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**KNOWLEDGE, ATTITUDE AND BEHAVIORS OF PREGNANT WOMEN
TOWARDS PREGNANCY INDUCED HYPERTENSION IN MDANTSANE
TOWNSHIP BUFFALO CITY HEALTH DISTRICT**

BY

BULELWA BEATRICE PETER

A thesis submitted in fulfilment of the requirements for the degree of

MASTER OF PUBLIC HEALTH



DEPARTMENT OF NURSING SCIENCE
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FACULTY OF HEALTH SCIENCES
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Supervisor: Prof DT Goon

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DECLARATION

I the undersigned, declare that this thesis entitled “**KNOWLEDGE, ATTITUDES AND BEHAVIOURS OF PREGNANT WOMEN TOWARDS PREGNANCY INDUCED HYPERTENSION IN MDANTSANE TOWNSHIP, BUFFALO CITY HEALTH DISTRICT**” is my own work, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete reference. I further declare that this work has not been submitted before for any other degree at any other institution.

Name: Bulelwa Beatrice Peter



Signature:

Date: 16/07/2020



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DECLARATION ON PLAGIARISM

I, Bulelwa B Peter, student number: 201716460 hereby declare that I am fully aware of the University of Fort Hare's policy on plagiarism and I have taken every precaution to comply with the regulations.

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CERTIFICATION

This mini-dissertation entitled “**KNOWLEDGE, ATTITUDES AND BEHAVIOURS OF PREGNANT WOMEN TOWARDS PREGNANCY INDUCED HYPERTENSION IN MDANTSANE TOWNSHIP, BUFFALO CITY HEALTH DISTRICT**” meets the regulations governing the award to the degree of Masters in Public Health of the University of Fort Hare and is approved for its contribution to scientific knowledge and literary presentation.



.....
Prof. DT Goon

Supervisor

Date: 16/07/2020



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DEDICATION

I dedicate this thesis to my family for the support, love and encouragement that helped me to finish this MPH programme. I also devote this thesis to my supervisor, Professor DT Goon, for the support he gave me.



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LIST OF ACRONYMS

ANC:	Antenatal Care
BANC:	Basic Antenatal Care
BCM:	Buffalo City Metropolitan
BP:	Blood Pressure
CCEMD:	Committee in Confidential Enquiries into Maternal Deaths
DoH:	Department of Health
ECDoH	Eastern Cape Department of Health
ECP:	Eastern Cape Province
HDP:	Hypertension Disorder of Pregnancy
HTN:	Hypertension
IUGR:	Intrauterine Growth Restriction
KAB:	Knowledge Attitude and Behaviour
MDG:	Millennium Development Goals
NDoH:	National Department of Health
PIH:	Pregnancy Induced Hypertension
UK:	United Kingdom
UNICEF:	United Nations Children's Fund
SA:	South Africa
SANCA:	South African Nursing Council
SDG:	Sustainable Development Goals
SPSS:	Statistical Package for Social Sciences
WHO:	World Health Organization

ABSTRACT

Background and aim: The prevalence of pregnancy-induced hypertension (PIH) deaths is high in the Eastern Cape. Anecdotal evidence indicates that most women fall pregnant because of attitudes towards contraceptives and are seemingly unaware of pregnancy-related complications. Hence, the objective of this study was to examine the knowledge, attitudes and behaviour of pregnant women concerning pregnancy-induced hypertension in the Buffalo City Metropolitan Municipality.

Methods: This was a cross-sectional survey involving 200 pregnant women attending antenatal healthcare clinics in Mdantsane, Buffalo City Metropolitan Municipality. A self-administered questionnaire was used for data collection. Collected data were managed and analysed using statistical package for social sciences (SPSS) version 24. Data analysis involved both descriptive (count, frequency, mean and standard deviation) and inferential statistics (Chi-square and logistics regression). For the inferential statistics, the level of significance was set at 0.05.

Results: It was observed that the married women were more likely to be aware of PIH compared to single women (OR=2.4 95%CI (1.17; 4.90)). Of the 45 married women, 73.3% were aware of PIH compared to single women. Out of the women who participated in the study, 43.8% showed attitudes indicating they were not aware of this condition and associated complications from high-pressure during pregnancy. Compared to those in their first pregnancy, those who had previous pregnancy were more likely to be aware of PIH (OR=17.1 95 % CI (9.09; 32.15)). Of the 140 previously pregnant women, 83.6 % were aware of PIH compared to those during their first pregnancy.

Conclusion: The results of the study indicate that sociodemographic factors play a role in pregnant women 's understanding of PIH. Improving knowledge of PIH among pregnant women requires context-specific strategies. During an antenatal visit, health care providers should implement focussed health education programmes.

Keywords: hypertension, pregnancy, pregnancy-induced hypertension, maternal mortality, gestation age, knowledge, attitude and behaviour.

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CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND

Worldwide, evidence demonstrates that pregnancy-induced hypertension (PIH) is a dangerous medical condition and a direct cause of maternal morbidity and mortality (Fadare, 2016). A study by Arshad (2011) found that PIH affects almost 5-8% of pregnant women, while Mannisto et al. (2013) identified PIH as the most common direct cause of escalating maternal deaths. Though PIH is the leading contributor to maternal and perinatal mortality, prolonged hypertension, renal failure, or neurological disorder may contribute to most health complications in pregnancy (Srivakumar, 2015). According to the Department of Health (2007), PIH-related illnesses in South Africa are serious medical impediments to a healthy pregnancy, with frequencies of PIH varying between 70-80%. Most PIH develops as a failure of trophoblast to attack and destroy the coiled veins on the 20-24 weeks of pregnancy (Seller, 2010; Olusanya & Solanke, 2012). Consequently, this increases maternal mortality, further reflecting the lack of knowledge, a poor attitude and uptake of precautionary measures on the part of pregnant women, particularly those who have believed in traditional medicines. Also, Fraser et al. (2006) report that oedema due to PIH variations in blood pressure is sometimes in non-dependent anatomical areas of the body, including the faces and other parts of the body.

World Health Organisation (2012) reported maternal mortality and morbidity as the worse health issue challenging the world. Globally, about 1000 pregnant women die of hypertension and its related causes every day. Pregnancy-induced hypertension is prevalent in primigravidae, young pregnant women, older pregnant women, multigravidae and overweight pregnant women. Awareness of the socio-demographic factors for PIH will help in early diagnosis of PIH illness related to morbidity and mortality. The Eastern Cape Province in South Africa is one of the rural and disadvantaged provinces with high unemployment rates and low monthly income levels. The report compiled by Social Development in 2016 shows that households receiving social assistance from the total population in South Africa increased by 29.9% in 2003 and 44.3% in 2010.

Furthermore, the 2016 Household Survey report by Statistics South Africa shows an increase to 45.5 per cent in 2015. As a result of these social welfare grants, most young women in South Africa tend to become pregnant and drop out of school without adequate knowledge of PIH. Due to poor experience and understanding by pregnant women in the Eastern Cape province, PIH was considered part of the hypertensive complications of pregnancy and the leading cause of direct maternal mortality in South Africa. According to the Department of Health (2007) and Khan (2014), when compared with the total estimated population, the most maternal deaths due to hypertension disorders occur in girls younger than 20 years of age. Lack of knowledge of PIH signs and symptoms may lead to limited health-seeking behaviour. There is speculation that this knowledge gap by pregnant women on PIH may be due to the influence of traditional healers, but there is little evidence of this. Identifying knowledge gaps for PIH and its causes of maternal, perinatal and mortality is crucial, as most women are unaware. Besides, the pregnant women that are aware of PIH have different views of functional and irrational reason, while others compare their PIH related signs with delusion (Poon et al., 2010).

1.2 RESEARCH PROBLEM

Despite PIH and its complications being reported as the second major cause of direct maternal mortality in the world, there is slow progress in reducing maternal mortality rate associated with PIH (Männistö et al., 2013; Department of Health, 2007). In the 2015 report compiled by the National Department of Health, complications from hypertension in pregnancy had a direct impact in maternal deaths in Eastern Cape Province. Some mothers, for example, ended up delivering their babies before time, others died at birth while the babies had growth complications due to lack of information about PIH. Statistics from the Department of Health (2015) in the Saving Mothers report, highlights rising maternal death in the Eastern Cape linked to hypertension complications among pregnant women. Between 2005-2007, the Department of Health published a report that revealed 628 cases of maternal mortality due to PIH. In the 2014 Saving Mothers report, 194 maternal deaths due to PIH was recorded in the Eastern Cape. In comparison to the developed counties like the United Kingdom, maternal deaths are rare. Still, hypertension-related deaths are the second

most common cause of maternal death after thromboembolism (Centre for Maternal and Child Enquiries, 2011).

Overall, PIH is a combination of high blood pressure with other complications like excess cholesterol in the urine, upper and lower limb oedema, facial puffiness and damage to the body's internal organs. Though there are many published PIH studies in other settings, there is no evidence for Mdantsane, Eastern Cape. The awareness, attitudes and behaviour of pregnant women regarding PIH must be understood to inform the revision of the current public health policy towards the improvement of maternal health outcomes. Information is key to decision-making in shaping the reality of a person. Attitude as a cognitive component comprises of an individual's thoughts and beliefs while as a behavioural component, it influences action. Attitudes develop by experience that can directly or indirectly influence an individual together with the individual's environment (Myo; Thawom; Janthila; Nongluk; Suchart & Wilawan et al., 2012).

