ASSESSMENT OF THE KNOWLEDGE, ATTITUDES AND PRACTICES OF FEMALE SECONDARY SCHOOL LEARNERS ON EMERGENCY CONTRACEPTION IN ONGWEDIVA, OSHANA REGION

THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH
OF
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DECLARATION

I, Emmanuel Magesa, hereby declare that this study is a true reflection of my own research, and that this work, or part thereof has not been submitted for a degree in any other institution of higher education.

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Emmanuel Magesa                                                                 Date
DEDICATION

I dedicated this work in the memory of all female school learners who lost their lives and [those] dropped out of schools because of unwanted pregnancies. I believe they could have changed this world or make a substantial difference amongst their societies.
ACKNOWLEDGEMENTS

I would like to express my gratitude to the following people and institutions who contributed to the positive outcome of my studies

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<td>Combined Oral Contraceptives</td>
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<td>CPR</td>
<td>Contraceptive prevalence rate</td>
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<td>EC</td>
<td>Emergency Contraception</td>
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<td>ECs</td>
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<td>EU</td>
<td>European Union</td>
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<td>FHI</td>
<td>Family Health International</td>
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<td>Family planning</td>
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<td>GRAP-LAC</td>
<td>Gender Research Advocacy Project- Legal Assistance Centre.</td>
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<td>HBM</td>
<td>Health Believe Model</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>ICEC</td>
<td>International Consortium for Emergency Contraception.</td>
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<td>IEC</td>
<td>Information Education Communication</td>
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<td>IPPF</td>
<td>International Planned Parenthood Federation</td>
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<tr>
<td>IUD/IUCD</td>
<td>Uterine Contraceptive Device.</td>
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<td>KAP</td>
<td>Knowledge, Attitudes and Practices</td>
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<td>LNG</td>
<td>Levonorgestrel</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MMR</td>
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ABSTRACT

Emergency contraception (EC) has been available in Namibia for many years; however, there has been little research on knowledge, attitudes and practice of female learners about it. The aim of this study was to assess the knowledge, attitudes and practices of secondary school female learners towards emergency contraception. A cross sectional descriptive study of 294 secondary female learners was conducted at Mweshipandeka and Gabriel Taapopi secondary schools in Ongwediva, Namibia, during January 2013. A self-administered questionnaire was distributed to female learners who agreed to participate in the study. The findings indicated that only 4.4% of female learners had heard and used emergency contraception. About 48% of them reported that oral contraceptive pills are used for EC, 6% mentioned implants as EC and 9% mentioned intrauterine device (IUD) as an EC. Only 7.8% mentioned the correct time (within 72hrs) of taking ECs in case of unprotected sex. More than 29% of female learners mentioned friends/family as the source of information about EC. About 86% of female learners who heard EC know the mechanism of action of EC pills and 8.5% believed that EC worked by inducing abortion. More than 80% of students had positive attitudes towards EC. The level of knowledge of female learners in secondary schools about EC appears low; hence there is a need for more awareness creation and education among the learners on EC. This could be done through peer education in the schools and a possible incorporation of EC issues in secondary school curriculum
CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND

Unintended pregnancy induced abortive procedures with adverse effects and complications is one of reproductive health problems that affect millions of females globally, and is counted among some of the leading causes of maternal mortality and morbidity (World Health Organization, [WHO] 2009 a).

Unintended pregnancy can lead to serious social stigma and health consequences for both mother and child (Plan, 2013). The adverse social and economic consequences for a woman who becomes pregnant will depend on her particular marital, cultural, family and community situation. However, in many developing countries, pregnancy severely limits a woman in pursuing education and in having broader economic opportunities in the future (Chris, 2005).

Globally, it is estimated that 45 million unintended pregnancies are terminated each year, of which 19 million are terminated in unsafe conditions. More than 40% of all unsafe abortion are performed by young women aged 15-24 which make up 15% of the population in the world and the majority of these young people live in the developing countries (United Nations Children’s Fund, [UNICEF] 2011).

A number of studies of abortion in developing countries have reported that abortion and abortion morbidity are most common among young women (Parker, 2005). This is because young people are sexually active, start sex before marriage, as indicated by the
study that one out of six women at the age of 15-19 years starts sex before marriage, over the past years the initiation of sexual activity has started at an earlier age and their knowledge about means to protect themselves is often inadequate, resulting in unplanned and unwanted pregnancies (Farquharson and Stephenson, 2010, and Roberts, Moodley and Esterhuizen, 2004). According to Parker, (2005) compared to women in their twenties, adolescents aged 15-19 years are two times more likely to die during childbirth, and those aged below 14 years are five times more likely to die.

The problem of unintended pregnancy and its complication can be reduced by the use of emergency contraception (EC), which refers to a group of birth control modalities that when used within a defined period of time can markedly reduce the risk of unintended pregnancy (Moszynki, 2006). It is also known as post-coital contraception intended for occasional or emergency use. EC is the only option left for a woman who has had unprotected sexual intercourse and she is not ready for pregnancy (Byamugisha, Mirembe and Fixelid, 2006)

Unprotected intercourse that demands the use of emergency contraception can be due to: failure of barrier methods such as slippage, breakage or misuse of a condom, sexual assaults, failed coitus interruptus, two or more consecutive missed oral contraceptive pills, or simply because intercourse was not expected therefore contraception was not used (Sevil and Hatipoglu, 2006).

It is estimated that more than one-third of pregnancies in developing countries are unintended and two-thirds of those are among women who are not using any method of
contraception (Singh, Sedgh and Hussain, 2010). The reasons for not using contraception include concern about the possible side effects and belief that individuals are not at risk of getting pregnant. (Krakowiak-Redd et al, 2011). Statistics show that Sub Saharan Africa is most affected region in the world (Tsui, Mosley and Burke, 2010).

Namibia as part of Sub Saharan Africa has predominantly young population, which makes up to 37% of the total population (Namibia Demographic Health Survey, [NDHS] 2006/2007), of which more than 14% are women and girls aged between 12 and 24 (Namibia Statistics Agency, [NSA] 2010). This is the group which is more affected with unintended pregnancy and its consequences (NDHS: 2006, 2007 and NSA, 2010). The Maternal Mortality Ratio (MMR) in Namibia increased from 225 per 100,000 live births in 1992, to 271 per 100,000 live births in 2000 and to 449 per 100,000 live births in 2006/07, which is among the highest in the world. One of the main contributing factors for MMR in Namibia is unsafe abortion (NDHS: 2006/07). Despite the fact of the increase in MMR, considerable achievements in other indicators have been observed. The contraceptive prevalence rate (CPR) increased from 38% in 2000 to 46% in 2006 while unmet need for family planning drastically dropped to 3% in 2006 from 24% in 2000. In addition teenage pregnancy decreased from 18% in 2000 to 15% in 2006 (Ministry of Health and Social Services [MOHSS], 2012).

According to Namibia Women Health Network (NWHN) (2010), 16 per cent of maternal deaths in Namibia are linked to unsafe abortions and unwanted pregnancies,
which are mostly performed by young, people, aged 12-24, although a lack of research by the Government has restricted information on the issue. Unsafe abortion done by these young people includes drinking concoctions containing ink, petrol and boiled newspapers, and the use of objects such as sticks and metal, clothes and hangers to end the pregnancy (NWHN, 2010). Hence, death and permanent injuries for young women often occur.

Unwanted pregnancies among female learners threaten their health and social welfare and the health and welfare of the children born to them. Pregnancies often cause learners to terminate their education, baby dumping and leaving them with very few options for establishing a good life for themselves and their children. (Gender Research and Advocacy Project-Legal Assistance Center, [GRAP-LAC] 2008).

