



University of Kerbala

College of Nursing

**Effectiveness of an Educational Program on Nurses'
Knowledge and Attitudes Regarding Pregnancy
Induced Hypertension at Primary Health Care
Centers in Kerbala City**

A Thesis Submitted

By

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To

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Fulfillment of Requirement for the Degree of Master in Nursing
Science**

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Dedication

To

Those who Enlighten the World with their light, my masters
Fatima, her Father, her Husband and her Sons (peace is upon
them)...

My Mother and Father with love and respect

My Brothers and Sisters for their love, support, and
encouragement

My Husband with all love and respect who supports me to
continue my study....

My Uncle and Aunt and their Children....

Dear friends and every person who gave me opportunity to
go on the right way...

Amal

2022

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

((وَوَصَّيْنَا الْإِنْسَانَ بِوَالِدَيْهِ حَمَلَتْهُ أُمُّهُ وَهَنَا عَلَى
وَهْنٍ وَفِصَالُهُ فِي عَامَيْنِ أَنْ اشْكُرْ لِي وَلِوَالِدَيْكَ
إِلَى الْمَصِيرِ))

صدق الله العلي العظيم

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Background: Pregnancy-induced hypertension (PIH) is the most prevalent complication of pregnancy, the common cause of maternal death, and it also contributes to neonatal morbidity and mortality. That influences approximately 10% of all pregnant women worldwide (Tadele *et al.*, 2020).

Objective: of this study is to determine the effectiveness of an educational program on nurses' knowledge and attitudes regarding pregnancy-induced hypertension. And determine the association between the educational program's effectiveness and the demographic characteristics of its participants.

Methodology: A quasi-experimental study design was performed in the Holy Kerbala city's primary health care centers a non-probability "purposive" sample consisting of 60 nurses was chosen and divided into 2 groups of 30 nurses in each group. Only 52 of the 60 samples completed the program, and eight samples did not complete the implementation test (post-test), so they were excluded from the study. The final division consisted of 25 nurses as the study group and 27 nurses as the control group. A pre-test was done for both groups; educational program were applied only to the study group from February 6th –10th. The post test was administered after the implementation of the program for the study group and also done for the control. The study, which lasted from November 1st, 2021 to May 30th, 2022,

Result: of the study revealed that nurses had an increase in knowledge regarding pregnancy-induced hypertension in primary health care centers. The association revealed there is no significant difference between nurses' knowledge and attitudes with demographic characteristics in the two groups study and control

Conclusion: that the nurses in the study group had benefited from an education program in knowledge and attitudes significantly improved compared with the control group.

Recommendation: Those educational and training programs for nurses are offered on a regular basis in order to improve their knowledge of gestational diseases. Educational lectures for nurses in primary health care centers and hospitals must be done on a regular basis and updated to assist nurses in spreading health awareness in order to keep pregnant women and fetuses healthy and reduce morbidity and mortality.

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List of Abbreviations and Symbol Table

Items	Meaning
PIH	Pregnancy Induced Hypertension
HDP	Hypertension Disorder Pregnancy
BP	Blood Pressure
PE	Preeclampsia
GH	Gestational Hypertension
DBP	Diastolic Blood Pressure
SBP	Systolic Blood Pressure
IUGR	Intrauterine Growth Restriction
SGA	Small for Gestational Age
WHO	world health organization
GH	Gestational Hypertension
ICU	Intensive Care Unit
BMI	Body Mass Index
HELLP	Hemolysis, Elevated Liver Enzymes, and Low Platelet
USA	United States of America
NST	Non-Stress Test
CNS	Central Nerve System
CBC	Complete Blood Count
AST	Aspartate Transaminase
ALT	Alanine Aminotransferase
LDH	Lactic Dehydrogenase
IV	Intravenous
U&Es	Urea & Electrolytes
LFTs	Liver Function Tests
ECG	Electrocardiogram
RR	Respiratory Rate
SaO ₂	Saturation of Oxygen
ACOG	The American College of Obstetricians and Gynecologists
NICE	National Institute for Health and Clinical Excellence
PIGF	Placental Growth Factor
ISSHP	International Society for the Study of Hypertension in Pregnancy
PCR	Polymerase Chain Reaction
ACE	Angiotensin-Converting Enzyme
LDH	Lactic dehydrogenase
DIC	Disseminated Intravascular Coagulation
NSAIDs	Non-Steroidal Anti-Inflammatory Drugs
AKI	Acute Kidney Injury

MgSO ₄	Magnesium sulphate
Items	Meaning
CCB	Calcium Channel Blockers
ARBs	Angiotensin II Receptor Blockers
ACEi	angiotension converting enzyme inhibitors
PHCCs	Primary Health Care Centers
No.	Number
SPSS	Statistical Package of Social Sciences
SD	Standard Deviation
d.f	Degree of Freedom
F	Frequency
Sig	Significance
NS	Non –Significant
M	Mean
T- value	T-Test
Eval	Evaluation
Kg	Kilo gram
MmHg	Millimeter mercury
mg/L	Milligram/ liter
%	Percentage
H	Hour
mg/mmol	Milligram/ minimal
>	More than
<	Less than
≥	More than or equal
≤	Less than or equal

Chapter One:
Introduction

Chapter One:

Introduction

1.1. Introduction:

Pregnancy Induced Hypertension (PIH) is the most prevalent complication of pregnancy, the common causes of maternal death, and they also contribute to neonatal morbidity and mortality. That influences approximately 10% of all pregnant women worldwide (Tadele *et al.*, 2020). One of the most common causes of maternal death during pregnancy and delivery is hypertension that can be identified and avoided. Prenatal testing for hypertension and proteinuria, as well as careful monitoring and treatment of preeclampsia, has been shown in studies to reduce eclampsia related maternal mortality by 48-68 percent. Preeclampsia and eclampsia are linked to severe maternal and perinatal morbidity, such as intrauterine growth retardation, premature birth and early newborn deaths, in addition to causing mortality (Liljevik & Lohre, 2012).

Pregnancy-induced hypertension is common in young primigravid women. Primi women over the age of 35, as well as numerous pregnancies with diabetes and obese mothers, are more likely to develop it. It is universally prevalent in low-income mothers who are unlikely to receive routine prenatal care. After 20 weeks of pregnancy, PIH is a pregnancy-specific multisystem illness characterized by edema, hypertension, and proteinuria (Abdalmajed, 2018).

Chronic hypertension, gestational hypertension, preeclampsia, superimposed preeclampsia, and eclampsia are all examples of hypertension disorders. Chronic hypertension in women can be detected before conception or before the 20th week of pregnancy. While

Preeclampsia occurs after 20 weeks of pregnancy and is described as a systemic condition characterized by hypertension and protein in urine, while eclampsia is defined as the occurrence of a seizures, severe hypertension is more than 160/110 mm Hg (Tadele *et al.*, 2020).

The pathogenesis of hypertension disorder pregnancy (HDP) isn't totally understood. HDP is a disease that appears to be caused by damage to maternal endothelial cells and systemic activation, such as hypertension, protein in urine, a response to systemic inflammation, and a collection of anti-angiogenic factors, which appear to cause the disease by prevent the production of major growth factors in glomerular endothelial cells. The signs and symptoms of preeclampsia are reversed when the pregnancy is terminated, showing that trophoblastic infestation plays a key part in the disease's etiology (Sachan *et al.*, 2013).

Endothelial dysfunction, hypertension, and protein in urine have all been associated to increased placental synthesis of soluble fms-like tyrosine kinase-1 in preeclampsia, according to a new study. In a multi-study, chronic hypertension was responsible for about 30% of HDP cases, while pregnant hypertension/preeclampsia was responsible for 70% (Maynard *et al.*, 2003). Bleeding, high blood pressure, infection, obstructed labor, and abortion complications are the five major obstetric reasons account for over 80% of maternal deaths. Pregnancy-induced hypertension such as preeclampsia and eclampsia is the second most common cause of maternal death after hemorrhage, contributing for 18% of all mortality (Liljevik & Lohre, 2012).

Hypertensions may existed pre pregnancy or develop during it; Preeclampsia (PE) and gestational hypertension (GH) are two hypertensive diseases that affect pregnant women (Roberts, Davis & Homer, 2017). Gestational hypertension which arises after 20 weeks of pregnancy is the most frequent hypertensive disease in pregnancy. Hypertension, edema,

and proteinuria are the most common symptoms. It is more common in primigravidas particularly those under the age of 20 or over the age of 35 who come from a lower socioeconomic background and have poor nutritional status. A client's risk is further increased by diabetes numerous pregnancies or a family history of gestational hypertension (White *et al.*, 2011).

Etiology of the gestational hypertension, the primary cause is unknown, but genetic and immunological influences are suspected. Pregnancy hypertension starts in the first trimester of pregnancy and is linked to abnormalities of the growing placenta. If placental development does not progress normally after 18 weeks of pregnancy, Vasospasm and ischemia are caused when the spiral arteries supplying the placental layer remain restricted and retain their reactions. The mother's blood pressure rises as a result of this after 20 weeks of pregnancy, vascular constriction, platelet aggregation, and placental inability are all symptoms of systemic endothelial injury in the circulatory system (Medforth *et al.*, 2011).

When individual baseline values are unknown, hypertension is defined as blood pressures equal to or greater than 140/90 mmHg following at least two measures under optimal conditions and at varying periods, with a minimum of six hours between readings. If previous blood pressure measurements are available, a pregnant woman with an increase in blood pressure of 15 and/or 30 mmHg (Ferreira *et al.*, 2016). Preeclampsia occurs after the 20th week of pregnancy, during labor, and for up to 48 hours after birth. It affects about 8–10% of all pregnancies and is a quickly developing condition marked by elevated blood pressure and proteinuria. When Preeclampsia is detected early on, the mother is usually recommended to stay in bed and her blood pressure is regularly monitored. If the condition worsens, the doctor will be forced to induce labor or perform a Caesarean section, regardless of whether the baby has reached

full term or not. Preeclampsia can cause problems with the arteries that provide blood to the placenta. The fetus receives less oxygen and nutrition as a result of this, low birth weight, prematurity, or stillbirth (El-Bahy *et al.*, 2013).

Preeclampsia is managed by nurses monitor and encourage the resolution of difficulties, including monitoring vital signs and FHR, external stimuli should be kept to a minimum, Rest and relaxation are encouraged, Urine production, protein level, and specific gravity should all be measured and recorded. Examine the face, arms, hands, legs, ankles, and feet for edema. Examine for pulmonary edema, a condition in which the lungs become swollen. Weigh the client on a daily basis. Every 4 hours, check your deep tendon reflexes. Examine the placenta for detachment. Headache and vision disturbances, epigastric pain, and altered levels of awareness are also symptoms of this condition (Shaheen, 2020).

Preventing hypertensive-related mortality requires the supply of magnesium sulphate for the therapy of preeclampsia at health centers, as well as qualified health personnel with knowledge and abilities in hypertension management. Prenatal screening of pregnant women for routine calcium supplementation for women at high risk of preeclampsia, and preeclampsia therapy with early birth of women with preeclampsia and eclampsia has all been linked to magnesium sulphate. They've been well researched and show promise in lowering the risk of maternal death (Tadele *et al.*, 2020).

Proteinuria is defined as a loss of protein in the urine, which suggests that the kidneys have been damaged. It is important to collect urine over the course of 24 hours in order to assess the overall loss. When 2+ value \geq 0.3g or more protein in the 24 hour urine is related with elevated blood pressure, preeclampsia is identified. Eclampsia is defined by the presence of seizures in women whose pregnancy has been exacerbated by pre-

eclampsia, ruling out other possibilities such as epilepsy, meningitis, and sepsis (Ferreira *et al.*, 2016).

The prevention and treatment of certain disorders using magnesium sulfate, is recommended by the World Health Organization (WHO). The use of sulfate in combination with a high treatment reduces by the risk of death from preeclampsia or eclampsia by 50% (Ferreira *et al.*, 2016).

Women with gestational hypertension (GH) or preeclampsia (PE) may need multidisciplinary therapy, admittance to a maternity hospital, and lengthy postpartum care, which may include time in an acute care facility such as an Intensive Care Unit (ICU). The physical and psychological repercussions of hypertension-affected pregnancy, as well as the long-term health problems, have been documented (Roberts, Davis & Homer, 2017). When pregnant women are cared for during pregnancy and after childbirth to prevent and treat preeclampsia, eclampsia is an important step toward maternal health performance. Maternal health providers' health managers and other stakeholders require current, evidence-based recommendations to guide clinical policies and practices (World Health Organization, 2018).

1.2. Important of the study:

Pregnancy induced hypertension (PIH) can be classified to preeclampsia, chronic hypertension, gestational hypertension. It is a hypertension condition that occurs during pregnancy (Singh & Srivastava, 2015).

PIH is a prominent reason of maternal death and perinatal morbidity all over the world (Mission & Caughey, 2013). In general, it responds to 76000 and 500000 maternal and newborn loss of life per year, respectively (Britt, 2018). Pregnancy-induced hypertension such as preeclampsia and eclampsia is the second most common cause of maternal death after

hemorrhage, contributing for 18% of all mortality (Liljevik & Lohre, 2012). Preeclampsia is responsible for 16% of maternal mortality in underdeveloped countries, Latin America accounts for 25% of maternal mortality, whereas Asia and Africa account for 10% (Britt, 2018). According to the Ministry of Health's annual statistical report from 2016, maternal hypertension accounts for 12.4 percent of maternal deaths in Iraq and is also the third biggest cause of maternal death after postpartum hemorrhage and pulmonary embolism (Al Ebrahimi, Al Jobori, & Al Safi, 2019).

The second most common cause of maternal morbidity and mortality is PIH. Because it is linked to placental abruption, intrauterine growth restriction with otherwise healthy fetuses, and premature birth, PIH has an influence on perinatal mortality; 500–600 babies die each year as a result of PIH (Medforth et al., 2011).

Preventing and treating preeclampsia and eclampsia in pregnant women and during childbirth is an important step toward achieving the health goals. Efforts to prevent and minimize morbidity and mortality associated with these disorders can assist to alleviate global imbalances in maternal and perinatal health (WHO, 2018)

Nurses can help pregnant women identify risk factors and risk groups for pregnancy hypertension on the initial visit by taking a complete medical history as well as personal and family history. Nurses are particularly important in informing pregnant women about the risks of preeclampsia, This can happen throughout the second or third trimester of pregnancy and after the baby is born (Ahmed, Ahmed & Kamal 2021).

If the nurse observes mild hypertension without proteinuria, the woman will be asked to come in more regularly to check her blood pressure and urine. Cooperating care is the majority of successful treatment

methods, and after being sent to a counselor for examination, women can usually return to healthcare, assuming their condition is stable (Medforth et al., 2011).

Therefore, the improvement of the nurses' knowledge is important to improving maternal and neonatal health services among pregnant mothers in Karbala city. According to the problem, the researcher advanced to study this issue.

1.3. Research question:

Does the educational program have an effect on nurses' knowledge and attitudes regarding pregnancy induced hypertension?

1.4. Statement of the Problem:

The current study focused on the effectiveness of education program on nurses' knowledge and attitudes concerning pregnant hypertension management. The goal of the study is to reduce maternity complications in pregnant women who frequent primary health care centers. When nurses deliver knowledge regarding gestational hypertension care, it is critical to utilize this information in the workplace.

1.5. Objectives of the study:

This study aims to:-

1. Evaluate Nurses' Knowledge regarding Pregnancy induced Hypertension and their needs for an education program
2. Evaluate Nurses' Attitudes regarding Pregnancy induced Hypertension and their needs for an education program
3. Determine the effectiveness of the educational program on Nurses' Knowledge and Attitudes regarding Pregnancy induced Hypertension

4. Find out the association between the Effect of education program with their demographic characteristics such as (gender, age, education level, years of experience, and participation in training courses)

1.6. Definitions of terms:

1.6.1. Effectiveness:

- a) Theoretical definition: A change that occurs as a result of or in response to an activity or other cause (Cambridge Dictionary, 2019).
- b) Operational definition: The effect of the program's concept on nurses' knowledge and attitudes about pregnancy induced hypertension at primary health care centers.

1.6.2. Education Program

- a) Theoretical definition: A collection of educational activities structured to achieve a predetermined aim or the completion of a prescribed set of educational objectives for learners to gain information, Skills, and competence in any personal, social, or professional setting (UNESCO, 2012).
- b) Operational definition: An education program prepared and implemented for nurses to teach them knowledge related to the pregnancy hypertension care in primary health care centers in Kerbala city.

1.6.3. Knowledge

- a) Theoretical definition: The condition of knowing about a certain truth or scenario that you gain during training or skills, as well as the information, understanding, and abilities that you gain through education or experience (Oxford University, 2015).
- b) Operational definition: Information, ideas, and skills about pregnant hypertension care obtained through experience or training in primary health care centers.

1.6.4. Attitudes:

- a) Theoretical definition: The way you think and feel about someone or something; the way you act toward someone or something that reveals how you think and feel (Oxford University, 2015).
- b) Operational definition: A person's established way of thinking or feeling about something, which is usually mirrored in their behavior.

1.6.5. Pregnancy induced Hypertension:

- a) Theoretical definition: A blood pressure of 140/90 mm Hg or higher is considered high, without proteinuria, detected during the first time after mid-pregnancy (Durham & Chapman, 2014).
- b) Operational definition: During pregnancy, many women experience complications such as hypertension, which includes arising in systolic and diastolic blood pressure.

Chapter Two:
Literature Review

Chapter Two:

Review of Literature

Overview

This chapter covered theoretical material such as hypertensive disorders definition, causes and categorization, as well as how it's identified through investigations and pregnant evaluation, and how hypertensive pregnant are managed. This data has been chosen because of the global burden of hypertension, World Health Organization (WHO) created comprehensive hypertensive disorders guidelines for underdeveloped and developing nations (WHO, 2010). Furthermore, it concentrated on research that contained empirical literature on nurses' understanding and practice of hypertension. Midwives working in hospitals must be aware of particular preventable illnesses throughout pregnancy in order to examine, diagnose, and manage the pregnant patient rapidly and effectively, ensuring that baby and mother morbidity and death are kept to a minimum (Stellenberg, & Ngwekazi, 2016).

2.1. Historical Background of Hypertensive in pregnancy.

Hypertension, also known as high blood pressure, is a situation in which the systolic blood pressure is greater than 140 mmHg and the diastolic blood pressure is greater than 90 mmHg (WHO, 2015). Suffering, illness, and death are all too common among women approximately 15% of pregnant women are predicted to experience life-threatening problems at some point in pregnancy, delivery, or the postpartum period. Hypertensive disorders of pregnancy (HDP) are a major cause of these complications and sufferings (WHO, 2017). If a two sequential measurements blood pressure

for pregnant woman's result is greater than or equal to 140/90 mmHg in, women is considered hypertensive. Hypertensive disorders of pregnancy (HDP) are a general term referred to increased blood pressure throughout pregnancy. It involves pregnancy-induced hypertension (without proteinuria), preeclampsia (with proteinuria) and eclampsia (preeclampsia with convulsions), gestational hypertension and chronic hypertension (Berhe et al., 2018). Hypertensive disorders of pregnancy are global health issues and women with HDP are more probably to perinatal loss of life (WHO, 2011).

Diagnosis of pregnancy-related hypertensive diseases after a period of rest in a calm atmosphere, women's blood pressure should be checked using a standardized procedure in a sitting posture with their arm at the level of the heart using an adequately sized cuff (i.e., length 1.5 times the circumference of the arm). For hypertension diagnosis and monitoring, the arm with the higher BP results should be used. Non-severely raised blood pressure should be re-measured at the same visit, with at least a 15-minute delay between the first and second measurements (Butalia, et al., 2018).

Pregnancy-induced hypertension (PIH) was defined as new hypertension that appears at more than 20 weeks of gestational age of pregnancy with or without proteinuria, which involves gestational hypertension, pre-eclampsia, and eclampsia. PIH is a globally significant public health threat both in developed and developing countries, contributing factors to high perinatal deaths (Berhe et al., 2020). PIH is common in young primi gravid women. It is more common in Prime mothers over the age of 35, as well as with numerous pregnancies, diabetes, and obese mothers. It is more common in low-income mothers who are less likely to receive routine prenatal care. After 20 weeks of pregnancy, PIH is a multisystem illness characterized by edema, hypertension, and

proteinuria. Premature birth, intrauterine growth retardation (IUGR), abruption placentae, and intrauterine death are all linked to PIH (Abdalmajed, 2018). Preeclampsia, eclampsia, and gestational hypertension are hypertensive disorders of pregnancy that influence on ten percentages of pregnancies and the linked with elevated rate disease and death for both the women and the fetus (Braunthal, & Brateanu, 2019).

2.2. Concepts of Hypertensive Disorders in pregnancy:

Preeclampsia, eclampsia, and gestational hypertension are hypertensive disorders of pregnancy. Hypertension that appears at more than 20 weeks of gestational age of pregnancy with proteinuria, whereas seizures without a causative condition characterized is eclampsia (Malek, 2021). Pregnancy-induced hypertension (PIH) is described as systolic blood pressure (SBP) greater than one hundred forty mmHg and diastolic blood pressure (DBP) greater than ninety mmHg. It occurs in approximately 6–10% of pregnancies. It is divided into three levels: mild level when SBP measures 140-149 and DBP measures 90-99 mmHg, moderate level when measures of SBP are between 150 to 159 and DBP between 100 to 109 mmHg, and severe level when the measures result in SBP greater than 160 and DBP greater than 110 mmHg (Kintiraki et al., 2015).

The stages of hypertension are shown in table 1: optimum, normal blood pressure, pre-hypertension (also known as high normal), hypertension stage one, hypertension stage two, and emergency hypertension (also known as grade 3 hypertension). A systolic pressure of less than 120 and a diastolic pressure of less than 80 mmHg are considered optimal hypertension. Normal blood pressure is defined as 120-129 mmHg systolic and 80-84 mmHg diastolic. When systolic blood pressure is 130-139 and/or diastolic blood pressure is 85-89mm Hg, it is considered high

normal hypertension (pre Hypertension). Grade 1 hypertension is defined as a systolic pressure of 140-159 mmHg and/or a diastolic pressure of 90-99 mmHg. The diastolic and systolic blood pressures with grade2 hypertension are 160-179 and/or 100-109 mmHg, respectively. Grade3 hypertension (hypertension crisis) is defined as blood pressure that is greater than or equivalent to 180 mm Hg and/or 110 mm Hg (Nyirabazungu, 2017).

Category	Systolic		Diastolic
Optimal	<120	And	<80
Normal	120-129	and/or	80-84
High normal	130-139	and/or	85-89
Grade 1 hypertension	140-159	and/or	90-99
Grade 2 hypertension	160-179	and/or	100-109
Grade 3 hypertension	> or equal to 180	and/or	> or equal to 110
Isolated systolic hypertension	> or equal to 140	And	<90

Table (2-1): Classification of BP levels (Nyirabazungu, 2017).

Hypertensive disorders are the second leading cause of maternal death, accounting for 19% of pregnancy-related fatalities in women after a live birth and 20% of pregnancy-related deaths in women after a stillbirth (Fortner, 2009).

2.3. Classification of hypertension in pregnancy:

The basic classification was kept because it describes four different kinds of hypertension: Pregnancy-Induced Hypertension (PIH) is a term

used to describe hypertension caused by pregnancy; Preeclampsia and eclampsia are two conditions that can occur during pregnancy, Chronic hypertension of any etiology, Preeclampsia superimposed on chronic hypertension (Al-bahadily et al., 2017).

2.3.1. Pregnancy induced hypertension also know gestational hypertension.

Gestational hypertension occurs when blood pressure levels are equal to or higher than 140/90 for the first time after 20 weeks without proteinuria. Nearly half of pregnant women with gestational hypertension develop preeclampsia syndrome. When the blood pressure is elevated, it can be a risk problem for the woman and the fetus (Durham & Chapman, 2014).

2.3.2. Preeclampsia and eclampsia.

Preeclampsia / Eclampsia: Hypertension after 20th week of gestation with proteinuria or hypertension and target organ damage with or without proteinuria Preeclampsia that develops in a woman with chronic hypertension or chronic renal disease (Al Ebrahimi et al., 2019). Eclampsia, coma and convulsion are considered as characteristics of eclampsia, it may happen early in the postpartum period, during labor, before the onset of labor. Late postpartum eclampsia (convulsions happening over 48 hours after birth) happens once in a while however it has been reported. A few women experience just a single convulsion, particularly if it happens late in the process of giving birth or postpartum period, others may have from 2 to at least 20, except if they happen repetitively, the lady comes back the conscious state between convulsions (Davidson et al., 2012).

2.3.3. Chronic hypertension:

It is diagnosed as hypertension before pregnancy or before the twenty weeks of pregnancy, with a blood pressure (BP) of 140/90 mmHg on at least two occasions 4 hours apart (Sinkey et al., 2020). Hypertension diagnosed firstly in pregnancy that continues beyond the postpartum period and is categorized as chronic hypertension (Littleton et al., 2002).

2.3.4. Preeclampsia superimposed on chronic hypertension

Preeclampsia with chronic hypertension: that means women that have Hypertensive and new onset proteinuria before the twenty weeks of pregnancy, or a sudden increase in proteinuria or blood pressure in women with hypertension and proteinuria before the 20th week of pregnancy. Preeclampsia affects nearly a one-quarter of women with persistent hypertension (Durham & Chapman, 2014).

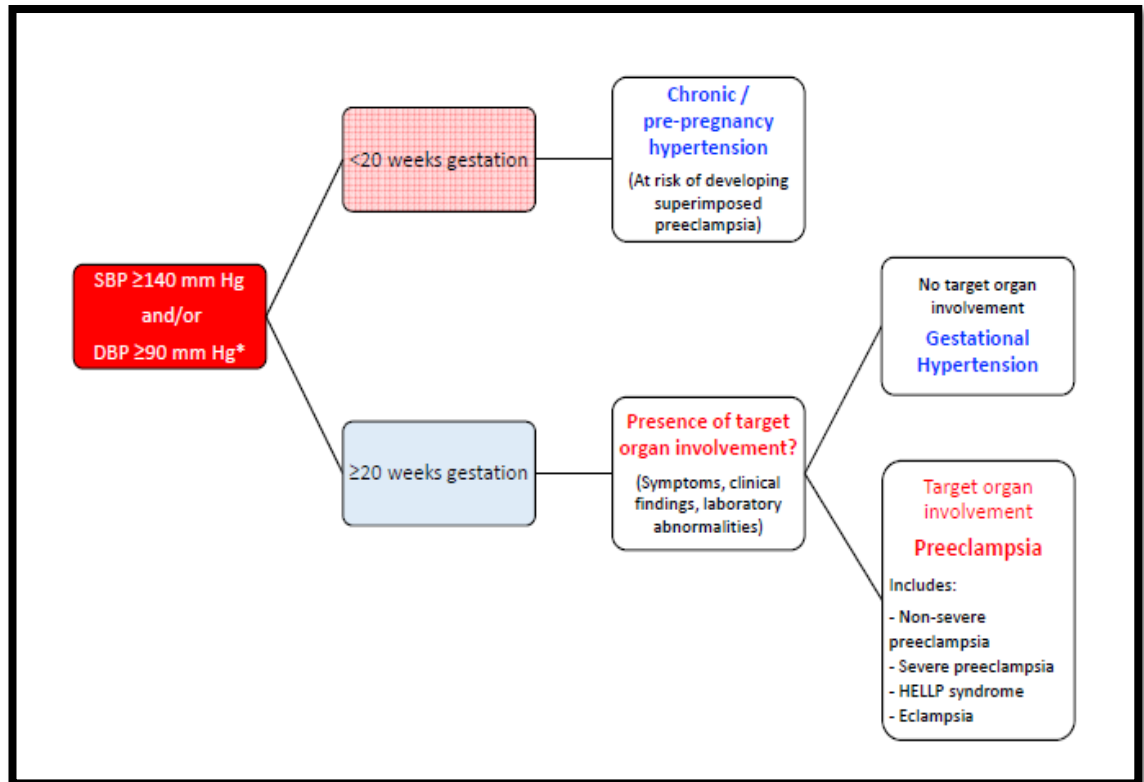


Figure (2-1): Hypertensive Disorders of Pregnancy Classification (Butalia, et al., 2018).