1.3 AIM OF THE STUDY

The aim of the study was:

- To examine the knowledge, attitudes and behaviours of pregnant women regarding pregnancy-induced hypertension and its risk factors in Mdantsane Township at Buffalo City Metropolitan.

1.4 RESEARCH OBJECTIVES

- To examine the knowledge, attitudes and behaviour of pregnant women concerning pregnancy-induced hypertension in Mdantsane Township.
- To investigate the socio-demographic factors associated with pregnancy-induced hypertension among pregnant women in Mdantsane Township

1.5 RESEARCH QUESTIONS

- What is the knowledge, attitudes and behaviour of pregnant women concerning pregnancy-induced hypertension in Mdantsane Township?



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- What are the socio-demographic factors associated with pregnancy-induced hypertension among pregnant women in Mdantsane Township?

1.6 SIGNIFICANCE OF THE STUDY

Given the lack of reliable data on pregnancy-induced hypertension and its complications in Mdantsane, Eastern Cape, this study may provide accurate predictions of the incidence and prevalence of pregnancy-induced complications. Findings may inform preventive interventions and health policies aimed at reducing morbidity and mortality.

1.7 DELIMITATION OF THE STUDY

The study was delimited to only pregnant women from eight clinics in Mdantsane as per scheduled appointment in Buffalo City Metropolitan Municipality.

1.8 DEFINITIONS OF TERMS

Attitude

Is “a settled way of thinking or feeling about something”. It can also be defined as “an organized predisposition to respond in a favourable or unfavourable manner toward a specified class of objects”.



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Chronic hypertension

The presence or history of hypertension preconception or in the first half of pregnancy. Considered “essential” if there is no underlying cause or “secondary” if associated with definitive aetiology.

Hypertension

It is an abnormal blood pressure due to psychological stress. A blood pressure that is above 140/90mmgh and is considered high and, severe if the pressure is above 180/120mmgh.

Critical Hypertension

High blood pressure that has no known secondary cause. It is also referred to as primary hypertension.

Knowledge

Is “the facts, feelings or experiences known by a person or group of people; awareness, consciousness, or familiarity gained by experience or learning; specific information about a subject”.

Maternal mortality

Is defined by the World Health Organization as “the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from a cause related to or aggravated by the pregnancy or its management but not from accidental or incidental cause”.

Overweight

It is the weight that is above the normal weight of 25kilograms. An individual with a body physique guide (BMI) >25 kilograms per meter but less than 29.9 kilograms per meter is said to be overweight.

Obesity

It is an excessive accumulation of body fat. An individual with a body mass index > 30kg kg/m is considered obese.



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Pregnancy Induced Hypertension

New hypertension in a pregnant woman with no protein in the urine after 20 weeks of pregnancy.

Prevalence

The proportion of a population found to have a condition, either disease or risk factors.

1.9 CHAPTER OVERVIEW

This study is structured into five chapters, and a brief overview of each chapter is presented as follows:

Chapter one is the introduction to the research problems and the rationale for the study. This chapter provides the research questions, objectives and explanation of the concepts used in the study.

Chapter two presents the review of literature on knowledge, attitude and behaviour of pregnant women towards pregnancy-induced hypertension.

Chapter three provides a clear explanation of the methodological approach taken to achieve the study objectives. It describes the research design, steps taken to collect data and to analyse the data with ethical consideration.

Chapter four presents the analysis of the data and narrates the findings. This chapter shows how the data answers the research questions and attains the research objectives.

Chapter five is the final chapter of the study that explains findings from the study results. A review of the study's key findings, conclusion and recommendations is in this chapter.

CHAPTER 2: LITERATURE REVIEW

2.0 INTRODUCTION

This chapter provides the rigour of the literature review and discussion based on synthesized studies.

2.1 SEARCH METHODS

This study reviewed the literature on the prevalence of pregnancy-induced hypertension; the knowledge, attitudes, including the behaviour of pregnant women regarding pregnancy-induced hypertension; and socio-demographic issues related to pregnant women in the context of South Africa and globally. The electronic search databases used were Google Scholar, Science Direct, Scopus, EMBASE, ERIC, Medline, and Web Science, EBSCO host, PubMed, BIOMED Central, and African Journal Online. The basic search phrases were: "pregnancy-induced hypertension" OR "knowledge" OR "attitudes" OR "comportment" OR "pregnant women" OR "socio-demographic factors." Only peer-reviewed and relevant documents published in English were retrieved for review.



2.2 FINDINGS FROM THE LITERATURE REVIEW

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2.2.1 Prevalence of pregnancy induced hypertension

According to the Department of Health (2007), mainly hypertension disorders are the medical barriers to a healthy pregnancy in South Africa, with rates ranging from 70% to 80%. There are several PIH studies conducted worldwide, but not many among the Black African community. It was predictable that more than half a million females would die each year from pregnancies related complications. Ninety-nine per cent of such deaths occur in the developing world (Verwoerd et al., 2002). In support of this fact, Michalow et al. (2015) further states that hypertension disorders (19%) are the most common cause of antepartum mortality, while intrapartum asphyxia (29%) and antepartum haemorrhage (27%) are the main causes of intrapartum mortality. Also, in present-day healthcare practice, pregnancy-induced hypertension remains a significant obstetric issue. The disease poses a tremendous medical challenge

because it not only affects maternal health but also puts the growth of the foetus at risk (Ahenkorah et al., 2008). Some literature-based evidence suggests that PIH aetiology remains unknown to date, even though some risk factors have been identified (Zhang et al., 1997). Women who are vulnerable to PIH include those who have had pre-pregnancy hypertension and those who have had hypertension in previous pregnancies, including women under 20 years of age and over 40 years of age (Rahimi, 2013).

In Africa, the number of maternal deaths from hypertension disorders was estimated at 9.1% (Palacios, 2014). Evidence from Zimbabwe indicates that the history of PIH is a good predictor of recurrence in subsequent pregnancy and perinatal adverse outcome risks (Muti et al., 2015). Follow-up studies are required in Africa's black population. As such, it is essential to research the pattern of risk factors for PIH among South African women as publications on this subject are very scarce in South Africa. Low awareness of PIH among pregnant women in South Africa appears to be a major cause of maternal and childhood morbidity, and its complications have been described as the greatest common causes of maternal death (Männistö 2013). This study, therefore, seeks to identify the relationship among pregnant women in Buffalo City Municipality between knowledge, attitude and behaviours towards PIH. This is aimed at making inputs to the literature available and also as a step towards possible intervention findings to reduce the prevalence of this clinical condition associated with high maternal and perinatal morbidity and mortality worldwide.

2.2.2 Knowledge, attitudes and behaviour of pregnant women concerning pregnancy-induced hypertension

Improved perception of PIH and its implications is crucial to healthcare-seeking behaviour. A study by James et al. (2009) demonstrates that multigravida women who had previous knowledge about the existence of pregnancy tolerated hypertension better than the primigravidae. Another evidence indicates that high maternal mortality rates are associated with inadequate information, pessimistic attitude, and lack of preventive practice by pregnant women with strong conventional beliefs (Olusanya & Solanke, 2012). Therefore, the study continues to examine the understanding of

knowledge, attitudes and women's behaviour towards PIH at Mdantsane. It has been noted that women have an attitude toward PIH as they believed that Juju, which is superstition, caused swollen lower limbs (James et al., 2009). Katz and Nare (2002) support this report because they found that some women prefer to adopt agreed cultural practices such as faith healers carrying out their deliveries. Similar research conducted in Nigeria reveals that lack of education complicates understanding and recognition of hypertension determinants (Nigeria Demographic & Health Survey, 2008).

Adequate awareness of PIH during antenatal visits, therefore, requires the health professional to emphasize the consequences of PIH to improve the knowledge and positive attitude of pregnant women. The location-related access to medical facilities could, according to Igbokwe (2008), influence the attitude of pregnant women towards ANC visits. He also informs that pregnant women in urban areas would be more optimistic about taking antenatal care than rural counterparts (Igbokwe, 2008). Also, maternal mortality in developing countries has increased by 14% because in its early stages, a woman may be unaware of the presence of PIH. Findings from studies conducted in Africa, Asia, Latin America and the Caribbean over the past 20-odd years, defines this "ongoing holocaust" as killing 10-15 per cent of mothers. More women die due to PIH in Africa, which account for an excellent deal for teenage mortality (Mannisto et al., 2013). Health education and awareness programs for pregnant women will help reduce mortality and morbidity related to PIHs and improve initiatives to achieve SDGs 3.1 and 3.2. This can result in early diagnoses for females with PIH who are normotensive at their first two weeks of pregnancy.