Investing in family planning, including emergency contraception and other reproductive health services can mitigate the economic and environmental impact of population growth, and improving maternal and child health, especially with Namibia’s high HIV prevalence (Chris, 2005, National Guideline on Family Planning, 2012). Although several contraceptive methods, including Emergency Contraceptive Pills (ECP) are available, accessible, and free to users at all public sector health facilities across Namibia, high rates of unintended pregnancies in the country persist. Results from Namibia show pregnant women under age 20 who reported that their pregnancies were mistimed or unwanted was 55 percent (NDHS, 2006/7).
1.2. PROBLEM STATEMENT

Unintended pregnancies are a major public health issue and continue to burden many countries in the world. Promising developments have been seen in recent years in a global effort to address the problems of unintended pregnancies, including accessibility and availability of emergency contraceptive to all women and adolescents (WHO, 2009b). However the numbers of unintended pregnancies are set to continue to grow worldwide. It is estimated that 38% of pregnancies worldwide are unintended, which is the equivalent to 80 million unintended pregnancies each year (Zeteroglu, Sahin, Sahin and Bolluk, 2004).

Behavioral factors that frequently put the adolescent at greater risk of unintended pregnancy include sexual experimentation and risk taking, as well as limited ability to plan ahead. The nature of relationships and frequency of intercourse is often different during adolescent years compared with later in life. Shorter relationships, sometimes with long intervals in between, are not uncommon, and sex may be infrequent and sporadic. This may lead to reluctance to adopt a regular family planning method or make it harder to plan to use one (Grasier and Gabbie, 2008). For many youth, sex is largely unplanned and sporadic, yet few young people know about the option of emergency contraception after unprotected intercourse (Farquharson and Stephenson, 2010). According to Srikanthan (2008), “religions and cultural beliefs can also play a part in the reluctance of using emergency contraception for young people”.
Official statistics on pregnancy related school dropout in Namibia for 2010 show that a total of 1500 learners dropped out for this reason – with 96% of them being girls (10-20 years). Most of these girls have resorted to unsafe abortion (Namibia Planned Parenthood Association [NAPPA], 2010). There are large regional disparities, with pregnancy-related dropouts being highest by far in Kavango and Ohangwena, followed by the regions of Omusati, Oshikoto, Oshana and Caprivi. Information from other sources indicates that the official figures may be an underestimate (GRAP-LAC, 2008).

In developing countries the lack of knowledge and access to emergency contraception may result in young females resorting to unsafe abortions, which contribute significantly to maternal mortality and morbidity (Allison, Melanie and Andrew, 2005) but by making ECPs accessible to adolescents can help to prevent unintended pregnancy. Prevention of unintended pregnancy in turn prevents the risk that adolescent pregnancy poses to mother and child including abortion. In addition, providing ECPs can provide adolescent with the bridge to other reproductive health services (Parker, 2005).

Despite the fact that the Government of Namibia has introduced EC to the general population (MOHSS, 2010) the issue of unintended pregnancy still exists. This could be due to limited information as sexual education is not taught in schools and is a taboo discussion topic at home, and negative attitudes among the adolescents who are primarily those in need of EC (Bruyn and Mallet, 2011).
Thus, this study was conducted to connect it to the problem, just situated in Ongwediva town, Oshana region and assessed knowledge, attitudes and practices (KAP) of emergency contraception among Mweshipandeka and Gabriel Taapopi school female learners.

1.3 AIM OF THE STUDY

The aim of the study was to assess the knowledge, attitudes and practices of female school learners in Mweshipandeka and Gabriel Taapopi High schools on emergency contraceptives.

1.4 SPECIFIC OBJECTIVES

The specific objectives for the research were:

- To determine/estimate the level of knowledge and awareness of female school learners towards the use of emergency contraceptive.

- To determine/explore on the attitudes and practices of female school learners towards the use of emergency contraceptive.

1.5 DEFINITION OF TERMINOLOGY

Assessment- The systematic collection, review and use of information about certain situation/program in order to improve.
**Attitude** - Hypothetical construct that represents an individual's degree of like or dislike for something positive or negative views of a person, place, thing or event.

**Emergency Contraception** - Are the medicine used to prevent pregnancy in women who have had unprotected sex or the birth control method have failed.

**Fecund** - Producing or capable of producing an abundance of offspring or new growth; fertile.

**Knowledge** - Familiarity with someone or something, which can include facts, information, descriptions, or skills acquired through experience or education. It can refer to the theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicitly (as with the theoretical understanding of a subject); and it can be more or less formal or systematic.

**Practice** - Is an act of performing an activity or exercise (a skill) repeatedly regularly in order to improve or maintain one's proficiency.
**Rape** - The unlawful compelling of a person through physical force or duress to have sexual intercourse.

**Reproductive age** - The span of ages at which individuals are capable of becoming parents. The term can be applied to men and women but most frequently refers to women.

**School learner** - Adult female

1.6. **SIGNIFICANCE OF THE STUDY.**

The outcome of this study will lead to a better understanding of practices of the school learners towards the use of emergency contraceptive. Furthermore, it will have an impact on practice it might facilitate the implementation of ECP policies. It will assist health workers to promote emergency contraceptives, while understanding the attitudes and practices of female school learners regarding emergency contraceptives.

1.7 **SUMMARY**

A general overview was given about the proposed research problem. The researcher identified the need for a study to assess female learners’ knowledge of emergency
contraception. The research process was discussed briefly in order to place the study in context and to give the reader an overview of the steps that were followed to achieve the research aim and objectives. It was clear that an in-depth study was necessary to ensure that measures could be taken to address the high rates of unwanted and unplanned pregnancies among learners in secondary school.
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Literature review helps to lay the foundation and provides the context for a new study. By doing a thorough review, researcher determined how best to make a contribution to the existing base of evidence, whether there are gaps or inconsistencies, or whether a replication with a new study was done. Reviewing the literature also can also help to identify relevant conceptual frameworks or appropriate research methods. A literature review also plays a role at the end of the study as researchers try to make sense of their findings (Polit and Beck, 2008).

2.2: CONCEPTUAL FRAMEWORK

According to Wondimu (2008) a conceptual framework is a model that determines what questions need to be answered by the person conducting the research, as well as how empirical procedures are to be used as an instrument when answering these questions. Based upon the literature reviewed above, in the study the socio-demographic, exposure to different communication media and other communication are considered as independent variables, knowledge and practice of contraception and exposure to unprotected sex and its consequences as intermediate variables, and knowledge and attitude of EC as the dependent variable. The independent variables: socio-demographic factors such as age, marital status, sexual experience, level of education, exposure to different media and communication about reproductive health matters like
(family, peer, and boyfriend/husband communication) affects or determines knowledge, attitude and practices of EC among female school learners directly or through the knowledge and practice of regular contraception and exposure to unprotected sex and its consequences like induced abortion.

**Figure 2.2 below, illustrates the conceptual framework of variables that influence KAP of female learners in this study.** Adopted from Wondimu (2008) and modified by the researcher.
2.3. OVERVIEW OF EMERGENCY CONTRACEPTION

Emergency contraception is defined as a medication or device used to prevent pregnancy after unprotected intercourse (including sexual assault) or after a recognized contraceptive failure. It has alternatively been called post-coital contraception or ‘the morning after pill’. These terms are confusing and imply that EC pills can only be taken immediately, which is incorrect. They can be used, while with decreasing efficacy, for up to five days post intercourse (Calabretto, 2009). As the name implies, the EC should only be taken or inserted in cases of emergency and not be used as a regular contraceptive, it is intended as a backup method only and not as long term contraceptive (Lindeque, 2008, Steyn and Mason, 2009, NAPPA, 2010). The method is simple, effective and safe, but does not protect from sexually transmitted diseases (STI) and Human Immunodeficiency Virus (HIV) (Cheng, Gülmezoglu, Piaggio, Ezcurra and Van Look, 2008).

Much research suggests that emergency contraceptive reduces the risk of pregnancy of women who have had unprotected sexual intercourse by approximately 75% to 89% if is taken within 72 hours after engaging in unprotected sexual intercourse (Goodwin, Montoro and Muderspach, 2010). Emergency contraception prevents pregnancy in the same way as other hormonal contraceptives such as pills, injectable (Depo Provera) or even breast feeding by delaying or inhibition of ovulation, inhibiting fertilization or inhibiting implantation of the fertilized egg by altering endometrial receptivity, or possibly causing regression of the corpus luteum. This depends on when during the
menstrual cycle of a woman initiates the method. (Chaudhuri, 2008). In this study correct time for EC is within 72 hours after unprotected sexual intercourse.