2.4. Gestational Hypertension:

Gestational hypertension is High blood pressure most commonly occurring after the 20th week of pregnancy without any organ involvement in a nulliparous woman (Roberts, Davis & Homer, 2017).

2.4.1. Pathophysiology of pregnancy induced hypertension

Increased cardiac output is common during pregnancy, and it can harm artery epithelial cells, reducing the vascular response to blood pressure, causing vasoconstriction and high blood pressure. Reduced uteroplacental perfusion occurs from abnormal invasion of cytotrophoblasts of the spiral arteries show to be beginning event in PIH. The maternal vascular endothelium is thought to be activated or dysfunctional as a result of placental ischemia, leading to elevated endothelin and thromboxane

production, increased vascular sensitivity to angiotensin II, and decreased production of vasodilators such prostacyclin and nitric oxide. It is remain unknown the role of endothelial and humoral mechanisms in mediating the decrease in renal hemodynamic and excretory function, as well as the increase in arterial pressure during PIH (Abdalmajed, 2018).

2.4.2. Risk Factors for Gestational Hypertension (GH) include:

many risk factors of pregnancy induced hypertension include: Null parity, Over the age of 40, More than ten years between pregnancies, Multi-fetal pregnancy, Family history of preeclampsia, Body Mass Index (BMI) greater than thirty five kg/m², Previous history of preeclampsia or gestational hypertension, Gestational age at presentation , Pre-existing kidney disease and Pre-existing vascular disease (NICE guideline, 2019).

2.4.3. Manifestation of Gestational Hypertension:

Vasospasm impedes blood flow to the mother's organs and placenta, leading to one or more of these signs: hypertension, proteinuria (protein in the urine), and edema. GH in sever stage can also affect the central nervous system, urinary tract, gastrointestinal system, liver, eyes, and blood clotting function (Chapman & Durham, 2009).

2.4.4. Management of pregnant with Gestational Hypertension

In women with gestational hypertension should be doing a comprehensive assessment out in the health care setting by a healthcare professional who is trained in the management of hypertensive disorders of pregnancy. Maintain a blood pressure range of 110 to 140 systolic /85 diastolic mmHg, Evaluate development of pre-eclampsia, Delayed delivery until thirty nine weeks when blood pressure can be controlled, Monitor

fetus growth especially if maternal uric acid is high, Pre-eclampsia has not developed, and fetal monitoring is reassuring (Brown et al., 2018).

Management of pregnancy in women with gestational hypertension disease:

According to the degree of hypertension if blood pressure is mild or moderate (the result is measured at 140/90 or 159/109 mmHg) the admission to hospital does not routinely. Offer pharmacological treatment if BP remains above 140/90mmhg the aim to decrease BP, Measure blood pressure once or twice a week until it is less than 135/85 mmhg, Fetal assessment includes fetal heart auscultation at every antenatal checkup and ultrasound examination of the fetus at the time of diagnosis, Reassess every two to four weeks if clinically indicated. Where Blood pressure Sever (160/110mmhg or more) the admission to hospital, however, if blood pressure falls below 160/110 mmHg, treat as if it were hypertension, all women should receive pharmacological treatment, Every 15–30 minutes measure Blood pressure until the result of measure is less than 160/110 mmHg, Assess complete blood count test, renal and liver function tests as required and then weekly fetal assessment, At every antenatal appointment, Perform fetal heart auscultation and ultrasound assessment of the fetus at the time of diagnosis, and reassess every 2 weeks if severe hypertension continues (NICE, 2020).

2.4.5. Timing of birth:

Early birth before 37 weeks is not offered to pregnant women who have suffered from gestational hypertension whose blood pressure measure is 160/110 mmHg or less, unless there are other medical indications. The woman and the senior obstetrician should agree on the timing of birth and maternal and fetal indications for birth for women with gestational

hypertension whose blood pressure is lower than 160/110 mmHg after 37 weeks. If an early birth is required, prescribe antenatal corticosteroids and magnesium sulfate if necessary (NICE guideline, 2019).

2.5. Preeclampsia (PE):

Preeclampsia is a human pregnancy-specific disease defined as hypertension and significant proteinuria in a previously healthy woman on or after the 20th week of pregnancy. It affects about 2–8% of pregnancies (Ghulmiyyah & Sibai, 2012). PE is the leading cause of maternal and perinatal morbidity and mortality, accounting for 14 percent of all maternal deaths and more than 500,000 fetal deaths each year. Despite the fact that it usually presents late in pregnancy and has a mild clinical course, severe maternal complications are common, resulting in marked hypertension and dysfunction of end-organ (Sunjaya & Sunjaya, 2019).

2.5.1. Classification and Degrees of Preeclampsia:

Hypertension is classified as mild (140/90–149/99 mmHg), moderate (150/100–159/109 mmHg) or severe (160/110+ mmHg), classifications of pre-eclampsia including:

Mild Preeclampsia women may show few if any symptoms. The blood pressure is elevated to 140/90 mm Hg or higher and the proteinuria is 1 g or less in 24 hours (2+ dipsticks). Although edema is no longer considered as a diagnostic criterion, generalized edema, seen as puffy hands or face, and may be present in dependent areas such as the ankles. Edema is identified by a weight gain of more than (1.5 kg) per month in the second trimester or more than 0.5 kg a week in the third trimester. Edema is assessed on a 1+ to 4+ scale (Ladewig et al., 2014).

Moderate preeclampsia: Moderately excessive blood pressure (140 to 159 mm Hg systolic or 90 to 159 mm Hg diastolic, measured two times at a minimum of 4 hours apart) necessitates cautious evaluation and monitoring. Severe preeclampsia is described as blood pressure that is higher than one hundred sixty mm Hg systolic or higher than one hundred and ten mm Hg diastolic (Herman & Sukhija, 2017).

Severe preeclampsia may occur suddenly. While the woman is resting on the bed, blood pressure rises to greater than 160 mmHg diastolic and 110 mmHg systolic in two time measures through a six-hour period. "Severe PE can cause: renal failure; hemolysis, elevated liver enzymes, and low platelet (HELLP) syndrome"; liver and cerebral hemorrhage; and maternal death. A pregnant woman is exposed in many conditions to a higher risk of complications and death. Approximately 10% to 25% of all PE cases result in maternal death, and another 15 to 20% result in premature births (Jeyabalan, 2013).

2.5.2. Pathogenesis of preeclampsia:

The pathophysiologic processes underlying this disorder are described as occurring in two stages, despite the fact that the precise cause is unknown. "The first stage is marked by abnormal placentation, reduced placental perfusion, impaired trophoblast invasion, and inadequate uterine spiral artery remodeling. The second stage describes the maternal systemic symptoms, which are characterized by inflammatory, metabolic, and thrombotic responses that conspire to alter vascular function, potentially resulting in multi-organ damage"(Steegers et al., 2010).

2.5.3. Diagnosis of preeclampsia:

Preeclampsia is diagnosed when there is a combination of high blood pressure and proteinuria. After the 20th week of pregnancy,

hypertension is defined as a blood pressure of at least 140 mm Hg (systolic) or at least 90 mm Hg (diastolic) on at least two occasions and at least 4–6 h apart. High blood pressure is assessed as severe if there are persistent increases in blood pressure greater than 160 mm Hg systolic pressure, greater than 110 mm Hg diastolic pressure, or both (Buchbinder *et al.*, 2002).

Preeclampsia can be recognized by:

Blood pressure measure is more than 140 mmHg for systolic while more than 90 mmHg for diastolic .Edema may be apparent on inspection. Proteinuria: Ensure 24 hour urine samples are full before forwarding to the laboratory for analysis. Ankle edema is a typical occurrence during pregnancy, and it usually goes away overnight. Broader edema putting pressure on the pretibial area, face, hands, abdomen, and sacrum, particularly if it occurs suddenly, should be investigated extensively. The severity of the edema increases with the severity of the preeclampsia, Urine sample or 24-hour urine collection to quantify proteinuria, Full blood count to check for platelet consumption and hemolysis. Due to hemoconcentration, the hemoglobin concentration in preeclampsia might be elevated. Renal dysfunction is assessed using urea and electrolytes. Liver enzymes are used to evaluate liver function and look for transaminases. Ultrasound is used to evaluate fetal development and the volume of amniotic fluid, as well as Doppler velocimetry of the umbilical arteries (Marshall & Raynor, 2014).

2.5.4. Manifestations of preeclampsia:

The clinical signs and symptoms of preeclampsia include: systolic blood pressure equal or more than 160 mmHg or diastolic blood pressure equal or more than 110 mmHg, urinary protein secretion of approximately

five grams in a one-day collection, neurologic disorder, pulmonary edema, hepatic and renal disorder (creatinine levels greater than 1.2 mg/dL are abnormal in women without a history of renal disease), deficiency of platelets in the blood, fetal growth reduction (Jeyabalan, 2013).

2.5.5. Risk factors of preeclampsia include:

Risk factors come in two varieties: maternal preexisting characteristics and pregnancy woman specific qualities. In addition to using artificial reproductive technology, which increases the chance of numerous fetal gestations, preeclampsia may be associated with a higher incidence of predisposing illnesses such hypertension or diabetes mellitus or childbearing delay (Berg et al., 2009).

Pregnancy-specific factors

“The risk factors including: Null parity, Partner-related factors (new paternity, limited sperm exposure such as barrier contraception, Multifetal gestation and, Hydatidiform mole)”.

Preexisting maternal conditions

such as: “elderly women, Pregestational diabetes, Increased body mass index, Chronic hypertension, connective tissue disorder, Antiphospholipid antibody syndrome ,Renal disease , and who have a family history of preeclampsia” (Jeyabalan, 2013).

2.5.6. Complications on mothers and fetus:

Preeclampsia can have an impact on a woman's entire body, resulting in more pregnancy-related issues such HELLP syndrome and neurologic diseases as well as complications with the renal systems, uterine, cerebrovascular, cardiovascular, hepatic, and pulmonary. According to studies, newborns can have an impact on the arteries that deliver blood to

the placenta. As a result, the fetus receives insufficient oxygen and nourishment, which results in low birth weight, sluggish body growth, stillbirth, prematurity, and breathing problems after birth. The placenta may separate from the uterus prior to delivery as a result of preeclampsia (placenta abruption). Also, Eclampsia (Preeclampsia with seizures) can occur if Preeclampsia is uncontrolled for more than 24 hours (Sabry, Atia & Abd Elkhalek, 2021). Infant mortality from preeclampsia is three times higher in low-resource settings than in high-income ones due to a lack of neonatal intensive care facilities (Jeyabalan, 2013). Women who do not receive antenatal treatment are seven times more likely to die from preeclampsia complications than women who receive good prenatal care. Although preeclampsia cannot always be avoided, many deaths caused by it can be avoided. To reduce preeclampsia-related mortality, every woman should get comprehensive antenatal care. Preeclampsia requires close monitoring, early discovery, and treatment in order to reduce mortality associated with the disorder (Hadian et al., 2018).

2.5.7. Hospital care for mild and sever preeclampsia:

2.5.7.1. Hospital care for mild preeclampsia:

The woman is placed in bed, generally lying on her left side, to reduce the pressure on the vein cava, thereby enhancing venous return, circulatory volume, and placental and renal perfusion. Her diet should be well-balanced and healthy. Avoid eating items that are very salty, and keep your daily sodium intake to no more than 6 gram, Nonetheless, diuretics and rigorous sodium restriction are no longer utilized to treat preeclampsia, tests to evaluate fetal status are done more frequently as a pregnant woman's preeclampsia progresses.

These examinations are Monitoring fetal well-being is critical to ensuring the fetus's safety. The tests used are as follows: Non-stress test

NST, fetal movement record, Ultrasonography should be done at least every 3 to 4 weeks to monitor growth. To detect fetal impairment, doppler velocimetry is started around 30 to 32 weeks, biophysical profile, and amniocentesis to detect fetal lung maturity.

The following are the methods used to monitored maternal well-being:

check blood pressure for four times during 24 hours, Monitor weight and evaluation for edema daily, long term headache, visual disorder, or epigastric pain, evaluate urine dipstick for protein daily, Assessment of some important laboratory values to include complete blood count (CBC), serum creatinine, lactic dehydrogenase (LDH), uric acid, liver function tests (aspartate transaminase AST, alanine aminotransferase ALT), bilirubin, and assess urine for protein and creatinine clearance for 24-hour at least (Davidson et al., 2012)

2.5.7.2. Hospital care for sever preeclampsia:

Severe preeclampsia patients are admitted to the hospital immediately. Childbirth is considered in all pregnant women with preeclampsia after 34 weeks of gestation because the risk factors for prolonged pregnancy for the mother are too severe. Expectant treatment may be utilized in some women who are fewer than 34 weeks pregnant since it improves newborn outcomes dramatically (Cunningham *et al.*, 2010). The well-being of the fetus is monitored on a daily basis, and if the mother or fetal condition deteriorates, birth is recommended regardless of gestational age. The following are some more medicinal treatments for severe preeclampsia: Complete bed rest is required, Stimuli that may bring on a convulsion should be reduced Diet, and Anticonvulsants Magnesium sulfate. To promote fetal lung maturity, betamethasone or dexamethasone is frequently given to a mother whose fetus has an immature lung profile

Dexamethasone. Dexamethasone can be given intravenously, which may affect its efficiency. Fluid and electrolyte supplementation are also important. Antihypertensive: The most common reason for taking antihypertensive medication is to prevent stroke. Antihypertensive therapy is usually prescribed for people who have a systolic blood pressure of 160 mm Hg or above while a diastolic blood pressure of the range between 105 and 110 mm Hg or greater (Davidson et al., 2012).

2.5.8. Prevention of preeclampsia:

Prevention of preeclampsia is classified into three levels: primary, secondary, or tertiary (Alkema et al., 2016). Primary prevention focuses on avoiding or preventing pregnancy in pregnant women at high risk for preeclampsia. For these women, primary prevention includes modifying lifestyle, promoting women's healthy nutrient intake, reducing the stressors associated with pregnancy, and promoting mental health in women with high-risk pregnancy factors (Hadian et al., 2018). Pregnancy at high risk for preeclampsia; using thromboxane as a vasoconstriction; using prostacyclin as a vasodilator that is responsible for platelet compilation by using a low dose of aspirin beginning at or before 16 weeks of pregnancy; prophylactic use of antioxidants such as vitamin C or E (Sabry, Atia & Abd Elkhalek, 2021).

Secondary prevention is based on pathophysiological mechanisms of the disease rather than its development. Secondary prevention focused on high-risk women to provide a productive intervention as possible to help antenatal results promote management and attention when assessing proteinuria to avoid the major complications through the safe use of an automated strip reading device (Poon & Sahota, 2019).

Tertiary prevention is based on making use of treatment for preeclampsia and reducing complications. As a result, clinical judgment-based care can result in fewer premature newborns and shorter hospital stays with higher costs for babies with low birth weight use of magnesium sulfate and antihypertensive drugs to prevent seizures. The rate of preeclampsia can be minimized by the use of magnesium sulfate (Sabry, Atia & Abd Elkhalek, 2021).

2.6. Eclampsia:

Eclampsia is distinguished by the presence of seizures in women whose pregnancy was complicated because of pre-eclampsia, excluding other differential diagnoses, such as epilepsy, meningitis, sepsis, among others (Ferreira et al., 2016).

Eclampsia is split into three types: antepartum, intrapartum, and postpartum eclampsia. It can start in the third trimester and get worse as labor progresses (Utami et al., 2020).

2.6.1. Pathophysiology of eclampsia:

Preeclampsia/eclampsia is believed to result from abnormal placental development. Placental ischaemia is caused by significant pathogenic alterations in the placental vascular bed (Munro, 2000). Several ideas and etiologic mechanisms have been suggested as potential etiologic factors, but none have been established satisfactorily. Some of the etiologic factors include cerebral edema, cerebral infarction, cerebral hemorrhage, cerebral vasoconstriction, metabolic encephalopathy, and hypertensive encephalopathy that have been involved in the pathophysiology of eclamptic convulsions. However, it's unclear if these findings are related to or caused by the convulsions (Sibai, 2005).

2.6.2. Clinical Manifestation of Eclampsia:

Seizures or convulsions in a pregnant woman, woman in labor, or within 42 days following birth who does not have a history of epilepsy are the primary symptoms of eclampsia. Muscle aches and pains, agitation, loss of consciousness, stroke, coma, and death can all be signs of eclampsia in both the mother and the fetus (Khatun, Mohammad & Chowdhury, 2017). Clinical symptoms including: Persistent occipital or frontal headaches, blurred vision, photophobia, epigastria or right upper quadrant pain or both, altered mental state (Cooray et al., 2011).

2.6.3. Risk factors associated with eclampsia:

Risk factors for preeclampsia and eclampsia include:

primiparity, Primigravida, a history of preeclampsia or eclampsia, kidney disease, pre-existing hypertension prior to pregnancy, repeated pregnancies, and obesity are all risk factors for preeclampsia and eclampsia. However, determining the most significant risk factor among these risk variables is difficult (Utami et al., 2020). Patient above 35 years of age, Teenage pregnancy, and Previous pregnancies had poor outcomes, such as intrauterine growth retardation, placental abruption, and fetal mortality (Al-Rabeei et al., 2018).

2.6.4. The diagnosis of eclampsia:

Eclampsia is considered secure in the status of presence of generalized edema, proteinuria, convulsions, and hypertension. Women with preeclampsia are characterized by a different set of signs, which can range from severe hypertension, severe proteinuria, and generalized edema to sometimes signs including absence or minimal hypertension, no proteinuria, and no edema. The presence of hypertension is a defining

feature of eclampsia. In 20–54 percent of instances, hypertension is severe (systolic blood pressure of at least 160 mm Hg and/or diastolic blood pressure of at least 110 mm Hg) and in 30–60 percent of cases, hypertension is mild (systolic blood pressure of 140–160 mm Hg or diastolic blood pressure of 90–110 mm Hg). However, hypertension may not be present in 16% of instances. Proteinuria is commonly present when eclampsia is diagnosed. Consistent frontal or occipital headaches, vision disorder, epigastric discomfort, and altered mental health are all symptoms that might occur before or after the commencement of convulsions (Sibai, 2005).

2.6.5. Complication of eclampsia:

Cardiovascular disease, renal disease, and cerebrovascular disease are all complications of eclampsia, and they all diminish life expectancy. In addition, intrauterine growth restriction, small for gestational age, respiratory distress syndrome, transient tachypnea of the newborn, anemia, apnea, asphyxia, prior intraventricular hemorrhage, cardiomyopathy, cerebral palsy, and persistent pulmonary hypertension of the newborn are all negative fetal effects of PEE. Preeclampsia and eclampsia are also primary causes of perinatal death (EL Sebaey Soliman et al., 2021).

Women with preeclampsia with severe characteristics and eclampsia who are diagnosed early, receive prompt treatment, and deliver their babies on time have fewer maternal and fetal problems and mortality. In terms of maternal and neonatal morbidity and mortality, nurses' knowledge and abilities in diagnosis and care of these disorders are crucial (Angelina et al., 2020).

2.6.6. Management of eclampsia:

Management of eclampsia consists of prevention or treatment of seizures, control of blood pressure and ultimately, delivery of the infant. Immediate management of eclampsia including: Secure and safety airway and administer high flow oxygen, Place wedge under right hip, Secure and safety intravenous access and draw blood for CBC, Urea & Electrolytes, liver function tests (LFTs), clotting screen, cross match, and Kleihauer test if abruption suspected, Control seizures, Control hypertension, Monitor vital signs including BP, Electrocardiogram ECG, Respiratory Rate RR, Saturation of Oxygen SaO₂ and fetal heart rate and, Catheterize bladder, monitor urine output, and test urine for protein (Munro, 2000).

2.6.7. Nursing Interventions for an Eclampsia Seizure:

When the seizure begins:

Keeping an eye on the patient during a seizure entails: In need of assistance, by assessing the patient's airway and breathing, you can ensure their safety. Keeping the woman's head turned to one side by lowering the bed's head to reduce the danger of aspiration, anticipate the need for suctioning. Preventing maternal injury and aspiration is the major cause of maternal mortality. To prevent tongue injury, a padded tongue blade should be placed if possible (a tongue blade is still recommended by guidelines but rarely utilized in clinical practice). If possible, keep the side rails up and padded. Notifying the physician and recording the time, length, and type of seizure activity.

After the seizure, the following is done:

Determine the health of the mother and the fetus in a timely manner. Assess airway; suction if necessary; provide supplemental oxygen at a rate

of ten L/min via mask. Ascertain IV access. As directed, provide magnesium sulfate. Create a peaceful atmosphere (Durham & Chapman, 2014).

2.7. Chronic Hypertension with Superimposed Preeclampsia:

Women who have previously been diagnosed with chronic hypertension the studies reveal preeclampsia may be developed in about 22% of these women. The onset of superimposed preeclampsia is difficult to detect. The presence of proteinuria and increasing hypertension after 20 weeks of gestation point to superimposed preeclampsia. It may be exceedingly challenging to confirm the diagnosis of superimposed preeclampsia if the woman has underlying renal disease Preeclampsia is diagnosed by a spike in serum uric acid, which usually occurs when gestation is in the late second trimester or early third (Davidson, London & Wieland Ladewig, 2014).

2.8. HELLP syndrome (Hemolysis, Elevated Liver enzymes, and Low Platelets)

Red blood cells are destroyed as they move through constricted channels, resulting in hemolysis. Reduced blood supply and injury to the liver cause elevated liver enzymes. Platelets aggregating at the location of injured vascular endothelium cause platelet consumption and thrombocytopenia, resulting in few platelets. HELLP syndrome is often associated with preeclampsia, as up to 20% of women with severe preeclampsia develop HELLP syndrome (Durham & Chapman, 2014).

2.8.1. Pathophysiology of HELLP Syndrome:

HELLP syndrome is comparable to preeclampsia in that it causes aberrant placentation, immune cell activation, and endothelial dysfunction in women. The HELLP syndrome has also been linked to an increase in maternal morbidity and mortality. While the causes of preeclampsia and

HELLP syndrome are unknown, the clinical manifestations of edema, hypertension, proteinuria, and renal insufficiency can be explained by the disease's typical changes in renal physiology (Szczepanski et al., 2020).

2.8.2. Clinical Manifestations of HELLP Syndrome and diagnosis

The clinical signs and symptoms, Nausea/vomiting, Epigastric pain, Visual changes, Headache, and Jaundice (Herman & Sukhija, 2017). Additionally, laboratory tests are utilized to recognize HELLP syndrome. Tennessee and Mississippi are the two classifications used to diagnose HELLP syndrome.

The Tennessee classification system diagnostic criteria for HELLP are: Hemolysis, Increased Lactic dehydrogenase LDH ($>$ or $=600$ IU/L), Increased AST ($>$ or $=70$ IU/L), Low platelets ($< 100 \times 10^9/L$) (Rimaitis et al., 2019)

The HELLP syndrome is 2 classifications may be complete or incomplete:

Complete Syndrome includes: including all three features, Partial HELLP – severe preeclampsia with one or two features but not all three (Herman & Sukhija, 2017).

The Mississippi classification uses the lowest observed platelet count, as well as the other two key clinical criteria, to determine the severity of the illness (LDH and AST). “In comparison to the other two classifications, Class I is the most severe, with a higher risk of morbidity and mortality: A platelet count of less than 50,000/microL is indicative of Class I HELLP syndrome. Class II HELLP syndrome is defined by a platelet count of 50,000 to 100,000/microL (LDH $>$ or $=600$ IU/L, AST $>$ or $=70$ IU/L). Class III HELLP syndrome is defined by a platelet count of

100,000 to 150,000/microL (LDH > or = 600 IU/L, AST > or = 70 IU/L)” (Rimaitis et al., 2019).

2.8.3. Complication of HELLP Syndrome on mother and fetus:

HELLP syndrome is considered a life-threatening illness associated with a high percentage of women and newborn death (Lam & Dierking, 2017). HELLP syndrome is a preeclampsia or eclampsia complication linked to an increased risk of maternal mortality and serious maternal complications such as pulmonary edema, acute renal failure, and disseminated intravascular coagulation (DIC), as well as hemorrhage, sepsis, hepatic failure, and abruptio placentae. As a result of placental malfunction, this syndrome is linked to a significantly higher risk of perinatal mortality and a bad outcome for fetuses (Gedik et al., 2017). Fetal complication such as intrauterine growth restriction (IUGR), respiratory distress syndrome, and preterm delivery (Jiang, Wang & He, 2020).

2.8.4. Management of HELLP Syndrome:

The gestational age of manifestation determines how the HELLP syndrome is treated. For both the mother and the fetus, HELLP syndrome has the capacity to actually become life-threatening. As a result, it is always recommended to hospitalize patients so that test values may be closely monitored. Through hospitalization, patients should be addressed as if they are severely pre-eclamptic, using magnesium sulfate for seizure prevention and blood pressure control with used hydralazine, labetalol, or nifedipine as needed (Sibai, 2004). Maternal-fetal monitoring should be done at every stage of treatment since, for real HELLP patients, save those with stable maternal-fetal states between 24 and 34 weeks of pregnancy, early delivery is usually suggested. Giving corticosteroids (betamethasone intramuscular (12mg) every 12 hours for 2 doses or dexamethasone intravenously (12mg) every 12 hours for 4 doses) and then delivering 24

hours after the last dosage is recommended for this group of patients. Steroid therapy is beneficial not just to the fetus in terms of lung maturity, but also to patients in terms of improving laboratory values, notably platelet counts. Transfusions of red blood cells, platelets, and plasma may be beneficial to some patients (Khalid & Tonismae, 2021).

2.9. Postpartum management:

Pregnant women should be monitored for preeclampsia complications for at least a few days after giving birth, and their blood pressure and general health should be checked at least every four hours while they are awake. It is recommended to continue antenatal antihypertensive medication and to start antihypertensive therapy for any hypertension before day 6 postpartum. Antihypertensive therapy can then be gradually tapered off over days rather than abruptly stopped. It's vital to remember that eclamptic seizures might appear suddenly in the early postpartum period. For at least 3 days after delivery, blood pressure check every 4 to 6 hours through the day. As with redelivery, keep an eye on your overall well-being and neurological function; eclampsia can happen after delivery. If any of these tests reveal Hb, platelets, liver transaminases, and creatinine were abnormal before delivery, repeat the tests the day after delivery and then twice daily until stable within the normal range. Unless the woman's blood pressure drops below 110/70 mm Hg or without symptoms in the meanwhile, antihypertensive therapy should be begun after delivery and decreased gently after 3 to 6 days postpartum. Most women can be discharged on day 5 after giving birth, especially if they can manage their blood pressure at home. Women with preeclampsia Avoid non-steroidal anti-inflammatory drugs if possible, notably in the setting of acute kidney injury (AKI), and use different pain relief (Brown et al., 2018).

2.10. Treatment of pregnancy induced hypertension (PIH):

Treatment for PIH is based on criteria such as blood pressure, gestational age, symptom severity, and risk factors.

Mild to moderate hypertension:

Pregnant women with mild to moderate PIH who do not meet the criteria for pharmacologic treatment might consider non-pharmacological treatment. Lifestyle changes, such as complete bed rest and salt limitation, are not indicated in PIH or PE, according to the WHO. Risk factors for PIH, PE, and eclampsia include obesity and an increase in gestational weight, hence following the recommendations for pre-pregnancy BMI dependent recommended weight growth is critical (Gaillard et al., 2011). Women at high risk of PE should take 75 mg of aspirin and calcium supplements every day, especially if their dietary calcium consumption is inadequate. Due to a lack of evidence, the vitamins (C, E, and D) are not recommended for PE therapy (Mancia et al., 2013). Magnesium sulphate (MgSO₄) is advised for eclampsia prophylaxis or as an additional therapy option in eclampsia in women with severe PE.

Severe hypertension

Varying health organizations have different blood pressure limits for starting medication treatment in PIH. Because of its effectiveness and lengthy track record of safety, methyldopa is regarded the medication of choice during pregnancy. In an emergency, they can be given labetalol intravenously. Calcium channel blockers (CCBs), such as nifedipine per os or isradipine IV, are efficacious and do not pose a significant teratogenic risk. It's important to note the possibility of a synergism with MgSO₄ that could cause hypotension. Atenolol and metoprolol are considered effective and safe for late pregnancy. Due of perinatal side effects and a slower treatment response, hydralazine is no longer the preferred parenteral medication in emergency situations (Kintiraki et al., 2015).