Different adverse health outcomes arise due to lack of awareness leading to inadequate utilization of health care facilities, poor health status, poor diagnosis and drug enforcement (Panday et al., 2009). The Millennium Development Goal (MDG) report showed that the baseline maternal mortality rate for 2001 was 369 and increased to 627 in 2007 (Ziyani, 2006). These rates are rising worldwide every year, especially in South Africa, which is why the SDG target is set to reduce maternal deaths by less than 70 per 100 000 live births by 2030. The challenge is that young

women, especially in rural areas, are at higher risk of PIH due to late booking at antenatal clinics or unbooked pregnancy-related clinic visits due to distance travelled to health facilities (Candice, 2004). Another factor is that, based on research conducted in South Africa, young pregnant women are often abused and humiliated by nursing staff and so often reluctant to visit health facilities early during pregnancy, leading to problems (Jewkes et al., 2009). The resultant effect of this frustration at antenatal clinics and hospitals caused by some ill-mannered healthcare workers is the preference by the pregnant women to be cared for by their relative (Kyomuhendo, 2003).

2.2.3 The socio-demographic factors associated with pregnancy-induced hypertension among pregnant women

Hypertension-induced pregnancy aetiology (PIH) may have relationships with pregnant women's history, health, and economic status. Sachdeva et al. (2011) agrees with previous studies that, although the difference was not important, the incidence of PIH was classified as higher in rural women. The Eastern Cape Province, however, has been identified as a resource-limited province with high unemployment, poverty and low socioeconomic status. In other areas, clinics are far from home, resulting in difficulties by the majority of pregnant women in making antenatal care visits due to lack of transportation resources to health centres. To further complicate issues, it is not easy to be pedestrian in these days as a result of climate change, longer time to reach the clinic and the risk of being attacked on the road by criminals (Sakala et al., 2011). Also, due to financial constraints, pregnant women are unable to afford the cost of travelling to health facilities, even though antenatal care is free. Consequently, booking for ANC visit may be of lower importance to these pregnant women since about 70-71% of families are from households with a monthly income of less than R350 per person in the Eastern Cape Province. Recognizing this, the Health Department (2015) recommends that women suspected of being pregnant should plan and book a visit to their nearest health facilities to start ANC immediately. Besides, it has been discovered that pregnant women who can afford to attend daily antenatal visits are those who are highly educated and therefore have lower chances of getting

PIH as they are more conscious of their health issues compared to women who are illiterate (Obionu, 2006). Evidence also shows that maternal age is a critical risk factor, as the risk of PIH increases with a mother's advancing age (Zhang et al., 2007).

2.2.4 Health promotion

According to the World Health Organisation (1988), the average age at pregnancy, worldwide, is 20 to 30 years of age. This indicates that women who became pregnant at the age of 35 years and above have been categorized as members of a high-risk group. To this end, the WHO has set a goal of achieving decreased infant, perinatal, and maternal mortality rates worldwide by 2020 as PIH continues to be a major health-related issue in pregnant women even after advances in medical science. However, given the increasing age at which women become pregnant and the greater risk of complications, much work needs to be done to meet this goal. South Africa has been identified as one of the countries that are taking the initiative in reporting the increasing burden of non-communicable diseases (NCDs) for both rural and urban area compared to other African countries. Priorities to help reduce PIH morbidity and mortality in South Africa include the emphasis on increased PIH awareness and improved access to affordable health services for the rural population and poor people (Department of Health, 2015). In addition, severe hypertension, pending eclampsia and HELLP are life-threatening conditions requiring immediate action and thorough evaluation from healthcare professionals to prevent further serious complications.

2.2.5 Risk factors associated with pregnancy-induced hypertension

Some of the identified risk factors attributed to PIH include myth-related cultural beliefs, especially in Africa. An example is that if others in the community learn early about pregnancy, they may become jealous and bewitch the mother and harm the foetus (Lawrence, 1999). Other risk factors include delays in deciding to seek healthcare. Pregnancy complications affect mostly young mothers as they are still immature and haven't grown fully to handle pregnancy and deliver a baby. There is a

need to encourage early attendance at antenatal clinics so that these women receive self-care information during pregnancy, delivery and post-birth. Delays in attending antenatal clinic minimizes the chances of suitable screening, risk factors management if detected, and timely referral. Early detection and treatment of some of these complications of pregnancy is the basis for proper management during delivery and after childbirth. The lack of such a visit and an opportunity for early assessment may result in the identification of complications during pregnancy, delivery and puerperium. Further discussion of some of these risk factors for PIH is provided below.

2.2.5.1 Partner influence

It is well known that the biological mothers and sisters of single pregnant women and, the husbands of married pregnant adolescents are those who provide support during pregnancy. Women with a previous normal pregnancy are also reported to have a low risk of developing PIH, but other studies suggest that this decisive effect is no longer safe when women decide to change partners (Dekker, 2002). In addition, studies have shown that multiparous women who had a marriage transition prior to an index pregnancy will have an increased risk of PIH (Eras et al., 2000).

2.2.5.2 Infrastructure and supplies

There are numerous barriers to access to health care services in Africa directly linked to socio-economic deprivation, socio-cultural traditions, gender relations, inadequate medical resources and infrastructure in the health sector (Kyomuhendo, 2003). Many countries made provision for mobile clinics to counter this challenge as the cost of the clinic visits by members of the household is high. In general, many challenges are facing the government in South Africa concerning building physical health infrastructure and meeting budget requirements rather than delivering mobile pharmaceutical clinics. Healthcare professionals in the country and the infrastructure challenges of providing care are very demanding, as they are three times as many as the current number of professionals needed for universal care coverage. As a result of this factor, many community delivery services are affected by this health care crisis.

Another issue is that most of the health care facilities available are primarily located in urban areas, while the needy poor live in rural areas. The distance travelled by these

people in rural areas to access these facilities is more than 28 km. Hence, distance to a health facility is a strong determinant of its choice for maternal health services and other uses (AL-Nahedh, 1995). Resultantly, communities seeking access to these facilities are often not consistent with appointments leading to deaths of some pregnant women from complication not managed before they arrive the health facilities (Federal Ministry of Health, 2007). In Eastern Cape, transport between health facilities for patients has been one of the main factors causing pregnant complications. Also, poor communication between different levels of health care has compounded the delay in care. Furthermore, most primary health centres (PHC) cannot provide specialized intervention, and treatment at Community Health Centres (CHC) could also be problematic. For instance, in Mdantsane, Eastern Cape, the Nontyatyambo CHC is not capable of complete obstetrics. Ironically, referring women to this CHC puts vulnerable people in an even more dangerous situation with an obstetrical emergency.

2.3 SUMMARY

In this literature review, the researcher reviewed both national and international published articles to identify and discuss possible factors affecting pregnancy-induced hypertension both globally and locally. The research methodology will be discussed in the following chapter.



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CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter, the research design and methodology are described. The population study of the research are pregnant women utilizing antenatal clinics at Mdantsane in Buffalo City Municipality in East London.

3.2 RESEARCH DESIGN

An analytical cross-sectional study design was used to assess the knowledge, attitude and behaviour of pregnant women towards pregnant induced hypertension in Mdantsane at Buffalo City Municipality, East London, Eastern Cape.

3.3 STUDY SETTING

The study was carried out in Mdantsane, South Africa, in the Eastern Cape. Mdantsane is South Africa's second-largest township with eighteen zones and the newest developed unit P. The region still has a very high unemployment rate, with a population of 250,000. Most Mdantsane residents live below living salary according to the nation's economic classifications. There are eight primary health centres (PHC), one community health centre (Nontyatyambo CHC) and one regional hospital (Cecilia Makiwane Hospital). Both the CHC and the hospital serve as referral centres in cases requiring further management.

3.4 STUDY POPULATION

A study population consists of all the inhabitants of a particular place with common characteristics that are important to the researcher (Fadare, 2016). Accordingly, this study involved all pregnant women who attended antenatal care at the eight PHCs in Mdantsane at buffalo City Municipality, East London. The eligibility criteria applied in enrolling consenting study participants are as follows.

3.4.1 Inclusion criteria

Only pregnant women who attended antenatal care at the eight PHCs in Mdantsane, East London were included in the study.

3.4.2 Exclusion criteria

Non-pregnant women were not eligible to participate in the study. The study also failed to include pregnant women who did not attend ANC at any of the PHCs in Mdantsane.

3.5 SAMPLING

Based on accessibility, and using convenient sampling, all eight PHCs in Mdantsane at Buffalo City Municipality were selected to be the study sites. Further, the researcher used non-probability purposive sampling to enrol 200 consenting pregnant women as participants for this study. The sample investigated depended on the abilities to answer the research questions and willingness to participate in the study.

