لجنة الدراسات العليا

Ref. No. :
Date: / /

العدد : ٥٢٨
التاريخ : ٢٠٢٢/١/٢٠

الى / دائرة صحة بابل/ مركز التدريب والتطوير
م/ تسهيل مهمة

تحية طيبة :

يطيب لنا حسن التواصل معكم ويرجى تفضلكم بتسهيل مهمة طالبة الماجستير (سهاد حسين محيسن) لغرض جمع عينة دراسة الماجستير والخاصة بالبحث الموسوم :

الجوانب النفسية للنساء المجهضات بسبب العدوى الفايروسية.

Psychological Aspects of Miscarriage women by Viral Infection.

مع الاحترام ...

كلية التمريض
المعاون العلمي

ا.م . د. نهاد محمد قاسم الدوري
معاون العميد للشؤون العلمية والدراسات العليا
٢٠٢٢/١/٢٠

المرافقات //
- بروتوكول.
- استبانة.

صورة عنه الى //
- مكتب السيد العميد للتفضل بالاطلاع مع الاحترام.
- لجنة الدراسات العليا
- الصادرة .

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وزارة التعليم العالي والبحث العلمي
جمهورية العراق
Ministry of Higher Education and Scientific Research
جامعة بابل
كلية التمريض
University of Babylon
College of Nursing

العدد :
التاريخ : / /
Ref. No. :
Date: / /

الى /جامعة بابل / كلية التربية للعلوم الانسانية – قسم اللغة الانكليزية
م/ مقوم لغوي

تحية طيبة :

يرجى التفضل بتحديد عضو هيئة تدريس في كليتكم لغرض تقويم رسالة الماجستير للطالبة (**سهاد حسين محيسن**) والموسومة ب

الجوانب النفسية للنساء المجهضات بسبب العدوى الفيروسية.

Psychological Aspects of Miscarriage women by Viral Infection.

مع الاحترام ...

ا.م . د. نهاد محمد قاسم
معاون العميد للشوون العلمية والدراسات العليا
٢٠٢٢ /٥ / ١٦

نسخة منه الى//
-مكتب السيد العميد... للتفضل بالاطلاع مع الاحترام.
-مكتب السيد معاون العميد للشوون العلمية...للتفضل بالاطلاع مع الاحترام.
- وحدة الدراسات العليا مع الاوليات.
-الصادرة.

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College of Education for Human Sciences

العدد : ٤٨٠٤
التاريخ : ٢١/٥/٢٠٢٠

جامعة بابل / كلية التمريض
الواردة
العدد / ٤٠٤٨
التاريخ ٢١ / ٥ / ٢٠٢٠

Ref. No :
Date:

كلية التمريض
المعاون العلمي

الى/جامعة بابل/ كلية التمريض

مكتب السيد معاون العميد للشؤون العلمية المحترم

م/أعادة رسالة

تحية طيبة:

نعيد إليكم رسالة طالبة الدراسات العليا / الماجستير (سهاد حسين محيسن) بغرض تقويمها لغوياً من قبل (أ.م.د. وفاء مخلص فيصل) من قسم اللغة الانكليزية في كليتنا، وقد ثبتت الملاحظات على متن الرسالة يرجى من الباحثة الالتزام بها.

*** مع الاحترام ***

أ.د. سامة كاظم عمران
المعاون العميد للشؤون العلمية
والدراسات العليا

نسخة منه الى//
- الدراسات العليا
- الصادرة

الأستاذ الدكتور
عادل ياسر الناصري

//سارة//

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B6

Part One: Socio-demographic Characteristics

1. **Age** ☐ year
2. **Educational level**

Not read or write ☐ Elementary School ☐

Secondary School ☐ Intermediate school ☐ Institute and above ☐

3. **Occupation**

Employed ☐ Housewife ☐

Students ☐ Others ☐

4. **Financial Status**

Sufficient ☐ Certain limit ☐ insufficient ☐

5. **Residents**

Urban ☐ Rural ☐

6. **Gravida** ☐
7. **Number of Miscarriage** ☐
8. **Duration of last miscarriage (Month)** ☐
9. **Number Living children** ☐