2.4. HISTORICAL BACKGROUND OF EMERGENCY CONTRACEPTION

The roots of modern emergency contraception date back to the 1920s, when researchers initially demonstrated that estrogen ovarian extracts interfere with pregnancy in mammals (Van Look and Von Hertzen, 1993). Veterinarians were the first to apply this finding, administering estrogens to dogs and two horses that had mated when their owner had not wanted them to. Despite scattered reports of clinical use of post-coital estrogens in humans as early as the 1940s (Van Look and Von Hertzen, 1993) the first documented cases were not published until the mid-1960s, when physicians in the Netherlands applied the veterinary practice of post-coital estrogen administration to a 13-year-old girl who had been raped at mid-cycle. (Haspels, 1994).

At around the same time, U.S. researchers were investigating the efficacy of high-dose estrogens, and toward the end of the decade, these preparations became the standard. Women typically received either conjugated estrogens, the steroidal estrogen ethinyl estradiol or the non-steroidal estrogen diethylstilbestrol (DES). Today, in places where high-dose estrogens are still used, they are administered in the so-called 5x5 regimen: 5 mg of ethinyl estradiol per day for five days. (Haspels, 1994).
In the early 1970s, the high-dose estrogen regimens gave way to a combined estrogen-progestin standard. Canadian physician Albert Yuzpe and his colleagues began studies in 1972 on this combined regimen, guided by their observation that a single dose of 100 mcg of estrogen coupled with 1.0 mg of the progestin dl-norgestrel induces endometrial changes that are incompatible with implantation (Van Look, Von Hertzen, 1993). The "Yuzpe method," as it came to be known, replaced high-dose estrogen formulations, chiefly because it offered a lower incidence of side effects, but also because the commonly used DES was linked to vaginal cancer in the daughters of women who had taken it to prevent miscarriages. The regimen now begins within 72 hours after unprotected intercourse and typically consists of 200 mcg of ethinyl estradiol and 1.0 mg of levonorgestrel.

Research on regimens that omitted estrogen also began in the early 1970s, predominantly in Latin America. A 1973 report described the results of a large-scale trial investigating five doses of levonorgestrel: 150 mcg, 250 mcg, 300 mcg, 350 mcg and 400 mcg per tablet. The regimen was tested as an ongoing post-coital method, rather than an emergency formulation. Participants in the trial were instructed to take a tablet as soon as possible within three hours after intercourse and could use the method as often as necessary; some continued to use this method for two years (Kesserü, LarranagaandParada, 1973). The results showed that the lower doses were not efficacious and caused some menstrual disruption, chiefly a shortening of the cycle. This experiment marked the first major venture into ongoing post-coital contraception.
and laid the groundwork for the levonorgestrel methods that have become available in many developing countries and in Eastern Europe.

The late 1970s were to offer the chief non-hormonal method available today, the copper-releasing IUD. This device causes endometrial changes that inhibit implantation; in addition, the copper ions released appear to be directly embryotoxic (Van Look and Von Hertzen, 1993).

More recently, two other methods have been investigated: danazol and mifepristone. Danazol, a synthetic progestin and anti-gonadotropin, was first used as an emergency contraceptive in the early 1980s (Van look and Von Hertzen, 1994). Mifepristone, more commonly known as RU-486, is a potent anti-progesterone registered in four countries as an abortifacient. Relatively little research is available on these newer methods, although mifepristone in particular appears extremely promising as an emergency contraceptive.

2.5 EFFICACY STUDIES ON EMERGENCY CONTRACEPTION

Efficacy rates for EC are estimated by comparing the number of pregnancies observed among a large number of women using the EC method to the number of pregnancies that would be expected in an equivalent number of fecund women with the same coital history, but using no contraception and it is expressed as a percentage. To reduce the likelihood of error and increase the reliability of the estimates, researchers should limit study populations to women with regular cycles and should define mid-cycle (when
ovulation occurs) as 14 days before the expected onset of the next menses in women with 28-day cycles. Using published estimates of the probability of conception on each day of the cycle (Camp, 1994) researchers can calculate the expected number of pregnancies among women in their trials. The problem of this trial’s result is that calculations should be regarded as lower bounds, because the published estimates are based in part on women who have undergone artificial insemination using frozen sperm and in part on couples who may have been selected for below-average fecundity (Camp, 1994). Another problem with many trials of emergency contraception is that researcher may include some women who had become pregnant because of an act of unprotected intercourse occurring more than 72 hours before the start of the emergency contraception regimen.

In order to have more accurate results, investigators should ensure that there is no woman participating in the trial who conceived within 72 hours before the trial. Sensitive human chorionic gonadotropin assays may play a role here, particularly for trials of methods that can be initiated later than the traditional 72 hours after unprotected intercourse. With five-day cutoffs, for example, ultra sensitive pregnancy tests could be used to rule out preexisting pregnancies.

Investigators should also limit analysis of failure to women who did not have further acts of unprotected intercourse during the treatment cycle. A number of trials have made participants' willingness to abstain or to use condoms for the rest of the cycle a
condition of inclusion. (Of course, trials of the IUD need not impose this rule, since this method is a highly effective ongoing contraceptive.)

Because it is unclear whether a relationship exists between the exact time elapsed since unprotected intercourse and the efficacy of the regimen, investigators should record and analyze the number of hours between unprotected intercourse and initiation of therapy. Some research also suggests that the time limit for the Yuzpe regimen may be extended to five days (Trussell, Ellertson and Stewart, 1996).

Investigators may also wish to limit analysis in their studies to women of proven fertility. Although such a practice may slow the trials unacceptably (because many women seeking emergency contraception are young and have never been pregnant), it might afford more precise estimates of a regimen's efficacy. Of course, women who are not of proven fertility may also require emergency contraception, but there is a need to analyze them separately from women reporting prior pregnancies.

Similarly, although efficacy tests should exclude women who have had more than one act of unprotected intercourse during a menstrual cycle, such women should receive EC when they request it. Studies that required women to state that they had not had any other acts of unprotected intercourse in the cycle prior to the 72 hours before initiating treatment found that women frequently misreported their experience in order to obtain treatment (Trussell, Ellertson and Stewart, 1996). Later protocols by these same investigators allowed any women requesting the treatment to obtain it, but limited
analysis to women who had had only one act of unprotected intercourse in the cycle and whose one act had occurred less than 72 hours prior to the start of treatment.

Because the conditions of the ideal trial may be burdensome to women, investigators must take special care to reassure them that they can receive treatment even if, for example, they are not willing to abstain from intercourse for the balance of the cycle. It may be best, in fact, for investigators to treat any woman needing the therapy, and then to analyze data only from those meeting the criteria.

2.6: INTERNATIONAL CONFERENCES/AGENCIES PROMOTE EMERGENCY CONTRACEPTION

From a public health perspective, wider availability has been supported by numerous reproductive and other professional/international health organizations and conferences as it is logical that ready access to EC should reduce the number of unplanned pregnancies, along with the rate of abortions.

2.6.1. Cairo International Conference on Population and Development

As affirmed at the 1994 International Conference on Population and Development in Cairo, women have the right to control the number and timing of their pregnancies. To realize this right, women throughout the world need access to a broad range of contraceptives, including EC, as well as to safe abortion services. While most contraceptives are intended for use before or during intercourse, some methods can be used within a short time after unprotected intercourse. Rumored folk methods such as
post-coital douching with Coca-Cola are of dubious efficacy, but fortunately are not a woman's only alternative. Within the last 30 years, a number of approaches, which seem safe and efficacious, have been developed.

2.6.2 Bellagio conferences

The need to promote emergency contraceptives emerged at a 1995 meeting in Bellagio, Italy convened by the Rockefeller Foundation, where it was revealed that emergency contraception had the potential to significantly reduce the number of unwanted pregnancies in the developing world.

A group of seven internationally recognized organizations working in the field of family planning like WHO and International Planned Parenthood Federation (IPPF) then formed the Consortium for EC with the specific task of building partnerships in developing countries and promoting emergency contraceptive pills (ECPs).