3.6 INSTRUMENTATION

The data was obtained through the use of a self-administered questionnaire. The questionnaire was tested for **accuracy** and **written** in the English language. When clarity was needed, explanations were offered to participants. The questionnaire consisted of four sections, namely: demographic **characteristics**, socio-economic factors, client wellbeing and knowledge of complications during pregnancy. **The researcher designed the questionnaire to include questions related to knowledge and attitudes towards pregnancy-induced hypertension.**

3.7 DATA COLLECTION PROCEDURE

The researcher approached all pregnant women who attended ANC at the eight selected clinics in the Buffalo City Metropolitan area. The informed consent form was issued to all the pregnant women who were willing to participate in the study so that they could read and sign prior to participating in the study. When necessary, the objectives and procedures of the study were explained in detail to the participants who needed clarification. After obtaining informed consent, the researcher explained the instructions on how to complete the questionnaire to those who had difficulty understanding what was expected of them. All instructions on how to fill out the questionnaire were conveyed to consenting participants in both written and verbal English languages. Confidentiality and privacy were maintained during data collection, as the data in the completely filled questionnaire was anonymised and kept in a locked

cabinet only accessible to the study staff. The duration of the data collection was two months, and it required the researcher to spend four (4) days at each of the eight (8) clinics.

3.8 DATA ANALYSIS

Before analysis was performed, the data was managed with MS Excel and later exported to Statistical Package for Social Sciences (SPSS) for more detailed analysis. The analysis was performed using a combination of descriptive and inferential statistics. Results from the descriptive statistics were presented as means and standard deviations (SD). Expected outcomes measures (prevalence rates and mean variances) and differences between age groups were calculated using inferential statistics. The association between demographic, risk factors associated with women induced pregnancy hypertension and utilization of health services by these women was investigated in the unadjusted analysis as well as stratified and multivariate models. A p-value of 0.05 was set to indicate statistically significant tests.

3.9 ETHICAL CONSIDERATION

The University of Fort Hare ethics review committee approved the study protocol. In addition, permission for data collection was granted by the Eastern Cape Provincial Department of Health after applying to approval to use the data for academic purposes. Permission to collect data from Buffalo City Municipality was approved by the Department of Health District Manager.



In addition to the requirements listed above, participation was made voluntary, and only participants that meet the criteria were approached and participate in the study. The potential participants were informed about the purpose of the research study the opportunity to withdraw from the study whenever they wish without penalty. An informed consent form was issued to obtain written informed consent before the commencement of data collection.

To observe and protect human rights researcher and her assistants ensured that human rights were not being violated. The raw data was not shared with any other person other than the investigator. Completed questionnaires were kept under a

locked filing cabinet by the researcher. The following were considered when conducting the study.

3.9.1 Informed consent

Participants were requested to sign an informed consent in which the purpose, objectives and aim of the study were explained appropriately.

3.9.2 confidentiality and anonymity

The researcher ensured that the data collected from the participants is kept confidential and that the information was used for study purpose only.

3.9.3 Respect and dignity

Respect for human dignity is a norm that obliges us to respect the decisions of adults who have decision-making capacity. Consequently, the consenting participants were allowed to voluntarily participate in the study without any form of coercion.

3.9.4 Principle of beneficence and justice

A moral obligation to act for the benefit of others is the principle of beneficence. The idea is that of protecting and defending others' right from discomfort and harm. Justice obliges us to share benefits, risks, expenses and capital equitably. In this study, the researchers ensured beneficence and justice by making sure that there was little or no harm to participating in the study. They were also informed of no direct benefits, but indirect benefits as findings would inform policy formulation and implementation to improve both maternal and child health outcomes.

3.10 RELIABILITY AND VALIDITY

The study instrument was designed based on literature review and validity was tested through the conduct of a pilot study at one of the study sites on the eligible study participants for two days. Reliability of the collection tools was assessed from the analysis of data obtained from the pilot study. Data from the pilot study was discarded and not included in the main study analysis.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 INTRODUCTION

The results from the analysis carried out based on the study objectives are reported in this chapter. Tables show the results of the analysed data with the narratives for each table provided. This chapter also explains the implications of the results.

4.2 CHARACTERISTICS OF THE STUDY RESPONDENTS

As shown in Table 4.1, majority of the respondents were single women (82%) and had only completed secondary education (123, 49.4%). Of all eight (8) clinics, most were respondents were enrolled from Philani Clinic (40, 16.1%), while the lowest was from Zingisa clinic (19, 7.6%).

Table 4.1: Sociodemographic characteristics of the study population

	Characteristic	Frequency	Percentage
Religion	Anglican	88	35.3
	Apostolic	18	7.2
	Baptist	2	.8
	Jehovah's Witness	13	5.2
	Jesus Christ Church	6	2.4
	Methodist	61	24.5
	Presbyterian	33	13.3
	Seventh Day Adventist	6	2.4
	Zion	22	8.8
Clinic	NU13	25	10.0
	Eluxolweni	23	9.2
	Fezeka	39	15.7
	Luyolo	25	10.0
	Nobuhle	22	8.8
	NU16	36	14.5
	Philani	40	16.1
	Thembisa	20	8.0

	Zingisa	19	7.6
Marital status	Married	45	18.1
	Single	204	81.9
Education	College	90	36.1
	Secondary	123	49.4
	University	36	14.5

4.3 STUDY RESPONDENTS' PREGNANCY HISTORY AND KNOWLEDGE OF PIH

Table 4.2 presents the pregnancy history of the respondents and the knowledge of PIH. About 140 (56.2%) of respondents were multigravida (have had a previous pregnancy that was delivered). Of the 200 respondents, a little over 50% were aware of PIH and associated risk factors. However, assessment of the level of significant difference between awareness of PIH and knowledge of PIH associated risk factors using the Chi-squared test shows a statistically significant difference for only awareness of PIH ($\chi^2=4.92$; $p=0.04$) and not the knowledge of PIH risk factors ($\chi^2=0.33$; $p=0.57$).



Table 4.2: Study respondents' pregnancy history and knowledge of PIH

Variable	Response [n (%)]		χ^2	p-value
	Yes	No		
Previous pregnancy	140 (56.2)	109 (43.8)	3.86	0.05
Previous delivery	140 (56.2)	109 (43.8)	3.86	0.05
Awareness of PIH	142 (57.0)	107 (43.0)	4.92	0.04 ^s
Knowledge of PIH risk factors	129 (51.8)	120 (48.2)	0.33	0.57

s-statistically significant

4.4 ASSOCIATION BETWEEN SOCIODEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION AND AWARENESS OF PIH

As shown in Table 4.3, statistically significant increased odds for awareness of PIH was among the respondents who were married (OR=2.4 95%CI (1.17; 4.90)) and had a history of pregnancy (OR=17.1 95%CI (9.09; 32.15)). No statistically significant

association was found between the educational level of the respondents and awareness of PIH.

Table 4.3: Association between sociodemographic characteristics of the study respondents and their awareness of PIH

Characteristic		Total n (%)	PIH Awareness n (%)		OR	95% CI
			Aware	Not Aware		
Marital status	Married	45 (18.1)	33 (73.3)	12 (26.7)	2.4	(1.17; 4.90) ^s
	Single	204 (81.9)	109 (53.4)	95 (46.6)	Reference	
Education	High School	123 (49.4)	65 (52.8)	58 (47.2)	0.9	(0.63; 1.27)
	Diploma	90 (36.1)	51 (56.7)	39 (43.3)	0.8	(0.50; 1.16)
	Degree	36 (14.5)	26 (72.2)	10 (27.8)	Reference	
Previous pregnancy	Yes	140 (56.2)	117 (83.6)	23 (16.4)	17.1	(9.09; 32.15) ^s
	No	109 (43.8)	25 (22.9)	84 (77.1)	Reference	
Contraceptive used	None	48 (19.3)	25 (52.1)	23 (47.9)	0.9	(0.52; 1.62)
	Condom	102 (41.0)	59 (57.8)	43 (42.2)	0.7	(0.49; 1.08)
	Injectable	78 (31.3)	41 (52.6)	37 (47.4)	0.9	(0.58; 1.41)
	Pill	21 (8.4)	17 (81.0)	4 (19.0)	Reference	

s-statistically significant

4.5 ASSOCIATION BETWEEN SOCIODEMOGRAPHIC CHARACTERISTICS OF THE STUDY RESPONDENTS AND THEIR KNOWLEDGE OF PIH RISK FACTOR

Knowledge of PIH risk factors also showed the pattern of associations observed for PIH awareness (Table 4.4). The results presented reveal that married women are more likely than single women to know the risk factors of PIH (OR=2.7 95 % CI (1.35; 5.47)). Furthermore, being pregnant had been seen to increase the odds (OR=12.8, 95% CI (6.97; 23.58)) of knowing about risk factors for PIH.