Second Part: Psychological Aspects among Aborted Women's (Antony et al., 1998)

First: Depression

List	Depression items	Always	Sometime	Often	Never
1	I couldn’t seem to experience any positive feeling at all				
2	I just couldn't seem to get going				
3	I felt that I had nothing to look forward to				
4	I felt sad and depressed				
5	I felt that I had lost interest in just about everything				
6	I felt I wasn't worth much as a person				
7	I felt that life wasn't worthwhile				
8	I couldn't seem to get any enjoyment out of the things I did				
9	I felt down-hearted and blue				
10	I was unable to become enthusiastic about anything				
11	I felt I was pretty worthless				
12	I could see nothing in the future to be hopeful about				
13	I felt that life was meaningless				
14	I found it difficult to work up the initiative to do things				

Second: Anxiety

List	Anxiety items	Always	Sometime	Often	Never
1	I was aware of dryness of my mouth				
2	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)				
3	I found myself in situations that made me so anxious				
4	I was most relieved when they ended				
5	I had a feeling of faintness				
6	I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion				
7	I felt scared without any good reason				
8	I had difficulty in swallowing				
9	I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)				
10	I felt I was close to panic				
11	I feared that I would be 'thrown' by some trivial but unfamiliar task				
12	I was intolerant of anything that kept me from getting on with what I was doing				
13	I was worried about situations in which I might panic and make a fool of myself				
14	I experienced trembling (e.g., in the hands)				

Third: Stress

List	Stress items	Always	Sometime	Often	Never
1	I found myself getting upset by quite trivial things				
2	I tended to over-react to situations				
3	I found it difficult to relax				
4	I found myself getting upset rather easily				
5	I felt that I was using a lot of nervous energy				
6	I found myself getting impatient when I was delayed in any way (e.g., lifts, traffic lights, being kept waiting)				
7	I felt that I was rather touchy				
8	I found it hard to wind down				
9	I found that I was very irritable				
10	I found it hard to calm down after something upset me				
11	I found it difficult to tolerate interruptions to what I was doing				
12	I was in a state of nervous tension				
13	I was intolerant of anything that kept me from getting on with what I was doing				
14	I found myself getting agitated				

**DASS-42*

Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological assessment*, *10*(2), 176.

عزيزتي المراة/

إن المعلومات التي تصدر عنك ستكون في غاية السرية ولن تستخدم إلا لغرض البحث العلمي فقط..

لذا يمكنك الإدلاء برأيك بكل جدية ومصداقية

الجزء الاول: المعلومات الديموغرافية:

١-العمر : ☐

٢-المستوى التعليمي

☐ لا تقرأ ولا تكتب ☐ خريجة ابتدائية

☐ خريجة ثانوية ☐ خريجة معهد فما فوق

٣-المهنة

☐ ربه بيت ☐ موظفة

☐ طالبة ☐ آخرى

٤-الوضع المادي

☐ يكفي ☐ يكفي الى حد ما ☐ لا يكفي

٥- الاقامه

☐ مدينة ☐ ريف

٦-عدد مرات الحمل

☐ حمل أول ☐ حمل متعدد

٧-عدد مرات الإجهاض

☐ مرة واحد ☐ اكثر من واحد

٨- وقت أخر إجهاض (بالأشهر) ☐

٩-عدد ألاطفال الاحياء ☐

الجزءالثاني: الجوانب النفسية عند المجهضات

اولا: الاكتئاب

ت	الفقرات	دائما	أحيانا	غالبا	أبدا
١	لا يبدو أنني أشعر بأي شعور إيجابي على الإطلاق				
٢	أنا فقط لا أستطيع أن أبدأ				
٣	شعرت أنه ليس لدي ما أتطلع إليه				
٤	شعرت بالحزن والاكتئاب				
٥	شعرت أنني فقدت الاهتمام بكل شيء تقريبًا				
٦	شعرت أنني لا أساوي كثيرًا كإنسان				
٧	شعرت أن الحياة لا تستحق العناء				
٨	لم أستطع الحصول على أي متعة من الأشياء التي فعلتها				
٩	شعرت بالحزن الاكتئاب				
١٠	لم أستطع أن أصبح متحمسًا لأي شيء				
١١	شعرت أنني لا قيمة لها				
١٢	لم يكن بإمكاني رؤية أي شيء أأمل فيه في المستقبل				
١٣	شعرت أن الحياة لا معنى لها				
١٤	لقد وجدت صعوبة في العمل على المبادرة لفعل الأشياء				

