

**KNOWLEDGE AND PRACTICES OF HEALTH WORKERS IN
RELATION TO PREECLAMPSIA AT ISHAKA ADVENTIST
HOSPITAL IN WESTERN UGANDA.**

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DECLARATION

I SIBOMANA OBARIDO, hereby declare that this research work is of my own effort and has never been submitted to any higher institution of learning for award of any academic qualification.

Signature.....

Date.....

APPROVAL

This work has been produced under the approval of the undersigned supervisor,

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It is now ready for submission to school of allied health sciences.

Signature.....

Date.....

DEDICATION

I would like to express my appreciation to my beloved parents, Mr. Habimana Richard and Mrs. Mukandekezi Bonny for the support rendered. I also dedicate this work to My brothers; Ndagije John Bosco, Hakiza Julius, Maniraguha Wilson and my sisters; Rebecca, Allen, Pamela and Janet who have tirelessly supported me this far. This project would not have been done without their support and assistance.

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DEFINITION OF TERMS

Hypertension. Blood pressure \geq 140/90mmHg

Preeclampsia. A hypertensive disorder of pregnancy occurring usually at 20 weeks and above with proteinuria.

Eclampsia. Hypertension experienced with proteinuria and seizures in pregnancy.

Post-partum preeclampsia. This is hypertension experienced after delivery.

Antihypertensive drugs. Drugs used to reduce high blood pressure.

Anticonvulsants. Drugs used to prevent or reduce seizures.

Corticosteroids. Steroid drugs used in treatment of hypertension and other diseases.

Informed consent. Where an individual is provided with essential information about preeclampsia and fully understood it and based on this she has agreed a procedure to be done.

Mortality. Number of deaths in a population.

Maternity clinic. Health facility or part of it where women and their newborns receive care during pregnancy, childbirth and delivery.

Labor. As used in this research proposal, a period from the onset of regular contractions to complete delivery of the placenta.

Premature baby. Fetus born Before 37 completed weeks of pregnancy.

Knowledge. Facts, information, and skills acquired through experiences, education or association; the theoretical or practical understanding of a subject.

Practices. The actual application or use of idea, belief, or method, as opposed to theories relating to it.

LIST OF ACRONYMS.

PE	preeclampsia
HTN	Hypertension.
BP	Blood Pressure.
IV	Intravenous (injection or infusion).
IM	Intramuscular Injection.
IU	International Unit.
LBW	Low birth weight: birth weight less than 2500 g.
ANC	Antenatal Care.
MOH	Ministry of Health.
WHO	World Health Organization.
CI	Confidence Interval
OR	Odds Ratio
PIH	Pregnancy Induced Hypertension
PPH	Postpartum Hemorrhage
UN	United Nation
HDP	Hypertensive Disorders of Pregnancy
FHR	Fetal heart
HWs	Health workers
CBC	complete blood count
IAH	Ishaka Adventist hospital
MgSO4	Magnesium sulphate

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CHAPTER ONE

1.1 BACK GROUND OF THE STUDY

Preeclampsia is a life threatening hypertensive disorder of pregnancy that normally starts after 20 weeks of gestation(Agrawal, 2014). with increased blood pressure ($Bp \geq 140/90$ mmHg) and proteinuria (urinary albumin ≥ 300 mg/24hrs). It is one of the leading causes of maternal mortality and morbidity amongst pregnant women in the world. Maternal mortality & morbidity are significant Public health problem in developing countries.(Kaushik *et al.*, 2012)

Despite many attempts towards understanding the possible causes of preeclampsia and contributing associated factors, the etiology of preeclampsia remains obscure .Studies have suggested several risk factors for preeclampsia including null parity, family or own history of hypertension, diabetes, body mass index(BMI)higher than normal, multiple pregnancy, maternal age (less than 20 and greater than 35 years), renal disease, hydatidifom mole, hydrops fetalis, oocyte donation or donor insemination, chronic hypertension ,chronic autoimmune disease.(Bilano *et al.*, 2014)

According to the World Health Organization(2008), postpartum hemorrhage is the leading cause of maternal deaths in developing countries, accounting for 27% of deaths, followed by hypertensive disorders of pregnancy(primarily pre-eclampsia and eclampsia) and sepsis, which each account for 12% of deaths, and obstructed labor (6% of deaths)(Barbara *et al.*, 2014). About 10 million women develop preeclampsia every year with the estimated maternal mortality of about 630,000 women each year and about 500,000 fetal deaths. WHO reported that, globally an estimated number of 289,000 women died during and following pregnancy and childbirth related problem in 2013 alone(Gedefa A *et al.*, 2016). The mortality is due to limited availability of services, poor access to care, and lack of knowledge by community members and HWs(Ruchi Puri., 2011)

In Sub-Saharan Africa more than 270,000 women die from maternal deaths, worldwide approximately 76,000 women and 500,000 babies die yearly due to preeclampsia(Heintz T &

Emily T., 2012). In Sub-Saharan Africa, maternal mortality is abnormally very high with >400 deaths/100,000 births compared to <10/100,000 in Europeans(Nakimuli *et al.*, 2015).