Table 4.4: Association between sociodemographic characteristics of the study respondents and their knowledge of PIH risk factor

Characteristic		Total n (%)	PIH risk factor		OR	95% CI
			knowledge			
			Know	Don't Know		
Marital status	Married	45 (18.1)	32 (71.1)	13 (28.9)	2.7	(1.35; 5.47) ^s
	Single	204 (81.9)	97 (47.5)	107 (52.5)		Reference
Education	High School	123 (49.4)	56 (45.5)	67 (54.5)	1.2	(0.84; 1.71)
	Diploma	90 (36.1)	49 (54.4)	41 (45.6)	0.8	(0.55; 1.27)
	Degree	36 (14.5)	24 (66.7)	12 (33.3)		Reference
Previous pregnancy	Yes	140 (56.2)	107 (76.4)	33 (23.6)	12.8	(6.97; 23.58) ^s
	No	109 (43.8)	22 (20.2)	87 (79.8)		Reference
Contraceptive used	None	48 (19.3)	22 (45.8)	26 (54.2)	1.2	(0.67; 2.08)
	Condom	102 (41.0)	53 (52.0)	49 (48.0)	0.9	(0.63; 1.36)
	injectable	78 (31.3)	37 (47.4)	41 (52.6)	1.1	(0.71; 1.73)
	Pill	21 (8.4)	17 (81.0)	4 (19.0)		Reference

s-statistically significant

4.6 AGE EFFECT ON PIH AWARENESS AND KNOWLEDGE OF PIH RISK FACTORS

The two independent samples t-test was used to test for the effect of age on PIH awareness and knowledge of PIH risk factors (Table 4.5). The results show a

statistically significant difference between the mean age of those who knew about PIH ($t=6.97$, Mean difference = 3.45, $p<0.0001$, 95% CI (2.47; 4.42)) and the risk factors for PIH ($t=3.49$, Mean difference = 3.49, $p<0.0001$, 95% CI (2.54; 4.44)) compared to those who did not.

Table 4.5: Age effect on PIH awareness and knowledge of PIH risk factors

Characteristic		N	Mean	SD	t	p-value	Mean Difference	95% CI
PIH awareness	Aware	142	25.1	4.443	6.97	<0.0001	3.45	(2.47;4.42) ^s
	Not Aware	107	21.6	2.918				
PIH Risk factor knowledge	Know	129	25.2	4.551	3.49	<0.0001	3.49	(2.54;4.44) ^s
	Don't Know	120	21.8	2.901				

s-statistically significant

4.7 DISCUSSION OF FINDINGS

For an individual to take a decision on seeking help during pregnancy, it is important to have an understanding of about PIH, its underlying causes and symptoms.

Globally, it has also been reported that PIH remains a dangerous medical condition and one of the direct causes of maternal morbidity and mortality. This means that emphasis on awareness as evidence from different studies points out that high maternal mortality rate was as a result of inadequate knowledge, negative attitude and lack of preventive practice on the part of the pregnant women who have strong traditional belief. This study investigated the understanding of knowledge, behaviour and attitude of pregnant women towards PIH in Buffalo City Municipality.

The mortality from PIH is remain high due to lack of awareness by pregnant women of its presence as some tend to associate its signs with witchcraft (Poon et al., 2010). It has been found out that some women do not know of its symptoms as they don't get sick; sometimes they don't experience any abnormalities in their pregnancies until the

complications becoming moderate to severe. Study conducted by James et al. (2009) he indicated a difference in knowledge differences of PIH between women with previous pregnancies and those pregnant for the first time. Women with previous pregnancy were very aware of the condition as compared to Primigravida's. This means that the department of health needs to have a strategy and an approach to pass all relevant information to pregnant women during antenatal visit.

Furthermore, Calder (2006) supports the statement that most of the pregnant women who regularly attend the antenatal clinic are aware of the potential risks of PIH. Therefore, women should be equipped with knowledge as the World Health Organisation (1988) encourage adherence to consistency on this activity all the time. Knowledge is the very crucial to awareness amongst pregnant women to improve their behaviour towards PIH and reinforcement of blood pressure control.

The misconceptions lead to a lack of general awareness and visits to health centres by other women. It is against such background that these women need to be equipped with adequate knowledge and skills to subsequently enhance positive behaviour. Contrary to the recommendations, there's more regional literature on lack of knowledge about Pregnancy Induced Hypertension (Edmonds & Dewhurst, 2012). Similar sentiments were reported in Uganda, where 64% of pregnant women were highly knowledgeable about PIH but not on how to monitor their blood pressures. According to the main cited reason on lack of knowledge towards pregnancy-induced hypertension, these were caused by staff attitudes which resulted to minimum interaction between health workers and younger women attending antenatal clinic during pregnancy period (Srivakumar et al., 2007).

Moodley and Molefe (2007) found out that majority of teenagers do not adhere to treatment when they feel better, similar sentiments was expressed by Ali et al. (2013), that young women with knowledge on the management of PIH are likely to utilise it and also able to control hypertension. Most of the complications related to PIH are due to maternal negligence or unawareness on the management of hypertension. The report by Department of Health (2007) at Tygerberg Hospital supported this finding by

showing that 50% of their caesarean sections were performed for failed induction of labour or foetal distress after patient were diagnosed with PIH after induction of labour. Severe hypertension was diagnosed in about three-quarters of the patients. This and the high proportion of women with severe hypertension reflects the significant morbidity endured in pregnancy-induced hypertension in patients at term.

Ultimately such cultural inclination posed adherence problem as well as poorly controlled hypertension, in addition to this, knowledge, therefore, deemed to be the most appropriate approach to enhance both maternal and fetal wellbeing as well as foster successful outcomes of pregnancy (Ali et al., 2013). It is, therefore, routine emphasis on attitudes empowerment programmes to be clearly intended on educating and reinforcing a woman's responsibility for their well being. The study conducted in Mdantsane at the Eastern Cape it was found out that young women had no knowledge of PIH as well as its management, including monitoring of blood pressure.

Furthermore, Psarayi et al. (2010) echoed that circumstances leading to little knowledge levels may differ from different individuals. Individuals understanding of knowledge of PIH is the most important aspect as to have positive thinking on how to monitor and be able to control blood pressure. In order for an individual to have knowledge of PIH, one needs to understand and acknowledge this condition. Background of this study concentrates on knowledge as a critical concept which emphasizes on relevant information and understanding of pregnancy-induced hypertension itself. Finding from the study also focuses on determining the level of understanding of PIH in from pregnant women in Mdantsane at Buffalo City Metro and deals with supplying adequate information and educate women of intervention measure. Most individuals turn to have a clear understanding of the situations after they have received information and education, which also influences positive attitude. It is only after awareness programs and information sharing that pregnant women in Mdantsane can present with an understanding of complication and knowledge of risk factors pertaining to hypertension during pregnancy. It has been stated that the higher the level of education, the higher the acquisition of knowledge, attitude and behaviour of pregnant women towards hypertension (Fadare, 2016). A similar study concurs on

the noting that health care provider and pregnant women ignorance about the importance of ANC as one of the contributing factors resulting in the low utilization of antenatal clinic services in Nigeria (Ali et al., 2013).



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CHAPTER 5: SUMMARY OF THE STUDY

This chapter presents the introduction, summary of the study, major findings of the study, limitations, conclusions and recommendations.

5.1 INTRODUCTION

The goal of this chapter is to present a summary of the study. The conclusion is derived from the results of the study are presented. Lastly, the limitations and guidelines are based on the conclusion are drawn.

5.2 SUMMARY OF THE STUDY

As a result of difficult views about the outcome of the study and limitations due to challenges in the Department of Health and use of self-designed questionnaire, classification of hypertension categories was impossible. Therefore, data was analysed, bearing in mind that only the incidence of pregnancy-induced hypertension, which exposed a prevalence of 13.9%. Premature investigation and analysis of the hypertension may be proposing escalation on possibilities of an individual getting pregnant without developing complications for both the pregnant women and her unborn child.



Even though the results of the resent research are dated many years back; currently, national literature statistics has reported that hypertension in pregnancy is among the four leading causes of maternal death in Brazil. This validates that this disease remains predominant.

The objectives of the study were determining the distribution of participants by biographical characteristics and examining if the pregnant women have knowledge on the risk of pregnancy-induced hypertension (PIH). The study was done to debate if there were any association between PIH awareness and marital status, education, pregnancy history and use of contraceptive. Also, identify if there any association between knowledge of PIH risk factors and marital status, education, pregnancy history and contraceptive usage in Buffalo City Municipality. In this chapter, the researcher has presented conclusion, limitations, recommendations and a summary

of the study. Recommendations will be focusing on education and research. Individual knowledge levels, perceptions and attitudes influence health behaviour decisions. While knowledge, attitude and behaviour are shaped and influenced by other external factors, it is important to look at the individual factors that influence pregnant women's knowledge, attitudes and behaviour towards pregnancy-induced hypertension.

Pregnant women are viewed differently by other people. At the same time, this study did not intend to ask participants if they have any previous experiences, of which some women participants shared their experiences. Knowledge is very important as it is the basis upon which decisions are made. It is also crucial as it helps shape an individual's reality. In the absence of adequate and factual knowledge, pregnant women are bound to make unsound decisions that have a bearing on their lives. Participants indicated that they had knowledge of pregnancy-induced hypertension.

5.3 MAJOR FINDINGS OF THE STUDY

A large proportion of the participants (56.2%) had previous pregnancy and previous deliveries. The prevalence of pregnancy-induced hypertension was high at (51.8%), and for awareness, the difference between the proportion aware of PIH (57.0%) and the proportion not aware (43.0%) is statistically significant. With respect to previous pregnancy, those who had a previous pregnancy were more likely to be aware of PIH compared to those in their first pregnancy. Of the 140 who had a previous pregnant 117 (83.6%) were aware of PIH compared to 25 (22.9%) of those in their first pregnancy. Of the 45 married women (71.1%) knew the PIH risks factors compared to (47.5%) single ones.