ثانيا: القلق

ت	الفقرات	دائما	أحيانا	غالبا	أبدا
١	كنت أعي جفاف فمي				
٢	لقد عانيت من صعوبة في التنفس (على سبيل المثال ، التنفس السريع بشكل مفرط، وضيق التنفس في حالة عدم وجود مجهود بدني)				
٣	وجدت نفسي في مواقف جعلتني قلقًا للغاية وشعرت بالارتياح الشديد عندما انتهوا				
٤	شعرت بالارتياح الشديد عندما انتهوا				
٥	تعرقت بشكل ملحوظ (على سبيل المثال، تعرق اليدين) في حالة عدم وجود درجات حرارة عالية أو مجهود بدني				
٦	كان لدي شعور بالضعف				
٧	شعرت بالخوف دون أي سبب وجيه				
٨	كنت أجد صعوبة في البلع				
٩	كنت على دراية بعمل قلبي في غياب المجهود البدني (على سبيل المثال، الإحساس بزيادة معدل ضربات القلب، فقدان ضربات القلب)				
١٠	شعرت أنني على وشك الذعر				
١١	كنت أخشى أن يتم "إلقاء" في مهمة تافهة ولكنها غير مألوفة				
١٢	كنت غير متسامح مع أي شيء يمنعني من متابعة ما كنت أفعله				
١٣	كنت قلقة بشأن المواقف التي قد أصاب بالذعر وأخدع نفسي				
١٤	عانيت من الارتعاش (على سبيل المثال ، في اليدين)				

ثالثا: الإجهاد

ت	الفقرات	دائما	أحيانا	غالبا	أبدا
١	وجدت نفسي منزعجًا من أشياء تافهة جدًا				
٢	كنت أميل إلى المبالغة في رد الفعل على المواقف				
٣	وجدت صعوبة في الاسترخاء				
٤	وجدت نفسي أشعر بالضيق بسهولة إلى حد ما				
٥	شعرت أنني كنت أستخدم الكثير من الطاقة العصبية				
٦	وجدت نفسي ينفد صبر عندما تأخرت بأي شكل من الأشكال (على سبيل المثال، المصاعد وإشارات المرور والانتظار)				
٧	شعرت أنني كنت حساسة نوعا ما				
٨	لقد وجدت صعوبة في الاسترخاء				
٩	لقد وجدت أنني كنت سريع الانفعال للغاية				
١٠	لقد وجدت صعوبة في الهدوء بعد أن أزعجني شيء ما				
١١	وجدت صعوبة في تحمل الانقطاعات لما كنت أفعله				
١٢	كنت في حالة توتر عصبي				
١٣	كنت غير متسامح مع أي شيء يمنعني من متابعة ما كنت أفعله				
١٤	وجدت نفسي مضطربًا				