2.6.3. The International Consortium for Emergency Contraception's (ICEC)

ICEC started in 1996. Its mission is to expand access to emergency contraception (EC) around the world, with a focus on developing countries. ICEC brings together over 2,000 health care providers, pharmacists, researchers, pharmaceutical manufacturers, and others committed to its mission.
2.6.4. The European Consortium for Emergency contraception (ECEC)

ECEC was launched in Athens on June 21st at the 12th Congress of the European Society of Contraception and Reproductive Health. The reasons for the launch of ECEC were as follows:

- Access to EC is unequal across the region.
- Absence of a harmonized evidence-based approach to EC recommendations.
- Current changes in the EC landscape are likely to lead to further inequalities in access to reliable EC options.
- ICEC works to expand access to EC worldwide, but focuses on the developing world.
- ICEC and partners identified a need to develop a regional platform to serve as an authoritative source of information, and a voice for more equitable access to EC in Europe.

Its mission is to expand knowledge about and access to EC in European countries, and to promote the standardization of EC services delivery in the European context, to ensure equitable access within the region. (Not only with the 27 EU countries, but with all countries considered Europe by the EU and the WHO).
2.7: EMERGENCY CONTRACEPTION METHODS USED WORLDWIDE

2.7.1 Yuzpe method/regimen

This method involves taking a high dose of a standard combined oral contraceptive within 72 hours of unprotected sex. When using the Yuzpe method for emergency contraception, women can take a high dose of a standard combined oral contraceptive ("the pill"), which contains both an estrogen and a progestin. Depending on which pill is used, this may involve taking two to six pills for each dose, for a total of two doses taken 12 hours apart. It should be started within 72 hours (three days) of unprotected sex. One reason for the popularity of the Yuzpe method is that the hormones it uses are the active ingredients found in several brands of ordinary combined oral contraceptives.

However, after it was discovered that using progestin-only pills was more effective and caused less nausea and vomiting, the Yuzpe method was largely replaced by progestin-only emergency contraceptives. Nausea and vomiting are some of the major drawbacks of the Yuzpe method, as many women actually vomit up the pills, making them less effective, but there are a few rare circumstances in which the Yuzpe regimen might be considered a good option. In general, such circumstances occur when access to a progestin-only emergency contraceptive is not available. This might happen in rural areas where it may be difficult to get to a pharmacy (Farajkhoda, at el, 2009).

Several other brands of combined oral contraceptives contain the same hormones needed for the Yuzpe method, but in lower doses (Ellertson at el, 2003). Women using these brands therefore have to take a greater number of pills; for example, women in the
United States can use the brands Nordette, Levlen and Lo/Ovral for the Yuzpe method if they simply double the number of tablets of these lower dose oral contraceptives. (In other words, they would take four pills for each half of the regimen.) A number of triphasic oral contraceptive formulations also contain the hormones needed for the Yuzpe method. For example, eight of the yellow tablets (corresponding to cycle days 12-21) of Triphasil or Tri-Levlen constitute the complete regimen.

The failure rate of the Yuzpe method ranges from about 0.2% to 2% (Van Look, Von Hertzen, 1993). This rate is useful insofar as it tells clinicians that of all women they treat with this therapy, 2% or less will likely experience pregnancy. However, these results do not account for the fact that some of the women would not have become pregnant even if they had not used the method under study.

Therefore, better studies of the method limit their scrutiny to women with regular cycles. For such women, an expected number of pregnancies can be estimated using published fertility tables if investigators record the cycle day of unprotected intercourse (or details about a woman's cycle, such as its usual length and the first day of the last menstrual period). From the 10 available studies that approached this optimal design (Ellertson et al, 2003). It is possible to calculate a proportionate reduction in pregnancy associated with the use of the Yuzpe method. By comparing observed and expected pregnancies, investigators have demonstrated that the Yuzpe method reduces the chances of pregnancy by about 75% (Ellertson et al, 2003).
Because the regimen consists of the same active ingredients as certain combined oral contraceptives, and because it has never been specifically regulated by the U.S. Food and Drug Administration, the contraindications for its use sometimes have simply been adopted wholesale from those stated for combined pills: current or past thromboembolic disorders, cerebrovascular disease or coronary artery disease, known or suspected carcinoma of the breast or endometrium, jaundice, and hepatic adenomas or carcinomas. Women older than 35 who smoke heavily have also been considered ineligible for the regimen. General medical consensus, however, is that the regimen has no contraindications (Farajkhoda et al, 2009).

Despite the lack of evidence, some clinicians fear that the Yuzpe regimen may heighten the risk of fetal malformation if administered to a woman in early pregnancy. To be more conservative, a clinician should talk with a woman before she begins the regimen to rule out the possibility of a preexisting pregnancy (i.e., one that resulted from an act of unprotected intercourse occurring more than 72 hours earlier).

Side effects of the Yuzpe method are the same as those commonly experienced with short-term use of combined oral contraceptives: nausea (including vomiting, headaches, breast tenderness, abdominal pain and dizziness. Nausea, by far the most common of these, typically is reported by 50% of users. Taking the tablets with food, or with milk may lessen nausea, although whether such a practice inhibits absorption of the drug or renders it less effective remains to be investigated. Some clinicians also routinely give
an antiemetic or anti-nausea medication such as dimenhydrinate or cyclizine hydrochloride. (Ellertson et al, 2003).

2.7.2 Levonorgestrel (LNG)

The levonorgestrel emergency contraceptive regimen consists of two doses of 0.75 mg of levonorgestrel taken 12 hours apart, starting within 48 hours after unprotected intercourse. Although progestins were among the first drugs used in postcoital contraception, few studies of the emergency levonorgestrel regimen have controlled for cycle day of unprotected intercourse. The best and most recent of the levonorgestrel emergency contraceptive trials, conducted in Hong Kong (Raymond, Taylor, Trussell and Steiner, 2004) indicates a failure rate of 2% and a proportionate reduction in pregnancy of 60%. Levonorgestrel is available in a strip of 10 pills containing 0.75 mg each for this use and a four-pill strip, this emphasizes that the pills are intended for sporadic or emergency contraception.

The brand (Postinor) is advertised for women who have intercourse fewer than four times per month. Like the Latin American progestin-only formulations that paved its way, Postinor is meant to be taken within eight hours after unprotected intercourse when used as a primary postcoital method. Unlike commercial formulations of the Yuzpe method, Postinor is available in many developing countries and is even sold over the counter in some places.
Certain brands of progestin-only oral contraceptives can also be adapted for emergency use. The Ovrette brand, for example, contains 0.075 mg of dl-norgestrel, the equivalent of 0.0375 mg of levonorgestrel, per tablet. Therefore, a total of 40 tablets make up the complete regimen. Although such a regimen is impractical for most women, this option may be important for women with estrogen contraindications (Raymond, Taylor, Trussell and Steiner, 2004).

2.7.3 Mifepristone.

Mifepristone, potentant progesterone, has been tested since the early 1980s for its abortifacient qualities (Marions at el, 2002). More recently, in two studies evaluating mifepristone as an emergency contraceptive (Ellerton at el, 2003), the regimen consisted of 600 mg of the drug taken in a single dose within 72 hours after unprotected intercourse. No pregnancies were observed among mifepristone users in either trial, despite a combined enrollment of nearly 600 women. The side effect profile of mifepristone was also generally superior to that of the Yuzpe regimen, although menstrual disturbances appeared more commonly than with the Yuzpe method.

Lower doses of mifepristone may also be effective, and the time limit in which the therapy may be used could extend beyond 72 hours. The 600 mg dose is the same dose currently used as part of the medical abortion regimen provided in France. (Hamoda at el, 2004). The World Health Organization is investigating the efficacy of mifepristone in much smaller doses (50 mg and 10 mg) (Van Look, Von Hertzen, 1994). If proven safe and effective, a smaller dose (e.g., 10 mg or 1 mg) could be more palatable.
politically in countries where abortion is restricted, in so far as it might allay fears that women will hoard pills to use for medically induced abortion.

2.7.4. High dose estrogens

Post-coital treatment with high-dose estrogens (the standard regimen wherever emergency contraception was offered during the 1960s and early 1970s) is at least as effective as the Yuzpe method, but produces more side effects. These regimens must be initiated within 72 hours after unprotected intercourse and are administered in two daily doses for five days. Each dose (2.5 mg of ethinyl estradiol, 10 mg of esterified or conjugated estrogens, or 5 mg of estrogen) is equivalent to 25 mg of DES. One example of a high-dose estrogen still prescribed as an emergency contraceptive is Lynoral, marketed and used in family planning programs in the Netherlands (Mittal, Lakhatia, Kumar and Singh 2001).