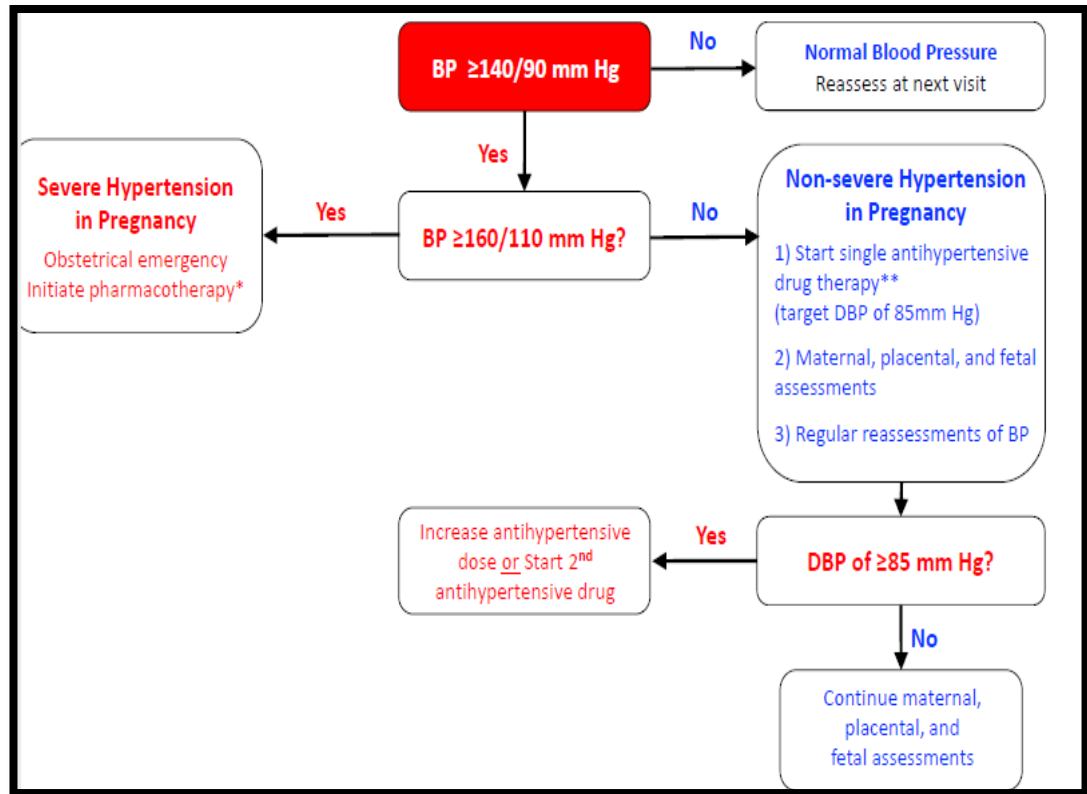


Figure (2-2): Management of Hypertension in Pregnancy (Butalia, et al., 2018).

2.11. Antihypertensive medications

Pregnant women with an average SBP of 140 mm Hg or DBP of 90 mmHg were recommended antihypertensive treatment for chronic hypertension, gestational hypertension, or preeclampsia. Oral labetalol, oral methyldopa, long-acting oral nifedipine, or other oral β -blockers are used as monotherapy (acebutolol, metoprolol, pindolol, and propranolol) should be used as the initial antihypertensive therapy.

Clonidine, hydralazine, and thiazide diuretics are examples of antihypertensive medicines that can be considered second-line. Once a woman becomes pregnant, Angiotensin-converting enzyme ACE inhibitors and Angiotensin II receptor blockers (ARBs) should be avoided. Pregnant women on antihypertensive medication for chronic hypertension or

gestational hypertension should aim for a DBP of 85 mm Hg (Butalia, et al., 2018).

First-Line medication

IV infusion of hydralazine (Apresoline, Neopreol) vasodilator is used in cases of severe preeclampsia; nevertheless, vigilance must be exercised to avoid fast blood pressure drops. Rapid maternal blood pressure lowering can reduce uteroplacental perfusion and oxygen delivery to the fetus. Methyldopa (Aldomet): Exact mechanism uncertain; may operate on the central nervous system. Because the onset of this medicine can take many days, it is not recommended for use in an emergency. There are no long-term impacts on the fetus, according to research. Labetalol (beta blocker): Lowers systemic vascular resistance and slows heart rate. There hasn't been much research done on the long-term impacts on the fetus.

Medication of Second-Line

Nifedipine is a calcium channel blocker increases cardiac index, increases urine output, and promptly controls hypertension (Durham & Chapman, 2014).

First Line Oral Drugs (Grade C)	Second Line Oral Drugs (Grade D)	Medications to Avoid
Labetalol	Clonidine	ACEi* (Grade C)
Methyldopa	Hydralazine	ARBs* (Grade D)
Long-acting oral nifedipine	Thiazide diuretics	*fetotoxicity of renal system
Other β -blockers (acebutolol, metoprolol, pindolol, & propranolol)		

Table (2-2): Common Antihypertensive Drugs used during Pregnancy (Butalia, et al., 2018).

2.12. The Nurse's knowledge in Care of Pregnant Women with Hypertension:

Pregnancy-related hypertension is prevalent, and nurses are frequently involved in the care of women who develop hypertension during their pregnancy. Pregnant women must be educated, carefully screened, and diagnosed early. If a woman does not recognize or understand the signs of preeclampsia, she is less likely to seek medical help. A factor in maternal preeclampsia mortality has been discovered as a lack of understanding regarding the severity of symptoms. Women with preeclampsia who are detected and treated early have fewer negative outcomes than those who are diagnosed later. To avoid potentially fatal effects, hypertensive emergencies must be recognized, evaluated, and treated as soon as possible (Folk, 2018).

2.13. Timing of birth

The birth of women with pregnancy hypertension is one of the primary alterations in therapy. Preterm birth is linked to infant respiratory difficulties, admission to the hospital, and neonatal death. Birth at or beyond 37 weeks' gestation is suggested for women with mild gestational hypertension or preeclampsia without severe symptoms. Those with severe preeclampsia at 34 weeks or beyond, as well as maternal or fetal instability states, should be allowed to give birth as soon as the pregnant woman's stability is established, regardless of gestational age, And also be Birth to a woman with HELLP syndrome at 34 weeks of pregnancy (Obstetricians, 2013).

The Nurse's knowledge and Attitudes about pregnancy induces hypertension:

In obstetric emergencies, nurses are the first medical professionals to come into touch with pregnant women; hence it is crucial that their decisions be informed by the most recent scientific research (WHO 2012). The gathering of information, thorough physical examination, consideration of blood pressure characteristics and other preeclampsia signals, early case recognition, collection and screening of laboratory testing, particularly 24 hour proteinuria and fetal assessment, and pushing What's more, those who are claiming prenatal consultations, making the right and prompt interventions, calling for assistance, giving oxygen, establishing caliber venous access, and beginning magnesium sulfate therapy are actions that, if taken, will ensure care and the reduction of fetal and maternal mortality (Abdalhafze et al.,2018). During the first visit, nurses can assist in identifying the risk factors and risk groups for preeclampsia by asking expectant patients about their personal histories as well as their full medical and family histories. Pregnant women need to be informed about the dangers of preeclampsia, which can manifest in the second trimester of pregnancy and throughout the postpartum period. Nurses can do this by assessing symptoms, checking blood pressure, and more (Sabry et al., 2021).

2.15. Previous Studies:

First study:

Shaheen, (2020), conduct study to Effect of Educational Program on the Knowledge of Nurses Caring for Women with Eclampsia and Pre Eclampsia. The study samples include (160) nurses who worked in Obestetric and Gynecology department The main findings, There was a highly statistical significant difference between pre and posttest regarding

nurses' knowledge about preeclampsia and eclampsia. Conclusion, it's important to improve nurses' knowledge regarding preeclampsia and eclampsia. Recommendation: Continuous educational program to improve nurses' knowledge regarding care of preeclampsia and eclampsia.

Second study:

Khatun, Mohammad & Chowdhury (2017), Conduct a research to examine nurses' knowledge of eclampsia management at a private hospital in Bangladesh. the study samples include (105) nurses. Results show that the mean of the respondents was 31.6 years. Slightly above half (51.4%) of the respondents were unmarried and the rest of them were married. Majority of the participants (52.5%) had B.Sc. nursing; however 70.5% of the respondents knew about the current management of Eclampsia. The results of this study demonstrated that the majority of the nurses who took part in it had a sufficient degree of knowledge regarding eclampsia care.

Third study:

Sabry et al., (2021), conducted study to evaluate effect of precede model educational program on nurses ' knowledge and attitude toward health promotion of preeclampsia. The study sample includes a purposive sample of 30 nurses. The Results Level of knowledge, enabling factors and reinforcing factors have been increased with statistical significance immediately and after one month of precede model educational program. Nurses had good attitude toward health promotion of preeclampsia one - month post precede model educational program in comparison to the pre - educational program. Conclusion: PRECEDE model educational program for nurses was effective in improving their knowledge and attitude toward health promotion of preeclampsia. The recommendation: PRECEDE model educational program toward health promotion of preeclampsia should be incorporated with the antenatal care for pregnant women in the study setting.

Fourth study:

Abdalmajed, (2018), conduct study to assessment Nurses' Knowledge regarding Nursing Care of Pregnancy Induced Hypertension at Kassala Saudi New Hospital, Kassala State. The study sample include (42) of nurses. Results show that (45.2%) of the studied population had poor knowledge about gestational hypertension, (50.0%) of the studied population had poor knowledge about nursing interventions regarding impaired tissue perfusion. The concluded Nurses' knowledge regarding pregnancy induced hypertension showed sufficient level of knowledge in general. The study recommended that Standard guidelines of nursing intervention for pregnancy induced hypertension should be available, training staff and encourage them to increase their knowledge.

Fifth Study:

Ayed & Ibrahim (2021), conducted the study about the effect of educational program of eclampsia management on knowledge of maternity nurses at mosul teaching hospitals. The study sample includes (30) nurses were selected by purposive sampling. The results of the study showed the educational program on nurses' knowledge regarding eclampsia is effective, highly significant differences after implementation of the educational program compared to their knowledge before the educational program in study group. According to the findings, 53.3 % of nurses had poor knowledge of prior implementation of the educational program. However, after implementation, 70.0 % of them had excellent knowledge. Conclusions: The educational program has a positive effect on nurse's knowledge of eclampsia treatment, according to the study's conclusion. The Recommendation, Continuous educational program to improve nurses' knowledge regarding care of preeclampsia and eclampsia.

Sixth Study:

Tadele, et al., (2020), conducted the study to evaluate the knowledge and skills of nursing staff in the gynecology emergency room about pregnancy-induced hypertension in the Ethiopia. The study samples include (78) of nurses. The average age of the responders was 25.62 years, according to the findings. Only 54 (67.9%) of the total study participants were found to have acceptable understanding about pregnancy-induced hypertension. However, out of the 78 charts examined, 39 (50 percent) showed good practice when it came to pregnancy-induced hypertension. Only training has a significant relationship to knowledge of PIH ($P = 0.003$), yet, none of another variables are connection with the practice of pregnancy-induced hypertension.

Chapter Three:
Methodology

Chapter Three:

Methodology

This chapter explains the methodology and design of the current study. Administrative Arrangement, study setting, study sample and sampling, study phases, data collection methods, pilot study, educational program implementation, instrument and educational program reliability and validity, data analysis, and study constraints are also included.

3.1. Design of the Study:

A quasi-experimental study was adopted utilizing a system of pre- and post-testing procedure for both the studied and the control groups to meet the study's objectives Which conducted for the period of 1st Nov/ 2020 to the 30th / May /2022

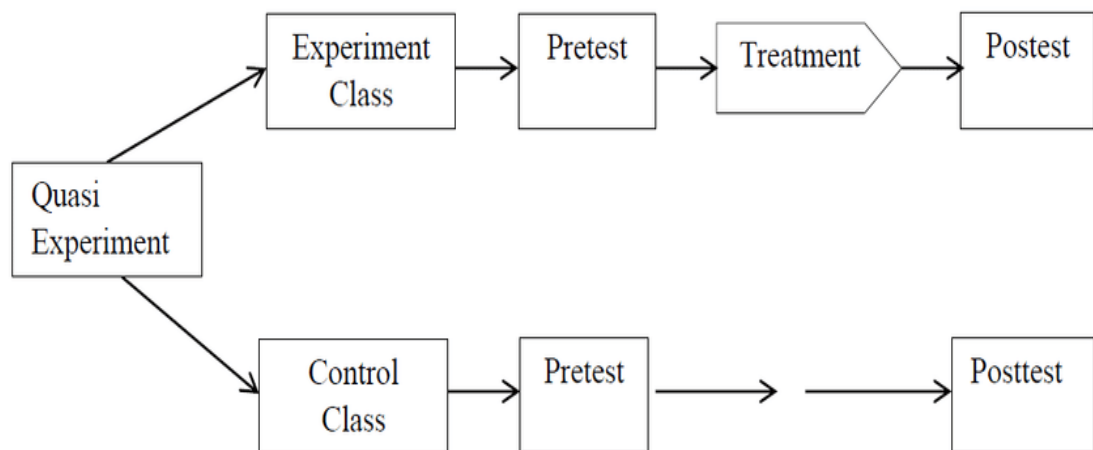


Figure 3-1: Steps of quasi-experimental study

Quasi-experiment is an experiential study that involves non-random specification to measure the direct effect of the intervention (education program) on a target sample (nurses). It generally allows the researcher to observe and control the task under the treatment condition but using some criterion other than random assignment

3.2. Administrative Arrangements:

The official permissions were obtained from relevant authorities before collecting the study data as follow:

1. Protocol of research and official permission taken from University of Kerbala/ College of Nursing to conduct the study.
2. The title, constructed educational program and questionnaire were presented to the Ethics Committee formed within the College of Nursing, which reviewed the study tools (program and questionnaire), and therefore agreed to conduct the study (**Appendix A1**).
3. In the last step of the administrative arrangements, an official letter by the (Training Department and Development) Kerbala Health Directorate (**Appendix A2**).
4. An official permission presented at primary health care sectors to formally access the primary health care centers (**Appendix A4**) and (**Appendix A5**).
5. In addition, the consent of the nurse to participate in the study, after explaining the objectives and usefulness of the study to them and assuring that all information provided will be confidential and for scientific and research purposes (autonomy and privacy).

3.3. Sitting of the Study:

The study takes place in ten primary health care centers throughout Holy Kerbala City, divided into two health sectors (**Appendix B**).

3.4. Sample of the Study:

A non-probability "purposive" sample consisting from 60 nurses was chosen and divided into 2 groups with 30 nurses in each group. Only 52 of

the 60 samples completed the program. The implementation test was not finished by eight samples (post-test), so they were excluded from the study. The final division consisted of 25 nurses as the study group and 27 nurses as the control group. The study group is exposed to the educational program that deals with nurses' knowledge and attitudes towards pregnancy-induced hypertension. The educational program was not presented to the second group.

3.4.1. Inclusion Criteria:

1. Nurses who have one year and more experience.
2. Nurses who are different educational levels.
3. Nurses who performed poorly on the pretest.
4. Nurses who are ready to participate in research.

3.4.2. Exclusion Criteria:

1. Nursing staff that rejected to take part in the study.
2. Nurses with a pre-test score of at least 60%.
3. Nurses with less than one year of experience.
4. Nurses who declined to finish the study.
5. Nurses who selected for pilot study.

3.5. Steps of the Study:

3.5.1. Preliminary Assessment of Nurses Knowledge and Attitudes about Pregnancy Induced Hypertension

Before implementing the educational program, the researcher constructed a preliminary need assessment consist from close ended questions through the review of literature and previous study, which applied on nurses to assess their knowledge toward pregnancy induced hypertension to determine the need for educational program. Data were collected from (20) nurses that worked in (PHCCs) from the period of December 2021 to January 2022.

Every nurse had 15–30 minutes to respond to the questions. The nurses' expertise in pregnancy-induced hypertension was found to be poor.

As a result of this assessment, the researcher was willing to formulate an educational program that focuses the most critical topics that nurses need to know about pregnancy-induced hypertension in primary health care settings see the (**Appendix C**).

3.5.2. Construction of the Educational Program:

The educational program was created in response to the demands of nurses, as well as information obtained through a review of relevant scientific literature, past studies, and the researcher's own experience. Experts in several fields of nursing sciences examined the program's content (**Appendix G**). Based on the views and suggestions of these specialists, the contents of the program form were revised. They all thought that the curriculum was well-designed to help nurses improve their knowledge and attitudes (**Appendix E**).

3. 6. Group Assignment:

3. 6.1. The Control Group:

Samples from the control group were just administered to the study instrument and their information according to their profession and academic study. In this study, only two tests were taken (pre-post tests)

3. 6.2. Study Group:

The study group's nurses received the same information, in addition to getting an educational program aimed at enhancing knowledge concerning pregnancy-induced hypertension.

The following are some of the steps involved in implementing the program that was presented to the study group:

- a. Nurses provided personal information, and a pre-test was conducted.
- b. The pregnancy-induced hypertension educational program is designed and presented in eight sessions throughout a one week period. Every session lasted about an hour and a half, and there were (25) nurses in study group.
- c. The place: in the College of Nursing / University of Kerbala.
- d. Each session deals the follows:

Lectures, discussions, computer and data presentations (Power Point), video, and photographs are all used. All of the program's sessions employ these techniques.

First Session:

Hypertension during Pregnancy

1. Introduction about Hypertension during Pregnancy.
2. Definition of high blood pressure.
3. Methods for measuring and determining blood pressure.
4. Classifications of high blood pressure during pregnancy.

Second Session:

Hypertension during Pregnancy

1. The first type is Pregnancy-induced hypertension.
2. Causes of hypertension during pregnant.
3. Risk factors for hypertension.
4. Complications of hypertension.

Third Session:

1. Diagnosis of hypertension during pregnant.

2. Signs and symptoms of high blood pressure during pregnancy.
3. Methods of managing hypertensive patients during pregnancy.

Fourth Session:**Chronic Hypertension**

1. Chronic blood pressure.
2. Classification and reasons of blood pressure.
3. Therapeutic measures.
4. Nursing evaluation of chronic hypertension.

Fifth Session:**Preeclampsia**

1. What mean the Preeclampsia.
2. Risk factors for preeclampsia.
3. Tests for preeclampsia.
4. Signs and symptoms of preeclampsia.
5. Risks to the mother and fetus.

Sixth Session: Eclampsia

1. What is Eclampsia.
2. Warning signs of a possible infection or preeclampsia.
3. Care during and after the seizure.

Seventh Session: HELEP Syndrome.

1. What is HELEP Syndrome (Hemolysis, Elevated Liver Enzyme, and Platelet Low).
2. Medical management in HLEB syndrome.

Eighth Session:**Comprehensive Nursing Management**

1. Comprehensive nursing procedures for pressure disorders during pregnancy.
2. Prevention of high blood pressure during pregnancy.
3. Educating the patient on appropriate home care treatment methods.

2.7. Study Instrument

The study created this questionnaire with the goal of explaining the study's objectives and importance by getting responses to the study's questions. The questionnaire is one of the tools used to help gather data that contributes to checking the outcomes expected by the study.

The following three parts were utilized by the researcher to gather information from study participant respondents:

First Part: demographic characteristics including (gender, age, years of experience, education grade and participation in training sessions).

Second Part: knowledge of the nurses, it was constructed based on extensive review of related studies and available literatures to measure nurses' knowledge regarding pregnancy induced hypertension.

Third Part: nurses' attitudes, it was constructed based on extensive review of related studies and available literatures to measure nurses' attitudes regarding pregnancy induced hypertension.

The researcher followed the guidelines for creating the questionnaire suitable to the importance of the information that the investigator is keen to be adequate and complete for all parts of the problem and can be relied on and accepted. The questions were closed-ended, which required responding according to what was proper.

3.8. The Validity of the Study Instrument:

Validity refers to ensuring that the questionnaire will measure what it was planned to measure, and honesty to the questionnaire's inclusion of all elements that must be included in the analysis, and the clarity of its

paragraphs and vocabulary, so that it is understandable to everyone who uses it.

To improve the questionnaire's validity, it was given to (12) experts from various domains. Experts were required to show their opinions and comments on the items of the questionnaire regarding their language suitability and relation to the dimension of study variables they were allocated to as well as suitability for the study participants (**appendix G**).

The experts' comments indicated that minor adjustments to some things should be made, and these were adjusted in accordance with their recommendations, after which the final document was created in order to conduct the study.

3.9. The Pilot Study:

The objective of the pilot study was to test the study tool's stability and credibility, clarity and its efficiency, which confirmed the standard time required to collect data for each subject, which can be estimated due to the method of data collection interview procedures and to difficulties identification that may be encounter.

The pilot study aimed to achieve the following objectives.

1. Developing and testing adequacy of research instruments.
2. Assessing the feasibility of instrument.
3. Identifying potential issues with the proposed data analysis approaches.
4. Estimate the time during collected data by the researcher.

Results of Pilot Study:

1. The questionnaire is reliable.

2. The time required for answering the questionnaire ranged from (20-30) minutes.
3. The instrument items were clarify and understood the knowledge of nurses about pregnancy induced hypertension (Table 3-1).

Before the questionnaire reached its final form, it went through the following stages:

1. Determining the data that will be collected through the questionnaire according to the study questions.
2. Determining the method and format of the questionnaire.
3. Determining the type of criterion that determines the type of answer in the questionnaire.
4. Presenting the questionnaire to the supervising to express his opinion and observations in developing the questionnaire and modifying it based on his observations.
5. Presenting the questionnaire to a number of panels of experts to express their opinion and observations in developing the questionnaire and modifying it based on what they submitted.
6. Conducting a reliability test on it by distributing the questionnaire to a sample of 10 nurses.
7. Writing the questionnaire in its final form, then printing, reviewing and distributing it in a same formula before and after education program.

Reliability of the Questionnaire:

The reliability of study instruments refers to the assurance that the response will be nearly identical whether it is given to the same person at multiple periods.

The researcher was used test-retest reliability method to apply on a random exploratory sample of ten nurses, where each nurse received the questionnaire without being aware that they were being used as a sample to

assess the tool's stability. Later, the participants in this sample were not included in the original sample used to conduct the final study. The confidence coefficient is computed using the Alpha Cronbach sample coefficient, as illustrated below.

Table 3-1: Reliability of the Studied Questionnaire (n=10)

Scale (Reliability Coefficient)	Cronbach's Alpha Value	Standard Value	Evaluation
Knowledge (30-items)	0.80	0.70	Pass
Attitudes(10-items)	0.78		

3.10. 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 collect 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 beginning of the collection of information from the sample who are participating in the study. The researcher provided a brief explanation about the research methodology of the project, the objective of conducting it, and the responsibilities of the nurses who participate in this research, in order to give everyone a complete and clear picture of the study to be carried out.

On the other hand, the researcher emphasized that all nurses who are participating in the study had the right to not complete their participation

and withdraw from this study in the event that they felt uncomfortable or annoyed with some of the items in the questionnaire that was prepared as a research tool or the researcher's method of collecting data or anything else.

3.11. Methods of Data Collection

The implementation was carried out in the University of Kerbala / College of Nursing throughout the period from 6th to 10th /February/2022

The following were included in the program's implementation, which was presented to the study group:

- 3.11.1. Each nurse in the study and control groups completed a data form by Self-report use.
- 3.11.2. All of the study's nurses performed a pre-test to evaluate their knowledge and attitudes, the pre-test lasted (20-30) minutes.
- 3.11.3. Nurses were recalled to present in the same classroom so they could participate in a course.
- 3.11.4. The nurses' knowledge test included thirty questions and ten questions on the nurses' attitudes. Both the study and control groups were given various alternatives. The examination was designed to evaluate the nurses' knowledge and attitudes with regards pregnancy induced hypertension.
- 3.11.5. Each class will take 60-90 minutes to complete.
- 3.11.6. In this study, all nurses in the study and control groups were given a post-test immediately following program completion.

3.11.7. The control group had the same procedures as the study group, with the exception of the educational program.

3.11.8. These sessions included the following teaching materials: (classroom, lectures, white board, computer, data show)

3.12. Statistical Analysis Approach:

The researcher used the SPSS-20 and Microsoft Excel (2010) programs to statistically analyze the data gathered from the study sample in order to deduce the link between the variables, and gain the research final findings based on a series of statistical tests.

3.12.1. 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 performed through use:

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

B. Statistical SPSS.

The average score can be calculated by using the following:

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

For knowledge

Statistical Mean = 30-44 refer to Poor Knowledge

Statistical Mean = 45-52 refer to Fair Knowledge

Statistical Mean = 53-60 refer to Good Knowledge

For Attitudes

Statistical Mean = 10-19 refer to Negative Attitudes

Statistical Mean =20-25 refer to Neutral Attitudes

Statistical Mean = 26-30 refer to Positive Attitudes

C. Standard Deviation ($\pm SD$).

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 investigate covariance between the items I and j is K, where K is the item number of questions. It's important to note that this is the variance, not the standard deviation, of item I.

3.12.2. Inferential approach:

1. t-test

A. Paired Sample t-test

To determine the significance of a difference in pre-test and post-test in a single group, such as a pre-post study group and a pre-post control group.

B. Independent Sample t-test

To assess the significance difference between two groups of measurement, such as pre-test of study group and pre-test of control group; post-test of study group and post-test of control group

To determine if the means of the related population differ statistically, the Independent Samples t-test examines the means of two independent groups.

2. Analysis of Variance:

ANOVA for equality of Means (testing for coincidence when the mean's parameter differs).

Table 3-2: Analysis of Variance (ANOVA)

Source of variance	Sum of squares	Degree of freedom	Mean of square	F-statistics
Between groups	$SSB = \sum \frac{(\sum X)^2}{n} - \frac{(\sum X)^2}{n}$	DFB=1	$\frac{SSB}{DFB}$	$\frac{MSB}{MSW}$
Within groups	$SSW = (\sum X)^2 - \frac{(\sum X)^2}{n}$	DF=N-K	$\frac{SSW}{DFW}$	
Total	$SST = (\sum X)^2 - \frac{(\sum X)^2}{n}$	DFT=N-1		

P-value (≤ 0.05)

Chapter Four:
Results of the Study

Chapter Four:
Results of the Study

This chapter deals with results of the study. The data analysis systematically in figures and tables, which are corresponded with the objectives of the study as follows:

Table 4-1: *Descriptive Statistic of Demographic Characteristics of the Study – Control Groups*

Variable		Study group		Control group	
		F.	%	F.	%
Age	20-24	12	48.0	8	29.6
	25-29	8	32.0	11	40.7
	30-34	1	4.0	3	11.1
	35 and >	4	16.0	5	18.5
	Total	25	100.0	27	100.0
Gender	Male	10	40.0	6	22.2
	Female	15	60.0	21	77.8
	Total	25	100.0	27	100.0
Level of education	school Nursing	8	32.0	7	25.9
	Diploma in Nursing	13	52.0	15	55.6
	Bachelor in nursing	4	16.0	5	18.5
	Total	25	100.0	27	100.0
Years of Experience	1-5	15	60.0	13	48.1
	6-10	6	24.0	8	29.6
	11 and >	4	16.0	6	22.2
	Total	25	100.0	27	100.0

F=Frequency, %= percent, >=greater than.

Table (4-1) reveals that the majority of the sample were at age (20-29) years old (80%) in study group while (70.3%) in control group. Regarding the gender, Female nurses predominated among nurses in each

study, and control groups were (60%) and (77.8%) respectively. In terms level of education at the study participants expressed a diploma nursing in study and control groups (52.0%) and (55.6). Concerning the years of experiences, the greater percentage of nurses participants in the study sample had about (1-5) years in the study and control groups with a percentage (60.0) (48.1) respectively.