In this study knowledge, attitude and behaviour towards pregnancy-induced hypertension in Mdantsane Township at Buffalo City Municipality will be examined. The findings of the study relating to knowledge of pregnancy-induced hypertension in Mdantsane, level of educations played a major role. Women with tertiary education had more understanding of PIH than those who only had a high school background. The rate of understanding PIH indicates that there is a need for awareness on certain

important factors as this will assist the individual in adjusting her thinking about her self-care. Furthermore, when the women are aware and have an understanding of PIH, it is more comfortable to adapt the behaviour and acquire skills that will assist her in maintaining and controlling blood pressure. The study that was done in Nigeria on knowledge of hypertension among the staff of the University of Ibadan concurs that level of education has a huge impact on significant change in awareness of complication and knowledge of risk factors of hypertension. It has been discussed in several studies about (82%) of pregnant women who obtained formal education are fully aware and do have knowledge of PIH the condition (Calder, 2006).

It has been noted that pregnant women age 25 years and less were more vulnerable to the PIH due to lack of education and unawareness regarding health care. Maternal age is considered as one of the essential factors as with increasing age of mother, the risk of PIH increase. But in contrast to this study finding by Sahu et al. (2009) reported the maternal age to be significantly higher in cases as compared to controls. The increased risk of pregnancy-induced hypertension in younger women who are less than 21 years of age and women who are 35 years and older (Anorlu et al., 2005). Findings on awareness was significantly high on women with previous pregnancy than those who were pregnant for the first time. Pregnant women with previous pregnancies were also aware of its complications and risk factors of PIH. Through health education of the at-risk population, a high level of awareness of the condition will be achieved. It will reduce related mortality and morbidity and contribute to the achievement of Millennium Development Goals (MDG's).

The finding of the study is that attitudes and behaviour are influenced by a high level of knowledge of pregnancy-induced hypertension by pregnant women who have previous pregnancy in Mdantsane. The married women had a very positive attitude and more aware of the risk and complications of PIH, whereas the younger pregnant women did not appear to influence the dangers. This had concluded that the threat of PIH was greater when the age of pregnant women was less than 25 years, and this observation conformed with what we found (Yadav et al., 2007).

5.4 LIMITATIONS OF THE STUDY

The researcher only focused on eight clinics in Buffalo City Municipality for a limited period because of study limitations. Therefore, underlying connotations cannot be determined but only be interpreted as possible causal associations. Secondly, the questionnaire was self-designed, as such some elements of untruthfulness and recall bias cannot be mastered. This was a cross-section study; therefore, some participants could possibly have preferred a more in-depth discussion about the reproductive related issues of pregnancy. Also, to the best of the researcher knowledge, no study exists on pregnancy-induced hypertension at Buffalo City Municipality in the Eastern Cape.

5.5 CONCLUSION

In conclusion, several research studies have been conducted on numerous characteristics of pregnancy-induced hypertension worldwide. Nevertheless, the remaining gaps identified in other areas to be discovered for more clarity on knowledge deficit concerning PIH and its complications. The trend of knowledge indicates a broad awareness and knowledge of certain specifics in relation to pregnancy-induced hypertension (PIH); such awareness is needed to adjust factors that influence the individual's own self-performance. There is no clarity on how best pregnant women would be informed about PIH and also in terms of information sharing, for them to seek immediate and appropriate care.

This indicates that there is a considerable need for Buffalo City Municipality to conduct further investigations related to the attitude of the pregnant woman from the detected health care facilities in order to observe knowledge, attitudes and behaviours of pregnant women. Knowledge towards PIH in Buffalo City Municipality is inadequate, intensive changes to be taken by the people and the Department of Health to improve the situation. These changes might take longer to be achieved, but the goal to reduce maternal and mortality rate will be achieved in the Eastern Cape. This study was limited to 200 numerous pregnant women that attended antenatal care at Mdantsane in Buffalo City Municipality Eastern Cape. Collaboration of studies conducted

nationwide to be considered as the way forward to submit the information that can be used by policymakers and stakeholders.

5.6 RECOMMENDATIONS

This study shed on-trend on knowledge, attitude and behaviour towards pregnancy-induced hypertension in Mdantsane, Buffalo City Municipality. Based on the findings and conclusion of the study, the following are hereby recommended:

- There is a need for availability of posters providing clarity on pregnancy-induced hypertension at primary care centres, which are written in languages that is understandable to users, including handouts that accompany the antenatal care card.
- There is a need to minimize the risk of pregnancy-induced hypertension, after delivery, facilities must ensure that health education is emphasized on other contributing conditions, such as diabetes, as well as its management.
- An excellent community awareness on risk factors of chronic hypertension, and the importance of early and regular visit to antenatal clinic for check-ups during by pregnant women.
- There is a need to improve management and control blood pressure for pregnant women at $\geq 37+0$ weeks' gestation, and delivery should be considered at 38+0 to 39+6 weeks' gestation.
- Counselling should include an explanation of the risk of pregnancy-induced hypertension and foetal growth restriction.
- Women should be educated about the signs and symptoms of pregnancy-induced hypertension.
- Women with chronic hypertension, whether essential or secondary, are at high risk of pregnancy complications and should therefore be observed frequently during the pregnancy by an obstetrician familiar with the management of hypertension in pregnancy.
- The researcher recommends that the study be expanded to the rest of Buffalo City Metro for concealment of a large population so that findings can be generalized to the whole country.

REFERENCES

AL-Nahedh, N. N. A. (1995). Factors affecting the choice of maternal and child health services in a rural area of Saudi Arabia. *Eastern Mediterranean Health, J. pp.* 261-9.

Ahenkorah, L., Owiredun, W. K. B. A., Laing, E. F., Amidu, N., & Turpin. C. A. (2008). Lipid Profile and Lipid Peroxidation among Ghanaian Pregnancy-induced hypertension. *Journal of Medical Science*, 8(8): 691-698.

Ali, A. B., & Jimoh, A. (2013). Knowledge of hypertension among the staff of university of Ibadan Nigeria. *Journal of Public Health and Epidemiology*, 3(5):204-209.

Anorlu, R. I., & Iwuala, N. C. (2005). Risk factors for pre-eclampsia in Lagos, Nigeria. *Australia, New Zealand: Journal for Obstetrics and Gynaecology*, 45(4): 278-282.

Arshad, A., Pasha, W., Khattak, T.A., & Kiyani, R.B. (2011). The impact of pregnancy induced hypertension on the birth weight of newborn at term. *Journal of Rawalpindi Med College*. 15:113-115.



Calder, A. A., & Dunlop, W. (2006). *High Risk Pregnancy*. London: Butterworth-Heinemann Limited.

Candice, R. (2004). Emergency contraceptives Knowledge and practices of tertiary students in Durban, South Africa. *Journal of Obstetrics and Gynaecology, Volume 24*: 441-445.

Centre for Maternal and Child Enquiries (2011). Saving Mothers' Lives: reviewing maternal deaths to make motherhood safer: 2006–08. The Eighth Report on Confidential Enquiries into Maternal Deaths in the United Kingdom. *BJOG*, 118(1):1–203.

Dekker, G. (2002). The partner's role in the etiology of preeclampsia. *Journal of Reproductive Immunology*, 57(1-2): 203-215.

Department of Health, (2007). *Guidelines for Maternity Care in South Africa*. Pretoria: Government Printers.

Department of Health, (2015). *Guidelines for Maternity Care in South Africa: A manual for clinics, community health centres and district hospitals. 4th edition*. Pretoria: National Department of Health.

Edmonds, K., & Dewhurst, D. (2012). *Textbook of Obstetrics & Gynaecology* (8th ed.). Blackwell: Wiley.

Eras, J. L., Saftlas, A.F., Triche, E., Hsu, C. D., Risch, H.A., & Bracken, M. B. (2000). Abortion and its effect on risk of pre-eclampsia and transient hypertension. *Epidemiology*, 11(1): 36-43.

Fadare, R. I. (2016). Knowledge and attitude of pregnant women towards management of pregnancy-induced hypertension in Southwest Nigeria. *Journal of Advances in Medical and Pharmaceutical Sciences*, 11 (2):1-10.


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Federal Ministry of Health, (2007). *Integrated maternal, newborn and child health strategy*. Abuja: Government of Nigeria.

Fraser, M. D. et al., Cooper, M. A., & Dem, O. A. (2009). *Myles Textbook for Midwives*. Livingstone: Edinburgh Churchill.

Igbokwe, C. C. (2008). Levels and determinants of non-acceptance of family planning practices among couples in Ezeagu LGA of Enugu State. *West African Journal of Physical and Health Education*, 12:217-227.

James, O. F., Mgbekem, M. A., & Edem, O. A. (2009). Knowledge, attitude and preventive practices towards pregnancy-induced hypertension among pregnant women in general hospital Calabar. *Pakistan Journal of Social Sciences*, 6(1):1-5.

Jewkes, R., Morrell, R., & Christofides, N. (2009). Empowering Teenagers To prevent Pregnancy. *Learners from South Africa Culture, Health & Sexuality*, 7(11): 675-688.