In Nigeria about 55,000 women die due to preeclampsia per year and this account for around 10.0% of the world total maternal mortality rate(Fadare *et al.*, 2016)In Nigeria the burden of maternal morbidity and mortality is still on the increase with the country contributing about 15% to global maternal deaths at ratio of 554 per 100,000 live births to 630 per 100,000 live births(Kelly R & Sola A., 2017). In Sudan it accounts for 4.2% among the obstetric complications of pregnancy and about 18.1% of maternal death(Saria M., 2014). The mortality is high because not all health facilities are equipped with skilled professionals and technology to assess and address preeclampsia(Okpomeshine C., 2017)

In Uganda Pre eclampsia remains a significant public health threat among the five obstetric emergencies, which includes postpartum hemorrhage, obstructed labor, unsafe abortion, puerperal sepsis. The risk factors for preeclampsia have not been well documented in Uganda(Kiondo P *et al.*, 2012). The incidence of preeclampsia/eclampsia in Uganda are very high, in a research done in Mulago national referral hospital it contributed 17.6% of maternal morbidity and 21.4% of maternal deaths among women referred to the emergency obstetric unit(Wandabwa *et al.*, 2010). No much research has been on knowledge and practices of HWs in relation to preeclampsia in AIH and Uganda at large.

1.2 PROBLEM STATEMENT

Preeclampsia is one of the leading causes of maternal and perinatal morbidity and mortality Worldwide(Teklit Grum., 2013). The risk of maternal death is much more common in developing countries than developed countries. Therefore it is necessary to recognize the signs and symptoms to predict the disease before it threatens the survival of both mother and fetus.

Preeclampsia complicates about 3% of all pregnancies, and all hypertensive disorders affect about 5 -10% of pregnant women who have elevated blood pressure during pregnancy(Sally A *et al.*, 2016). Recognized complication of hypertension in pregnancy includes severe pre-eclampsia, eclampsia, acute renal failure, HELLP syndrome and hepatic failure. Others could include cerebral oedema and hemorrhage, retinal hemorrhage and detachment, pulmonary oedema, disseminated intravascular coagulopathy (DIC). And it is the number one reason physicians decide to deliver a baby prematurely.

Delay in diagnosis and prompt initiation of treatment could result in disastrous consequences for both the mother and the baby. So, firstly, it is quite important to determine how vast the problem is in our hospital, identify risk/ predisposing factors so as to prevent the preventable causes. Similarly, early detection of the diseases process and formulation of an effective and efficient management protocols and strategies is also crucial(Okpomeshine C., 2017) The risk of maternal death is very high in lower health centers where there no enough trained doctors and other HWs. There is also inadequate supply of drugs used in management of pre-eclampsia.

1.3 JUSTIFICATION

Preeclampsia is a common obstetric emergency in Uganda. (WHO, 2010) In March 2010 it was among the first two major causes of maternal death in Mulago national referral hospital Uganda together with obstructed labor. In October 2010 about 3-4 patients of preeclampsia were seen per day constituting of around 8% of maternal admission in Mulago labor ward. In IAH no research has been done yet concerning knowledge and practices of HWs in relation to preeclampsia. The significance of this is to establishment of new public health policy that will lead to improved health care service delivery and hence reduction of both maternal and child morbidity and mortality

1.4 STUDY OBJECTIVES.

1.4.1 General objective

To assess the health worker's knowledge and practices in relation to preeclampsia at Ishaka Adventist hospital

1.4.2 Specific objective

1. To assess health workers knowledge concerning preeclampsia at Ishaka Adventist hospital.
2. To assess the practices of health workers concerning diagnosis and treatment of preeclampsia at Ishaka Adventist hospital.