Table 4-2: *Nurses' Knowledge regarding Pregnancy Induced Hypertension (Study and Control Group)*

Table 4-2-1: *Comparison between Nurses Responses at Study Group in Pre-posttests Regarding to Knowledge about Pregnancy Induced Hypertension*

Study Group Knowledge	Pretest			Posttest		
	Mean	Sd.	Eval.	Mean	Sd.	Eval.
1. When does high blood pressure occur during pregnancy?	1.60	.500	fair	1.92	.277	Good
2. The appropriate position for measuring blood pressure for a pregnant woman	1.80	.408	good	1.96	.200	Good
3. Chronic hypertension mean	1.48	.510	poor	1.80	.408	Good
4. Factors that increase the risk of developing preeclampsia are	1.48	.510	poor	1.88	.332	Good
5. When does Preeclampsia occur?	1.16	.374	poor	1.68	.476	Fair
6. What does the Eclampsia mean?	1.20	.408	poor	1.88	.332	Good
7. When does superimposed preeclampsia occur?	1.08	.277	poor	1.52	.510	Fair
8. What is the Edema?	1.88	.332	good	1.96	.200	Good
9. What is HELLP syndrome?	1.28	.458	poor	1.80	.408	Good
10. What are the factors that play a role to increase blood pressure? Choose all the possible correct answers	1.36	.490	poor	1.92	.277	Good
11. What are risk factors of preeclampsia include?	1.52	.510	Fair	2.00	.000	Good
12. What is the effect of preclampsia on fetal outcome?	1.16	.374	Poor	1.72	.458	Fair

13. What is the effect of chronic hypertension on pregnant women outcome?	1.56	.507	Fair	1.88	.332	Good
14. The signs and symptoms of Preeclampsia are	1.40	.500	Poor	1.92	.277	Good
15. What is suggested the treatment for general non-pharmacological treatment of pregnant women with mild to moderate high blood pressure during pregnancy	1.60	.500	fair	2.00	.000	Good
16. Why is bed rest encouraged for pregnant women with preeclampsia	1.36	.490	poor	1.76	.436	Fair
17. How does the nurse-midwife monitor the health of the mother's fetus before preeclampsia?	1.36	.490	poor	1.80	.408	Good
18. What should the nurse do before administering (MgSo4)?	1.60	.500	fair	1.96	.200	Good
19. How to give magnesium sulfate MgSo4 to pregnant women through?	1.40	.500	poor	2.00	.000	Good
20. Nursing care during taking MgSo4.	1.08	.277	poor	1.64	.490	Fair
21. What is the nursing care treated for severe pre-eclampsia?	1.04	.200	poor	1.68	.476	Fair
22. What methods can help prevent gestational hypertension?	1.48	.510	poor	1.96	.200	Good
23. What is measure the mother needs during Pre-eclamptic:	1.12	.332	poor	1.60	.500	Fair
24. When should the midwife inform a pregnant woman having a hypertensive disorder?	1.16	.374	poor	1.76	.436	Fair
25. How will you manage woman with pre-eclampsia?	1.36	.490	poor	1.84	.374	Good
26. What nutritional advice would you give to a woman with preeclampsia?	1.24	.436	poor	1.80	.408	Good
27. What treatment would you prescribe for pre-eclampsia?	1.16	.374	poor	1.84	.374	Good
28. Nursing care for mild pre-eclampsia includes	1.04	.200	poor	1.96	.200	Good
29. Nursing care for severe pre-eclampsia includes	1.12	.332	poor	1.80	.408	Good
30. The aim of antihypertensive treatment is to:	1.64	.490	Fair	1.96	.200	Good

S.D. = Standard Deviation; Eval.= Evaluation(poor=1-1.4; Fair= 1.5-1.7; Good 1.8-2)

Results related to knowledge respondents regarding to pregnancy induced hypertension in PHC centers, are presented in table (4.2.1). The result indicate that the nurses at the pretest in study group are poor at all studied items (mean score = 1-1.4) except, the items number (1, 11,13,15,18 and 30) the responses were fair (mean = 1.5-1.7) the item (2) the response was good (mean = 1.8-2). Between the pretest and posttest of the program, the percentage sufficiency of the knowledge responders was higher in the posttest than it was in the pretest for the educational program.

Table 4.2.2: *Overall Total Skill Knowledge Comparison between Pre and Posttests in Study Group Responses Pregnancy Induced Hypertension*

Total knowledge pretest					Total knowledge posttest				
Level of knowledge	F.	%	Mean	SD.	Level of knowledge	F.	%	Mean	SD.
Poor	16	64.0	1.36	.489	poor	0	0	1.88	.331
Fair	9	36.0			Fair	3	12		
Good	0	0			Good	22	88		
Total	25	100.0			Total	25	100.0		

F. =Frequency; *%*= percentage; *SD.* = standard Deviation ;(poor=1-1.4; Fair= 1.5-1.7; Good 1.8-2)

Results illustrated that the (64.0%) of nurses expressed a poor level of knowledge at the pretest period of measurement (mean score =1.36; SD = 0.489) with regard pregnancy induced hypertension. while, after application of education program, findings demonstrated that (88%) of nurses expressed a good level of knowledge at the posttest period of measurement (mean = 1.88; SD= 0.331).



Figure 4-1: Total Knowledge Comparison between Pre-Posttests Study Group

Table 4.2.3: Comparison between Nurses' Responses at Control Group in Pre-posttests Regarding to Knowledge about Pregnancy Induced Hypertension

Control Group Knowledge	Pretest			posttest		
	Mean	SD.	Eval.	Mean	SD.	Eval.
1. When does high blood pressure occur during pregnancy?	1.51	.509	Fair	1.52	.509	Fair
2. The appropriate position for measuring blood pressure for a pregnant woman	1.48	.509	poor	1.44	.506	poor
3. Chronic hypertension mean	1.37	.492	poor	1.37	.492	poor
4. Factors that increase the risk of developing preeclampsia are	1.51	.509	Fair	1.44	.506	Poor
5. When does Preeclampsia occur?	1.29	.465	Poor	1.30	.465	Poor
6. What does the Eclampsia mean?	1.22	.423	Poor	1.30	.465	Poor
7. When does superimposed preeclampsia occur?	1.29	.465	Poor	1.30	.465	Poor
8. What is the Edema?	1.51	.509	Fair	1.48	.509	Poor
9. What is HELLP syndrome?	1.33	.480	Poor	1.33	.480	Poor
10. What are the factors that play a role to increase blood pressure? Choose all the possible correct answers	1.25	.446	Poor	1.30	.465	Poor
11. What are risk factors of preeclampsia include?	1.29	.465	Poor	1.37	.492	Poor
12. What is the effect of preclampsia on fetal outcome?	1.29	.465	Poor	1.30	.465	Poor

13. What is the effect of chronic hypertension on pregnant women outcome?	1.55	.506	fair	1.52	.509	Fair
14. The signs and symptoms of Preeclampsia are	1.33	.480	Poor	1.37	.492	Poor
15. What is suggested the treatment for general non-pharmacological treatment of pregnant women with mild to moderate high blood pressure during pregnancy	1.62	.492	fair	1.67	.480	fair
16. Why is bed rest encouraged for pregnant women with preeclampsia	1.33	.480	Poor	1.33	.480	Poor
17. How does the nurse-midwife monitor the health of the mother's fetus before preeclampsia?	1.29	.465	Poor	1.30	.465	Poor
18. What should the nurse do before administering (MgSo4)?	1.59	.500	fair	1.67	.480	fair
19. How to give magnesium sulfate MgSo4 to pregnant women through?	1.29	.465	Poor	1.22	.424	Poor
20. Nursing care during taking MgSo4.	1.29	.465	Poor	1.30	.465	Poor
21. What is the nursing care treated for severe pre-eclampsia?	1.37	.492	Poor	1.30	.465	Poor
22. What methods can help prevent gestational hypertension?	1.37	.492	Poor	1.37	.492	Poor
23. What is measure the mother needs during Pre-eclamptic:	1.25	.446	Poor	1.33	.480	Poor
24. When should the midwife inform a pregnant woman having a hypertensive disorder?	1.22	.423	Poor	1.26	.447	Poor
25. How will you manage woman with pre-eclampsia?	1.25	.446	Poor	1.30	.465	Poor
26. What nutritional advice would you give to a woman with preeclampsia?	1.29	.465	Poor	1.26	.447	Poor
27. What treatment would you prescribe for pre-eclampsia?	1.33	.480	Poor	1.41	.501	Poor
28. Nursing care for mild pre-eclampsia includes	1.22	.423	Poor	1.26	.447	Poor
29. Nursing care for severe pre-eclampsia includes	1.29	.465	Poor	1.22	.424	Poor

30. The aim of antihypertensive treatment is to:	1.59	.500	fair	1.48	.509	Poor
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S.D. = standard Deviation; Eval. = Evaluation (poor=1-1.4; Fair= 1.5-1.7; Good 1.8-2)

The results showed that the pre-post tests were used to evaluate the study sample responses with regard knowledge towards pregnancy induced hypertension. The results indicate that the nurses at the pre –posttest in control group are poor at all studied items (mean= 1-1.4) except, the items number (1, 4, 8,13,15,18 and 30) the responses were fair (mean = 1.5-1.7). While the responses in posttest are poor at all studies items except, the number (1, 13, 15 and 18) the responses were fair.

Table 4.2.4: *Overall Total skill Knowledge Comparison between Pre-posttests in Control Group responses Pregnancy Induced Hypertension*

Total knowledge pretest control group					Total knowledge posttest control group				
Level of knowledge	F.	%	Mean	SD.	Level of knowledge	F.	%	Mean	SD.
Poor	23	85.2	1.14	.362	Poor	24	88.9	1.11	.320
Fair	4	14.8			Fair	3	11.1		
good	0	0			good	0	0		
Total	27	100.0			Total	27	100.0		

F. =Frequency; %= percentage; SD. = standard Deviation ;(poor=1-1.4; Fair= 1.5-1.7; Good 1.8-2)

Results illustrated that the (85%) of nurses expressed a poor level of knowledge at the pre-test period of measurement (mean= 1.14; SD= 0.362) with regard pregnancy induced hypertension. And after a period of time passed, results demonstrated that (88.9%) of nurses expressed a poor level of knowledge at the posttest period of measurement (mean = 1.11; SD= 0.320).

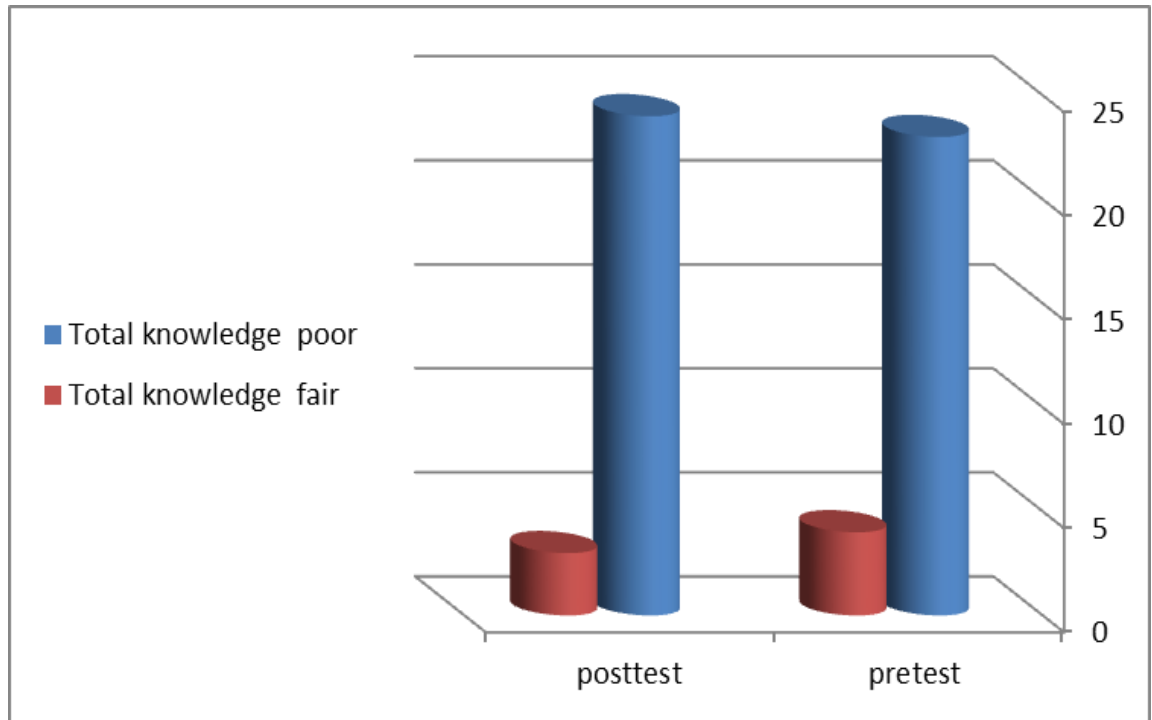


Figure 4-2: Total Knowledge Comparison between Pre and Posttest Control Group

Table 4-3: Paired Samples *t*-test of the difference between pretest and posttest study group Knowledge

	Paired Differences		T	Df	Sig.
	M	S.D.			
Total knowledge pretest – posttest	-1.52	.585	-12.970	24	.000

M= Mean, SD = Standard Deviation, T-value = T-Test, d.f= Degree of Freedom, Sig= significance

The study results reveal a highly significant difference within the study group's knowledge responses in pre-post-tests ($p = 0.000$). The study findings show a perfection in the nurses' knowledge of pregnancy-induced hypertension ($M = 1.52$, $SD = 0.585$).

Table 4-4: Paired Sample t-test of the difference between pretest and posttest control group Knowledge

	Paired Differences		T-value	Df	Sig.
	M	S.D.			
Total knowledge pretest – posttest	.037	.337	.570	26	.574

M= Mean, SD = Standard Deviation, T- value= T-Test, d.f= Degree of Freedom, Sig= significance

The study results reveal a non-significant difference that's found between the knowledge level in the pretest and posttest for the control group ($p= 0.574$), the study findings show no refinement in the nurses' knowledge towards pregnancy-induced hypertension (M=0.037, SD= 0.337).

Table 4-5: Nurses' Attitudes towards Pregnancy Induced Hypertension (Study and Control Groups):

Table 4-5-1: Comparison between Nurses Responses at Pre-Posttests in Study Group Regarding to Attitudes towards Pregnancy Induced Hypertension

Study Group Attitude	Pre test			Post test		
	M	S.D.	Eval.	M	S.D.	Eval.
1. I think that high blood pressure in pregnant women is an uncommon health problem.	2.52	.823	Neutral	2.92	.400	Positive
2. I believe it is essential to measure the blood pressure of every pregnant woman during every antenatal care visit	2.80	.500	Positive	2.96	.200	Positive
3. It is not a nurse's duty to educate pregnant women about high blood pressure during pregnancy.	2.84	.374	Positive	3.00	.000	Positive

4. I think it is the nurse's duty to educate pregnant women about the importance of prenatal care in primary health care centers	2.72	.678	Positive	3.00	.000	Positive
5. I do not think it is the nurse's duty to educate pregnant women with high blood pressure not to need bed rest.	2.80	.500	Positive	2.72	.678	Positive
6. I believe that most pregnant women with chronic high blood pressure are at risk of developing preeclampsia.	2.72	.542	Positive	2.96	.200	Positive
7. It is very important to evaluate edema in pregnant women with high blood pressure	2.44	.651	Neutral	2.92	.277	Positive
8. The electronic sphygmomanometer is the best tool for measuring blood pressure to get the correct reading	2.08	.862	Neutral	2.88	.440	Positive
9. The use of a blood test as a routine screening tool is very essential for predicting preeclampsia.	1.64	.638	Negative	2.04	.978	Neutral
10. I believe that epigastric pain and headache are always clinical signs of preeclampsia.	2.00	.577	Neutral	2.96	.200	Positive

M=Mean, S.D. = Standard Deviation, level of Evaluation (Negative=1-1.9, Neutral=2-2.5, Positive=2.6-3)

The pretest-posttest results revealed an assessment of the study sample's attitudes toward pregnancy-induced hypertension. The results show that the nurses at the pre-test in study group are Positive (M=2.6-3) at studies items (2,3,4,5 and 6) except, the items number (1,7,8,and 10) the responses were neutral (2-2.5) and the item (9) the response was negative (M=1-1.9). While, after the application of education program, nurses

expressed at post-test a positive responses except the item (9) response neutral in attitudes.

Table 4.5.2. Comparison between Pre-Posttests in Study Group responses towards Pregnancy Induced Hypertension Attitudes

pretest group					Posttest group					
		F.	%	M	S.d.			Mean	S.d.	
Total attitude study group	Negative	1	4.0	2.48	0.585	Positive	25	100	3.00	.000
	Neutral	11	44.0			Total	25	100		
	Positive	13	52.0							
	Total	25	100.0							

F= Frequency, %=percentage, M=Mean, S.D. = Standard Deviation, level of Evaluation (Negative=1-1.9, Neutral=2-2.5, Positive=2.6-3)

Results illustrated that the (52%) of nurses expressed positive attitudes at the pre-test period of measurement (M =2.48, SD =0.585) with regard pregnancy induced hypertension. While, after application of education program, findings demonstrated that the (100%) of nurses expressed positive attitudes at the post-test period of measurement (M =3, SD=0.000).

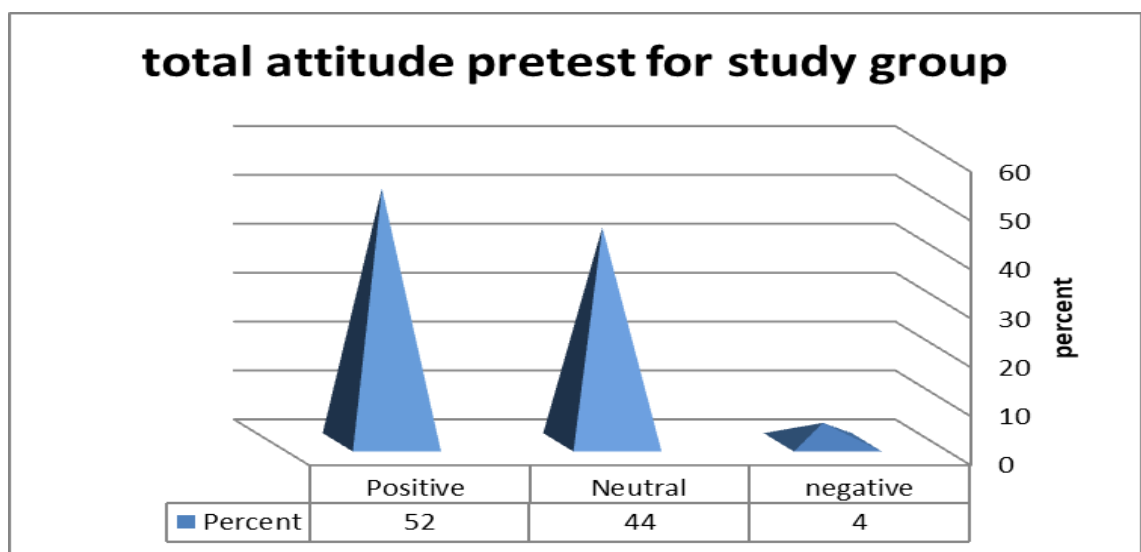


Figure 4-3: Overall Responses in Attitudes Scores for Study Group (Pre-test)

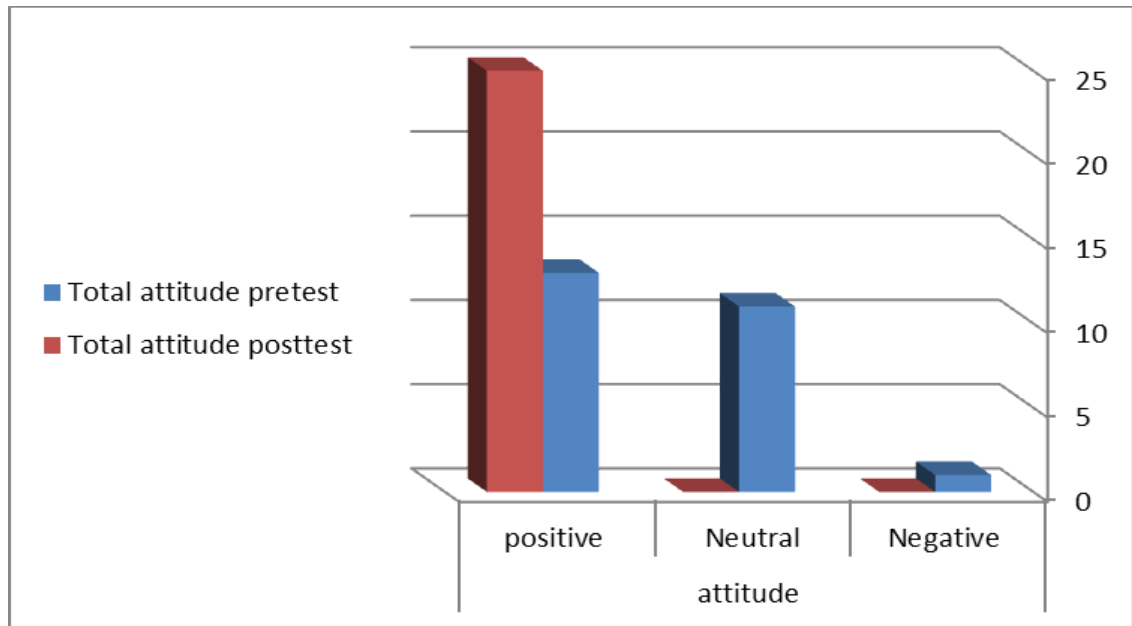


Figure 4-4: Overall Responses in Attitudes Scores for Study Group (Pre-posttests)

Table 4-5-3: Nurses' Responses at Pre-Posttests in Control Group Regarding to Attitudes towards Pregnancy Induced Hypertension

Control Group Attitudes	Pretest group			Posttest group		
	Mean	Sd.	Eval.	Mean	Sd.	Eval.
1. I think that high blood pressure in pregnant women is an uncommon health problem.	2.44	.847	Neutral	2.37	.884	Neutral
2. I believe it is essential to measure the blood pressure of every pregnant woman during every antenatal care visit	2.18	.786	neutral	2.19	.534	Neutral
3. It is not a nurse's duty to educate pregnant women about high blood pressure during pregnancy.	2.18	.786	Neutral	2.11	.847	Neutral

4. I think it is the nurse's duty to educate pregnant women about the importance of prenatal care in primary health care centers	2.37	.741	Neutral	2.30	.775	Neutral
5. I do not think it is the nurse's duty to educate pregnant women with high blood pressure not to need bed rest.	2.18	.681	Neutral	2.07	.675	Neutral
6. I believe that most pregnant women with chronic high blood pressure are at risk of developing preeclampsia.	2.25	.712	neutral	2.11	.678	Neutral
7. It is very important to evaluate edema in pregnant women with high blood pressure	2.37	.687	Neutral	2.37	.688	Neutral
8. The electronic sphygmomanometer is the best tool for measuring blood pressure to get the correct reading	2.44	.577	Neutral	2.41	.636	Neutral
9. The use of a blood test as a routine screening tool is very essential for predicting preeclampsia.	1.81	.483	Negative	1.78	.577	Negative
10. I believe that epigastric pain and headache are always clinical signs of preeclampsia.	2.18	.557	Neutral	2.11	.506	Neutral

M=Mean, S.D. = Standard Deviation, level of Evaluation (Negative=1-1.9, Neutral=2-2.5, Positive=2.6-3).

Results show that the nurses at the pretest in control group is neutral at all studied items (M=2-2.5) except, the item number (9) the responses were negative (M=1-1.9). While, period of time has been passed, the nurses expressed constant attitudes as in the first test.

Table 4.5.4 .Overall Nurses' Attitudes towards Pregnancy Induced Hypertension in control Group

Pretest group					Posttest group					
		F.	%	Mean	Sd.		F.	%	Mean	Sd.
Total attitude Control group	Natural	26	96.3	2.03	.192	Negative	3	11.1	1.88	.320
	Positive	1	3.7			Neutral	24	88.9		
	Total	27	100.0			Total	27	100.0		

F= Frequency, %=percentage, M=Mean, S.D. = Standard Deviation, level of Evaluation (Negative=1-1.9, Neutral=2-2.5, Positive=2.6-3)

Results illustrated that the (96.3%) of nurses expressed a neutral attitudes at the pre-test period of measurement (M =2.03, SD =0.192) with regard pregnancy induced hypertension. While, after period of time has been passed, findings demonstrated that the (88.9%) of nurses expressed same attitudes as first test at the post-test period of measurement (M =1.88, SD = 0.320).

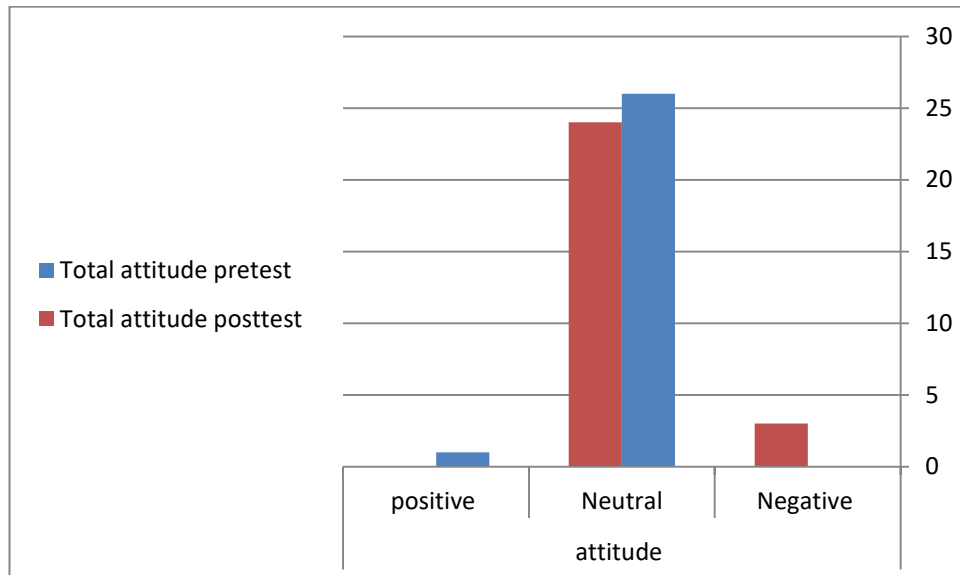


Figure 4-5: Total Attitude Comparison between Pre-Posttests (Control Group)

Table 4-6: Paired Samples T-Test of the difference between pretest and posttest study group Attitude

	Paired Differences		t-value	Df	Sig.
	Mean	Sd.			
Total attitude pretest - posttest	-.52	.585	-4.437	24	.000

M= Mean, SD = Standard Deviation, T- value= T-Test, d.f= Degree of Freedom, Sig= significance

The study results reveal a highly-significant distinction between the study group attitudes responses in pre-test and post-test ($P = 0.000$). The findings show a refinement in the nurses' attitude towards pregnancy induced hypertension ($M=0.52$, $SD= 0.585$).

Table 4-7: Paired Samples t-test of the difference between pretest and posttest in control group Attitude

	Paired Differences		T	Df	Sig.
	M	Sd.			
Total attitude pretest - total attitude posttest	.074	.384	1.000	26	.327

M= Mean, SD = Standard Deviation, T- value= T-Test, d.f= Degree of Freedom, Sig= significance

Results show that there were non-significant difference that's found between the attitudes level in the pretest and posttest for the control group ($p=0.327$), The results of the study show that there was a statistical mean were no improvement in the nurses' attitudes towards pregnancy induced hypertension at the post-test as time passed. ($M =0.07$, $S.D= 0.384$).

Table 4-8: *Statistical Differences between Nurses' Knowledge regarding Pregnancy Induced Hypertension and Type of Demographic Characteristic in study and control groups (ANOVA).*

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Age	Between Groups	.701	1	.701	.577	NS. .455
	Within Groups	27.939	23	1.215		
	Total	28.640	24			
Gender	Between Groups	.242	1	.242	.968	NS. .335
	Within Groups	5.758	23	.250		
	Total	6.000	24			
Level of Education	Between Groups	.087	1	.087	.178	NS. .677
	Within Groups	11.273	23	.490		
	Total	11.360	24			
Years of experience	Between Groups	.175	1	.175	.288	NS. .597
	Within Groups	13.985	23	.608		
	Total	14.160	24			

d.f= Degree of Freedom, F = Frequency, Sig = Significance, NS= Non Significant

The table (4-8) demonstrates there is no statistically significant difference between nurses' knowledge levels and the demographic characteristics in study and control groups at (p-value=0.05).