Katz, K., & Nare, C. (2002). Reproductive health knowledge and use of services among young adults inDakar, Senegal. *Journal Biosocial Sciences*, 2(34), 215-31.

Khan, A. (2014). Pregnancy induced hypertension: Assessment of prognastic Value of platelets count in women with varying degree. *Professional Medical Journal*, 21(3).

Kyomuhendo, G. B. (2003). Low use of rural maternity services in Uganda: impact of women's status, traditional beliefs and limited resources. *Reproductive Health Matters* , 11: 16-26.

Lawrence, J. P. (1999). Community participation as a myth or reality: a personal expiarence from Tanzania. *Health Policy and Planning*, 4(2).

Mannisto, T., Mendola, P., Vaarasmaki, M., Jarvelin, M. R., Hartikainen, A. L., & Pouta, A. (2013). Elevated blood pressure in pregnancy and subsequent chronic disease risk. *Circulation*, 127: 681-690.

Michalow,J., Chola, I., McGee, SS., Tugendhaft, A., Pattinson, R., Kerber, K., & Hofman, K. (2015). Triple return on investment: the most and impact of 13 intervenstions that could prevent stillbirth and save the lives of mothers and babies in South Africa. *BMC Pregnancy and Child*, 15(1), 39.

Moodley, J., & Molefe, N. (2007). *Confidential Enquiries into Martenal Deaths*, 4th ed. Pretoria: Government Printers.

Muti, M., Tshimanga, M., Notion, G. T., Bangure, D., & Chonzi, P. (2015). Prevalence of pregnancy induced hypertension and pregnancy outcomes among women seeking

maternity services in Harare, Zimbabwe. *BMC cardiovascular disorders*, 15 (111).
<https://doi.org/10.1186/s12872-015-0110-5>

Myo, N. A., Thawom, L., Janthila, S., Nongluk, P., Suchart, K., & Wilawan, T. et al. (2012). Assessing awareness and knowledge of hypertension in an at-risk population in the Karen ethnic rural community Thasongyang, Thailand. *International Journal of General Medicine*, 5(1)553-561.

Nigeria Demographic and Health Survey. (2008, May). Preliminary report. National Population Commission.

Obiono, C. N. (2006). *Primary health care for developing countries*. Enugu: Delta Publications.

Olusanya, B. O., & Solanke, O. A. (2012). Perinatal outcomes associated maternal hypertensive disorders of pregnancy in a developing country. *Hypertension pregnancy*, 120-30.



Palacios, C. & Pena-Rosas, J. P. *Calcium supplementation during pregnancy for preventing hypertensive disorders and related problems*. Retrieved from WHO RHL Commentary. http://apps.who.int/rhl/pregnancy_Childbirth/antenatal_care/nutrition/cd00159_penasrosasjp_com/en/. Accessed 19/11/2014

Panday, S., Makiwane, M., Ranchad, C., & Letsoalo, T. (2009). *Teenage Pregnancy in South Africa with A Specific Focus On School-Going Learners*. Child, Youth, Family and Social Development, Human Science Research Council. Pretoria: Department of Education.

Poon, L. C., Kametas, N. A., Chemelen, T., Leal, A., & Nicolaides, K. A. (2010). Maternal risk factors for hypertension disorder in pregnancy: A multivariate approach. *Journal of Human Hypertension*, 24: 104-110.

Pswarayi, I. (2010). The relationship between pregnancy induce hypertension (PIH) self-care knowledge and hypertension control among pregnant mothers age 18 to 49 years in bindura district. Zimbabwe. Incomplete information

Rahimi, Z., Mozafari, H., Parsian, A. (2013). Preeclampsia and angiotension converting enzyme (ACE)I/D and angiotensin II type-1 receptor (ATIR) A1166C polymorphism:Association with ACE I/D polymorphism. *Journal of Renin-Angiotensin-Aldesterone System*, 14(2): 174-180.

Rehana, R., Tanveer, S., & Nasree, R. F. (2006). An analysis of direct causes of maternal mortality. *Journal of Postgraduate Medical Institute*, 2(1):86-91.

Roberts, J. M., Lain, K. Y. (2002). Recent Insight into the pathogenesis of pre-eclampsia. *Placenta*, 23(5): 359-372.

Sachdeva, P. D., Patel, B. D., & Bhatt, M. V. (2011). A study of incidence and of pregnancy induced hypertension in Central Gujarat, India. *International Journal of Universal Pharmacy and Life Science*, 1(3): 61-70.

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Sahu,S., Abraham, R., & Vedavalli, R. (2009). Study of lipid profile, lipid peroxidation and vitamin E in pregnancy induced hypertension,. *India Journal for Physiological Pharmacology*, 53(4): 365-69.

Sakala, M. (2011). Assessment of barriers to the utilization of antenatal care services in Kazungula district Zambia. University of Western Cape, Cape Town.

Seller, P. (2010). A Text Book and Reference Book for Midwives in South Africa: *Midwifery Volume 2*. Lansdowne: Juta & Co.

Social Development, (2016). An examination of absolute poverty. *Poverty trend in South Africa*.

Srivakumar, S., Bhat, B. V. & Badhe, B. A. (2015). Associated risk factors with pregnancy-induced hypertension. *International Journal of Medicine and Public Health*, 5: 59-62.

Verwoerd, G. R., Hall, R. D., Grove, D., Maritz, J. S., & Odendaal, H. J. (2002). Primipaternity and duration of exposure to sperm antigens as risk factors for pre-eclampsia. *International Journal of Obstetrics and Gynecology*, 78(2): 121-126.

World Health Organisation, (2012, December). Diabetes Programme, Country and Regional Data on Diabetes. *WHO Africa Region*. Retrieved from WHO African Region: <http://www.who.int/diabetes/fact/world>

World Health Organisation, (1988). International Collaborative study of hypertension disorders of pregnancy, Geographic variation in the incidence of hypertension in pregnancy. *American Journal Obstetrics and Gynecology*, 158 (1): 80-83.



Yadav, S., Bhat, B. V., & Baghe B. A. (2007). Effects of pregnancy induced hypertension on mothers and thier babies. *Indian Journal Paediatrics*, 74(7):27-29.

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Zhang, J., Zeisler, J., Hatch, M.C., & Berkowitz, G. (1997). Epidemiology of pregnancy-induced hypertension. *Epidemiology Revision*, 19(2): 218-232.

Zhang, J. (2007). Partner change, birth intervals and risk of pre-eclampsia: a paradoxical triangle. *Paediatrics Perinatal Epidemiology*, 21(Sppl 1): 31-35.

Ziyani, I. (2006). "Swazi youth" attitudes and perceptions concerning adolescent pregnancies and contraceptives. *Health South Africa Gesondheid*, 1(11), 31-42.

ANNEXURE A: RESEARCH INSTRUMENT

All information herewith provided will be treated confidentially. It is not necessary to indicate your name in this questionnaire.

INSTRUCTIONS

1. Please answer all questions by providing an "X" in the box corresponding to the chosen alternative or by writing your opinion in the space provided.
2. Please answer all questions as honestly, frankly and objectively as possible.
3. Answer according to your own personal opinion and experience.

Answer the questions by placing an "X" in the box corresponding to the alternative which is applicable to you or write down your response in the space provided.



SECTION A: DEMOGRAPHIC DATA

1. What is your age?

Age	ANSWER
1.1. 19-25 years	
1.2. 26-35 years	
1.3. 36-45 years	

2. Indicate your religion.

RELIGION	ANSWER
2.1. Muslim.	
2.2. Roman Catholic	
2.3. Anglican	
2.4. Seventh Day Adventist	
2.5. Methodist	

2.6. Africa Inland Church	
2.7. Jehovah Witness	
2.8. Other (specify)	

3. Indicate your marital status

	ANSWER
3.1. Single	
3.2. Married	
3.3. Divorced	
3.4. Co-habiting	
3.5. Other (specify)	

4. What is your highest level of completed education?

	ANSWER
4.1. Primary	
4.2. Secondary	
4.3. University/College	
4.4. No formal education	



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SECTION B: SOCIO-ECONOMIC FACTORS

5. What is your current employment status?

Unemployed	1
Employed full-time	2
Employed part-time	3
Self employed	4

SECTION C: WELL BEING OF THE CLIENT

6. What type of contraceptives were you using before pregnancy?

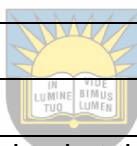
6.1. Male condom.	Yes	No
-------------------	-----	----

6.2. Female condom	Yes	No
6.3. Oral contraceptive pills	Yes	No
6.4. Injectable	Yes	No
6.5. Others (specify)	Yes	No
6.6. I have not used contraception before getting pregnant	Yes	No

7. Satisfaction with service delivery during Antenatal visit, please indicate to what extent you agree with the statements below.