1.5 RESEARCH QUESTIONS

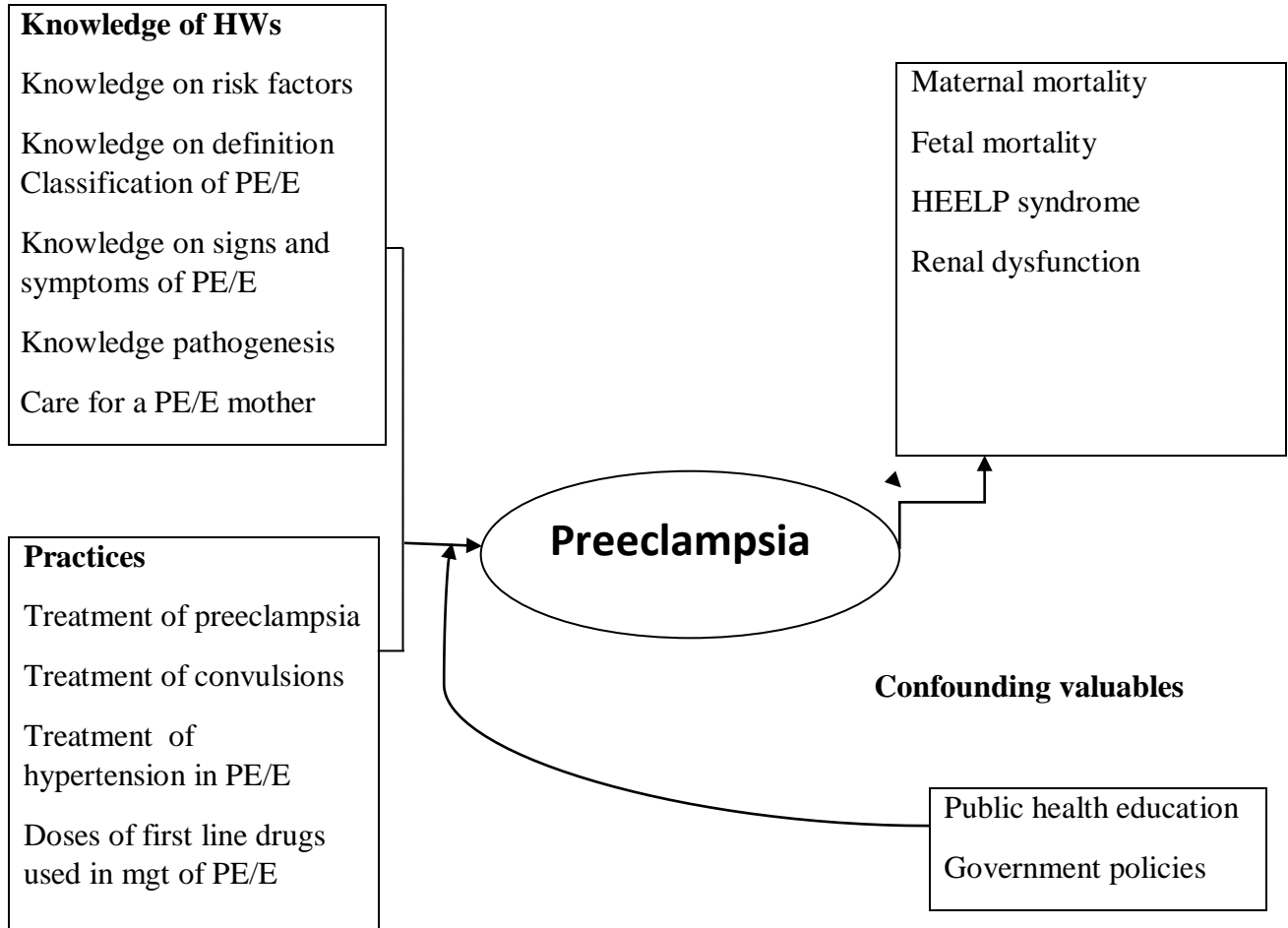
1. Is there adequate or inadequate knowledge concerning preeclampsia among health workers at Ishaka Adventist hospital?
2. Are the health workers doing correct practices concerning diagnosis and treatment of preeclampsia at Ishaka Adventist hospital?

1.6. Conceptual framework on health worker’s knowledge and practice concerning preeclampsia in Ishaka Adventist hospital.

Independent valuables

dependent valuables

complications



CHAPTER: TWO

LITERATURE REVIEW

2.1. Knowledge of HWs in relation to preeclampsia.

Pre-eclampsia is a pregnancy-specific syndrome characterized by the onset of hypertension and proteinuria after 20th week of gestation in women who previously were normotensive (Moghadam *et al.*, 2012). It affects approximately 3-8% of all pregnancies and if not treated it can progress to Eclampsia. Preeclampsia and eclampsia are the second leading cause of maternal mortality worldwide (Caglia J., 2017). The association between pre-eclampsia and maternal mortality has been noted in medical literature for over one hundred fifty years (Druzin *et al.*, 2013). In a research carried out to determine the frequency and quality of interventions that address the direct causes of maternal and newborn deaths, it was found out that the primary outcome measures were quality of antenatal care (ANC), quality of labor and delivery (L&D), infection control, client communication, management of complications of labor and delivery (PPH, severe PE/E, obstructed labor), essential newborn care, newborn resuscitation, harmful health practices, and health worker knowledge (USAID, Rawlins B *et al.*, 2014). Maternal death is particularly relevant to clinical task shifting to cadres of health workers with insufficient training to make autonomous clinical management decisions in treatment of pre-eclampsia (Editorial, 2013). Several studies have suggested that antenatal care can protect mothers from complications of pregnancy including pre-eclampsia (Thein *et al.*, 2012). When Pre-eclampsia is diagnosed in its early stages, bed rest is usually advised for the mother and her blood pressure should be monitored closely (El-bahy *et al.*, 2013). Some facilities routinely screen all patients who arrive for evaluation in triage with a chemstick dip while others send a sample for urinalysis to the laboratory for evaluation (Druzin *et al.*, 2013).

2.1.1. Classification of preeclampsia

The Uganda clinical Guideline classifies pre-eclampsia from mild to severe PE as follows:

(1) Mild preeclampsia; as a diastolic BP of (90-109) mmHg and/or a systolic BP of (140-159) mmHg, with $\geq 1+$ proteinuria; and no organ dysfunction.