Table 4-9: *Statistical Differences between Nurses Attitudes towards pregnancy induced hypertension and type of Demographic Characteristic in study and control groups.*

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	.807	1	.807	.667	NS. .423
	Within Groups	27.833	23	1.210		
	Total	28.640	24			
Gender	Between Groups	.375	1	.375	1.533	NS. .228
	Within Groups	5.625	23	.245		
	Total	6.000	24			
Level of Education	Between Groups	.027	1	.027	.054	NS. .818
	Within Groups	11.333	23	.493		
	Total	11.360	24			
Years of experience	Between Groups	.327	1	.327	.543	NS. .469
	Within Groups	13.833	23	.601		
	Total	14.160	24			

d.f= Degree of Freedom, F = Frequency, Sig = Significance, NS= Non Significant

The table (4–9) demonstrates there is no statistically significant difference between nurses' attitudes levels and demographic characteristics in study and control groups at (p-value=0.05).

Chapter Five:
Discussion of the Results

Chapter Five:

Discussion

This chapter presents a comprehensive description of both the current study's findings as well as a discussion of those findings, which are supported by relevant literature and studies. Those findings were based on nurses' responses in study group and control group to the Pretest and posttest on pregnancy-induced hypertension.

5 .1: Discussion of the Demographic Characteristics of the Nurses in the Primary Health Care Centers:

Following the analysis of demographic characteristics as indicated in (table 4-1), the majority of nurses were aged 20–29 years old (80%) in the study group and (70.3%) in the control group. This finding is consistent with Ayed, and Ibrahim, (2021), who show that most (73.3) of the nurse in studies were ages (21-30) years old ,also agree with Gudeta and Regassa (2019), who revealed that the majority of nurses (68%) of the study participants were aged 20–29 years old. However, it disagrees with Abdalmajed (2018), who revealed that less than half (35.7%) of the study participants fell into their age group (20–30) years old.

Regarding gender, the study results revealed that the majority female nurses are predominated among nurses in both study and control groups at (60.6%) and (77.8%), respectively (Table 4-1).These findings agree with Olaoye et al. (2019), who revealed that (70.9%) of the nurse study sample was females; Angelina, et al., (2020) reported that (84.3%) of the study nurses had females.

Level of education in the study and control groups, 52.0 and 55.6 percent of study participants had a diploma in nursing, respectively (Table 4-1). These findings agree with those of EL Sebaey Soliman, et al., (2021) reported that (61.7%) of the study nurses graduated from an institute or had a diploma; El-Bahy, et al., (2013) revealed that (86.7%) of the study sample had a diploma in nursing; while this study disagreed with Shaheen, (2020) who revealed that (12.5%) of the study sample had a Technical Institute of Nursing; Liljevik & Lohre (2012), who revealed that (52.9%) of the studies nurses had diploma.

The study's findings indicate that in terms of the years of expertise that a higher percentage of nurses in the study and control groups had 1–5 years of experience, with percentages of (60%) and (48.1%), respectively (Table 4-1). These findings agree with Shaheen, (2020), who revealed that (51.3%) of the studied nurses had less than five years of experience; Ayed, and Ibrahim, (2021) revealed that the majority (53.3%) of study participants had 1–5 years of experience.

5.2. Discussion the Effect of Education Program on Nurses Knowledge toward Pregnancy Induced Hypertension in PHC Centers:

The results of the study group's understanding of pregnancy-induced hypertension at primary health care facilities improved significantly following exposure to an educational program, compared to the two times (pretest and posttest)

The current study's educational program about pregnancy-induced hypertension measures for the study group is effective, as revealed by good posttest grades compared to poor and fair pretest

grades for all questioners are presented in table (4.2.1), The result indicates that the nurses at the pretest in study group are poor at all studied items (mean score = 1-1.4) except, the items number (1, 11,13,15,18 and 30) the responses were fair (mean = 1.5-1.7) the item (2) the response was good (mean = 1.8-2). In the education program's posttest, the knowledge results were greater than the pretest. The results reveal that the (64%) of nurses expressed a poor level of knowledge at the pretest period of measurement. while, after application of education program, findings demonstrated that (88%) of nurses expressed a good level of knowledge at the posttest period of measurement (table 4.2.2).

The findings of this study reveal that the change after the education program indicates that the program's activity connected to nurses' knowledge is beneficial. The researcher feels that the improvement in nurse knowledge that occurs after the educational program is implemented demonstrates that the program is successful in enhancing the level of knowledge about pregnancy-induced hypertension.

These results are supported by Emam, and Saber, (2018); more than a quarter (30.0 percent) of nurses had poor knowledge before the program was implemented, whereas approximately 75.0 percent of nurses had good knowledge after the program was implemented. The results showed a statistical difference in knowledge of eclampsia women's care before and after the training. The findings of this study were supported by a quasi-experimental study conducted by El-Bahy et al. in 2013 to assess how an education program about pregnancy-induced hypertension affects maternity nurses' knowledge which observed that more than half of them were unaware of the

issue. This disparity could be attributed to their educational backgrounds. Mousa et al. (2013) Pre- and post-test knowledge levels on preeclampsia were recorded among the study sample. Pre-test knowledge was found to be (59%) while post-test knowledge was found to be (74 percent). In the pre and post-test, the SD was 6.7 and 2.4, respectively.

This study agrees with Ayed, & Ibrahim, (2021) found a considerable improvement in nurses' knowledge results for the study group in eclampsia care, with 53.34 percent of the study group having poor knowledge at pre-test and 70.0 percent having excellent knowledge at post-test.

Before to the training program, it was observed that more than half of the nurses did not know the proper answer to the definition and kinds of hypertension during pregnancy. This lack of information could be due to a lack of training opportunities.

In the (table 4.2.3.) the findings demonstrated evaluation of the study sample of control group responses at the pre-posttests with regard knowledge towards pregnancy induced hypertension. The results indicate that the nurses knowledge are poor at all studied items (mean= 1-1.4) except, the items number (1, 4, 8,13,15,18 and 30) the response were fair (mean = 1.5-1.7). While the response in posttest are poor at all studies items except, the number (1, 13, 15 and 18) the response were fair.

Findings show that the (85%) of nurses expressed a poor level of knowledge at the pre-test period of measurement with regard pregnancy induced hypertension. And after period of time passed, findings demonstrated that (88.9%) of nurses expressed a poor level of

knowledge at the posttest period of measurement. this results supported with Stellenberg & Ngwekazi (2016) They reveal significant gaps in midwives' knowledge of HDPs, particularly its assessment, diagnosis, and management.

There is a poor of knowledge concerning pregnancy-induced hypertension, according to the findings of the current study. This could be due to a lack of information or a requirement for recurrent in service training on high-risk factors that can cause to hypertension during pregnancy.

The findings showed a highly significant difference in before-test and after-test knowledge responses across the study group ($P = 0.001$), the study results indicate that there is an improvement in the nurses knowledge towards pregnancy induced hypertension in the (table 4-3).this supported with Shaheen , (2020) who show the study nurses' knowledge of eclampsia before and after-test. It was discovered a very statistical difference in the study samples' knowledge of eclampsia between pre and posttests (P value < 0.001)

5.3: Discussion of the Effect of Education Program on Nurses Attitudes toward Pregnancy Induced Hypertension:

The findings of data analysis show that the evaluation of the education program in two periods pretest and posttest of the implemented has a favorable influence on nurses' attitudes in the study group after implementation of the education program on nurses in primary health care centers in Kerbala city.

The effect of the educational program about (PIH) in this research may be shown in the positive posttest grades compared to the pretest grades in the study group. The findings indicate that the nurses at the pre-test in study group are Positive at studies items(2,3,4,5 and 6) except, the items number (1,7,8, and 10) the responses were neutral and the item (9) the response was negative .While, after the application of education program, nurses expressed at post-test a positive responses except the item (9) response neutral in attitudes (table 4.5.1). The findings of this study show that (52%) of studies sample expressed a positive attitudes at the pre-test period of measurement. While, after application of education program, findings demonstrated that the (100%) of nurses expressed a positive attitudes at the post-test period of measurement (Table 4.5.2).

The current study findings reveal that there is a highly-significant difference between the study group attitudes responses in pre-posttests ($P = 0.001$), the study results indicate that there is an improvement in the nurses attitude towards pregnancy induced hypertension (table 4-6).

The current study supports the findings of Ahmed Mohammed Sabry, et al., (2021), who found a highly statistically significant differences ($p > 0.001$) between nurses' attitudes before and after the program, with the majority of nurses (75%) having a negative attitude before the program and the majority (95%) having a positive attitude after the program. This is also supported by Sangeetha and Baby (2018), who found that majority 83 percent of (PIH) women, had a positive attitude after the program. Another study, conducted by Fadare, Akpor, and Oziegbe, (2016), looked at pregnant women's attitudes about PIH management. The results were similar to the

current study, with the majority of pregnant women having a positive attitude toward PIH care.

5.4: Discussion of the Association between Effects of education program Nurses Knowledge with Demographic Characteristics:

In terms of comparing the effects of nurses' knowledge improvement on their demographic characteristics, the current findings show that there are no significant differences in nurses' knowledge levels and demographic characteristics such as gender, age, education level, and years of experience in the pretest for the study and control groups (table 4-8).

These findings are consistent with those of EL-BAHY (2013), who found no statistically significant changes in mean knowledge scores based on age, place of employment, or years of experience in the health area.

These finding of the study Disagree with the shaheen, 2020) who Shows the mean score of knowledge about severe gestational hypertension of the study sample in rapport to their level of education before and after test. There was a highly statistically significant difference regarding overall knowledge in relation to their level of education and years of experience in pretest, where (P value <0.001). However, whilst there was no statistically significant variation regarding the overall knowledge score in link to their level of education and years of experience in posttest, where (P value >0.05).

The outcomes in the current study, the mean score of the total knowledge of the nurses tested showed no statistically significant

variation in connection to their years of experience. This contradicts the findings of Abd Alhafez, Ahmed, and Mohamed (2018), which looked at the impact of an international preeclampsia management training program on maternity nurses' expertise. These investigations discovered a link between a nurse's knowledge and their years of experience.

5.5: Discussion of the Association between Effects of education program Nurses Attitudes with Demographic Characteristics:

The current findings reveal that there is no significant difference between nurses' attitudes level and demographic characteristics such as gender, age, education level, and years of experience in the pretest for study and control groups at (P-value 0.05) (Table 4-9)

The finding agree with the findings of the research by Sangeetha and Baby, (2018) who revealed that there were no statistical significant relation between attitudes of preeclampsia and demographic characteristics, also with the study by Fadare, Akpor, & Oziegbe, (2016), who revealed that there were no statistical significant relation between attitudes of pregnancy induced hypertension and demographic characteristics.

Chapter Six: Conclusions and Recommendations

Chapter Six:
Conclusions and Recommendations

6.1. Conclusions:

This chapter presents the conclusions based on the interpretation and discussion of the study findings, as well as important recommendations that may aid in the development of strategic planning to improve nurses' knowledge and attitudes regarding pregnancy-induced hypertension. The researcher concluded the following based on the findings of the current study:

1. The demographic characteristics of the current study's reveal that the majority of nurses' participants are between the ages of 20 and 29, are mostly female, have a diploma, and have worked in nursing for less than 5 years. Furthermore, the majority of participants have received no training in antenatal care or gestational hypertension
2. The pre-test assessment of knowledge and attitudes about pregnancy-induced hypertension in PHC centers found a low level of assessment in both groups (control and study group).
3. After the educational program was implemented, the findings revealed a high level of nurses' knowledge and attitudes for post-test in the study group regarding pregnancy-induced hypertension. While the control group's degree of knowledge and attitudes show a low level this indicates the effect of the educational program on nurses of the study group.
4. According to the findings, there was no statistically significant relationship between nurses' knowledge and attitudes with the demographic characteristics of the participants.

6.2. Recommendations

The following are some of the recommendations made by this study:

1. A manual containing the basic need information about PIH
2. Providing nurses with a regular training and education program to improve their knowledge of pregnancy-induced hypertension.
3. Standardized protocols for treatment, management, and nursing care about pregnancy induced hypertension.
4. Encourage nurses to participate in continuing education activities such as workshops, conferences, and training programs, as well as to review and update nursing care related to hypertensive disorders in pregnancy.
5. Educational lectures for nurses in hospitals and primary health care centers should be done on a regular basis and updated to assist nurses in spreading health awareness for the purpose of maintaining pregnant and fetus health.

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Appendices

Appendix A1

Ministry of Higher Education and Scientific Research University of Karbala / College of Nursing Scientific Research Ethics Committee				وزارة التعليم العالي والبحث العلمي جامعة كربلاء / كلية التمريض لجنة أخلاقيات البحث العلمي
استمارة اخلاقيات البحث العلمي				
عنوان مشروع البحث				
English		باللغة العربية		
Effect of an Education Program up on Nurses' Knowledge and Attitudes Regarding Pregnancy Induced Hypertension at Primary Health Care Centers		اثر برنامج تعليمي على معارف واتجاهات الممرضين حول ارتفاع ضغط الدم خلال فترة الحمل في مراكز الرعاية الصحية الاولية		
بيانات عن الباحث الرئيسي				
الاسم الثلاثي	رقم الهاتف/ الموبايل	التلقب العلمي او العنوان الوظيفي	الاسم الثلاثي	
امال فاضل نوري	07800082561	ممرض جامعي	امال فاضل نوري	
بيانات الباحثين المشتركين				
الاسم الثلاثي	رقم الهاتف/ الموبايل	التلقب العلمي او العنوان الوظيفي	الاسم الثلاثي	
سلمان حسين فارس	07724542768	استاذ مساعد دكتور	سلمان حسين فارس	
اهمية موضوع البحث واهدافه (Importance of the research and its objectives)				
١. تعلم معارف الممرضين حول ارتفاع ضغط الدم خلال فترة الحمل ٢. تحديد اثر البرنامج على معارف واتجاهات الممرضين حول ارتفاع ضغط الدم أثناء فترة الحمل ٣. ايجاد العلاقة بين اثر البرنامج التعليمي حول ارتفاع ضغط الدم خلال فترة الحمل مع الخصائص الديموغرافية				
وقت ومكان اجراء البحث (الاماكن المقترحة لاجراء البحث فيها)				
• ٢٠٢٠/١١/١ الى ٢٠٢٢/١٢/١ • مراكز الرعاية الصحية الاولية في مدينة كربلاء				
منهجية البحث (Methodology)				
• نوع الدراسة / شبة تجريبي • Quasi experimental				
عينة الدراسة Sample of the study				
• العينة البحثية / الكادر التمريضي المتواجد في المراكز الرعاية الصحية				
الاعتبارات الاخلاقية خلال اجراء البحث (Ethical consideration during research)				
التعهد				
• اتى الموقع انشاء ..امال فاضل نوري راضي.. اتعهد بان اقوم باجراء البحث وفقا لما نكر في البروتوكول اعلاه وان التزم بتابع القوانين والتعليمات فيما يخص اجراء البحوث والالتزام بأخلاقياتها ، كما واتعهد بلخذا الموافقة من افراد العينة للمشاركة في الدراسة واخذ موافقة من ولي امر المشارك الشرعي في حال كون عمر الشخص المشارك اقل من ١٨ سنة، او كونه غير قادر على اللهم ، وان اقدم الإيضاحات والمعلومات الخاصة بالدراسة لافراد العينة للمشاركين في حال طلبها. وان اتعمل بمسرية تامة مع بيانات افراد العينة.				
اسم وتوقيع الباحث امال فاضل نوري				
توصية لجنة اخلاقيات البحوث في الكلية				
نحن اعضاء اللجنة الاخلاقية نوصي بان موضوع الباحث : ذو قيمة علمية ومهم للمجتمع والمريض				
رئيس اللجنة د.عبدعلي كريم احمد عضو د.عبدعلي محمد سعيد عضو د.عبدعلي محمد سعيد عضو د.عبدعلي محمد سعيد				

Appendix A2

Republic of Iraq Ministry of higher education & scientific research University of Karbala College of Nursing Graduate studies Division		جمهورية العراق وزارة التعليم العالي والبحث العلمي جامعة كربلاء كلية التمريض شعبة الدراسات العليا
		العدد: ١٥٣/ع التاريخ: 2021 / 11 / 15

الى / دائرة صحة كربلاء / مركز التدريب و تطوير الملاكات
م/ تسهيل مهمة

تحية طيبة...

يرجى التفضل بالموافقة على تسهيل مهمة السيدة (امال فاضل نوري) لغرض جمع عينات لإنجاز رسالة الماجستير الموسومة (Effect of an Education Program up on Nurses' Knowledge and Attitudes about Pregnancy Hypertension at Primary Health Care Centers (Health Care Centers) (أثر برنامج تعليمي على معرفة واتجاهات الممرضين حول ارتفاع ضغط الدم أثناء الحمل في مراكز الرعاية الصحية الأولية) وهي احدى طلبة الدراسات العليا / الماجستير في كليتنا / للعام الدراسي (2020-2021) و مستمرة في الدوام في الوقت الحاضر.

... مع التقدير ...


 أ.م.د. سلمان حسين فارس الكريطي
 معاون العميد للشؤون العلمية و الدراسات العليا
 2021 / 11 / 15


 امجد علي لفضة
 مدير مكتب البريد العام


نسخة منه الى :-
 - مكتب السيد المعاون العلمي المحترم.
 - شعبة الدراسات العليا.

العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء
 Mail: nursing@uokerbala.edu.iq website: nursing.uokerbala.edu.iq

Appendix A3

جمهورية العراق

Holy Karbala governorate
Karbala Health Department
General manager's office
Training and Human Development
Center



محافظة كربلاء المقدسة
دائرة صحة كربلاء المقدسة
مركز التدريب والتنمية البشرية
شعبة ادارة المعرفة
وحدة البحوث
العدد: ٢٨٤٥
التاريخ: ٢٠٢١ / ١١ / ٢١

إلى/ جامعة كربلاء / كلية التمريض
الموضوع / تسهيل مهمة

تحية طيبة....

كتابكم المرقم ١٠٣ في ٢٠٢١/١١/١٥


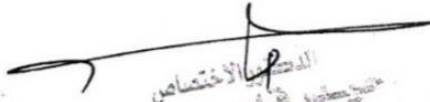
نود إعلامكم بأنه لا مانع لدينا من تسهيل مهمة الطالبة (امال فاضل نوري) دراسات عليا لإنجاز بحثها الموسوم حول: (اثر برنامج تعليمي معرفة واتجاهات الممرضين حول ارتفاع ضغط الدم اثناء الحمل في مراكز الرعاية الصحية الاولية) في مؤسساتنا الصحية/ قطاع الحر وبإشراف/طبيبة ممارسة (سلام فيصل لفتة) و قطاع المركز بإشراف الدكتور (انور حميد رشيد) على ان لا تتحمل دائرتنا اي نفقات مادية مع الاحترام

الدكتورة
تقوى خضر عبد الكريم
طبيبة اختصاص

الدكتورة
تقوى خضر عبد الكريم
مدير مركز التدريب والتنمية البشرية
٢٠٢١/١١/٢١


نسخة منه الى
مركز التدريب والتنمية البشرية مع الأوليات/ شعبة ادارة المعرفة/ وحدة البحوث مع الأوليات
مهدي /

Appendix A4

Holy Karbala governorate Karbala Health Department General manager's office Training and Human Development Center	جمهورية العراق	محافظ محافظة كربلاء المقدسة دائرة صحة كربلاء المقدسة قسم التدريب والتنمية البشرية شعبة ادارة المعرفة وحدة ادارة البحوث
		
	٩-١٦ <hr/> ١١ / ٢١	العدد: ١٨٢١ / التاريخ: ٢٠٢١ / ١١ / ١٨
الى / قطاع المركز الى / قطاع الحر الموضوع / بيان رأي		
السلام عليكم... كتاب جامعة كربلاء / كلية التمريض ١٠٣ في ٢٠٢١/١١/١٥ يرجى بيان رأيكم حول إمكانية تسهيل مهمة الطالبة (امال فاضل نوري) لإتجاز بحثها الموسوم:- (اثر برنامج تعليمي معرفة واتجاهات الممرضين حول ارتفاع ضغط الدم اثناء الحمل في مراكز الرعاية الصحية الأولية) في مؤسستكم الصحية مع ترشيح مشرف عملي للبحث من قبل عضو لجنة البحوث على ان لا تتحمل دانتنا اي نفقات مادية مع الاحترام.		
 الدكتور توفيق الخضراء اختصاصي طب الأطفال الدكتور تقوى خضر عبد الكريم مدير قسم التدريب والتنمية البشرية ٢٠٢١ / ١١ / ١٨	١٨ دارسي لما خلدنيا - دارسي الدكتورة طيبه اخنصان مديرة قطاع البحوث كربلاء - ١٨	
نسخة منه الهنئ:- مركز التدريب والتنمية البشرية شعبة ادارة المعرفة / وحدة ادارة البحوث مع الأوليات مهدي /		

Appendix A5

جمهورية العراق



محافظة كربلاء المقدسة
 دائرة صحة كربلاء المقدسة
 قطاع الحر
 مكتب مدير القطاع
 العدد / ٨٣٨
 التاريخ / ١١ / ٢٠٢١


إلى / قسم التدريب والتنمية البشرية
م/ بيان راي

السلام عليكم ورحمة الله وبركاته

١- كتبت ابيكم ذي العدد ٣٨٢١ في ٢٠٢١/١١/١٨ نود اعلامكم بانه لامانع لدينا من تسهيل مهمة الطالبة (امال فاضل نوري) من مراجعة المؤسسات الصحية التابعة لقطاعنا حول اكمال بحثها الموسوم (اثر برنامج تعليمي معرفة واتجاهات المرضين حول ارتفاع ضغط الدم اثناء الحمل في مراكز الرعاية الصحية الاولية) على ان لايتحمل قطاعنا اي نفقات مالية .

٢- تسمية طبية ممارسة (سلام فيصل لفته) كمشرف عملي للبحث المشار اليه انفا. مع التقدير...





 دكتور
 علي معز جاسم
 مدير قطاع الحر



نسخة منه الي:

• وحدة التدريب في القطاع مع الاوليات.

Appendix A6

HOLY KARBALA GOVERNORATE KARBALA HEALTH DIRECTORIES CENTER SECTOR		محافظة كربلاء المقدسة دائرة صحة كربلاء المقدسة قطاع المركز العدد / ٩٩٩٢ التاريخ / ٢٠٢١ / ١١ / ٢١
NO : DATE :		
الى / مركز التدريب والتنمية البشرية / وحدة البحوث م/ بيان رأي		
السلام عليكم كتبكم ذي العدد ٣٨٥١ في ٢٠٢١/١١/١٨ لامانع لدينا من تسهيل مهمة الطالبة <u>د. عالما مهدي نور كافي</u> قطاعنا/ لانجاز بحثها الموسوم تسمية طبيب / انور احمد رست / مشرف عملي للبحث للتفضل بالاطلاع .. مع الاحترام		
محافظة كربلاء المقدسة دائرة صحة كربلاء المقدسة قطاع المركز للرعاية الصحية الأولية الصادر		
الدكتورة الدكتورة <u>بيداء علي حسين النور كافي</u> مديرة قطاع المركز ٢٠٢١ / ١١ / ٢١		
نسخة منه الى : *قطاع المركز مع الاوليات		

Appendix A7

بسم الله الرحمن الرحيم

Holy Karbala governorate
Karbala Health Department
General manager's office
Training and Human Development
Center


 جمهورية العراق
 محافظة كربلاء المقدسة
 دائرة صحة كربلاء المقدسة
 مركز التدريب والتنمية البشرية
 مكتب المركز
 العدد: ٧٧
 التاريخ: ٢٠٢٢ / ١ / ١٢

الى / المستشفيات و القطاعات و اقسام الدائرة كافة
الموضوع / اعمام

السلام عليكم ...

اشارة الى كتاب جامعة كربلاء - كلية التمريض ذي العدد ١ في ٢٠٢٢/١/١٢ .
المتضمن اقامة دورة تدريبية بعنوان (ارتفاع ضغط الدم الناجم عن الحمل) لمدة خمسة ايام للفترة من
٦-٢٠٢٢/٢/١٠) الفئة المعنية للمشاركة بالدورة الملاكات التمريضية و الصحية و تقام الدورة في
جامعة كربلاء / كلية التمريض الساعة التاسعة صباحاً .
للتفضل بالاطلاع و ترشيح ما تروه مناسباً من منتمبيكم . مع الشكر و الاحترام ...

الدكتورة
 نسيب طيب
 الدكتورة
 تقوى خضر عبد الكريم
 مدير مركز التدريب والتنمية البشرية
 ٢٠٢٢ / ١ / ١٢

نسخة منه
 مركز التدريب والتنمية البشرية - مكتب المركز
 علي الكربلائي ٢٠٢٢/١/١٢
 العنوان / كربلاء المقدسة - حي الحسين (ع) - قرب دائرة كلب الحبل - رقم الهاتف / ٠٢٣٣٢٨٠٠٢
 البريد الإلكتروني / Email / train.centerKH@yahoo.com

الدوران

Appendix B

توزيع أماكن الدراسة حسب قطاعات ومراكز الرعاية الصحية الأولية في مركز مدينة كربلاء المقدسة.

المركز الصحي	القطاع	ت
الملحق	قطاع المركز	1
الاسكان		
العباسية الغربية		
حي العباس		
باب بغداد		
اليرموك	قطاع الحر	2
العامل		
الحر		
الحسن العسكري		
حي الحر		
10	2	المجموع

توزيع العينة حسب مراكز الرعاية الصحية الاولى في مركز مدينة كربلاء المقدسة

ت	المركز الصحي	مجموعة الدراسة	مجموعة الضابطة	المجموع
1	الملحق	3	3	6
2	الاسكان	3	3	6
3	العباسية الغربية	1	2	3
4	حي العباس	3	3	6
5	باب بغداد	3	2	5
6	اليرموك	2	3	5
7	العامل	3	2	5
8	الحر	2	3	5
9	الحسن العسكري	2	3	5
10	حي الحر	3	3	6
	المجموع	25	27	52

Appendix C

نتائج التقييم الأولي لمعارف الممرضين والعاملين الصحيين حول ارتفاع ضغط الدم خلال فترة الحمل في مراكز الرعاية الصحية الأولية بعد الاجابة بكتابة (نعم) او (لا) امام الفقرات. (عدد المشتركين = 20)

التقييم	لا		نعم		الفقرات	ت
	%	العدد	%	العدد		
Good	10	2	90	18	ارتفاع ضغط الدم: هو ضغط الدم الانقباضي ≥ 140 ملم زئبق وضغط الدم الانبساطي ≥ 90 /140 ملم زئبق.	.1
Failure	45	9	55	11	ارتفاع ضغط الدم المزمن هو: ارتفاع ضغط الدم بعد 20 أسبوعاً من الحمل ويتميز بارتفاع ضغط الدم وضهور البروتين في الادرار.*	.2
Failure	65	13	35	7	ارتفاع ضغط الدم اثناء الحمل هو: بداية لارتفاع ضغط الدم بدون وجود بروتين في الادرار، بعد 20 أسبوعاً من الحمل.	.3
Good	10	2	90	18	علامات وأعراض ارتفاع ضغط الدم لدى المرأة الحامل هي ارتفاع ضغط الدم ويكتشف عند قياس ضغط الدم بشكل روتيني و ظهور البروتين في الادرار .	.4
Failure	55	11	45	9	يقصد في تسمم الحمل (مقدمة ارتفاع الحمل):النساء اللواتي يعانين من ارتفاع ضغط الدم (أكثر من 90/140) بعد 20 أسبوعاً من الحمل أو يستمر ارتفاع الضغط بعد الولادة .	.5
Failure	40	8	60	12	تسمم الحمل (الارتفاع الحلمي)هو: حالة تشنج فقط تحدث للحامل لا تصاحب بارتفاع ضغط الدم الشديد مع عدم وجود الوذمة في الجسم.*	.6
Failure	40	8	60	12	قبل تسمم الحمل او مقدمة الارتفاع المتداخل مع ارتفاع ضغط الدم المزمن هو : ارتفاع ضغط الدم بدون بروتين في الادرار ، يكتشف بعد 20 أسبوعاً من الحمل*	.7
Failure	65	13	35	7	الوذمة (Edema) هي: زيادة الوزن لأكثر من 1 كغم في أسبوع من الحمل أو 2.25 كغم في شهر واحد.	.8
Failure	70	14	30	6	متلازمة هيلب(HELLP) انحلال الدم ، ارتفاع انزيم الكبد وأنخفاض في عدد الصفائح الدموية.	.9
	50	10	50	10	عوامل الخطورة في الإصابة بتسمم الحمل:هي السمنة ، ارتفاع ضغط الدم السابق، عمر الأم فوق 35 سنة ، سكري الحمل.	.10
Failure	55	11	45	9	تأثير ارتفاع ضغط الدم المزمن على نتائج الجنين في : نقصان الوزن عند الولادة.	.11
Failure	70	14	30	6	من أهم المضاعفات التي قد يسببها ارتفاع ضغط الدم للحامل على الجنين تشمل موت الجنين في الرحم وانفصال المشيمة	.12

ت	الفقرات	نعم		لا		التقييم
		العدد	%	العدد	%	
.13	النساء الاكثر عرضة للاصابة بارترفاع ضغط الدم أثناء فترة الحمل اللاتي يحملن لأول مرة، خصوصاً بعد سن 35 سنة، أو عند حمل التوأم .	15	75	5	25	Good
.14	يمكن تشخيص ارتفاع ضغط الدم الحمل عن طريق: قياس ضغط الدم وفحوصات البول الاعتيادية.	16	80	2	20	Good
.15	النساء المصابات بارترفاع ضغط الدم المزمن تكون أقل عرضة لولادة أطفال صغار بالنسبة لعمر الحمل.*	12	60	8	40	Failure
.16	خلال فترة الحمل، لا يوصى باستخدام العلاج المدر للبول (Lasix) للنساء المصابات بارترفاع ضغط الدم.	4	20	16	80	Failure
.17	يعتبر الاسترخاء للنساء الحوامل مع ارتفاع ضغط الدم في ضوء عالي وراحة في الفراش امر ضروري.*	16	80	4	20	Failure
.18	أهمية العناية أثناء الولادة من الأم المصابة بتسمم الحمل (مقدمة الارتعاج) قياس ضغط الدم كل نصف ساعة.	9	45	11	55	Failure
.19	قياس ضغط الدم للحامل خلال كل زيارة في مراكز الرعاية الصحية قبل الولادة أمرًا ضروري.	15	75	5	25	Good
.20	العلاج الذي سيوصف لتسمم الحمل (eclampsia): هو كبريتات المغنسيوم MgSo4.	9	45	11	55	Failure

أظهرت نتائج الدراسة الاستطلاعية في الأجابات أعلاه بأن هنالك ضعف في معارف الممرضين والكوادر الصحية من جميع الفقرات أعلاه ما عدا (1 , 4 , 13, 14 , 19)

Appendix D

منهاج برنامج ارتفاع ضغط الدم خلال فترة الحمل في مراكز الرعاية الصحية الأولية المقامة في كلية التمريض/ جامعة كربلاء للفترة من 6-10/2/2022.