خبراء تحكيم استمارة الاستبانة

ت	اسم الخبير	اللقب العلمي	الاختصاص	مكان العمل	سنوات الخبرة
١	د. سجاء هاشم محمد	أستاذ	تمريض صحة النفسية والعقلية	جامعة بابل/كلية التمريض	٤٠
٢	د. سلمى كاظم	استاذ	تمريض صحة مجتمع	جامعة بابل/ كلية التمريض	٣٩
٣	د. أمين عجيل ياسر الياسري	استاذ	تمريض صحة مجتمع	جامعة بابل/ كلية التمريض	٣٨
٤	د. علي كريم خضير	استاذ	تمريض صحة النفسية والعقلية	جامعة كربلاء/كلية التمريض	٢٩
٥	د. عرفات حسين الدجيلي	استاذ	طب الصحة النفسية والعقلية	جامعة الكوفة /كلية الطب	١٧
٦	د. كريم رشك ساجت	استاذ مساعد	تمريض الصحة النفسية والعقلية	جامعة بغداد/كلية التمريض	٢٣
٧	د. صافي داخل نوام	استاذ مساعد	تمريض الصحة النفسية والعقلية	جامعة كربلاء/كلية التمريض	١٥
٨	د. حسن علي حسين	استاذ مساعد	تمريض الصحة النفسية والعقلية	جامعة بغداد/كلية التمريض	١٣
٩	د.قحطان قاسم محمد	استاذ مساعد	تمريض الصحة النفسية والعقلية	جامعة بغداد/كلية التمريض	١٢
١٠	حيدر حمزة الحدراوي	استاذ مساعد	تمريض الصحة النفسية والعقلية	جامعة الكوفة/كلية التمريض	12
١١	د. علي احمد الحطاب	مدرس	تمريض الصحة النفسية والعقلية	جامعة بابل/ كلية التمريض	١٠

الخلاصة

الخلفية: تواجه النساء اللواتي يعانين من الإجهاض المتكرر العديد من المشاكل في حياتهن، بما في ذلك الآثار النفسية السلبية مثل القلق والتوتر والاكتئاب. دراسة هؤلاء وبذل المزيد من الجهد لتعزيز الدعم النفسي والاجتماعي لهؤلاء النساء لتقليل القلق وأعراض الاكتئاب. لذلك هدفت الدراسة إلى تقييم الجوانب النفسية للإجهاض بالعدوى الفيروسية وتحديد العوامل الاجتماعية الديموغرافية المرتبطة به.

المنهجية: أجريت دراسة وصفية تحليلية على عينة مكونة من 118 امرأة أجهضن بسبب التهاب فيروسي اختيرت بواسطة اخذ عينة غير احتمالية وتم التحقيق من مصداقية الاستبيان من خلال عرضها على الخبراء لإثبات صحتها. بلغ مجموع عدد الفقرات المدرجة في الاستبيان 42 فقرة موزعة على ثلاثة جوانب (الاكتئاب، القلق، الإجهاد). جمعت البيانات باستخدام المقابلة وتم التحليل بتطبيق الإحصاء الوصفي والاستدلالي.

النتائج: وأشارت نتائج الدراسة إلى أن (63.6٪) من النساء أظهرن مستوى عال من الجوانب النفسية. أكد تحليل التباين وجود فروق في الجوانب النفسية حسب عمر المرأة ($p=0.017$) ، وعدد مرات الحمل ($p=0.000$) ، وعدد مرات الإجهاض ($p=0.000$) ، والأطفال الأحياء ($p=0.000$).

الاستنتاجات والتوصيات: كانت الجوانب النفسية بين النساء المجهضات أعلى بشكل ملحوظ وتأثرت بعمر المرأة ، وعدد مرات الحمل ، وعدد مرات الإجهاض ، والأطفال الأحياء. يجب على المتخصصين في الرعاية الصحية بذل المزيد من الجهد لتعزيز الدعم النفسي والاجتماعي لهؤلاء النساء لتقليل القلق وأعراض الاكتئاب وزيادة الاهتمام بمسألة الإجهاض لاكتشاف الحلول المناسبة من خلال ورش العمل والندوات والاجتماعات الفكرية والمؤتمرات.

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جامعة بابل
كلية التمريض

الجوانب النفسية للنساء المجهضات بالألتهاب الفيروسي

رسالة مقدمة من قبل

سهاد حسين محيسن

الى

مجلـــــس كلية التمريض/ جامعة بابل

كـجزء من متطلبـات نيل درجة المـاجستير في علـوم التمريـض

بإشراف

أ.د. عبد المهدي عبد الرضا حسن

أ.د. ندى خزعل كاظم هندي

أيار /2022 ميلادية *شوال/ 1443 هجرية*