2.7.5 Danazol

The synthetic progestin and androgen danazol (marketed in the United States as Danocrine) can be used as an emergency contraceptive. The danazol regimen consists of two doses of 400 mg each, taken 12 hours apart. Regimens, involving three doses of 400 mg each, taken at 12-hour intervals, and two doses of 600 mg each, taken 12 hours apart, have also been investigated (Jadhav, Vavia and Nandedkar, 2007). Danazol's advantages are that its side effects are less prevalent and less severe than those associated with the Yuzpe method, and that it can be taken by women with contraindications to combined pill or estrogen. However, relatively little information is
available about the regimen. Of the two most thorough trials of the regimen, one concluded that the method is effective, while the other concluded that danazol does not work (Jadhav, Vavia and Nandedkar, 2007).

2.7.6 Copper IUD as EC

Intrauterine contraceptive device (IUD) is a device inserted into the uterus (womb) to prevent pregnancy. The IUD can be a coil, loop, triangle, or T in shape made of plastic or metal. An IUD is inserted into the uterus by a healthcare professional. IUDs have been safely used to prevent pregnancy by millions of women around the world, especially in European countries and have been used as emergency contraception for at least 35 years. Of two types of IUDs available, one can remain in place for 10 years, while the other must be replaced every year. How IUDs prevent pregnancy is not entirely clear. They seem to prevent sperm and eggs from meeting by either immobilizing the sperm on their way to the Fallopian tubes or by changing the uterine lining so the fertilized egg cannot implant in it.

IUDs have one of the lowest failure rates of any contraceptive method. According to meta-analysis of 20 studies of the post-coital insertion of a copper IUD, reveals that the failure rate of this approach is probably no higher than 0.1%. (The IUD offers the additional advantage of providing up to 10 years of contraceptive protection. The service delivery challenges raised by the method, however, may be severe, particularly in some developing countries. In addition, the method is contraindicated for women at risk of sexually transmitted disease (Stubbs and Schamp, 2008).
2.8: EMERGENCY CONTRACEPTION METHODS USED IN NAMIBIA

Emergency contraception was officially introduced in Namibia by the Ministry of Health and Social Service in 2010 with the aim of improving reproductive health (RH) (MOHSS, 2012). Though not widely used, currently, the various methods that are recommended to be used as emergency contraceptives in Namibia include:

2.8.1 Levonorgestrel-only regimen

Oral emergency contraception consisting of progestin has only been available as Escapelle®, Norlevo® and Microval®. Escapelle® contains 1.5mg levonorgestrel and is available as a single oral dose (MOHSS, 2012). It should be taken within 120 hours after unprotected sexual intercourse to be effective. Norlevo® is available as a two-tablet dose, each tablet containing 0.75mg LNG.

The two tablets should be taken 12 hours apart, but can also be taken simultaneously as a single dose (MOHSS, 2012). Microval® is an option if other regimens are not available. This type of contraceptive is available in two dosages of 25 tablets each. The first dose is to be taken within 120 hours after engaging in unprotected sexual intercourse, and the second dose of 25 tablets 12 hours after the first dose. This is not generally a popular method due to the large intake of tablets (MOHSS, 2012).
2.8.2 Combined estrogens-progestin (Yuzpe) regimen:

Two dosages of at least 100μg ethinyl estradiol and 0,5mg levonorgestrel should be taken within 120 hours after unprotected sexual intercourse, followed by a second dose 12 hours later. Certain Contraceptives can be used in a particular combination for this regime (MOHSS, 2012).

2.8.3 Copper IUD:

This device may be inserted five to seven days after the estimated time of ovulation. This method is highly effective and should be considered by women who need a form of emergency contraception if they present between 72 and 120 hours after unprotected sexual intercourse. An added benefit is that this device can be left in situ as a long-term contraceptive method (MOHSS, 2012).

2.9: LAWS THAT HAVE IMPACT ON EMERGENCY CONTRACEPTION

2.9.1 Abortion laws around the world.

Globally, abortion laws are immensely varied based on the grounds for which abortion is permitted, which ranges from no grounds to some, such as to save a woman’s life, to preserve physical health, to preserve mental health, in the case of rape or incest, in the case of fetal impairment, for economic or social reasons, and without restriction as to reason. Statistics show that globally, 60 percent of women of reproductive age (15-44) live in countries where abortion is broadly legal and the remaining 40 percent live in places where abortion is highly restricted, which are almost entirely in the developing
world. (Cohen and Susan, 2009) According to WHO (2011) it was found that “with the exception of Eastern Europe, regions with less restrictive abortion laws have low rates of induced abortion; unsafe abortions are nonexistent or the rate is very low. Conversely, where the laws are restrictive, most abortions are unsafe; and the combined induced abortion rates are high.

2.9.2 Abortion and sterilization law in Namibia

Under the Abortion and Sterilization Act of South Africa (1975), which Namibia inherited at the time of independence in March 1990. Abortion is allowed only under restricted conditions, like when the continued pregnancy endangers the woman’s life or constitutes a serious threat to her physical health. When the continued pregnancy constitutes a serious threat to the woman’s mental health, creating the danger of permanent damage to that health. When there exists a serious risk that the child to be born will suffer from a physical or mental defect so as to be irreparably seriously handicapped; when the foetus is alleged to have been conceived in consequence of unlawful carnal intercourse (rape or incest); or when the foetus has been conceived in consequence of illegitimate carnal intercourse and the woman is, owing to a permanent mental handicap or defect, unable to comprehend the implications of or bear the parental responsibility for the “fruit of coitus”. In addition to the woman’s physician, two other physicians are asked to endorse the existence of evidence for an abortion. This has undoubtedly contributed to the conclusion of an international study, published in 2010, that Namibia's progress in improving maternal health has been “insufficient”
Today, Namibia's government is increasingly putting measures in place to curb the high number of pregnancy-related deaths suffered by girls in the country. Nevertheless, discussions around the antiquated pre-independence abortion law have remained limited. The lack of EC use and access to safe, legal abortions, are contributing factors to the problem of abandonment of newborns, which is acknowledged to be a serious problem in the country.

**2.9.2.1 Unsafe abortion among school learners in Namibia.**

The termination of pregnancy (abortion) is a universal phenomenon occurring at all levels of societies. Abortion is defined as the discarding by the uterus of the product of conception before the 24\textsuperscript{th} week of gestation (WHO, 2012). The abortionists consist mainly of health workers or sometimes quacks. Places where abortions are conducted are numerous, including health facilities, hospitals, health centers, dispensaries, ordinary bedrooms, and occasionally in a simple room. Induced abortion is either safe abortion or unsafe abortion. It is unsafe abortion if the termination of unwanted pregnancy either done by a person lacking necessary skills or in an environment lacking the minimal medical standards or both.
Unsafe abortion causes a significant proportion of maternal deaths and morbidity. Nearly 70,000 women die every year due to the complications of unsafe abortion. Worldwide women of all ages seek abortion, but in sub Saharan Africa there is the highest burden of ill health and deaths from unsafe abortion, but there is more burden among the youths as it is shown that one in four unsafe abortions is among adolescents aged 15-19 years (WHO, 2011). It is also reported that out of 210 million pregnancies that occur around the world each year, 46 million (22%) are terminated.

In several other African countries, fear that a pregnancy would disrupt education is one of the main reasons young women cite for seeking abortions. There may be a link between, educational policies and abortion in Namibia as well. Many learners have said that they would consider abortion if they became pregnant, while several reported that they had actually resorted to this option themselves. In discussing motivations for abortion, learners cited not only fears of having to leave school, but also shame, embarrassment, stigma, worries about not being able to support the child financially, not knowing how to look after a baby, and lack of emotional support from their parents or the baby’s father. While no data exist on the number of Namibian school girls who have procured abortions in order to remain in school, some have certainly done so. Abortion in Namibia is illegal except in very narrowly defined circumstances and the possibility of girls in such situations resorting to Backstreet abortions with dire health consequences or even fatalities is very real. Restrictive school policies may also lead to baby-dumping or infanticide, although there
are as yet no studies which document the extent of this connection. (GRAP-LAC, 2008)

More than 30 years of experience with emergency contraceptives has established that the methods can substantially reduce the chances of pregnancy that their side effects are acceptable to women and that service provision requirements are not generally onerous to clinicians. While there is a need for additional research, the available literature sustains a compelling case for expanding emergency contraception at once, if efficacy and safety considerations are the sole criteria.