اليوم	الوقت	المواضيع
الاول	(90-60) دقيقة	1. المقدمة
		2. تعريف ارتفاع ضغط الدم
		3. طرق قياس وتحديد ضغط الدم
		4. أنواع ارتفاع ضغط الدم خلال فترة الحمل
		5. ارتفاع ضغط الدم الناتج عن الحمل
		6. اسباب ارتفاع ضغط الدم للحامل
الثاني	(90-60) دقيقة	1. عوامل خطر ارتفاع ضغط الدم أثناء الحمل
		2. مضاعفات ارتفاع ضغط الدم للحامل
		3. تشخيص ارتفاع ضغط الدم للحامل
		4. علامات واعراض ارتفاع ضغط الدم للحامل
		5. طرق إدارة مرضى ارتفاع ضغط الدم أثناء الحمل
الثالث	(90-60) دقيقة	1. ضغط الدم المزمن
		2. تصنيف ضغط الدم
		3. الاسباب
		4. الاجراءات العلاجية
		5. التقييم التمريضي لارتفاع ضغط الدم المزمن
		6. مقدمة أرتعاج الحمل preeclampsia
		7. عوامل الخطر لمقدمة أرتعاج
		8. الفحوصات الخاصة بفحص مقدمات الارتعاج
		9. علامات وأعراض مقدمات الارتعاج)

(preeclampsia مخاطر على الام والجنين 10.		
<p>1. الارتجاج الحملي eclampsia .</p> <p>2. العلامات التحذيرية من احتمالية الإصابة بل الارتجاج الحملي .</p> <p>3. الرعاية أثناء النوبة وبعد النوبة.</p> <p>4. متلازمة هيلب HELEP (Hemolysis, Elevated ,Liver Enzyme</p> <p>5. Platelet Low .</p> <p>6. الإدارة الطبية في متلازمة هليب.</p> <p>7. الاجراءات التمريضية الشاملة للاضطرابات الضغط اثناء الحمل.</p> <p>8. الوقاية من ارتفاع ضغط الدم أثناء الحمل.</p> <p>9. تعليم المريض على طرق العلاج المناسبة للرعاية المنزلية.</p>	<p>(90-60) دقيقة</p>	<p>الرابع</p>
<p>مراجعة ختام الدورة</p>	<p>90-60 دقيقة</p>	<p>الخامس</p>

Appendix E

البرنامج التثقيفي للممرضين حول ارتفاع الضغط اثناء الحمل

يهتم البرنامج التثقيفي بمعرفة واتجاهات الممرضين حول ارتفاع ضغط الدم الناتج عن الحمل ويركز على الموضوعات ذات العلاقة بهذه المعارف والموضحة في محتويات واهداف البرنامج

أهداف البرنامج:

الهدف العام:

الهدف من البرنامج هو توفير فرصة للممرضين العاملين في مراكز الرعاية الصحية الاولية في مدينة كربلاء المقدسة لتحسين مستوى معارفهم وأتجاهاتهم حول ارتفاع ضغط الدم أثناء فترة الحمل للوصول الى افضل خدمة مقدمة الى الام الحامل.

الاهداف الخاصة:

عند الانتهاء من البرنامج يجب ان يكون المشارك قادرا على أن :

1. يتعرف على ارتفاع ضغط الدم أثناء الحمل.
2. يحدد تصنيفات ضغط الدم.
3. يعدد علامات واعراض ارتفاع ضغط الدم عند الحامل
4. يذكر الاسباب والعوامل التي تساعد لحدوث الارتعاج الحملي
5. يذكر الفحوصات التي تظهر اذا كان لدى الحامل ارتفاع ضغط الدم اثناء الحمل وحدوث الأرتعاج الحملي
6. يتعرف على تأثير ارتفاع ضغط الدم على الحامل والجنين
7. يختار طرق الوقاية من ارتفاع ضغط الدم أثناء الحمل
8. يشارك في الوقايه من حدوث الارتعاج الحملي.
9. يتعرف على طرق العلاج المناسبة لحالة حدوث اضطرابات في الضغط الحملي
10. يهتم في تطوير الرعاية للام الحامل قبل فتره الولادة

الطرق التعليمية والوسائل التوضيحية المساعدة:

1. طريقة المحاضرة القصيرة
2. استخدام العرض التقديمي power point لإعداد وعرض المحاضرة
3. استخدام البوستر والصور التوضيحية
4. استخدام فيديوات توضيحية

5. استخدام السبورة

6. استخدام المناقشة الجماعية

مكان ووقت المحاضرة

قاعة المحاضرات في كلية التمريض جامعة كربلاء ولمدة (60-90) دقيقة لكل محاضرة

أهداف رعاية الحمل والولادة:

1. الحد من معدلات الوفيات والأمراض
2. لتحسين الصحة الجسدية والعقلية للنساء والأطفال.
3. للوقاية من تشوهات الأم والجنين التي يمكن أن تؤثر على نتائج الحمل ، والتعرف عليها
4. تقليل الوضع المالي لرعاية الأمهات.

مكونات البرنامج التعليمي:

1. تعريف ارتفاع ضغط الدم
2. تصنيفات ارتفاع ضغط الدم في فترة الحمل
3. ارتفاع ضغط الدم الناجم عن الحمل وطرق إدارة مرضى ارتفاع ضغط الدم أثناء الحمل
4. ماذا يقصد ضغط الدم المزمن
5. ماذا يعني مقدمة الارتجاج الحملية preeclampsia
6. ماهو الارتجاج الحملية
7. ماهي متلازمة هليب (HELEP)
8. الاجراءات التمريضية الشاملة لارتفاع الضغط اثناء الحمل .
9. الاداره الطبية للارتجاج الحملية
10. الوقاية من ارتفاع ضغط الدم أثناء الحمل
11. تعليم المريض على طرق العلاج المناسبة للرعاية المنزلية .

محاویر البرنامج التثقيفي

المحور الاول :

1. المقدمة: تعريف ارتفاع ضغط الدم
2. طرق قياس وتحديد ضغط الدم
3. أنواع ارتفاع ضغط الدم خلال فترة الحمل
4. ارتفاع ضغط الدم الناجم عن الحمل
5. اسباب ارتفاع ضغط الدم للحامل
- 6.

المحور الثاني:

1. عوامل خطر ارتفاع ضغط الدم أثناء الحمل
2. مضاعفات ارتفاع ضغط الدم للحامل
3. تشخيص ارتفاع ضغط الدم للحامل
4. علامات واعراض ارتفاع ضغط الدم للحامل
5. طرق العناية للنساء المصابات بارتفاع ضغط الدم أثناء الحمل

المحور الثالث:

1. ضغط الدم المزمن
2. تصنيف ضغط الدم
3. اسباب حدوث ضغط الدم المزمن
4. الاجراءات العلاجية
5. التقييم التمريضي لارتفاع ضغط الدم المزمن
6. مقدمة أرتعاج الحمل preeclampsia
7. عوامل الخطر لمقدمة أرتعاج
8. الفحوصات الخاصة بفحص مقدمات الارتعاج
9. علامات وأعراض مقدمات الارتعاج (preeclampsia)
10. المخاطر على الام والجنين

المحور الرابع:

1. الارتعاج الحملي eclampsia .
2. العلامات التحذيرية من احتمالية الإصابة بل الارتعاج الحملي .
3. الرعاية التمريضية أثناء النوبة وبعد النوبة.
4. متلازمة هيلب (HELEP)
5. الإدارة الطبية في متلازمة هيلب.
6. الاجراءات التمريضية الشاملة للاضطرابات الضغط اثناء الحمل.
7. الوقاية من ارتفاع ضغط الدم أثناء الحمل.
8. تعليم المريض على طرق العلاج المناسبة للرعاية المنزلية.

المحور الاول :-**المقدمة:-**

كل عام هناك ما يقدر بنحو 200 مليون حالة حمل في العالم. كل من حالات الحمل هذه معرضة لخطر حدوث نتائج عكسية للمرأة وطفلها الرضيع. في حين لا يمكن القضاء على المخاطر بشكل كامل ، يمكن تقليلها من خلال رعاية الأمومة الفعالة والمقبولة. ولتحقيق أقصى فعالية ، يجب أن تبدأ الرعاية الصحية في وقت مبكر من الحمل وتستمر على فترات منتظمة. تشير الرعاية السابقة للولادة إلى الرعاية التي تُعطى للأم المتوقعة منذ تأكيد الحمل حتى بداية المخاض.

لقد قام العراق بتحسين جودة الخدمات المقدمة من وزارة الصحة. وبذلت جهود كبيرة لدعم جميع أوجه الرعاية لما قبل الولادة التي سيكون لها أثر كبير على نتائج الحمل. إن تلقي المرأة الحامل لرعاية عالية الجودة قبل وبعد الولادة من مقدمي الخدمات الصحية على جانب كبير من المهارة لشيء مهم ويمكنهم توفير الخدمة شاملةً .

1. تعريف ارتفاع ضغط الدم :

يُعرف ارتفاع ضغط الدم بأنه ضغط انقباضي 140 ملم زئبق أو أكبر أو ضغط انبساطي 90 ملم زئبق أو أكثر.

يبلغ معدل حدوث اضطرابات ارتفاع ضغط الدم أثناء الحمل 12% - 22% ، وهي أكثر مضاعفات الحمل شيوعاً ، وهي السبب الرئيسي الثاني لوفيات الأمهات وتسهم في أمراض ووفيات الأطفال حديثي الولادة.

- ارتفاع ضغط الدم أثناء الحمل: ارتفاع ضغط الدم يظهر جديد بعد 20 أسبوعاً من الحمل بدون وجود بروتين في الادرار (بيلة بروتينية).
 - مقدمه الارتعاج (preeclampsia) : ارتفاع ضغط الدم يظهر جديد بعد 20 أسبوعاً من الحمل مع وجود بروتين في الادرار (بيلة بروتينية كبيرة).
 - تسمم الحمل الشديد: هو المصحوب بارتفاع شديد في ضغط الدم أو مصحوب بأعراض أو اختلال في الكيمياء الحيوية أو أمراض الدم.
 - ارتعاج الحمل (eclampsia) : هو حالة تشنج مصاحبة لمقدمة الارتعاج الحلمي.
- طرق تحديد ضغط الدم

1. وضعية الجلوس والذراع تكون على مستوى القلب
2. استخدام مفاص الكفة المناسب (تحتاج النساء البدينات إلى سوار بحجم أكبر لقراءة دقيقة)
3. استخدام جهاز الزئبقي الدقيق لقياس ضغط الدم
4. يتم تحديد ارتفاع في الضغط خلال قياسات ضغط الدم المتكرر في فترة 4 ساعات ما لم يكن ضغط الدم مرتفعاً جداً

اسباب ارتفاع ضغط الدم للحامل

1. تدفق كمية غير كافية من الدم الى الرحم
2. اضرار في الاوعية الدموية
3. مشاكل في الجهاز المناعي
4. التغذية غير السليمة

2. تصنف اضطرابات ارتفاع ضغط الدم إلى أربع فئات:

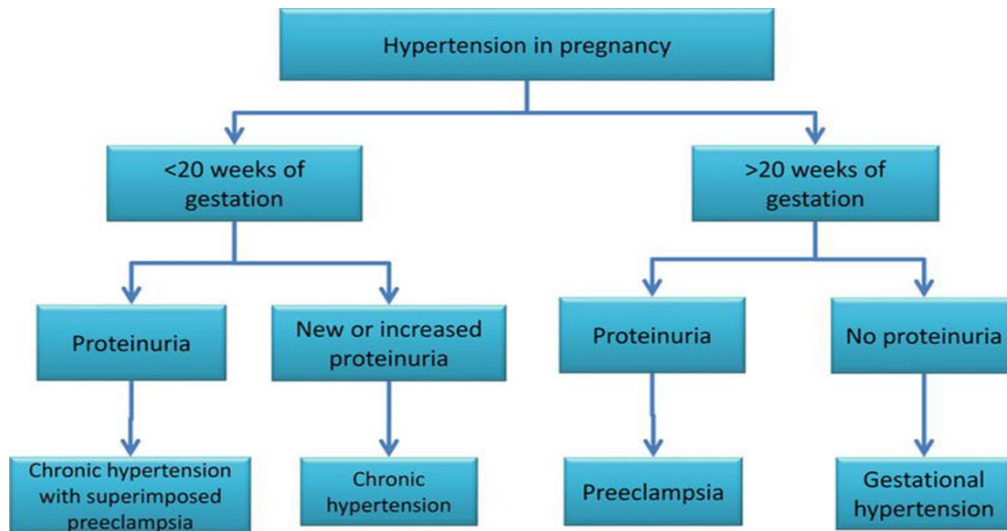
1. قبل تسمم الحمل (مقدمة الارتعاج) (preeclampsia) ومتلازمة الارتعاج الحلمي (eclampsia):مقدمة الارتعاج: هو مرض جهازى مع ارتفاع ضغط الدم مصحوباً ببروتين في الادرار بعد الأسبوع العشرين من

الحمل. 10% من جميع حالات الحمل الأولى تتأثر بمقدمات الارتعاج الحملي وتسم الحمل. الارتعاج الحملي (eclampsia): هو ظهور تشنجات أو نوبات لا يمكن أن تنسب إلى أسباب أخرى لدى امرأة مصابة بمقدمات الارتعاج.

2. Preeclampsia superimposed on chronic hypertension تسم الحمل المترابك على ارتفاع ضغط الدم المزمن: النساء المصابات بارتفاع ضغط الدم اللاتي يصبن ببيلة بروتينية جديدة قبل الأسبوع العشرين من الحمل ؛ أو فجأة زيادة البروتين في الأدرار أو عدد الصفائح الدموية $>100,000 /$ ميكرو لتر عند النساء المصابات بارتفاع ضغط الدم والبيلة البروتينية من قبل 20 أسبوع من الحمل. ما يقرب من 25% من النساء المصابات بمرض مزمن ارتفاع ضغط الدم يؤدي إلى تسم الحمل preeclampsia.

3. ارتفاع ضغط الدم أثناء الحمل (Gestational hypertension): ضغط الدم الانقباضي $\leq 140 / 90$ يظهر لأول مرة بعد 20 أسبوعًا من الحمل و بدون وجود ببيلة بروتينية في الأدرار. ما يقرب 50 % من النساء المصابات بارتفاع ضغط الدم أثناء الحمل يتطورن الى متلازمة تسم الحمل وعندما يرتفع ضغط الدم بشكل ملحوظ يمكن أن يشكل خطرًا على الأم والجنين.

4. ارتفاع ضغط الدم المزمن (Chronic hypertension): ارتفاع ضغط الدم (BP 140/90) قبل الحمل أو قبل الأسبوع العشرين من الحمل ، أو ارتفاع ضغط الدم الذي تم تشخيصه لأول مرة بعد 20 أسبوعًا من الحمل والذي يستمر بعد 12 أسبوعًا بعد الولادة ؛ قد يعرض المرأة لخطر كبير للإصابة بمقدمات الارتعاج.



3. ارتفاع ضغط الدم أثناء الحمل

يتميز ارتفاع ضغط الدم أثناء الحمل بارتفاع ضغط الدم دون وجود ببيلة بروتينية بعد 20 أسبوعًا من الحمل وتختفي بعد 12 أسبوعًا من الولادة ، كان يُعرف سابقا ارتفاع ضغط الدم الحملي بارتفاع ضغط الدم الناجم عن الحمل (pregnancy Induced Hypertension) أو تسم الحمل ، ولكن لم تعد تستخدم هذه المصطلحات. يُعرّف ارتفاع ضغط الدم أثناء الحمل بأنه ضغط الدم الانقباضي 140 ملم زئبق و / أو انبساطي 90 ملم زئبق في وقتين على الأقل بفواصل 4-6 ساعات على الأقل بعد الأسبوع العشرين من الحمل ، عند النساء المعروفات أنهن معتدل الضغط قبل هذا الوقت وقبل الحمل. يمكن التمييز بين ارتفاع ضغط الدم أثناء الحمل وبين ارتفاع

ضغط الدم المزمن ، والذي يظهر قبل الأسبوع العشرين من الحمل ؛ أو ارتفاع ضغط الدم قبل الحمل الحالي الذي يستمر بعد الولادة. تُستخدم فئة ارتفاع ضغط الدم الحاملي عند النساء المصابات بارتفاع ضغط الدم غير البروتيني للحمل ، حيث لا تتطور الاضطرابات الفيزيولوجية المرضية لمتلازمة تسم الحمل قبل الولادة. يعتبر ارتفاع ضغط الدم أثناء الحمل تشخيصاً مؤقتاً للنساء الحوامل المصابات بارتفاع ضغط الدم اللائي لا يستوفين معايير تسم الحمل (ارتفاع ضغط الدم والبيبة البروتينية) أو ارتفاع ضغط الدم المزمن (تم اكتشاف ارتفاع ضغط الدم لأول مرة قبل الأسبوع العشرين من الحمل).

نوع الحالة	الضغط الانقباضي (مم زئبق)	الضغط الانقباضي (مم زئبق)	عوامل الخطورة أو الاضرار القلبية الوعائية	النصائح العلاجية على أساس ضغط الدم وعوامل الخطورة
مثالية	119-80	79-50	توجد أو لا توجد	لا تحتاج إلى علاج
طبيعية	129-120	84-80	توجد أو لا توجد	لا تحتاج إلى علاج
طبيعية - عالية	139-130	89-85	لا توجد	لا تحتاج إلى علاج
عالية الدرجة 1	159-140	99-90	لا توجد	تغيير نمط الحياة. إذا لم ينخفض ضغط الدم إلى المدى الطبيعي بعد 3-6 شهور، فابدأ العلاج الدوائي
الدرجة 2	179-160	109-100	توجد	العلاج الدوائي وتغيير نمط الحياة
الدرجة 3	209-180	119-110	توجد أو لا توجد	العلاج الدوائي وتغيير نمط الحياة
الدرجة 4	210 ≤	120 ≤	توجد أو لا توجد	العلاج الدوائي وتغيير نمط الحياة
انقباضية مفردة (الضغط الانقباضي مرتفع، الضغط الانبساطي طبيعي)	140 ≤	90 >	توجد أو لا توجد	العلاج الدوائي (غالباً مدرات البول عند سن ما فوق 65) وتغيير نمط الحياة

المحور الثاني:-

عوامل خطر ارتفاع ضغط الدم أثناء الحمل ما يلي:

1. الحمل الأول
2. السمنة
3. تاريخ عائلي من ارتفاع ضغط الدم الحاملي (Gestational Hypertension)
4. العمر أكثر من 35 سنة أو أقل من 19 سنة
5. الحمل متعدد الأجنة (مثل التوائم)
6. ارتفاع ضغط الدم المزمن
7. أمراض الكلى المزمنة والسكري

• العناية التمريضية:

A. في حالة ارتفاع ضغط الحمل الخفيف

1. العناية على اساس مريضة خارجية مع زيارات اسبوعية
2. راحة في السرير
3. تحذير المريضة من ظهور احد علامات وأعراض مقدمة الارتعاج الشديد
4. مراقبة الضغط مرة أو مرتين مع تقييم البروتين في الادرار وعداد الصفائح وانزيمات الكبد بشكل اسبوعي
5. مراقبة عدد حركات الجنين وتقييم صحة الجنين اسبوعيا

B. في حالة ارتفاع ضغط الحمل الشديد:

خافضات الضغط, سلفات المغنيسيوم , انتهاء الحمل

العناية التمريضية لمرضى ارتفاع ضغط الدم أثناء الحمل

1. تأكد من حصول المريض على التغذية الكافية و نظام غذائي محدود الكافيين والصوديوم.
2. التشجيع على الراحة الكاملة في السرير ، ويفضل أن يكون ذلك في وضع الاستلقاء على الجانب الأيسر.
3. استخدم علاج خافض لضغط الدم أو كبريتات المغنيسيوم أو الأكسجين.
4. مراقبة الوزمة (تجمع السوائل) ودرجة التنقر للحامل.
5. رفع الذراعين أو الساقين المتورمتين .
6. مراقبة الوزن اليومي والسوائل الداخلة والخارجة من الجسم (input and output).
7. وضع قسطرة بولية ثابتة.
8. توفر غرفة هادئة ومظلمة.
9. فرض الراحة المطلقة في السرير.
10. تقديم الدعم العاطفي.
11. اتخاذ الاحتياطات اللازمة لنوبة الصرع المحتملة.
12. تقييم العلامات الحيوية للأم ومعدل ضربات قلب الجنين (Fetal Heart Rate) بشكل متكرر. مراقبة التغيرات في ضغط الدم ، ومعدل النبض ، ومعدل التنفس ، والرؤية ، ومستوى الوعي ، وردود الفعل الوترية العميقة ، والصداع الذي لا يخفف من تناول الأدوية.

المحور الثالث :-

4. ضغط الدم المزمن:

يحدث ارتفاع ضغط الدم المزمن عندما تعاني المرأة من ارتفاع ضغط الدم قبل الحمل أو قبل الأسبوع العشرين من الحمل ، أو عندما يستمر ارتفاع ضغط الدم لأكثر من 12 أسبوعًا بعد الولادة.

يصنف ضغط الدم على النحو التالي:

1. ضغط الدم الطبيعي: الضغط الانقباضي يكون أقل من 120 ملم زئبق ، والانبساطي أقل من 80 ملم زئبق
2. ارتفاع ضغط الدم: الانقباضي 120 إلى 139 ملم زئبق ، الانبساطي 80 إلى 89 ملم زئبق

3. ارتفاع ضغط الدم الخفيف: الانقباضي 140 إلى 159 ملم زئبق ، الانبساطي 90 إلى 99 ملم زئبق

4. ارتفاع ضغط الدم الشديد: الانقباضي 160 ملم زئبق أو أعلى ، الانبساطي 100 ملم زئبق أو أعلى

يحدث ارتفاع ضغط الدم المزمن في ما يصل إلى 22% من النساء في سن الإنجاب ، ويتفاوت انتشاره وفقاً للعمر والعرق ومؤشر كتلة الجسم. إنه يعقد ما لا يقل عن 5% من حالات الحمل ، حيث تصاب واحدة من كل أربع نساء بتسمم الحمل أثناء الحمل ، وعادة ما يُلاحظ ارتفاع ضغط الدم المزمن عند النساء الأكبر سناً ، والبدينات اللاتي يعانين من عدم تحمل الجلوكوز. المضاعفات الأكثر شيوعاً هي تسمم الحمل ، والتي تظهر في حوالي 25% من النساء اللواتي يدخلن الحمل مصابات بارتفاع ضغط الدم.

المضاعفات:

1. الولادة القيصرية
2. ارتفاع الضغط المترابك ويحدث نسبة 50% من ارتفاع ضغط الدم المزمن
3. انفصال المشيمة
4. الولادة المبكره
5. تحدد نمو الجنين داخل الرحم

الاجراءات العلاجية :

يركز علاج النساء المصابات بارتفاع ضغط الدم المزمن على الحفاظ على ضغط الدم الطبيعي ، والوقاية من تسمم الحمل / تسمم الحمل المترابك ، وضمان النمو الطبيعي للجنين. بمجرد أن تصبح المرأة حاملاً ، عادةً ما يتم حجز العوامل الخافضة للضغط لارتفاع ضغط الدم الشديد < 160 ملم زئبق الانقباضي و < 100 ملم زئبق للانبساطي. يوصف ميثيل دوبا (الدوميت) بشكل شائع بسبب سجل أمانه أثناء الحمل. يساعد هذا العامل الخافض للضغط البطيء على تحسين نضح الرحم.

التقييم التمريضي لارتفاع ضغط الدم المزمن :

تضمن التقييم التمريضي للمرأة المصابة بارتفاع ضغط الدم المزمن تاريخاً شاملاً وفحصاً جسدياً.

1. مراجعة تاريخ المرأة بحثاً عن عوامل الخطر التي تسبب في ارتفاع ضغط الدم متعدد العوامل ويتضمن عوامل الخطر القابلة للتعديل مثل (التدخين , السمّة , تناول الكافيين , الإفراط في تناول الكحول, الإفراط في تناول الملح , استخدام العقاقير المضادة للالتهابات)
2. العوامل الخطر غير القابلة للتعديل مثل زيادة العمر والعرق الأفريقي
3. اسأل إذا كانت المرأة قد تلقت أي استشارة ما قبل الحمل وما هي التدابير التي تم استخدامها للوقاية من ارتفاع ضغط الدم أو السيطرة عليه.
4. تقييم العلامات الحيوية للمرأة ، وخاصة ضغط الدم لديها في جميع الأوضاع الثلاثة (الجلوس ، والاستلقاء ، والوقوف) ولاحظ أي اختلافات كبيرة في القراءات.

5. اسأل المرأة إذا كانت تراقب ضغط دمها في المنزل, استفسر عن القراءات النموذجية.
6. اسأل المرأة إذا كانت تستخدم أي أدوية للتحكم في ضغط الدم ، بما في ذلك الدواء والجرعة وتكرار الإعطاء ، بالإضافة إلى أي آثار جانبية.
7. اسأل المرأة عن أسلوب الحياة التي اعتادت معالجتها عوامل الخطر قابلة للتعديل ، وفعاليتها.
8. ارتفاع ضغط الدم أثناء الحمل يقلل من التروية الرحمية. لذلك ، يجب تقييم حالة الجنين ومراقبتها
9. استفسر من المرأة عن حركة الجنين وتقييم تقرير "عدد الركلات" اليومية. تقييم معدل ضربات قلب الجنين في كل زيارة.