(2) Severe preeclampsia; As acute severe hypertension (160/110 mmHg) and $\geq 1+$ proteinuria OR any degree of hypertension with evidence of organ dysfunction (e.g., renal dysfunction, raised liver enzymes)(UCG., 2016)

2.1.2. Signs and symptoms of preeclampsia

Women with severe pre-eclampsia may have very high blood pressure usually $\geq 160/110$ mmHg with clinical features/symptoms like headache, blurring of vision of new onset, Epigastric or right upper quadrant pain, vomiting, dyspnea, weakness of generalized malaise, oedema, oliguria, excessive weight gain, urinary protein++, but those with moderate/mild pre-eclampsia generally shows no symptoms(UCG., 2016)

2.1.3. Complications of preeclampsia

Severe preeclampsia is associated with complications like HELLP syndrome, placenta abruption, and eclampsia(Soon P *et al* .,2016). Death is due to cerebral hemorrhage, disseminated intravascular coagulopathy, and aspiration pneumonia, rupture of capsule of the liver and status epilepticus all of which are due to eclampsia. Eclampsia occurs in 90% of the time in a pregnant woman who have pre-eclampsia.

HELLP syndrome. (Hemolysis elevated liver enzymes, low platelets/thrombocytopenia).

This is a life threatening condition that is normally diagnosed basing on lab findings. A liver function test signifies increased liver enzymes like lactate dehydrogenase. A complete blood count also shows low platelets levels. Other tests can be kidney function tests (serum uric acid above 6mg/l is abnormal in pregnancy). Clotting studies like bleeding time, prothrombine time, thromboplastine time and fibrinogen time can be done in advanced hospitals.

According to a research done on incidences and predictors of severe obstetric morbidity it found out that disease specific morbidity per 1000 were 3.9 (3.3 to 4.5) for severe pre-eclampsia, 0.2 (0.1 to 0.4) for eclampsia, 0.5 (0.3 to 0.8) for HELLP syndrome(Bewley *et al.*, 2001)

2.1.4. Pathogenesis of preeclampsia.

Pathogenesis of preeclampsia is not clear although placental factors and maternal risk factors attribute to its progress. However abnormally implanted placenta is considered to be the main predisposing factor(Wandabwa *et al.*, 2010). This is believed to result into poor uterine and placenta perfusion which leads to a state of hypoxia and increased oxidative stress and release of anti-angiogenic proteins into the maternal plasma along with inflammatory mediators.

The destruction of endothelial cells. As result of the damage of the endothelial cells, it loses its functions and in addition also produces proagulants, vasoconstrictions and mitogens. The increased pressure sensitivity of the maternal vessels leads to profound vasospasm and reduced organ perfusion which are characteristic of this disorder.

2.2. Practices concerning diagnosis and Treatment of pre-eclampsia

The only known definitive treatment of preeclampsia is delivery of the fetus and the placenta (Abdalla B., 2014)This is the number one reason why physicians decide to deliver the baby prematurely. In a meta-analysis from Elsevier revealed that the only interventions shown to prevent preeclampsia are antiplatelet agents, primarily low dose aspirin, and calcium supplementation. Magnesium sulfate can prevent and control eclamptic seizures. For preeclampsia, it more than halves the risk for eclampsia (number needed to treat 100, 95% confidence interval 50-100) and probably reduces the risk for maternal death(Moodley J., 2008). Several drugs are used in management of pre-eclampsia, these include anticonvulsants and antihypertensive.

2.2.1. Anticonvulsants

1. Magnesium sulphate

This is a drug of choice. Women with severe pre-eclampsia should be given MgSO₄ to prevent development of eclampsia. The therapy should be continued 24 hours after delivery or after the last seizure if it occurred in postpartum period.

Dose: Given as 4-g of MgSO₄ (20 ml of 20% solution). Draw 8 mL of a 50% MgSO₄ and add 12 mL of water for injection or Normal saline. Give the solution as a slow IV bolus over 20minutes (the 20-20-20 rule)(UCG, 2016)

Then give 5 g MgSO₄ (10 mL of MgSO₄ 50%, undiluted) in each buttock deep IM (total 10 g) IM deep in upper outer quadrant of each buttock with 1 ml of 2% lignocaine in the same syringe.

High doses of MgSO₄ can cause toxicity therefore do not give the next dose if any of these signs appears: knee jerk absent, urine output <100 ml/4 hrs. Respiratory rate<16b/min. In case of toxicity Give the antidote: calcium gluconate IV 1 g (10 ml of 10% solution) over 10 minutes(WHO, 2006)

2. Diazepam.

It is used only when MgSO₄ is not available to stop convulsions(UCG, 2016) It should also be used if magnesium toxicity occurs or if seizures happen in early pregnancy(WHO, 2006).

Dose: 10 mg slow IV over 2 minutes loading dose, (repeat once if convulsions recur)

Then give diazepam 40 mg in 500 ml IV fluids (normal saline or Ringer's lactate) titrated over 6-8 hours to keep the woman sedated but reusable(WHO, 2006).

2.2.2. Antihypertensive drugs used in management of pre -eclampsia.

1. Methyldopa

It's a Pro-drug converted to α -methyl-norepinephrine, which activates presynaptic alpha 2 adrenoreceptors in the medulla to reduce vasomotor outflow (cardiac output and heart rate), mainly it lowers peripheral vascular resistance. Used in mild to moderate HTN. Decreases left ventricular (LV) hypertrophy. It also decreases renal vascular disease. (BNF, 2017)

Therapeutic dosage is 1-2 grams once daily, beyond 2 grams, no further BP lowering is seen.