Emergency contraceptives are simple to use, relatively inexpensive and, in many cases, already accessible to the women who need them. The chief remaining obstacle to their use may well be ignored. Reproductive health advocates and providers need to educate each other and to educate women about these important options.

2.10: UNPLANNED PREGNANCY AMONG LEARNERS

In the entire world, pregnancy is a happy event for any women, men and the community in general, but in other side, it can be unhappy and painful event which is often accompanied by negative impacts socially, economically and politically. Around the world women, especially young ones, are becoming pregnant unintended. This contributes greatly to the increase in maternal and infant mortalities.

Learners in secondary schools are part of the significant high-risk group, as these young adults find themselves at a stage where they begin to discover their sexuality. They are free from parental guidance, which gives them a feeling of freedom, and in turn,
cultivates a feeling of independence. This feeling of independence is often acquired at an early age when young people need to make important choices, some of which are not always to their advantage. This view is supported by Lefkowitz, Gillen, Shearer and Boone (2004) who point out that “people start to explore their sexuality at young age”. The results of regrettable choices often lead to unwanted and unplanned pregnancies.

2.10.1 School drop-out due to pregnancy in Namibia

A schoolgirl makes an unwise decision. Or she is coerced into having sex against her will by means of physical force, economic pressure or peer pressure. She becomes pregnant. The person responsible for the pregnancy may be a schoolboy, a teacher, a ‘sugar daddy’ or even a relative. The problem of teenage pregnancy among schoolgirls is a major concern in many countries and a constraint in the elimination of gender disparities in education. (GRAP-LAC, 2008).

In 2007, there were 117 females for every 100 males in secondary school, with the overall percentage of female enrollment being higher than male enrollment in all secondary grades. While females had higher promotion rates and lower repetition rates than males up to Grade 8, the opposite was true for higher grades; and after Grade 8, a higher percentage of females than males left school, with the main reason for dropouts being pregnant. Other evidence indicates that these official statistics are likely to be an underestimate.
For example, in 2004, Women’s Action for Development surveyed six schools in the Khomas Region and found that at least 68 pregnancies had occurred amongst school girls there between January and September 2004, involving girls as young as age 15. As another point of comparison, a survey was done in all schools early in 1996 to establish how many learners had left school in 1995, and their reasons for dropping out. A total of 29,436 learners was reported to have dropped out in 1995, and the survey found that 24% of female dropouts – and up to 40% in some Regions – were due to pregnancy. (GRAP-LAC, 2008).

The effect of school dropout includes financial effects. This is a major effect because when someone drop out of high school they are more likely to live in poverty. This also affects their income and their chances to get a job. “Dropouts pay a high price, too. They are twice as likely to be unemployed and more than twice as likely as others to be in poverty.” This implies that dropping puts those people at risk of not having a job and depending on the government a lot for things like food stamps.

Dropping out of school not only affect the individual, but also society. “Dropping out of high school can result in long financial losses not just for the individual, but for society as a whole.” This shows that when people drop out of school they’re not just affecting themselves, they are also affecting the economy. “Dropouts contribute disproportionately to the unemployment rate. High school graduates have a better chance of being employed than dropouts.
In Namibia there is no research performed on how school dropout affects the economic system of the state.

2.11: EMERGENCY CONTRACEPTION

2.11.1 Mechanism of action of EC

Possible reproductive targets for EC include follicular development, ovulation, sperm transport, fertilization, implantation and corpus luteum function. As sperm are viable in the female reproductive tract for up to five (or sometimes seven) days, while ovum can only be fertilized within 24 hours of ovulation, the mechanism of action most likely differs depending on when hormonal EC is given in relation to the time of intercourse and the time of ovulation (Allen and Goldberg, 2007). Research has shown that the primary mechanism of action is by the prevention or postponement of ovulation through its effect on the luteinizing hormone (LH) surge (Allen and Goldberg, 2007), but that will work only if given at least two days before ovulation (Baird, 2009).

The overall biological data strongly suggest that the most likely mode of action is thus pre-fertilization. This is supported by (and explains) the reducing efficacy rates with the greater time interval between coitus and administration described above. That is, the later hormonal EC is given, the more likely it is that the LH surge has already occurred and ovulation will not be prevented. There are no data to support the view that LNG can impair the development of the fertilized embryo or prevent implantation, but any post-fertilizations action cannot be completely excluded.
However, it is clear that LNG does not disrupt an established pregnancy, defined as beginning with implantation, and is not considered an abortifacient (Allen and Goldberg, 2007).

### 2.11.2 Effectiveness of emergency contraception

The effectiveness of EC is not 100%, but its effectiveness depends on the method used, and the time of administration following unprotected sexual intercourse. They are generally effective and safe, with mild side effects that can be tolerated by the users. EC Pills can effectively reduce the risk of pregnancy by 75% to 89% only from acts of sexual intercourse that took place in the 72 hours before and work best when taken as soon as possible after unprotected sex. EC Pills will not necessarily protect a woman from pregnancy from acts of sex after she takes EC Pills, even from the next day. There is no delay in return of fertility after taking EC Pills. A woman can become pregnant immediately after taking EC Pills. In order to stay protected from pregnancy, women must begin to use another contraceptive method at once. IUCD is very effective by 99.9% if inserted within 120 hours (5days) of unprotected sexual intercourse. Just as for ECPs, there is no delay in return of fertility after the IUCD is removed. However the IUCD can be left in the uterus as a long term contraceptive method on the client with informed choice (MOHSS, 2012 and WHO, 2004).

### 2.11.3 Side effects and contraindication of emergency contraceptives

There is no any contraindication to the use of EC but clients who wish to avoid pregnancy should be told to use the conventional methods of family planning. Some of
the more common side effects of ECPs are slightly irregular bleeding for 1-2 days after taking ECPs, menstrual bleeding that starts earlier or later than expected, nausea, abdominal pain, fatigue, headache and breast tenderness. In the week after taking ECPs user can experience nausea, abdominal pain, fatigue, headache, breast tenderness, dizziness and vomiting (Heffner and Schust, 2010).

The side effects of IUCD as reported by some users are prolonged and heavy menstrual bleeding, irregular bleeding, changing in bleeding pattern and more cramps and pain during menstrual bleeding (Heffner and Schust, 2010).

2.11.4 Importance of EC for school learners

The importance of EC is evident in preventing unintended pregnancies and its ill consequences like unintended child delivery or unsafe abortion after unplanned or unprotected sexual intercourse. The concept appears appropriate for adolescents and learners in learning institutions who are subjected to have sex sporadically and occasional sexual intercourse which makes contraceptive planning difficult (Dereje, 2010).

Most victims of unwanted pregnancy are adolescents, who are expelled from school, often ending their formal education and the potential for future employment. For fear of being expelled from school, many adolescent girls resort to clandestine abortion, which often results in serious complications or death (NAPPA, 2010).
ECPs have become available in many developing countries. Other experience contraceptive failure and the failure rates may be higher in young people than adults due to their experience. Furthermore, few people use the method perfectly every time they have intercourse further highlighting the need for an emergency backup method. Also, many young women experience coerced sex, including rape. EC gives these women practically option and a critical last chance to prevent unwanted pregnancy and the associated hardships. It is also controlled by the woman thus empowering her to take responsibility for her life. Therefore, EC needs to be available and used appropriately as a backup in case regular contraception is not used or misused (Linere, 2012 and Parker, 2010).