5. ما قبل تسمم الحمل او مقدمة أرتعاج الحمل preeclampsia:

هو ارتفاع ضغط الدم وزيادة البروتين في البول بعد الأسبوع العشرين من الحمل عند مريضه طبيعي الضغط سابقا، او حدوث ارتفاع ضغط الدم مع اضطراب في وظيفة الاعضاء الرئيسي مع او بدون بيله بروتينية بعدالاسبوع 20 و يعتبر ارتفاع ضغط الدم حتى و إن كان بسيطاً تسمم حمل، وقد يؤدي إلى مضاعفات خطيرة على الأم والجنين إذا لم يتم علاجه.

تصنيفات تسمم الحمل preeclampsia

1. تسمم الحمل الخفيف
 - a. المرأة مصابة بشكل خفيف بالتهاب عندما يرتفع ضغط دمها إلى 90/140 مم زئبق ، ويتم أخذها في وقتين بفاصل (4-6) ساعات على الأقل.
 - b. تعاني المرأة من بروتين في الادرار (1+ أو 2+ على شريط اختبار كاشف في عينة من الادرار).
 - c. عادة ما تشير زيادة الوزن إلى احتباس غير طبيعي لسوائل الأنسجة.
2. تسمم الحمل الشديد
 - a. تتحول المرأة من تسمم الحمل الخفيف إلى الحاد عندما يرتفع ضغط دمها إلى 160 ملم زئبق انقباضي و 110 ملم زئبق انبساطي أو أكثر في وقتين على الأقل بفاصل 4 ساعات مع الراحة في الفراش.
 - b. بروتينية ملحوظة. 3+ أو 4+ في عينة بول عشوائية أو أكثر من 5 جم في عينة مدتها 24 ساعة مع وجود تجمع السوائل.

عوامل الخطر لمقدمة أرتعاج الحمل السابق preeclampsia / تسمم الحمل eclampsia (الارتعاج

(الحمل)

1. عدم الانجاب(الحمل الاول)
2. تقدم عمر الام
3. السمنة
4. وجود تاريخ عائلي للإصابة بمقدمات الارتعاج
5. ارتفاع ضغط الدم أو أمراض الكلى الموجودة مسبقاً

6. تسمم الحمل السابق
7. داء السكري
8. الحمل المتعدد الاجنة

المخاطر التي تتعرض لها المرأة:

1. وذمة دماغية / نزيف / سكتة دماغية
2. التخثر المنتشر داخل الأوعية الدموية (DIC)
3. تجمع السوائل الرئوية
4. فشل القلب الاحتقاني
5. فشل كبدي
6. الفشل الكلوي
7. انفصال المشيمة

مخاطر على الجنين وحديثي الولادة:

1. يمكن الإشارة إلى الولادة المبكرة المتعلقة بها تدهور حالة الأم.
2. تقييد النمو داخل الرحم (تأخر النمو داخل الرحم) المرتبط بقلة التروية الدموية
3. انخفاض الوزن عند الولادة
4. عدم تحمل الجنين للمخاض بسبب انخفاض التروية المشيمية
5. ولادة ميتة

الفحوصات الخاصة بفحص تسمم الحمل (مقدمات الارتعاج الحلمي)

1. جمع وتحليل البول على مدار 24 ساعة من أجل تصفية البروتين والكرياتينين الكلي
2. تعداد الدم الكامل Complete Blood Count
3. اختبار وظائف الكبد
4. ملف التخثر
5. تقييم لحجم الجنين وحجم السائل الأمنيوسي

علامات وأعراض مقدمات الارتعاج (preeclampsia)

1. ارتفاع حاد في ضغط الدم
2. قلة إنتاج البول - زيادة بروتين في الادرار
3. صداع - أمامي مستمر/او شديد
4. عسر التنفس مع ألم صدري خلف القص
5. اضطرابات بصرية (عتمات , رؤية مزدوجة, عمى مؤقت)
6. ألم شرسوفي أو ألم أعلى البطن
7. انتفاخ شديد وخاصة في الوجه والرقبة
8. زيادة في الوزن نتيجة تجمع السوائل

معايير تشخيص مقدمات الارتعاج Preeclampsia – eclampsia

1. تم تشخيصه بعد الأسبوع العشرين من الحمل.
2. يكون ضغط الدم < 140 ملم زئبق انقباضي أو < 90 ملم زئبق انبساطي مع زيادة البروتينات في البول [300 ملليجرام / ديسيلتر] في فترة جمع البول لمدة 24 ساعة.
3. في حالة عدم وجود بروتين في الادرار ، يشتبه في التشخيص إذا صداع ، تغيرات بصرية ، ألم بطني ، انخفاض الصفائح الدموية أو ارتفاع مستويات إنزيمات الكبد ، مع ارتفاع ضغط الدم.
4. تسمم الحمل يصف نوبة صرع كبير في مقدمات الارتعاج النساء.
5. تحدث الوذمة عند العديد من النساء الحوامل الطبيعيات ، وبالتالي لم تعد تعتبر علامة لمقدمات الارتعاج

الاجراءات الوقائية لمقدمة الأرتعاج الخفيف:

- إذا كان عمر الحمل ٣٧ أسبوع يفضل البدء بالتحريض الولادة
 - إذا كان العمر الحلمي بين (34-37) أسبوع يفضل المراقبة للحامل إلا اذا تطورت أحد أعراض أو علامات التسمم الحمل الشديد.
 - إذا كان العمر الحلمي أقل من 34 أسبوع يفضل التدابير الترقب والذي يتضمن مايلي:
1. تحديد النشاطات و الراحة في السرير بوضعية الاضطجاع الجانبي الأيسر قدر الإمكان
 2. تتابع المريضة كمريضة خارجية وتراجع مراكز العناية كل 3 أيام
 3. تقييم مختبري للصفائح والكرياتينين ووظائف الكبد مرة بالأسبوع على الأقل
 4. ليس هناك حاجة لإعطاء المدرات
 5. إعطاء ستيروئيدات إذا كان عمر الحمل > 34 أسبوع
 6. مراقبة عدد حركات الجنين يوميا و تقييم صحة الجنين مرتين أسبوعيا

الاجراءات الوقائية لمقدمة الارتعاج الشديد:

1. ضبط السوائل :
 - تجنب تسريب الزائد للسوائل والذي قد يسبب وذمة رئوية.
 2. تدبير اسعافي لارتفاع الضغط الشديد باستخدام الادوية التالية:
- ميثيل دوبا (Methyldopa)
- يعد الميثيل دوبا أحد مستقبلات ألفا-1 الأدرينالية (Alpha-adrenergic agonist) والتي تعمل على إيقاف إرسال إشارات انقباض الأوعية الدموية من الدماغ (التي تعمل على رفع ضغط الدم).
يعد هذا الدواء هو الخيار الأول لخفض ضغط الدم عند السيدات أثناء فترة الحمل، ويتم إعطائه إما على شكل حبوب أو عبر الوريد، وتتراوح جرعة هذا الدواء بين 0.5 - 3.0 غرام خلال اليوم يتم تقسيمها على جرعتين.
- لايبيتالول (Labetalol)

يعمل هذا الدواء من خلال تثبيط المستقبلات التي تعمل على تضيق الأوعية الدموية، ويعد خيار ثاني للسيدات اللاتي يعانين من ارتفاع ضغط الدم أثناء فترة الحمل، لكن هناك بعض الأبحاث التي تعتقد أن هذا الدواء قد يسبب تقييد نمو الجنين.

يتم إعطاؤه إما حبوب أو عن طريق الوريد، أما بالنسبة لجرعته فهي تتراوح بين 200 - 1200 ملليغرام خلال اليوم مقسمة إلى جرعتين أو ثلاثة يحددها الطبيب.

- نيفيديبين (Nifedipine)

يعد دواء النيفيديبين أحد أدوية الضغط المثبطة لقنوات الكالسيوم، ويعمل من خلال توسيع الأوعية الدموية وتقليل ضربات القلب.

لا يعد دواء الضغط المناسب للحامل في كل الأحوال، حيث يمكن أن يؤدي إلى هبوط في ضغط الدم خصوصاً عند أخذه مع كبريتات المغنيسيوم (Magnesium sulphate)، وحال قرر الطبيب إعطائه للحامل، فيصف الجرعة المناسبة لحالتها والتي تتراوح بين 30 - 120 ملليغرام خلال اليوم.

- الهيدرالازين (Hydralazine)

يعمل هذا الدواء على خفض الضغط عند الحامل من خلال توسيع الأوعية الدموية مما يسهل مرور الدم والأكسجين إلى القلب.

يعد بشكل عام امن ويتم صرفه في حالات ارتفاع ضغط الدم الحاد عند الحامل، إلا أنه قد يسبب في بعض الأحيان تكسر في الصفائح الدموية عند الوليد، ويتم إعطائه على شكل حبوب أو بالوريد بجرعة تتراوح بين 50 - 300 ملليغرام خلال اليوم مقسمة ما بين جرعتين إلى أربع جرعات حسب حالة الحامل.

المحور الرابع:-

6. الارتعاج الحملي eclampsia :

هو حدوث أختلاجات صرعية من نمط الصرع الكبير (grand mal seizures) عند مريضة لديها مقدمة ارتعاج في حال غياب الحالات العصبية، وهذه النوبة من التشنجات يمكن أن يحدث قبل، أثناء أو بعد الولادة فتره النفاس حوالي 50% من الحالات تحدث قبل الولادة.

الارتعاج الحملي ناتج عن واحد أو أكثر من التالية:

1. تشنج الأوعية الدماغية
2. نزيف دماغي
3. نقص التروية الدماغية
4. تجمع سوائل دماغية

العلامات السريرية والتشخيص:

• هناك عدة أعراض/علامات قد تحدث قبل الاختلاج:

1. ارتفاع ضغط الدم في 75% من الحالات
2. صداع جبهي شديد ومستمر

3. اضطرابات بصرية (رؤية مزدوجة , عتمات)

4. ألم شرسوفي أو ألم في اعلى البطن

5. الغثيان والقيء

• في 25% من الحالات لا تحدث هذه الاعراض والعلامات

• الرعاية أثناء النوبة ما يلي:

1. البقاء مع المريض خلال فترة النوبة.
2. طلب المساعدة من الكادر الصحي لمنع حدوث المضاعفات للام الحامل.
3. ضمان سلامة الحامل من خلال تقييم مجرى الهواء وعملية التنفس خلال النوبة.
4. اخفض رأس السرير ولف رأس المرأة إلى جانب واحد.
5. الحاجة إلى شفط السوائل لتقليل مخاطر الإصابة
6. منع إصابة الأم.
7. إذا أمكن ، يجب الوقاية من إصابة اللسان.
8. تسجيل وقت وطول ونوع نشاط النوبة.
9. إبلاغ الطبيب عن حالة المريضة.

بعد النوبة يتم القيام بما يلي:

1. تقييم حالة الأم والجنين بسرعة.
2. تقييم مجرى الهواء. شفط السوائل إذا لزم الأمر.
3. إعطاء الأوكسجين الإضافي: 10 لتر / دقيقة عن طريق القناع.
4. إعطاء كبريتات المغنيسيوم حسب أمر الطبيب مع توفير بيئة هادئة.

مقارنه بين preeclampsia and eclampsia

Eclampsia	Sever preeclampsia	Mild preeclampsia	
>160/110 mm hg	>160/110 mm hg	>140/90 mm Hg بعد 20 اسبوع من الحمل	ضغط الدم
بيله بروتينية عالية	>500 mg/24hr	300 mg/24hr	بيلة البروتينية
يوجد	لا يوجد	لا يوجد	الصرع / الغيبوبة
يوجد	يوجد	لا يوجد	الافراط في الحركة
1. صداع حاد 2. وذمة رئوية 3. RUQ أو ألم شرسوفي 4. اضطرابات بصرية	1. صداع 2. قله في الادرار 3. رؤية مشوشة 4. وذمة رئوية 5. قلة الصفائح (عدد الصفائح)	1. تجمع سوائل بسيط في الوجه واليدين 2. زيادة الوزن	علامات والاعراض الاخرى

5. نزيف في المخ 6. الفشل الكلوي 7. متلازمة هيلب	الدموية 100،000، صفحة / مم (3)		
	6. الاضطرابات الدماغية 7. ألم شرسوفي أو ألم في الربع العلوي الأيمن 8. متلازمة هيلب		

7. متلازمة هيلب (HELEP (Hemolysis, Elevated Liver Enzyme, Platelet Low):

شكل جديد من مقدمة الارتجاج يحدث فيه (انحلال الدم، ارتفاع إنزيمات الكبد، وانخفاض الصفائح الدموية) هو الاختصار المستخدم للتغيرات التي تحدث في النتائج المخبرية التي يمكن أن تحدث كمضاعفات تسمم الحمل الشديد، ولكن من الممكن أن يحدث بشكل مستقل (15-20) % من مريضات هيلب (HELLP) (Hemolysis Elevated Liver enzyme Low Platelet count) ليس لديهن ارتفاع ضغط أو بيله بروتيني في الأدرار.

1. انحلال الدم هو نتيجة لتدمير خلايا الدم الحمراء مثل تنتقل الخلايا عبر الأوعية الضيقة.
2. ينتج ارتفاع إنزيمات الكبد عن انخفاض تدفق الدم وتلف الكبد.
3. انخفاض عدد الصفائح الدموية ناتج عن تجمع الصفائح الدموية في موقع البطانة الوعائية التالفة المسببة للصفائح الدموية الاستهلاك ونقص الصفائح

النتائج المخبرية التي تدل على متلازمة هيلب:

1. الصفائح الدموية < 100,000 / مم 3
2. إنزيمات الكبد مرتفعة > 70 AST: وحدة / لتر ALT المرتفع: < 50 وحدة / لتر
3. البيليروبين مرتفع: < 1.2 مجم / ديسيلتر LDH مرتفع: < 600 وحدة / لتر

المخاطر على المرأة

1. انفصال المشيمة
2. الفشل الكلوي
3. ورم دموي في الكبد واحتمال حدوث تمزق
4. الموت

المخاطر على الجنين وحديثي الولادة:

1. الولادة المبكرة
2. الموت

الإدارة الطبية في متلازمة هيلب:

العلاج النهائي الوحيد لمتلازمة هيلب هو العلاج الفوري ولادة الجنين والمشيمة. يتم حل المرض بشكل عام في غضون 48 ساعة بعد الولادة. قد تشمل الإدارة الطبية استبدال الصفائح الدموية وهي نفس تلك الخاصة بالنساء المصابات بمقدمات الارتعاج الشديدة.

إجراءات التمريض:

1. إجراء تقييم شامل للمرأة فيما يتعلق بتشخيص الارتعاج الحملي .
2. تقييم النتائج المخبرية.
3. اخبار الطبيب فوراً في حالة الاشتباه في الإصابة بمتلازمة هيلب أو تدهور النتائج المخبرية.
4. اعطاء الصفائح الدموية وفقاً للأوامر.
5. التقييم والإدارة بالنسبة للنساء المصابات بمتلازمة هيلب كما هو الحال بالنسبة للنساء المصابات بمقدمات الارتعاج الشديدة.
6. تزويد المرأة والأسرة بالمعلومات المتعلقة بـ HELLP وعلاجه.
7. تقديم الدعم العاطفي للمرأة وعائلتها ، حيث أن المرأة والأسرة معرضون لخطر زيادة مستويات القلق المرتبطة بالتشخيص.

8. الاجراءات التمريضية الشاملة للاضطرابات الضغط اثناء الحمل بتقييم ما يلي:

1. ضغط الدم: يجب تقييم ضغط الدم كل 1 إلى 4 ساعات ، أو بشكل متكرر أكثر إذا أشارت الأدوية أو تغييرات أخرى في حالة الصحية للمرأة.
2. درجة الحرارة: يجب أخذ درجة الحرارة كل 4 ساعات ، أو كل ساعتين إذا كانت مرتفعة
3. النبض والتنفس: يجب تحديد معدل النبض والتنفس مع ضغط الدم.
4. معدل ضربات قلب الجنين: يجب فحص معدل ضربات قلب الجنين باستخدام ضغط الدم أو مراقبته باستمرار باستخدام جهاز مراقبة الجنين الإلكتروني إذا دعت الحالة.
5. الإخراج البولي: يجب قياس كل إفراغ للمثانة، كثيراً ما يكون للمرأة قسرة ساكنة. في هذه الحالة ، يمكن تقييم إخراج البول كل ساعة ويجب أن يكون الإخراج 700 مل أو أكثر خلال 24 ساعة ، أو 30 مل / ساعة على الأقل.
6. البروتين البولي: يتم تقييم البروتين البولي كل ساعة إذا كانت القسرة الساكنة في مكانها أو مع كل إفراغ. تشير قراءات +3 أو +4 إلى فقدان 5 جم أو أكثر من البروتين في 24 ساعة.
7. تقييم الوذمة (تجمع السوائل) : يتم فحص الوجه والأصابع واليدين والذراعين والساقين والكاحلين والقدمين بحثاً عن الوذمة. يتم تحديد درجة التنتور بالضغط على المناطق العظمية.
8. الوزن: يتم وزن المرأة يومياً في نفس الوقت وهي ترتدي نفس الرداء أو الرداء والنعال. قد يتم حذف الوزن إذا كانت المرأة ستحافظ على راحة الفراش بشكل صارم.
9. الوذمة الرئوية: تقييم السعال وضيق التنفس للحامل.

10. التنفس ، أو صعوبة التنفس: يتم تسمع الرئتين للتنفس الرطب.
11. ردود الفعل الارادية: يتم تقييم المرأة بحثاً عن دليل على فرط المنعكسات في وتر العضد أو الرسغ.
12. انفصال المشيمة: يجب تقييم المرأة كل ساعة للنزيف المهلي أو تصلب الرحم.
13. صداع: يجب سؤال المرأة عن وجود أي صداع ومكانه.
14. اضطراب بصري: يجب سؤال المرأة عن أي تشويش بصري أو تغيرات أو ورم خبيث. يجب تسجيل نتائج الاختبار اليومي لتنظير قاع العين على الرسم البياني.
15. ألم شرسوفي: يجب أن تسأل المرأة عن أي ألم شرسوفي. من المهم التفريق بينه وبين حرقه الفؤاد البسيطة ، والتي تميل إلى أن تكون مألوفة وأقل شدة.
16. تحاليل الدم المختبرية. الاختبارات اليومية (Hematocrit (HCT) لقياس تركيز الدم ؛ نيتروجين اليوريا في الدم (Blood Urea Nitrogen) BUN) والكرياتينين ومستويات حمض البوليك لتقييم وظائف الكلى ؛ وعوامل التخثر لأي مؤشر على قلة الصفائح ؛ إنزيمات الكبد
17. مستوى الوعي. يتم مراقبة المرأة من حيث اليقظة ، وتغيرات الحالة المزاجية ، وأي علامات على حدوث تشنج أو غيبوبة وشيكة.

9. الإدارة الطبية في الارتجاج الحملي:

1. ثبت أن سلفات المغنيسيوم ، وهو مثبت للجهاز العصبي المركزي ، يساعد في تقليل نشاط النوبات دون توثيق الآثار الضارة طويلة المدى للمرأة والجنين و هو العلاج المفضل للوقاية من النوبات في حالة تسمم الحمل وعلاج التشنجات الارتجاجية وقد استخدمت لأكثر من 60 عامًا بسبب تأثيرها المثبط للجهاز العصبي المركزي.
2. تستخدم الأدوية الخافضة للضغط للتحكم في الدم الضغط .
3. متابعة من خلال العيادات الخارجية للنساء المصابات بتسمم الحمل الخفيف يعد خيارًا إذا كان بإمكان المرأة الالتزام بتقييد النشاط ، وزيارات العيادة المتكررة ، واختبارات ما قبل الولادة ، ويمكنها مراقبة ضغط الدم
4. ولادة الجنين والمشيمة هي "العلاج" الوحيد لتسمم الحمل.

10. الوقاية من ارتفاع ضغط الدم أثناء الحمل

1. الوقاية من ارتفاع ضغط الدم الحملي التعرف المبكر على النساء المعرضات لخطر ارتفاع ضغط الدم الحملي قد يساعد في منع بعض مضاعفات المرض.
2. يعد التنقيف حول أعراض التحذير مهمًا أيضًا لأن التعرف المبكر قد يساعد النساء في تلقي العلاج ومنع تفاقم المرض
3. بالإضافة إلى تناول الملح حسب الحاجة
4. شرب ما لا يقل عن ثمانية أكواب من الماء يوميًا

5. زيادة كمية البروتين التي تتناولها وتقليل كمية الأطعمة المقلية والوجبات السريعة التي تتناولها
6. تمرن بانتظام واحصل على قسط كافٍ من الراحة ، رفع القدمين عدة مرات خلال اليوم
7. تجنب شرب الكحول والمشروبات التي تحتوي على مادة الكافيين .
8. قد يقترح عليك طبيبك تناول الأدوية الموصوفة والمكملات الإضافية

11. تعليم المريض على طرق العلاج المناسبة للرعاية المنزلية

1. تجنب برامج إنقاص الوزن الرجيم
2. توقف عن التدخين وتعاطي الكحول
3. الإدارة الأولية خالية من الأدوية لأن ضغط الدم ينخفض عادة في الثلثين الأولين من الحمل
4. قياس ضغط الدم اليومي مع قياس الوزن
5. مراقبة اليومية للبروتين في البول
6. مراقبة ركلات الجنين ونشاط الرحم
7. نظام غذائي متوازن يتم إعطاء نظام غذائي عالي البروتين ، متوسط الصوديوم لفترة طويلة لأن المرأة في حالة تأهب وليس لديها غثيان أو مؤشر على وشيك تشنج لتعويض الخسارة.

Appendix F

أستبانة معارف وأتجاهات الممرضين حول أرتفاع ضغط الدم خلال فترة الحمل في أماكن تقديم الرعاية الصحية الاولية .

الزملاء والزميلات العاملين في وحدات الرعاية الصحية..

السلام عليكم...

أن المعلومات المذكورة في الاستمارة أدناة سوف تستعمل لأغراض بحثية فقط واجابتك على الاسئلة تعد مشاركة في أنجاز البحث مع مراعات عدم ترك أية فقرة بدون أجابة.

الجزء الاول : الخصائص الديمغرافية.

ضع إشارة (✓) في المربع المناسب:

1-الجنس : ذكر , أنثى

2- العمر بالسنوات؟

3- مستوى التعليم؟

• خريج/ة اعدادية التمريض

• خريج/ة معهد

• خريج/ة كلية

• أخرى (ماجستير / دكتوراه)

4- عدد سنوات الخدمة الكلية في المؤسسات الصحية :

5- دورات التدريبية ؟

• هل أشرتكت بدورات تدريبية حول رعايه الحوامل ؟

• نعم لا

الجزء الثاني (II): معارف الممرضين في ما يتعلق بارتفاع ضغط الدم أثناء الحمل.

عزيزي الممرض/ الممرضة يرجى الاجابة على الاسئلة التالية بعناية, من خلال وضع دائرة حول الاجابة الصحيحة

الاختيارات	الاسئلة
<p>أ- يحدث ارتفاع ضغط الدم بدون وجود بروتين في الادرار، بعد 20 أسبوعاً من الحمل.</p> <p>ب- يحدث ارتفاع ضغط الدم مع بروتين في الادرار في 20 أسبوعاً من الحمل.</p> <p>ت- بداية ارتفاع ضغط الدم مع بروتين في الادرار بعد 35 أسبوعاً من الحمل .</p> <p>ث- يحدث قبل فتره الحمل ويستمر بعد الولادة</p> <p>ج- لأعلم</p>	<p>1- متى يحدث ارتفاع ضغط الدم اثناء الحمل:</p>
<p>أ- وضعية الجلوس والذراع بمستوى القلب</p> <p>ب- وضعية الوقوف</p> <p>ت- وضعية الجلوس والذراع اقل من مستوى القلب</p> <p>ث- وضعية الجلوس والذراع أعلى من مستوى القلب</p> <p>ج- لأعلم</p>	<p>2- الوضع المناسب لقياس ضغط الدم للحامل:</p>
<p>أ- ارتفاع ضغط الدم بعد 20 أسبوعاً من الحمل ويشمل ارتفاع ضغط الدم وبروتين في الادرار.</p> <p>ب- ارتفاع ضغط الدم الحالي قبل الحمل أو تشخيصه قبل 20 أسبوعاً من الحمل</p> <p>ت- وجود ضغط الدم الانقباضي ≤ 160 ملم زئبق أو ضغط الدم الانبساطي ≤ 110 ملم زئبق و بروتين في الادرار.</p> <p>ث- ارتفاع ضغط الدم خلال فتره الحمل فقط</p> <p>ج- لأعلم</p>	<p>3- ارتفاع ضغط الدم المزمن هو:</p>
<p>أ- تاريخ عائلي من تسمم الحمل</p> <p>ب- الحمل الثاني واكثر</p> <p>ت- الالتهاب الرئوي</p> <p>ث- أمراض القلب</p> <p>ج- لأعلم</p>	<p>4- العوامل التي تزيد من خطر الاصابة بتسمم الحمل (مقدمة الارتعاج) هي:</p>
<p>أ- تبدأ مقدمات الارتعاج بعد الاسبوع ال 20 من الحمل عند الحوامل التي كان ضغط الدم لديها طبيعياً مع علامات تلف عضوي كالكلية والكلى.</p> <p>ب- يحدث ارتفاع ضغط الدم في بداية الحمل (قبل 20 أسبوعاً) أو يستمر ارتفاع الضغط بعد الولادة.</p> <p>ت- عند ارتفاع ضغط الدم بدون وجود بروتين في الادرار ، ويكتشف بعد 20 أسبوعاً من الحمل.</p> <p>ث- يحدث مقدمة الارتعاج عند ظهور حالة من التشنجات اللاارادية من نوبات الصرع عند الحامل</p> <p>ج- لأعلم</p>	<p>5- متى يحدث ما قبل تسمم الحمل او ما يعرف بال (المقدمة الارتعاج الحلمي (preeclampsia) :</p>
<p>أ- هو ارتفاع ضغط الدم الجديد بعد 20 أسبوعاً من دون وجود بروتين في الادرار ويختفي بعد الولادة.</p> <p>ب- هو ارتفاع ضغط الدم قبل الحمل وقت مبكر من</p>	<p>6- ما المقصود بالارتعاج الحلمي او ما يسمى بال (التسمم الحمل (eclampsia) :</p>

<p>الحمل (قبل 20 أسبوعاً) أو يستمر ارتفاع الضغط بعد الولادة.</p> <p>ت- هو حالة تشنج تصاحب مقدمة الارتعاج (تسمم الحمل).</p> <p>ث- هو ارتفاع في ضغط الدم مع وجود بيله بروتينية في الأدرار</p> <p>ج- لأعلم</p>	
<p>أ- يحدث أثناء تطور ارتفاع ضغط الدم المزمن خلال فترة الحمل</p> <p>ب- عند النساء اللواتي يعانين من ارتفاع ضغط الدم (أكثر من 90/140) قبل الحمل في بداية الحمل (قبل 20 أسبوعاً) أو يستمر بعد الولادة</p> <p>ت- ارتفاع ضغط الدم من دون بروتين في الأدرار ، يكتشف بعد 20 أسبوعاً من الحمل</p> <p>ث- يحدث خلال فترة الحمل</p> <p>ج- لأعلم</p>	<p>7- متى يحدث مقدمة الارتعاج الحملي المتداخل (superimposed preeclampsia) :</p>
<p>أ- زيادة الوزن أقل من 1 كغم في أي أسبوع.</p> <p>ب- هي عبارة عن تورم ناتج من السوائل الزائدة المحتلثة في أنسجة الجسم وتكون ملحوظة أكثر في الساقين والذراعين.</p> <p>ت- زيادة الوزن ليست موجودة حول ثلثي مرضى ارتفاع ضغط الدم.</p> <p>ث- الوذمة نقصان في الوزن</p> <p>ج- لأعلم</p>	<p>8- ما هي الوذمة (Edema) :</p>
<p>أ- تحلل دموي للكريات الحمراء ، ارتفاع انزيم الكبد ونقص عدد الصفائح الدموية.</p> <p>ب- انحلال الدم ، ارتفاع انزيم المعدة وانخفاض عدد الصفائح الدموية.</p> <p>ت- انحلال الدم ، ارتفاع انزيم الكبد وارتفاع عدد الصفائح الدموية.</p> <p>ث- انحلال الدم ، انخفاض انزيم الكبد ، ارتفاع عدد الصفائح الدموية</p> <p>ج- لأعلم</p>	<p>9- ماذا تعني متلازمة هيلب (HELLP Syndrome)</p>
<p>أ- السمنة والكثير من الملح الغذائي والإجهاد.</p> <p>ب- انخفاض فيتامين D في النظام الغذائي، البوتاسيوم القليل جدا في النظام الغذائي الخاص بك.</p> <p>ت- كلاهما أ و ب.</p> <p>ث- غذاء يحتوي على نسبة قليلة من الملح</p> <p>ج- لأعلم</p>	<p>10- ماهي العوامل التي تؤثر في زيادة ضغط الدم، اختر ما هو ممكن:</p>
<p>أ- السمنة ، ارتفاع ضغط الدم السابق ، داء السكري.</p> <p>ب- عمر الأم فوق 35 سنة ، سكري الحمل.</p> <p>ت- كلاهما أ و ب.</p> <p>ث- اذا كانت متعددة الحمل</p> <p>ج- لأعلم</p>	<p>11- تشمل عوامل خطورة الإصابة بمقدمة ارتعاج الحمل (مقدمات التسمم الحملي) بما يأتي:</p>
<p>أ- تأخر نمو الجنين داخل الرحم.</p> <p>ب- التهاب السحايا.</p> <p>ت- موت الجنين داخل الرحم.</p> <p>ث- ولادة الجنين قبل الموعد</p> <p>ج- لأعلم</p>	<p>12- ماهو تأثير ما قبل تسمم الحمل (مقدمة ارتعاج الحمل preeclampsia) على الجنين:</p>
<p>أ- انفصال المشيمة المبكر ، قلة الأدرار.</p>	<p>13- ماهو تأثير ارتفاع ضغط الدم المزمن على</p>

النساء الحوامل:	ب- خلل في الجهاز العصبي المركزي ، قلة الصفائح الدموية. ت- كلاهما أ و ب. ث- يمنع استمرار الحمل بصورة صحيحة ج- لأعلم
14- ماهي علامات ما قبل تسمم الحمل(مقدمة الارتعاج (Preeclampsia) والأعراض التي تصاب بها :	أ- قلة الغثيان والقيء. ب- وذمة (تجمع السوائل) وبروتين في الادرار. ت- عدم انتظام دقات القلب. ث- انخفاض في ضغط الدم ج- لأعلم

الجزء الثالث(III): المعارف فيما يتعلق بمعالجة والوقاية من ارتفاع ضغط الدم أثناء الحمل.