Please use the following scale to tick appropriate answer

Strongly agree	5
Agree	4
Neutral (neither agree or disagree)	3
Disagree	2
Strongly disagree	1



The quality of antenatal care I received at the clinic was good	1	2	3	4	5
The attitude of the service providers were good	1	2	3	4	5
The nurses were friendly	1	2	3	4	5
I waited a short while before being helped	1	2	3	4	5
The drugs/supplements were always available	1	2	3	4	5
Social support was available	1	2	3	4	5
All the procedures and examinations done were fully explained	1	2	3	4	5
The danger signs and complications during pregnancy were explained	1	2	3	4	5
Essential items needed for delivery were explained	1	2	3	4	5

The equipment used was up to acceptable standards (user friendly)	1	2	3	4	5
---	---	---	---	---	---

8. Were you explained the anticipated mode of delivery (individualized birth plan)?

Yes	1
No	2
Not sure	3

SECTION F: KNOWLEDGE ABOUT COMPLICATIONS DURING PREGNANCY

9. Did you know anything about Pregnancy Induced Hypertension (PIH) before you get pregnant?

Have you heard of Pregnancy Induced Hypertension (PIH) before?	Yes	No
--	-----	----

If yes, where have you hear about it?

	ANSWER
Friends	
Parents	
Health facility	
Radio	
Television	
Internet	
Others (please be specify)	

	ANSWER	
Have you met anyone who suffered with Pregnancy Induced Hypertension during pregnancy before?	Yes	No

If yes, please indicate if it's one of these people?

Parent	
--------	--

Siblings	
Friend	
Other (please be specify)	

10. Do you Know which categories of people that gets affected by Pregnancy Induced Hypertension?

Adults	Yes	No
Youth	Yes	No
Primigravida	Yes	No
Women with more than one child	Yes	No
Rich people	Yes	No
Obese people	Yes	No
Poor people	Yes	No
All of the above	Yes	No

11. Have you ever ignored pregnancy complications that were explained to you during antenatal care visits?

High blood pressure	Yes	No
Swelling of the lower limbs	Yes	No
Abdominal pains	Yes	No
Bleeding during your pregnancy?	Yes	No

If yes, what were the reasons?

Attitude towards pregnancy itself	Yes	No
Denial of having the above complications	Yes	No
Lack of knowledge on how to attend to the complications	Yes	No
Other (please be specific)	Yes	No

	ANSWERS
--	----------------

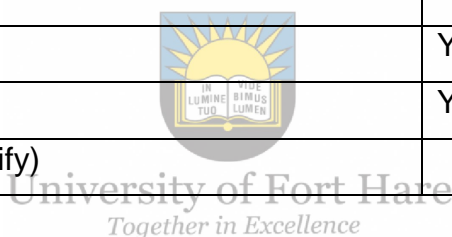
Were the risks that are associated with Pregnancy Induced Hypertension explained during antenatal visit?	Yes	No
--	-----	----

If yes, what are the most significant risks factors do you know off?

	ANSWER
Previous history of Pregnancy Induced Hypertension	
History of chronic high blood pressure, diabetes, kidney disease	
First pregnancy	
Obesity	
All of the above	

12. Behaviour towards Pregnancy Induced Hypertension

Does PIH makes you feel angry	Yes	No
Depressed	Yes	No
Sad	Yes	No
Emotional	Yes	No
Other (please be specify)		



Any suggestions on how to improve delivery of information about Pregnancy Induced Hypertension during antenatal visit to women in Buffalo Health District?

THANK YOU FOR YOUR PARTICIPATION

ANNEXURE B: LETTER OF APPROVAL FROM THE UNIVERSITY OF FORT HARE ETHICS COMMITTEE



University of Fort Hare
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ETHICAL CLEARANCE CERTIFICATE

REC-270710-028-RA LEVEL 01

Certificate Reference Number: **G00031SPET01**

Project title: Knowledge, attitudes and behaviour of pregnant women towards pregnancy induced hypertension in Mdantsane township, Buffalo city health district

Nature of Project Masters of Public Health

Principal Researcher:

Peter BB

Supervisor:

Prof DT Goon

Co-supervisor:

University of Fort Hare
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On behalf of the University of Fort Hare's Research Ethics Committee (UREC), I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instruments(s). Should any other instruments be used, these require separate authorization? The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that Impact upon the ethical conduct of the research

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

Special conditions: Research that includes children as per the official regulations of the act must take the following into account:

Note: The UREC is aware of the provisions of s71 0 the National Health Act of 2003 and that matters pertaining to obtaining the Minister's consent are under discussion and remain unresolved. Nonetheless, as was decided at a meeting between the National Health Research Ethics Committee and stakeholders on 6 June 2003, university ethics committees may continue to grant ethical clearance for research involving children without the Minister's consent, provided that the prescripts of the previous rules have been met. This certificate is granted in terms of this agreement.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if o Any unethical principal or practices are revealed or suspected to relevant information has been withheld or misrepresented on regulatory changes of whatsoever nature so require on the conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.
- In addition to the need to comply with the highest level of ethical conduct principal investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to the Dean of Research's office.

The Ethics Committee wished you well in your research


Yours sincerely



Professor Eunice Seekoe

Dean of Faculty of Health Science

30th November 2018

 25/01/2019

Professor Pumla Dineo Gqola

Dean of Research

30th November 2018



University of Fort Hare
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ANNEXURE C: LETTER FROM APPROVAL FROM BUFFALO CITY DISTRICT HEALTH MANAGER



BUFFALO CITY METRO HEALTH DISTRICT

OFFICE OF THE DISTRICT MANAGER

18 Sheffield Road • Westbank • East London • 5200, Eastern Cape

Private Bag X 9015 • Main Post Office, East London • 5200 • Eastern Cape

Tel.: +27 (0)43 708 1797 • Fax: +27 (0)43 708 1836/ 086 245 5023 • Website:

www.ecdoh.gov.za

Enquiries: Ms. Z Mntuyedwa

INTERNAL MEMORANDUM

TO:	MDANTSANE CLINIC SUPERVISORS & NONTYATYAMBO COMMUNITY HEALTH CENTRE
FROM:	DISTRICT HEALTH MANAGER: BUFFALO CITY METRO
SUBJECT:	PERMISSION TO CONDUCT RESEARCH STUDY: MS. B PETER
DATE:	12 MARCH 2019

Purpose

The purpose of this memorandum is to inform relevant Buffalo City Health District staff and patients of permission granted on research study to be conducted by Ms. B Peter from Fort Hare University.

Background and Exposition of Facts

Ms. B Peter is currently studying towards a Master's in Public Health degree with Fort Hare University. The title of her research study is "Knowledge, attitudes and behaviour of pregnant women towards pregnancy induced hypertension in Mdantsane, Buffalo City Metro Health District".

She has requested for permission to do research at Mdantsane Sub-District facilities. Ms. B Peter has submitted all the required documents for a research study in the Eastern Cape Department of Health facilities and as such permission has been granted to her by the Research unit to conduct the study in terms of her research protocol and methodology.

PERMISSION TO CONDUCT RESEARCH STUDY: MS B PETER

Approval by the District

1. Kindly note that this memorandum serves as an approval at district level for Ms. B Peter to conduct her research study in terms of the approved research protocol, ethical clearance and permission letter from the research unit subject to producing all necessary supporting documentation on request to prospective participants in the research study and management of the district;
2. All posters advertising the research must first be tabled with the District Manager to ensure compliance with departmental policies;
3. Patient details and addresses will only be provided to the researcher on those who have consented to participate in the research subject to the terms and condition of the letter of approval from the Research Unit of the Eastern Cape Department of Health.

APPROVED

13/03/2017

DATE



DR M. NKOMO

DISTRICT MANAGER

BUFFALO CITY METROHEALTH DISTRICT

ANNEXURE D: INFORMED CONSENT



University of Fort Hare
Together in Excellence

Faculty of Health Sciences

Department of Nursing Sciences

Research Participant - Informed Consent

I hereby give consent to Ms. Bulelwa B Peter, to conduct the study procedures indicated in the information letter provided to me for the purposes of research toward a Master in Public Health under Faculty of Health Science. I am embraced an examination extend looking at Knowledge, attitudes and behaviour of pregnant women towards pregnancy induced hypertension in Mdantsane township, Buffalo City Health District.

Authorization is along these lines asked for you to partake in the investigation. Your interest is deliberate you are permitted to pull back whenever in the event that you so with no impugn, punishment or loss of any medical advantage qualified for you. All The data will be kept in a secure location and will only be accessible to the supervisor and the researcher. The data will be destroyed two (2) years after publication or three (3) years from the time of the study. I understand that the proposed study has been approved by the University of Fort Hare Research Ethics Committee (UREC). All parts of the study will be conducted according to national and international ethics standards and principals.

Should you have concerns or queries regarding this study the following people may be contacted during office hours. The primary investigator can be contacted during office hours on their cellular phone(s): Ms. Bulelwa B Peter 083 301 9835. The study leader, Prof D.T. Goon can also be contacted during office hours on (043) 740 7368. Should you have any questions regarding the ethical aspects of the study, you can contact acting Dean of Research for the University of Fort Hare.

I have read and understood the above information and the Information Letter provided to me previously,

I understand the procedures and that I have had an opportunity to ask questions. I consent to participate in this study voluntarily, and

I am free to stop the tests at any point should I so desire, without being discriminated against.



Signature of Participant

Date

University of Fort Hare
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Signature of Researcher

Date