2. Hydralazine

It is hydrazine derivative that dilates arterioles and thus decreases peripheral vascular resistance increases cerebral and renal blood flow. Hydralazine is used more effectively, particularly in

severe HTN (BP \geq 160/110) mmHg in combination therapy with other drugs(BNF, 2017)It is contraindicated in cardiac disease because of side effects of tachycardia increasing cardiac output and oxygen consumption.

Therapeutic dose is Initially 25 mg twice daily, increased if necessary up to 50 mg twice daily

3. Labetalol

The mode of action of beta-blockers in HTN is not well understood, but labetalol reduces cardiac output, alter baroreceptor reflex sensitivity, block peripheral adrenoceptors and an arteriolar vasodilatation action thus decreasing peripheral vascular resistance. Women with a blood pressure of \geq 160/110mmHg who require critical care during pregnancy or after birth should receive immediate treatment with either oral/IV labetalol or IV hydralazine or oral modified-release nifedipine to achieve a target BP \leq 150/100mmHg(BNF, 2017)

Therapeutic dose is 20 mg/hour, doubled every 30 minutes; usual maximum dose is 160 mg/day.

4. Nifedipine

It is a calcium channel blocker that relaxes vascular smooth muscle and dilates coronary and peripheral arteries, thus decreasing peripheral vascular resistance. It has less effect on myocardium contractility. It is also used as maintenance antihypertensive therapy after use of labetalol or other drugs to control BP(BNF, 2017)

Dose: Nifedipine 20-40 mg every 12 hours in combination with other antihypertensive drugs

CHAPTER THREE

METHODOLOGY

3.1 Study design

The study was a cross sectional descriptive that was conducted among health workers in Ishaka Adventist hospital on knowledge and practices in relation to preeclampsia at IAH.

3.2 Study area

The study was conducted at Ishaka Adventist hospital which is located in Ishaka municipality, bushenyi district. It is located immediately north of the junction of Ntungamo-Kasese Road along Mbarara-Ishaka Road Approximately 77km by road west of Mbarara town. Ishaka Adventist Hospital is a 110 bed community Hospital comprising of medical ward, pediatric ward, surgical ward and obstetric and gynecological ward, FP and immunization services. There is a Nursing school and Laboratory training school. It's owned by the Seventh-day Adventist Church in Uganda and was founded in 1950 the SDA church. Its geographical coordinates are 0.5438° South and 30.1385° east.

3.3 Study population

Health personnel (Clinicians, nurses, midwives and doctors) working at antenatal, labor ward, maternity theatre outpatient department and postnatal clinics in Ishaka Adventist Hospital.

3.4 Sampling techniques

The study employed random sampling techniques.

3.5 The sample size determination

The sample size was determined by using Krejcie and Morgan table formula which is shown in the appendix II. My sample size was 36 HWs

3.5.1 Inclusion criteria.

Doctors, Clinical officers, nurses, midwives working at antenatal clinic, post-natal, maternity ward, maternity theatre and other clinics or wards in IAH.

3.5.2 Exclusion criteria

Students, HWs working in other departments; like eye clinic, dental clinic, orthopedics among others.

3.6 Data collection and tools

Data was collected by using a structured questionnaire prepared in English and made of closed ended questions.

3.7 Data analysis

Data analysis was done using statistical package SPSS 16.

3.8 Data presentation

The results of this study were reported, analyzed and presented in table form, graphs and Pie-charts.

3.9 Data quality control, validity and reliability.

Data reliability control was assured done by using of SOPs (positive and negative controls) for any clinical finding that was conducted.

Data collection process was supervised daily and checked for completeness of data was done by the end of the day and therefore the incomplete work was compiled before leaving the station to ensure its completion.

3.10 Ethical considerations

Ethical approval was sought from Kampala International university school of Allied health sciences. The health workers were given right to decide/consent for the test by signing on the consent form. The HWs were given right to withdraw at any time of the interview without any penalty. They were also given freedom to ask questions. HWs were also assured of confidentiality (phone numbers and signatures were used instead of names).

CHAPTER FOUR
RESULTS

Table (1) percentage distribution knowledge of study sample about the definition of preeclampsia.

Definition of preeclampsia	Frequency	Percentage
Very good	17	47%
Good	10	27%
Poor	9	26%
Total	36	100.0%

Table(1) illustrates the knowledge of the study sample about the definition of preeclampsia it was found out that 17(47%) had very good knowledge 10(27%) had good knowledge and 9(26%) had poor knowledge.

Table (2) knowledge of study sample about classification of preeclampsia

Classification of preeclampsia	Frequency	Percentage
Very good	11	31%
Good	9	25%
Poor	16	44%
Total	36	100.0%

Table(2) illustrates the knowledge of study sample about classification of preeclampsia it showed that 11(31%) had very good knowledge 9(25%) showed good knowledge and 16(44%) showed poor knowledge

Table (3) knowledge of study sample about causes of preeclampsia.

Causes of preeclampsia	Frequency	Percentage
Very good	28	78%
Good	3	8%
Poor	5	14%
Total	36	100.0%

Table(3) illustrates the knowledge of study sample about causes of preeclampsia it was found that 28(78%) had very good knowledge 3(8%) had good knowledge 5(14%) had poor knowledge.