أقرأ الاسئلة التالية بعناية, ثم ضع دائرة حول الاجابة الصحيحة		رقم
الاختيارات	الاسئلة	
أ- اتباع نظام غذائي صحي وتقليل الملح. ب- امتناع عن التدخين. ت- كلاهما أ , ب ث- مدارات البول ج- لأعلم	1. ماذا يقترح للعلاج العام غير الدوائي للنساء الحوامل مع ارتفاع ضغط الدم خلال الحمل من طفيف إلى معتدل:	
أ- لتقليل القيء. ب- لتقليل ضغط الدم. ت- لتحسين تدفق دم الرحم المشيمي. ث- لتقليل تدفق دم الرحم المشيمي. ج- لأعلم	2. لماذا يتم التشجيع على راحة السرير للحامل المصابه (قبل تسمم الحمل) بمقدمة الارتعاج:	
أ- الرسم البياني (مخطط الركلة). ب- عن طريق قياس معدل ضربات قلب الجنين مع دوبلر أو مراقبة الجنين الإلكترونية. ت- معدل التنفس للجنين. ث- حركه الجنين داخل الرحم. ج- لأعلم	3. كيف تقوم الممرضة القابلة برصد صحة الجنين للأم قبل مقدمة الارتعاج (preeclampsia):	
أ- توضيح الفائدة من اعطاء كبريتات المغنيسيوم للمريض. ب- قياس ضغط الدم ت- كلاهما أ , ب ث- مراقبة درجة حرارة الجسم. ج- لأعلم	4. ماذا يجب أن تقوم الممرضة قبل إعطاء كبريتات المغنيسيوم (MgSo4):	
أ- عضليا فقط. ب- عن طريق الوريد. ت- داخل الادمه. ث- عن طريق الفم. ج- لأعلم	5. طريقة إعطاء كبريتات المغنيسيوم MgSo4 للحامل عن طريق:	

<p>أ- المراقبة الالكترونية المستمرة للجنين ب- المحافظة على توازن السوائل ت- تقديم الدعم العاطفي ث- زيادة تناول السوائل ج- لأعلم</p>	<p>6. العناية التمريضية أثناء تناول كبريتات المغنيسيوم .</p>
<p>أ- مراقبة صوت قلب الجنين كل 4 ساعات. ب- مراقبة معدل التنفس كل 4 ساعات. ت- مراقبة معدل النبض كل 4 ساعات. ث- مراقبة حركة الجنين كل 4 ساعات ج- لأعلم</p>	<p>7. ماهي العناية التمريضية الخاصة بمقدمة الارتجاج(تسمم الحمل) الشديد:</p>
<p>أ- شرب ما لا يقل عن 8 أكواب ماء يوميا. ب- الحصول على ما يكفي من الراحة والملح. ت- ممارسة الرياضة ث- كل الإجابات أعلاه صحيحة أ , ب, ت. ج- لأعلم</p>	<p>8. ماهي الطرق التي يمكن أن تساعد في منع ارتفاع ضغط الدم الحلمي :</p>
<p>أ- قياس الوزن كل يوم. ب- قياس درجة حرارة الجسم كل يوم. ت- قياس معدل النبض كل يوم. ث- قياس ضغط الدم ج- لأعلم</p>	<p>9. ما هو القياس الذي تحتاجه الأم المصابة بمقدمة الارتجاج الحلمي :</p>
<p>أ- عندما لا تستجيب المرأة للعلاج التي قدمته لها الممرضة ب- عندما تتعرض المرأة لارتفاع سريع في ضغط الدم ت- عندما يحدث زيادة سريعة في الوزن والصداع الشديد. ث- عندما تتعرض المرأة لقلّة في الادرار. ج- لأعلم</p>	<p>10 متى يجب على الممرضة ان تشير الى الحامل تتعرض لاضطراب ضغط الدم:</p>
<p>أ- استعمال جرعة منخفضة من الأسبرين والكالسيوم والمغنيسيوم وتناول الزنك. ب- التشجيع على تناول البروتين بنسبة قليلة ت- تشجيعها على تناول الصوديوم. ث- الطلب من الحامل مراجعة مراكز الرعاية الصحية الاولية قبل الولادة كل شهر او اقل ج- لأعلم</p>	<p>11 طرق الوقاية للحامل التي تعاني ما قبل تسمم الحمل (مقدمة الارتجاج preeclampsia):</p>
<p>أ- استعمال الصوديوم والبروتين بنسب عالية في النظام الغذائي . ب- استعمال تقليل الأملاح وزيادة في البروتين ت- تقليل كمية الفواكة ث- استعمال الخضروات وزيت السمك.</p>	<p>12 ما النصيحة الغذائية التي تقدمها إلى امرأة مصابة بمقدمة الارتجاج preeclampsia :</p>

ج- لأعلم		
أ- الفينوباربيتون. ب- مدرات البول مثل لازكس ت- مثبط انزيم انجيوتنسين ث- كبريتات المغنسيوم MgSo4 ج- لأعلم	13	ما هو العلاج الذي سيوصف لمقدمة الارتعاج الحملي (preeclampsia):
أ- ولادة الجنين والمشيمة. ب- وضع المرأة في الجانب الأيسر ت- علاج ارتفاع ضغط الدم الشديد ث- العناية خلال اعطاء كبريتات المغنسيوم. ج- لأعلم	14	الرعاية التمريضية لمقدمة الارتعاج الحملي الخفيف تشمل:
أ- التشجيع على تناول كميات قليلة من الصوديوم ب- الراحة على السرير ت- زيادة تناول السوائل ث- عناية خلال اعطاء كبريتات المغنسيوم ج- لأعلم	15	الرعاية التمريضية لمقدمة الارتعاج الحملي الشديد تشمل:
أ- منع المضاعفات. ب- إطالة مدة الحمل من دون مخاطر. ت- يساعد على استمرار نمو الجنين داخل الرحم ث- كل الاجابات أعلاه صحيحة أ , ب , ت ج- لأعلم	16	ماهو الهدف من العلاج الخافض للضغط :

الجزء الرابع : اتجاهات الممرضين حول ارتفاع ضغط الدم اثناء الحمل.
أقرأ الاسئلة التالية بعناية, ثم ضع (✓) في الحقل المناسب.

الاجابة	الاسئلة			الرقم
	اتفق	محايد	لا اتفق	
				1. اعتقد ان ارتفاع ضغط الدم عند الحامل مشكلة صحية غير شائعة.
				2. اعتقد ان قياس ضغط الدم لكل امرأة حامل اثناء كل زيارة رعاية ما قبل الولادة أمرًا ضروري
				3. ليس من واجب الممرض أن يتوقف النساء الحوامل حول ارتفاع ضغط الدم اثناء الحمل.
				4. اعتقد من واجب الممرض توعية النساء الحوامل حول أهمية الرعاية السابقة للولادة في مراكز الرعاية الصحية الأولية.
				5. لا اعتقد ان من واجب الممرض توعية الحوامل المصابات بارتفاع ضغط الدم بعدم الحاجة إلى الراحة في الفراش.
				6. أعتقد ان معظم النساء الحوامل المصابات بارتفاع ضغط الدم المزمن يتعرضن لخطر الإصابة بمقدمات الارتعاج (تسمم الحمل).
				7. من المهم جدا ان يتم تقييم الوذمة عند المرأة الحامل المصابة بارتفاع ضغط الدم
				8. يعتبر جهاز قياس ضغط الدم الالكتروني أفضل الأدوات لقياس ضغط الدم للحصول على القراءة الصحيحة اثناء الحمل.
				9. ان أستخدام اختبار الدم كأداة فحص روتينية ضروري جدا للتنبؤ بمقدمات الارتعاج.
				10. أعتقد ان الألم الشرسوفي في اعلى البطن والصداع يشير إلى العلامات السريرية لمقدمة الارتعاج الحولي الحاد.

هل لديكم أي إضافة ، مقترحات او استفسارات ؟

شكرا لاشتراككم معنا...

Questionnaire**Part (I): Socio-Demographic and Personal characteristics**

1. Gender? male female

2. Age in years?

3. Level of Education?

- Secondary Nursing School
- Institute
- Bachelor
- Other (master, doctor)

4. Years of experience?

- From 1-5
- From 6-10
- From 11-15
- From 16 and above

5. Have you participated in training courses on pregnant women caring
(how many number)

- Yes No

Part (II) : General Knowledge of Nurses regarding Pregnancy Induced Hypertension.

Answer the following questions carefully and circle the right answer	
Questions	Options
1. When does high blood pressure occur during pregnancy?	<ul style="list-style-type: none"> a. Onset of hypertension without proteinuria, after 20 weeks of pregnancy. b. Onset of hypertension with proteinuria within 20 weeks pregnancy. c. Onset of hypertension with proteinuria after 35 weeks of pregnancy. d. Occur before pregnant and continue after delivery. e. I do not know.
2. The appropriate position for measuring blood pressure for a pregnant woman:	<ul style="list-style-type: none"> a. Sitting position with the arm at heart level b. standing position c. Sitting position with the arm lower than the level of the heart d. Sitting position with the arm higher than the level of the heart e. I do not know.
3. Chronic hypertension mean.	<ul style="list-style-type: none"> a. Hypertension develops after 20 weeks of gestation and characterized by hypertension and proteinuria b. Hypertension present before the pregnancy or diagnosed before 20 weeks of gestation c. Presence of systolic blood pressure ≥ 160 mmHg or diastolic blood pressure ≥ 110 mmHg and proteinuria $> 29/24$ hr. urine specimen or $\geq 2+$ on dipstick d. Hypertension occurs during pregnant. e. I do not know.
4. Factors that increase the risk of developing preeclampsia are:	<ul style="list-style-type: none"> a. A family history of pre-eclampsia b. Obesity. c. Pneumonia. d. Heart disease. e. I do not know.
5. When does Preeclampsia occur?	<ul style="list-style-type: none"> a. Preeclampsia begins after the 20th week of pregnancy in pregnant women whose blood pressure was normal with signs of organic damage such as the liver and kidneys. b. Women who have high blood pressure (over 140/90) before pregnancy early in pregnancy (before 20 weeks) or continue to have it after delivery c. Hypertension without proteinuria , detected after 20 weeks of pregnancy

	<p>d. Preeclampsia occurs when a case of no voluntary convulsions appears in a pregnant woman</p> <p>e. I do not know</p>
6. What does the Eclampsia mean?	<p>a. It's New hypertension presenting after 20 weeks without significant proteinuria and goes away after delivery hypertension</p> <p>b. It's high blood pressure before pregnancy early in Pregnancy (before 20 weeks) or continue to have it after delivery</p> <p>c. It's a convulsive condition associated with preeclampsia</p> <p>d. It's a hypertension with found protein in urine</p> <p>e. I do not know</p>
7. When does superimposed preeclampsia occur?	<p>a. develops in a women with chronic hypertension</p> <p>b. Women who have high blood pressure before pregnancy early in pregnancy (before 20 weeks) or continue to have it after delivery</p> <p>c. Hypertension without proteinuria , detected after 20 weeks of pregnancy ours collection</p> <p>d. Occur during pregnant.</p> <p>e. I do not know</p>
8. What is the Edema?	<p>a. Weight gain of lower than 1 kg in any one week</p> <p>b. It is a swelling resulting from excess fluid sequestered in the tissues of the body and is more noticeable in the legs and arms.</p> <p>c. weight gain is not present about two – thirds of patient with PIH</p> <p>d. edema is decrease in weight.</p> <p>e. I do not know.</p>
9. What is HELLP syndrome?	<p>a. Haemolysis , elevated liver enzyme and low platelets count</p> <p>b. Haemolysis , elevated stomach enzyme and low platelets count</p> <p>c. Haemolysis , elevated liver enzyme and high platelets count</p> <p>d. Haemolysis , low liver enzyme and elevated platelets count.</p> <p>e. I do not know.</p>
10. What are the factors that play a role to increase	<p>a. Obesity and too much salt in your diet , stress</p> <p>b. Non-steroidal Anti-inflammatory Drugs , a diet low in vitamin D , Too little potassium in your diet</p>

blood pressure? Choose all the possible correct answers	c. Both a and b d. nutrient contain low amount of salt. e. I do not know
11. What are risk factors of preeclampsia include?	a. Obesity prior hypertension , diabetes mellitus b. Maternal age above 35 years , gestational diabetes c. Both a and b d. multi pregnant women. e. I do not know.
12. What is the effect of preclampsia on fetal outcome?	a. IUGR (Intra Uterine Growth Retardation) b. Meningitis c. The death of the fetus inside the womb. d. premature delivery. e. I do not know.
13. What is the effect of chronic hypertension on pregnant women outcome?	a. Placental a bruption , Oliguria b. Central nervus system dysfunction , thrombocytopenia c. Both a and b d. prevents the continuation of pregnancy correctly e. I do not know.
14. The signs and symptoms of Preeclampsia are:	a. Decrease nausea and vomiting b. Edema and protein in the urine c. Tachycardia d. decrease in blood pressure. e. I do not know.

Part (III): Nurses Knowledge Regarding Treatment and Prevention of Pregnancy Induced Hypertension

Answer The Following Questions Carefully And Circle The Right Answer

Questions	Options
1. What is suggested the treatment for general non-pharmacological treatment of pregnant women with mild to moderate high blood pressure during pregnancy	<ul style="list-style-type: none"> a. Salt restriction b. abstain from smoking c. both a and b d. Diuretics e. I do not know
2. Why is bed rest encouraged for pregnant women with preeclampsia	<ul style="list-style-type: none"> a. Reduce vomiting b. Reduce blood pressure c. Improve utero-placental blood flow d. decrease utero-placental blood flow e. I do not know.
3. How does the nurse-midwife monitor the health of the mother's fetus before preeclampsia?	<ul style="list-style-type: none"> a. Kick chart b. Fetal heart rate with Doppler or electronic fetal monitors c. Fetal respiratory rate d. The movement of the fetus inside the womb e. I do not know.
4. What should the nurse do before administering (MgSo ₄)?	<ul style="list-style-type: none"> a. Explain purpose of administration of drugs to patient b. measure blood pressure c. both a and b d. Monitor body temperature e. I do not know.
5. How to give magnesium sulfate MgSo ₄ to pregnant women through?	<ul style="list-style-type: none"> a. Muscular only. b. Intravenously. c. Inside the dermis. d. Orally e. I do not know.
6. Nursing care during taking MgSo ₄ .	<ul style="list-style-type: none"> a. Continuous electronic monitoring of the fetus b. maintain fluid balance c. Providing emotional support d. Increase fluid intake

	e. I do not know.
7. What is the nursing care treated for severe pre-eclampsia?	<ul style="list-style-type: none"> a. Monitor fetal heart sound every 4 hours b. Monitor respiratory rate every 4 hours c. Monitor pulse rate every 4 hours d. Monitoring the movement of the fetus every 4 hours e. I do not know.
8. What methods can help prevent gestational hypertension?	<ul style="list-style-type: none"> a. Drink at least 8 glasses of water a day b. Get enough rest and use salt as needed for taste c. Exercise d. all above answers are correct e. I do not know.
9. What is measure the mother needs during Pre-eclamptic:	<ul style="list-style-type: none"> a. Measuring Weight every day b. Measuring Body temperature every day c. Measuring Pulse rate every day d. Measuring blood pressure every day e. I do not know.
10. When should the midwife inform a pregnant woman having a hypertensive disorder?	<ul style="list-style-type: none"> a. When the woman is not responding to the management given by the midwife b. When the woman is having rapid rise in blood pressure, rapid gain in weight and severe headache c. When the woman presents with oliguria d. When a woman is exposed to a rapid rise in(BP). e. I do not know.
11. How will you manage woman with pre-eclampsia?	<ul style="list-style-type: none"> a. Use low dose aspirin, calcium, magnesium and zinc intake b. Encourage low protein intake and encourage sodium intake c. Encourage her to eat sodium d. Asking the pregnant woman to visit the primary health care centers before giving birth every month or less e. I do not know.
12. What nutritional advice would you give to a woman with preeclampsia?	<ul style="list-style-type: none"> a. Use high sodium and high protein diet b. Use low salt and high fat in diet c. Reduce the amount of fruit d. Use vegetables and fish oil

	e. I do not know.
13. What treatment would you prescribe for pre-eclampsia?	a. Phenobarbitone b. Diuretics e.g. Lasix c. angiotensin-enzyme inhibitor d. Magnesium sulfate(MgSo4) e. I do not know.
14. Nursing care for mild pre-eclampsia includes:	a. The birth of the fetus and the placenta. b. The position of the woman on the left side c. treatment of severe high blood pressure d. Administration of magnesium sulfate e. I do not know.
15. Nursing care for severe pre-eclampsia includes:	a. Encouraging the intake of low amounts of sodium b. rest in bed c. Increase fluid intake d. Administration of magnesium sulfate e. I do not know.
16. The aim of antihypertensive treatment is to:	a. Prevent complication b. Helps the continued growth of the fetus inside the womb c. Prolonging pregnancy without risks. d. all above answers are correct e. I do not know.

Part (IV) Nurses attitudes regarding pregnancy induced hypertension

No	Statements	Response		
		agree	Neutral	Disagree
1.	I think that high blood pressure in pregnant women is an uncommon health problem.			
2.	I believe it is essential to measure the blood pressure of every pregnant woman during every antenatal care visit			
3.	It is not a nurse's duty to educate pregnant women about high blood pressure during pregnancy.			

4.	I think it is the nurse's duty to educate pregnant women about the importance of prenatal care in primary health care centers			
5.	I do not think it is the nurse's duty to educate pregnant women with high blood pressure not to need bed rest.			
6.	I believe that most pregnant women with chronic high blood pressure are at risk of developing pre-eclampsia			
7.	It is very important to evaluate edema in pregnant women with high blood pressure			
8.	The electronic sphygmomanometer is the best tool for measuring blood pressure to get the correct reading during pregnancy.			
9.	The use of a blood test as a routine screening tool is very essential for predicting pre-eclampsia.			
10.	I believe that epigastric pain and headache are always clinical signs of preeclampsia.			

Appendix G

قائمة بأسماء الخبراء المحكمين لاستمارة الاستبيان

ت	أسم الخبير	اللقب العلمي	الاختصاص	مكان العمل	سنوات الخبرة
1.	د. أمين عجيل ياسر	أستاذ	تمريض صحة مجتمع	جامعة بابل /كلية التمريض	38
2.	د. سلمى كاظم جهاد	أستاذ	تمريض صحة مجتمع	جامعة بابل /كلية التمريض	39
3.	د. علي عبد الرضا أبو طحين	أستاذ مساعد	بور دكتوراه/ طب مجتمع	جامعة كربلاء /كلية الطب	17
4.	د. فاطمة مكي	أستاذ مساعد	تمريض بالغين	جامعة كربلاء/كلية التمريض	27
5.	د. مرتضى غانم عداي	أستاذ مساعد	تمريض صحة المجتمع	جامعة وارث الانبياء / كلية التمريض	15
6.	د. حسن عبد الله عذبي المالكي	أستاذ مساعد	تمريض بالغين	جامعة كربلاء/ كلية التمريض	19
7.	د. حوراء حسين غافل	أستاذ مساعد	تمريض صحة الأم والوليد	جامعة بغداد/كلية التمريض	16
8.	د. حسام عباس داود	أستاذ مساعد	تمريض بالغين	جامعة كربلاء /كلية التمريض	21
9.	د. غزوان عبد الحسين عبد الواحد	مدرس	تمريض صحة مجتمع	جامعة كربلاء /كلية التمريض	17
10.	د. ساجدة سعدون عليوي	مدرس	تمريض صحة الام والوليد	جامعة كربلاء/ كلية التمريض	30
11.	د. نهى عادل ابراهيم	مدرس	تمريض صحة الام والوليد	جامعة بغداد /كلية التمريض	14
12.	د. حقي اسماعيل	مدرس	تمريض صحة مجتمع	جامعة كربلاء /كلية التمريض	5

Appendix H

الصورة (1) المحاضرة نظري للمشاركين في قاعة كلية التمريض



الصورة (2) المحاضرة نظري للمشاركين مع مشاركة الزملاء



الصورة (3) توزيع شهادة المشاركة في ختام الدورة من قبل السيد عميد كلية التمريض/ جامعه كربلاء الاستاذ الدكتور علي كريم الجبوري المحترم



الصورة (4) توزيع شهادة المشاركة من قبل السيد معاون العميد للشؤون العلمية
الدكتور سلمان حسين المحترم



الصورة (5) توزيع شهادة المشاركة من قبل السيد معاون العميد للشؤون الادارية الدكتورة فاطمة
مكي المحترمة



الصورة (6) توزيع الاستبانات على المجموعة الضابطة في المراكز الصحية



الصورة (7) توزيع الاستبانات على المجموعة الضابطة في المراكز الصحية



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University of Kerbala
College of Nursing




جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة كربلاء
كلية التمريض
الدراسات العليا

أقرار الخبير اللغوي

اشهد بان الرسالة الموسومة :

Effect of an Education program upon
(Nurse's Knowledge and Attitude Regarding pregnancy
Induced Hypertension at Primary Health Care

قد جرى مراجعتها من الناحية اللغوية بحيث اصيحت بأسلوب علمي سليم خال من الاخطاء
اللغوية ولأجله وقعت.

توقيع الخبير اللغوي: 
الاسم واللقب العلمي: د. حاتم كيسان جواد
الاختصاص النقي: علم اللغة
مكان العمل: جامعة كربلاء / كلية التمريض - الأنكلز
التاريخ: 2022 / 5 / 16



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كلية التمريض
الدراسات العليا

القرار الخبير الاحصائي

اشهد بان الرسالة الموسومة :

Effect of an Education Program up on Nurses
Knowledge and Attitudes Regarding Pregnancy Induced
Hypertension at Primary Health Care

قد تم الاطلاع على الاسلوب الاحصائي المتبع في تحليل البيانات واظهار النتائج الاحصائية
وفق مضمون الدراسة ولأجله وقمت.

توقيع الخبير الاحصائي:
الاسم واللقب العلمي: د. شروق عبد الرحمن اسعيد
الاختصاص المفقود: اعضاء تطمين
مكان العمل: جامعة كربلاء / كلية الادارة والاقتصاد / قسم الاحصاء
التاريخ: 2022 / 5 / 22

University of Kerbala

جامعة كربلاء



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المستخلص

يعتبر ارتفاع ضغط الدم الناتج عن الحمل هو أكثر مضاعفات الحمل انتشارًا ، والسبب الشائع لوفاة الأمهات ، كما أنه يساهم في الامراض ووفيات الأطفال حديثي الولادة و يؤثر ذلك على حوالي 10% من جميع النساء الحوامل في جميع أنحاء العالم. تهدف الدراسة إلى تقييم فاعلية البرنامج التثقيفي على معارف واتجاهات الممرضين تجاه ارتفاع ضغط الدم الناتج عن الحمل في مراكز الرعاية الصحية الأولية في مدينة كربلاء المقدسة ومعرفة العلاقة بين تأثير البرنامج التثقيفي وخصائصها الديموغرافية.

تكون الدراسة شبه تجريبية أجريت في مراكز الرعاية الصحية الأولية في مدينة كربلاء تم اختيار عينة غير احتمالية "هادفة" تتكون من 60 ممرض للحصول على بيانات تمثيلية ودقيقة. بلغ حجم العينة (60) ممرض مقسمة إلى مجموعتين تتكون كل منهما من (30) ممرض كمجموعة الدراسة والمجموعة الضابطة. من بين (60) عينة ، أكملت (52) عينة فقط البرنامج و (8) عينات لم تكمل اختبار البرنامج (الاختبار اللاحق) ، لذلك تم استبعادهم من الدراسة. يتكون التقسيم النهائي من 25 ممرض كمجموعة الدراسة و 27 ممرض كمجموعة ضابطة. تم إجراء اختبار مسبق لكلا المجموعتين ؛ تم تطبيق البرنامج التعليمي فقط على مجموعة الدراسة في الفترة من 6 إلى 10 فبراير 2022. تم تطبيق الاختبار اللاحق بعد تنفيذ البرنامج لمجموعة الدراسة وأيضًا للمجموعة الضابطة. الدراسة التي استمرت من 1 نوفمبر 2021 إلى نهاية شهر أيار 2022.

أظهرت نتيجة التقييم الاولي أن الممرضين لديهم زيادة في المعرفة فيما يتعلق بارتفاع ضغط الدم الناتج عن الحمل في مراكز الرعاية الصحية الأولية. حيث أظهرت نتيجة الارتباط عدم وجود فرق ذات دلالة إحصائية بين معرفة الممرضين واتجاهاتهم ذات الخصائص السكانية مثل العمر والجنس ومستوى التعليم وسنوات الخبرة في المجموعتين الدراسة والضابطة. تعتبر خلاصة الدراسة أن الممرضين في مجموعة الدراسة قد استفادوا من البرنامج التثقيفي وتحسنت معرفتهم واتجاهاتهم بشكل ملحوظ مقارنة بالمجموعة الضابطة. أوصت الدراسة بتقديم برامج تعليمية وتدريبية للممرضين بشكل منتظم من أجل تحسين معرفتهم بأمراض الحمل. وعمل المحاضرات التثقيفية للممرضين في مراكز الرعاية الصحية الأولية والمستشفيات بشكل منتظم وتحديثها لمساعدة الممرضين في نشر الوعي الصحي من أجل الحفاظ على صحة الحامل والجنين وتقليل معدلات الامراضية والوفيات .



جامعة كربلاء

كلية التمريض

فاعلية البرنامج التعليمي في معارف وأتجاهات الممرضين فيما يتعلق
بأرتفاع ضغط الدم الحملي في مراكز الرعاية الصحية الاولية في مدينة
كربلاء

رسالة تقدمت بها

امال فاضل نوري راضي

الى

مجلس كلية التمريض - جامعة كربلاء

جزء من متطلبات نيل درجة الماجستير في علوم التمريض

بأشراف

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