2.11.5. Correcting myths and misunderstandings on EC

There are often a lot of myths and misunderstandings surrounding the use of emergency contraception. It is important that adequate and correct information be provided to the public and potential users of emergency contraception. Emergency contraception does not cause abortion and does not cause birth defects should a pregnancy occur. It is not dangerous to a woman’s health and does not make women infertile. One other myth surrounding emergency contraception is the perception that it promotes sexual risk taking. EC should be used only after unprotected sexual intercourse and no evidence exists to support the claim that it promotes sexual risk taking. It should not be used as regularly as other contraception method (Kistnasamy, Reddy and Jordan, 2009, MOHSS, 2012).
2.11.6. Recommendations on EC dosage regimen in Namibia

Emergency contraceptive pills contain hormone derivatives known as progestin or a combination of progestin and estrogen like the natural hormone progesterone and estrogen in the woman’s body. These pills are known as progestin only pills (POPs) and combined oral contraceptive pills (COCs) (Prescott, 2011).

In Namibia the emergency contraceptive pills are OVRAL® which the client should take immediately (STAT) 2 tablets of OVRAL orally (P.O) and then 2 tablets after 12 hours. Each OVRAL tablet contains norgestrel 0.5mg + ethinyloestradiol 0.05 mg. Alternatively the person may take 4 tablets of Nordette® orally and then 4 tablets after 12 hours, each tablet containing levonorgestrel150mcg+ethinyl oestradiol 30mcg or 4 of the yellow tablets of Triphasil® orally then 4 tablets after 12 hours, each tablet of Triphasil containing similar elements as Nordette.

All hormonal methods should be given within 72 hours of unprotected sexual intercourse along with anti-emetic metoclopramide (Maxolon) tablets 10 mg P.O PRN as nausea and vomiting may occur. The non hormonal EC, which is IUCD, is inserted within 5 days of unprotected sex by health care providers who have received appropriate training. It can be retained for long term contraception or removed during the next menstrual period. The sooner EC is started, the more effective it is (MOHSS, 2012).
No routine return is required after using EC, the user of EC can come back to see health care providers if she might be pregnant, especially if she has no menstrual bleeding or next menstrual bleeding is delayed by more than a week.

2.11.7. Barriers to EC access and use

Timely access to emergency contraception (EC) is essential. Access has improved considerably, however, barriers to EC access and use continue to exist and are brought about by politics, lack of awareness, lack of clinician discussion of EC and its availability, and other issues.

(ii) Lack of marketing and awareness

Direct-to-patient advertising for ECPs is scarce, consequently; many women do not know that ECPs are effective, safe, and readily available in pharmacies.

(iii) Lack of discussion with a health care provider

According to data from the 2002 National Survey of Family Growth, only 3% of women reported that a health care provider had discussed EC with them in the previous year. Lack of information from a trusted health care provider further limits women's awareness and knowledge of EC and its availability.
(iv) Other barriers

The barriers to the use of EC have not been well studied and documented in Namibia. Studies conducted by researchers in other settings have identified lack of knowledge among the users about the correct timing and dosage of EC pills as a barrier to use of EC. The socio-cultural barriers of sexual and reproductive health education and the fears that young girls will take on the irresponsible sexual behavior and that EC may take over the regular effective contraception have also been cited as barriers to use of EC (Colarossi, Billowitz, and Breitbart, 2010 and Entelemahu, 2007; Mandiracioglu and Turgul, 2003). The general myths and misconceptions that surround the use of contraception could also be contributing to the low use and uptake of EC among students and young people in Namibia.

2.11.8. Need for EC in Namibia

According to NDHS (2006; 2007) Namibia’s maternal mortality ratio (MMR) had almost doubled since 1992 from 225 to 449 per 100 000 live births in 2006, the young people contribute 16% of the total MMR due to unsafe abortion, this is the evidence that there may be a need for use of EC in Namibia. At the age of 15-16 years, most of Namibian girls are already sexually active, but they are inexperienced and unwillingness to use a modern method of contraception, this predisposes them to unwanted pregnancy hence unsafe abortion. (Indongo, 2007, NAPPA, 2010). The EC,
which is entirely female controlled provide an opportunity for women to be in charge of their fertility desires and reproductive health needs concerning when to have a child, how many and with whom. Emergency contraception, which is an efficient means of preventing pregnancy can cut the number of unwanted pregnancies and its associated complications like unsafe abortions and therefore MMR, which is millennium development Goal number 5 (UN, 2004 and WHO, 2004).

2.11.9. Knowledge and practices of secondary school learners on EC

Knowledge and practice of emergency contraception are particularly important because of high rates of unwanted pregnancy for school learners. Different studies, nevertheless, have demonstrated that the knowledge and practice in relation to emergency contraception are limited among adolescents (10-20 years). It is not known how well and common the use of EC is in Namibia since it was only introduced in the last few years. Women, especially young people aged 12-24 need to be aware that there is a method of preventing pregnancy even after an unprotected sexual intercourse. Various studies have been conducted to explore the level of knowledge about emergency contraception among students.

2.11.10 Knowledge of emergency contraception

A study conducted in Switzerland among high school girls (16-20 years) on the knowledge and practices of EC showed that most of the sexually active girls, (89.3%) knew the existence of EC. Among those girls, 20% reported having used EC, and the
majority of them used it only once (64.1%) or twice (18.5%). EC awareness was positively associated with the father's level of education (girls: odds ratio 5.18) and the scholastic curriculum of the respondent. EC use was higher among girls who lived in urban areas (odds ratio 1.91) and occasionally had unprotected intercourse. The study concluded that EC awareness and use should be improved through better information and accessibility; especially among teenagers who place themselves in at-risk situations. EC awareness was also positively associated with the level of education of the girls. (Ottesen, Narring, Renteria and Michaud, 2002).

The study done in Lothian, south east Scotland found that 1121 (93.0%) of secondary school girls had heard of emergency contraception. One hundred ninety four (32.7%) girls had experienced sexual intercourse. Of girls who had experienced sexual intercourse, 61 (31.4%) had used emergency contraception. Knowledge of correct time limits was poor, sexually active girls being the most knowledgeable. An eight hundred sixty one (76.8%) students knew they could obtain emergency contraception from their doctor. Nine hundred twenty five 925 (82.5%) students believed emergency contraception to be effective, but 398 (35.5%) considered it more dangerous than the oral contraceptive oral. The study concluded health education initiatives should target teenagers from less academic schools as they are more probable to be sexually active at a youthful age and are less well informed about emergency contraception.
The survey performed in Sweden indicated that nearly half (45.4%) of the secondary school students had had sexual intercourse and of those, 28.3% said that they themselves had used ECP. Four of five teenagers knew about ECP and where to obtain it if necessary. Many female students (67.3%) also knew that ECP prevented implantation. The main sources of information about ECP were youth clinics \((n = 179)\) and friends \((n = 159)\) (Nordin and Tydén, 2001).

Another study was conducted among 753 secondary school female students from the Douro Region (Northern Portugal) and the findings of the study indicate that there is low (10.5%) knowledge towards EC. The students’ attitude is generally in favor of emergency contraception. Girls in the 12th grade are the students with the broadest effective knowledge (Castro and Rodrigues, 2009).

In a study conducted by Kang and Moneyham (2008) among high school female learners in Korea found that students generally lacked knowledge about emergency contraception and held misconceptions in this regard. As few as 21.3% of the students reported that they had previously received information on emergency contraception, while 79.6% felt that they needed more information on the matter. Less than 50% of the respondents knew that emergency contraception cannot prevent Sexually Transmitted Diseases.
The descriptive study conducted in Nepal to assess the KAP of secondary school girls showed that awareness of EC among respondents was found only 47% among which very few mentioned correct definition (17.02%) and consuming time (9.58%) of the EC. Overall knowledge was assessed as high level, 7.98%, medium level 47.34% and low level 44.68%. Despite inadequate knowledge on EC, attitudes were found favor among the respondents. The practices of EC were found 8.34% among the sexually active respondents (21%). Factors like age, level of education was found associated with KAP on EC. The study concluded that more than half of the respondents were unaware of EC. Among aware, very few were familiar with its correct meaning, consuming time and other related aspects. More effort should be exerted towards arising and improving awareness of EC among youth (Subedi, 2011).