Table(4) knowledge of study sample about risk factors for preeclampsia

Risk factors	Frequency	Percentage
Very good	29	80%
Good	5	14%
Poor	2	6%

Total	36	100.0%
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Table(4) illustrates the knowledge of study sample about risk factors for preeclampsia it was found that 29 (80%) had very good 5(14%) had good and 2(6%) had poor knowledge.

Table(5) knowledge of study sample about serious (subjective) signs of severe preeclampsia.

Serious signs of preeclampsia	Frequency	Percentage
Very good	20	56%
Good	2	3%
Poor	14	39%
Total	36	100.0%

Table(5) illustrates the knowledge of study sample about serious (subjective) signs of severe preeclampsia it was found that 20(56%) had very good knowledge 2(5%) had good knowledge 14(39%) had poor knowledge

Table(6) knowledge of study sample about mild to severe signs indicate progress of preeclampsia

Progress from mild to severe preeclampsia	Frequency	Percentage
Very good	13	36%
Good	6	17%
Poor	17	47%
Total	36	100.0%

Table(6) illustrates knowledge of study sample about mild to severe signs indicate progress of preeclampsia 13(36%) showed very good knowledge 6(17%) showed good knowledge and 17(47%) showed poor knowledge

Table(7) knowledge of study sample about bed rest for preeclamptic mother

Bed rest for preeclamptic mother	Frequency	Percentage
Very good	26	72%
Good	2	6%
Poor	8	22%
Total	36	100.0%

Table(7) illustrates knowledge of study sample about bed rest for preeclamptic mother it showed that 26(72%) had very good knowledge 2(6%) showed good knowledge and 8(22%) had poor knowledge on preeclampsia

Table(8) knowledge of study sample about signs of HELLP syndrome.

Signs of HELLP syndrome	Frequency	Percentage
Very good	14	39%

Good	5	14%
Poor	17	49%
Total	36	100.0%

Table(8) illustrates the knowledge of the study sample about signs of HELLP syndrome it was found that 14(39%) showed very good knowledge 5(14%) showed good knowledge and 17(49%) showed poor knowledge

Table(9) knowledge of study sample about the effects of preeclampsia on the mother

Effects of preeclampsia on the mother	Frequency	Percentage
Very good	21	61%
Good	7	19%
Poor	8	22%
Total	36	100.0%

Table(9) illustrates knowledge of the study sample about the effects of preeclampsia on the mother it showed that 21(61%) had very good knowledge 7(19%) showed good knowledge and 8(22%) showed poor knowledge

Table(10) knowledge of study sample about the effects of preeclampsia on the fetus

Effects of preeclampsia on the mother	Frequency	Percentage
Very good	25	69%
Good	5	15%
Poor	6	17%
Total	36	100.0%

Table(10) illustrates knowledge of the study sample about the effects of preeclampsia on the fetus it showed that 25(69%) had very good knowledge 5(15%) showed good knowledge and 6(17%) showed poor knowledge

Table(11) practices of study sample about drug of choice in managing convulsions in severe preeclampsia/eclampsia

Drug of choice in convulsing mother	Frequency	Percentage
Very good	30	83%
Good	2	6%
Poor	4	11%
Total	36	100.0%

Table(11) illustrates practices of study sample about drug of choice in managing convulsions in severe preeclampsia/eclampsia 30 (83%) showed very good practices 2 (6%) showed good practices 4(11%) showed poor practices

Table(12) practices of the study sample about dose of magnesium sulphate

Dose of MgSO4	Frequency	Percentage
Very good	16	48%
Good	0	0%
Poor	18	52%
Total	36	100.0%

Table(12) practices of the study sample about dose of magnesium sulphate about dose of magnesium sulphate it was found that 16(48%) showed very good practices 18(52%) showed poor practices

Table(13) practices of the study sample on determining the sign of magnesium sulphate toxicity

Signs of magnesium toxicity	Frequency	Percentage
Very good	21	58%
Good	2	6%
Poor	17	46%
Total	36	100.0%

Table(13) illustrates practices of study sample on determining the sign of magnesium sulfate toxicity it was found 21(58%) showed very good practices 2(6%) had good practices 17(46%) had poor practices.

Table(14) practices of the study sample about giving antidote for MgSO4 toxicity

Antidote for MgSO4 toxicity	Frequency	Percentage
Very good	31	86%
Good	2	6%
Poor	3	8%
Total	36	100.0%

Table(14) illustrates practices of study sample about giving antidote for MgSO4 toxicity it was found that 31(86%) showed very good practices 2(6%) showed good practices 3(8%) had poor practices

Table(15) practices of the study sample about hypertensive drugs used in severe preeclampsia

Antihypertensive drugs used in sever preeclampsia	Frequency	Percentage
Very good	33	92%
Good	0	0.0%
Poor	3	8%
Total	36	100.0%

Table(15) illustrates practices of study sample about hypertensive drugs used in severe preeclampsia it was found out that 33(92%) showed very good practices 3(8%) showed poor practices

Table(16) practices of the study sample about indications for delivery of preeclamptic mother

Indications for delivery of preeclamptic mother	Frequency	Percentage
Very good	20	55%
Good	2	5%
Poor	14	40%
Total	36	100.0%

Table(16) illustrates practices of study sample about indications for delivery of preeclamptic mother it was found out that 20(55%) showed very good practices 2(5%) showed good practices 14(40%) had poor knowledge.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMANDATIONS

5.0 DISCUSSION OF THE RESULTS

5.1 KNOWLEDGE OF HEALTH WORKERS IN RELATION TO PREECLAMPSIA

The study was a descriptive cross-sectional hospital based conducted to assess the knowledge and practices of health workers in relation to preeclampsia at Ishaka Adventist hospital in western Uganda.

This study showed that 9(26%) did not know the definition of pre eclampsia. These study results are in agreement with study done in Eastern Cape which is showed that (27.7%) of the participants had incorrect answer (Nompume , 2010).

The study showed that 29(80%) had very good knowledge 5(14%) had good knowledge and 2(6%) had poor knowledge on risk factors of preeclampsia as shown in table(4).These study results are in agreement with study done in Khartoum that found out that 45(90%) had very good knowledge and 3(6%) had good knowledge on risk factors of preeclampsia(Saria Mahgoub ., 2014). These findings also corresponds with the study conducted in Tanzania which also shown that (87%) knew the risk factors of preeclampsia(Maembe E., 2012).

The study also showed that 25(69%) had very good knowledge 5(15%) had good knowledge and 6(17%) had poor knowledge on effects of preeclampsia to the fetus as shown in table (10). These study results are in agreement with a study done by Maembe that showed that 34(68%) had very good knowledge 3(6%) good knowledge and 13(26%) had poor knowledge on effects of preeclampsia on the fetus this this is in agreement with my results

HELLP Syndrome is one of the complications of severe preeclampsia that occurs 10-20% increased maternal and fetal morbidity and mortality .The study found that more than half 18(49%) of study sample did not know the signs of HELLP syndrome that means there is a big deficit knowledge regarding in variable table(8).

Study revealed that (72%) of the study sample had very good knowledge on why we encourage rest to preeclamptic patient as shown in table (6) The result in this study corresponds with a

study done in Eastern cape which is showed that (84.1%), of the participants had correct answer (Nompume , 2010).

Although classifying preeclampsia is essential in its management 16(44%) of the study sample had poor knowledge regarding classification of preeclampsia as showed in table (2) in addition 14(39%) also didn't know the signs of severe preeclampsia as showed in table (5).This shows a deficit in knowledge in the two variables though 20(56%) had very good knowledge on serious subjective signs of severe preeclampsia.

5.2 PRACTICES OF HEALTH WORKERS IN RELATION TO DIAGNOSIS AND TREATMENT OF PREECLAMPSIA

The study found that 30(83%) showed very good practices on the best drug used in managing convulsions in severe preeclampsia/ eclampsia as shown in table (11)).These study results are in agreement with study conducted in Cairo that found out that 27(90%) knew indications for use of MgSO₄ (El-bahy *et al.*, 2013). The study also showed that 31(86%) showed very good practices on antidote drug used in case of magnesium toxicity as showed in table (14)

The study also found that 33(92%) showed good practices on best antihypertensive drugs used in managing severe preeclampsia as showed in table(15). These study results are in agreement with study conducted in Zanzibar that showed that 98% was able to choose correctly antihypertensive when the diastolic pressure remains above 110mmHg (rahma. J., 2013)

However in my study 18(52%) showed poor practices on the dose of magnesium sulphate 17 (46%) had poor practices in detecting signs of magnesium toxicity as shown in tables (12) and (13) respectively .This shows some deficit of knowledge on the two variables and should be investigated about.

5.3 CONCLUSION:

1. Most of the study sample knew about the following ;the risk factors for preeclampsia, Subjective signs of preeclampsia, drugs of choice used in managing hypertension in severe preeclampsia, drug of choice used in managing convulsions in severe preeclampsia/ eclampsia, effects of preeclampsia on fetus

2. Also many of the study samples did not know the following; dose of magnesium sulphate, Signs of magnesium toxicity, HELLP syndrome signs, indications for delivery of preeclamptic mother, signs that indicate progress from mild to severe preeclampsia and classification of preeclampsia.

5.4 RECOMMENDATIONS:

Basing on of the study results and conclusion, the researcher would like to recommend the following:

Frequent refreshing courses and conduct seminars related to preeclampsia.

Encourage HWs to always update themselves on preeclampsia

HWs to Conduct further studies related and seminars to this research.

Advise the government to make new policies concerning management and prevention of preeclampsia

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APPENDIXES

APPENDIX I: KREJCIE AND MORGAN TABLE

Populasi (N)	Sampel (n)	Populasi (N)	Sampel (n)	Populasi (N)	Sampel (n)
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

APPENDIX II: WORK PLAN

	MONTHS
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	June	September	October	October	Nov	Dec
Proposal writing						
Approval of research proposal						
Data collection						
Data analysis						
Dissertation write up						
Report submission						
Research defense						

APPEDIX III: budget used in this research

S/N	ITEM	QUALITY	UNIT PRICE/UGX	AMOUNT/UGX
1	Transport	1 person	20,000/=	20,000/=
2	Research assistants	2 people	25,000/=	50,000/=
3	Photocopying data collection form	10copies	100/=	1,000/=
4	Printing and photocopying the proposal	2 Copies	31 pages x100	31,000/=
5	Printing of the report	2 copies with hard cover	30,000/=	60,000/=
6	Stationery	5 Pens, 1 note book and a ream	25,000/=	25,000/=
7	Airtime	4 GB bundle	10,000/=	40,000/=
8	Miscellaneous	-----	50,0000/=	548,000/=
	GRAND TOTAL			300,000/=

Consent to participate in this study

A greeting, my name is **Sibomana Obarido**, a student of Kampala International university school of allied health science pursuing a diploma in clinical medicine and community health.

The Topic of my research is **knowledge and practices of health workers in relation to preeclampsia at Ishaka Adventist Hospital in western Uganda**. You are invited to participate in this study because your presence will assist us to identify and solve a particular problem.

Participation involvement: If you agree to participate in this study the following will take place The interview will be confidential and conducted for few minutes. This study is voluntary; if you are not interested you may withdraw at any time without any penalty. You are requested to get the questionnaire below on which you will put (T) besides a correct answer and (F) on a wrong answer. Some of the questions have more than 1 correct answer or more than 1 wrong answer. Thank you for your participation.

Benefits: There will be no direct benefit to you in this study but the information collected will help to control and prevent ion of preeclampsia.

Confidentiality: The information collected from you will be confidential but the findings from this study may be used by medical staff for management of preeclampsia.

Risks: There are no risks associated with this study. Only interview on questions about preeclampsia

Certification of consent: I have been invited to take part in the study titled knowledge and practices of health workers in relation to preeclampsia at Ishaka Adventist Hospital in Western Uganda. I have read and understand the information in this study. Therefore I agree to participate in this study.

Signature.....
Telephone number.....

Questions	T/F	Researchers use only
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(a)KNOWLEDGE OF HWs ABOUT PE-ECLAMPSIA		
1. Definition of preeclampsia.		
a. hypertension develops after 20 weeks gestation characterize high BP and proteinuria		
b. BP extend of 140/90mmHg or more with proteinuria induced by pregnancy after 20week		
c. Is disorder of pregnancy characterized by high BP and large amounts protein in the urine		
2. WHO and UCG classifies pre-eclampsia as;		
a.mild and severe preeclampsia		
b. mild, moderate, and severe		
hypertension, preeclampsia and eclampsia		
3. Cause of preeclampsia		
a .bacteria		
b. unknown/idiopathic		
c. virus		
4. Risk factors for developing pre eclampsia:-		
a.Nulliparity and multiple pregnancy		
b. family history, own Chronic hypertension and diabetes		
c. Age extremes above 35 years and below 20 years		
5. Serious (subjective) sign of severe Preeclampsia is:		
a. Nausea and vomiting.		
b. double vision and Epigastric pain		
c. pitting edema and headache		
6. When the patient progresses from mild Preeclampsia to severe.		
a.BP160/110mmHg		
b. Pulmonary edema or cyanosis		
c. impaired liver function		

7. Why encourage bed rest of pre-eclamptic mother		
a. To improve utero-placental blood flow		
b. To encourage growth of the fetus		
c .To reduce BP		
8. HELLP syndrome signs :-		
A .nausea and vomiting		
b. Right upper quadrant tenderness		
c. blurring of vision and oedema and oliguria		
9.Effect of pre eclampsia on fetus :-		
a. IUGR (intra uterine growth restriction)		
b. Perinatal death		
c. Preterm delivery		
10.Effect of pre eclampsia on maternal :-		
a. Insufficiency utroplacentation		
b. Renal failure and HEELP syndrome		
c. Abruption placenta		
(b)PRACTICES IN RELATION TO MGT & TREATMENT		
11.The drug of choice in treating convulsions In severe preeclampsia/eclampsia is;		
a.phenyton		
b.diazepam		
c.Magnesium sulphate		
12.what is the dose of magnesium sulphate		
a.8mgs slow iv followed by 10 mgs deep IM		
b.10mg slow IV bolus slowly over 10 minutes , followed by 4mgs deep IM		
c.14mg start, given as 4mg (20%)slow IV and 10mgs IM half on each buttock		

13. A Health worker determines the sign of magnesium sulfate toxicity when?		
a. respiration less than 16b\m		
b .deep tendon reflex are absent		
c .urinary output less than 30 ml\ h) or <100ml/4hrs.		
14. The antidote for magnesium toxicity and its dose ;		
a.IV atropine 25 mgs start		
b. calcium gluconate 1 g IV (10 ml of 10% solution) over 10 minutes.		
c. iv diazepam 10mgs		
15. the drug(s) of choice in severe PE/E, when BP is \geq 160/110 mmHg		
a.sublingual nifedipine and IV methyldopa and Lasix		
b. IV hydralazine, IV labetalol		
c.calcium channel blockers and aldosterone receptor antagonists		
16. Indication for delivery of preeclamptic mother:-		
a. signs of fetal distress		
b. un controlled BP		
c. abruption placenta		
Was there any questions that were unclear? If yes, please, write the number(s) of the question. And thank you for your participation.....		

APPENDIX IV: Geographical location of IAH



IAH