In Africa, a cross-sectional descriptive study was conducted in community High School in Jimma town, South West Ethiopia, the finding found that seventeen (16%) of the female learners were sexually active, five (4.7%) have given a history of previous pregnancy and two had a history of induced abortion. Sixty eight (64.1%) had heard about EC and the most cited sources of information were school teachers and health professionals. Out of those who have heard about EC, only 13 (19%) of the respondents were able to recite correctly the recommended time for EC user (i.e. Within 72 hours of unprotected sex). Awareness about EC was not found to be affiliated with either age or education level. EC use among those with prior knowledge was found to be very low 3 (4.4%). This study concluded that though a significant number were practicing sex
whereas the general awareness, detailed knowledge and practice of EC among adolescent high school students are very low and recommended that adolescent reproductive health/family planning programs be initiated/ expanded in schools. Furthermore, ensuring on safer sex practices and access to adolescent friendly EC information and services should be promoted (Tajure, 2010).

Another study of knowledge of secondary school girls towards EC was conducted by Alemaleyu, (2012) at Jirren high school, Ethiopia. Of the total respondents, 11.6% had ever had a sexual experience. Overall, 58.4% of the total respondents had ever heard of EC and 3.6% had ever used EC. Sixty four percent of those ever heard of EC mentioned pills and 48.0% of them identified 72 hours as a time limit to start the first dose of ECP. The major sources of information were TV/radio, 52% and 23.3% of a health professional. Around 75% of the respondents had positive attitude towards EC. Knowledge had significant association with educational level. The study concluded that information, education and communication are needed to increase awareness.

Another study was done in Thulamela Municipality of Limpopo Province, South Africa. The findings of the study showed that secondary school students were aware of different contraceptive methods that can prevent pregnancy. Only 17% of respondents were aware of emergency contraceptive, intrauterine device. The major source of information were parents and media. Pressure from male partners, fear of parental reaction to the use of contraceptives, reluctance to use contraceptives, poor
contraceptive education and lack of counseling were seen as the main causes of ineffective contraceptive use and non-utilisation. The study concluded that, possible modalities of intervention deal by providing contraceptive counseling and care to empower these school girls to make informed choices on reproductive health (Ramathuba, Khoza and Netshikweta, 2012).

A study undertaken in Kenya found that 57% of secondary school girls knew about emergency contraceptives. Of these, only 18% knew about the correct timing of use. The most common sources of information about emergency contraceptives were friends (81%) and magazines/newspapers (66.9%). Misconceptions were found to exist in respondents responses, mostly centered around perceived adverse effects of ECs. Of the 280 respondents, 22 (8%) had ever engaged in sexual activity and of these, 73% had used a form of contraception. 11 (50%) of those who had engaged in sex, had used an emergency Contraceptive Ever use of ECs was not significantly associated with accurate information regarding ECs (p=0.16). 9 of the 11 users of EC had gotten them from pharmacies. 70% of respondents knew of pharmacies as the main source of ECs while almost all users of ECs had sourced them from pharmacies. Forty-eight percent (48%) (n=133) knew of at least one friend who had used ECs by 21% knowing of more than six (6) friends who had used ECs. These findings reflect a lack of accurate information on emergency contraceptives by young girls. Despite low reported engaging in sexual activity, the proportion of EC use among those who have engaged in sex is high. The study concluded that, use of and accurate knowledge about ECs among
secondary school girls is low. The most common sources of information about ECs are friends and media and recommended that there is a need by the Ministry of Health and its partners to educate adolescents about emergency contraceptives, with emphasis on available methods and correct timing of use. Strategies to promote correct use of emergency contraception when necessary, should be focused on spreading accurate information through medical and informational sources, which have been found to be reliable and associated with good knowledge on emergency contraceptive pills (Michieka and Nyanchae, 2010).

Another study done in India to assess the knowledge and attitude of higher secondary school children regarding contraception and population control showed that the majority of students (94.4%) were aware of contraceptives and their easy availability on chemist shop. However, very few were aware of the names and how to use them and 60% of them considered that condom is an emergency contraceptive. This indicates that their knowledge towards emergency contraception was low (Jahnavi and Patra, 2009).

The general level of their knowledge about ECs was poor. The general attitude of students towards ECs was positive. It was the hope that the study will help policy-makers by providing evidence-based knowledge to promote EC use among students (Parey et al, 2010).
2.11.11. Factors that affect knowledge, attitudes and practices of school learners towards the use of EC

Demographic characteristics and economic status of the parents’ learners affect school learners’ knowledge, attitudes and practices on EC. The results of the study conducted in central Ethiopia on factors influencing the use of emergency contraceptive among female students showed that, lack of knowledge, fear of being seen by others, and inconvenient service delivery were pointed out as the main reasons for not using emergency contraceptives. Previous use of contraceptives and age of 20 years and above were significant predictors of use of emergency contraception, while poor knowledge of emergency contraception was a significant predictor of non-use of emergency contraception (Tilahun, Assefa and Belachew, 2010).

Michieka and Nyanchae, (2010) found that positive attitude of secondary school girls towards emergency contraceptives (would ever use EC and would recommend EC to friends) was found to be associated with previous use of ECs (: l= 6.47, p<0.05), currently having a boyfriend (: x2 =11. 44, p<0.05), knowledge on ECs (: x2= 6.65, p<0.05) and being in a higher class – Grade 11 and 12 (: x2 = 10.06, p<0.05). Cost of ECs and health worker/pharmacists’ attitude was perceived as barriers to access to ECs by young girls.

The study done by Nordin and Tydén, (2001) showed that the attitude toward using ECP in an emergency situation was positive, but secondary school girls, were restricted as to whether ECP should be available without a prescription. One third of girls (25%)
believed ECP could be used much more, and two-thirds of girls (75%) thought it could lead to negligence with ongoing contraception. Seventy-seven percent of secondary school girls preferred turning to a youth clinic when in need of ECP. One in four believed that the concerns for side effects could deter them from using ECP.

Altogether the above descriptive studies from different country studies showed that EC awareness and usage should be improved through more serious information and accessibility, particularly among teenagers who post themselves in at-risk positions.

2.12: SUMMARY

This chapter provided an overview of the historical background of contraception in general. International agencies and conferences that influenced reproductive health and promote emergency contraception, as well as laws that have an impact on EC such as restrictive abortion law were discussed. The incidence of unplanned pregnancies and sexual behavior among female learners in secondary school were discussed. This was followed by an overview of contraception methods available to males and females. Students’ knowledge, attitudes, practices of emergency contraception, was discussed in detail. The methodology for studying students’ knowledge at secondary school in Ongwediva will be discussed in the following chapter.
CHAPTER 3: RESEARCH METHODOLOGY

The literature relating to the research topic was reviewed in Chapter 2 and the researcher introduced concepts that influenced the development of the structured questionnaire as a data collection instrument for the study. In this chapter the different phases of the research methodology will be discussed in depth. Mouton (2008) points out that the research methodology concentrates on each step in the research process, including the development of the data gathering instrument(s) and actions to be taken.

3.1 RESEARCH DESIGN

According to Mouton, as cited in De Vos, Strydom, Fouché and Delport (2008), a research design is a plan of how one intends to accomplish the research. For the purpose of this research study, a quantitative, cross sectional descriptive design was employed. In doing so in this research design there was no manipulation of the independent variable and therefore no intervention. The major purpose of a cross sectional descriptive study design as applied in this instance is to examine the knowledge, attitudes, beliefs and behavior of people and how these variables will affect one another (Randall and James, 2011).

3.1.1: Study Area

The study was conducted at Mweshipandeka and Gabriel Taapopi secondary schools which are found in Ongwediva Town in the Oshana Region in the north of Namibia. The town is situated 708 km away from Windhoek, the capital city of Namibia.
Ongwediva town is the district capital of the Ongwediva electoral constituency. As of 2011, it had 33,700 inhabitants with a population growth rate of 3.5% annually and it covers 4,102 hectares of land. Most of the inhabitants speak Oshiwambo language (Ongwediva town council, 2011; Namibia Population and Housing Census, 2011).

Ongwediva has the highest concentration of educational facilities in Northern Namibia. This includes primary and secondary schools, Faculty of Engineering of University of Namibia and the Vocational Training Centre (Ongwediva town council, 2011). This study was conducted at Mwshipandeka and Gabriel Taapopi secondary schools in Ongwediva town. These are the only two high schools in Ongwediva town and they are the oldest, biggest and the best secondary schools in Oshana region and they can also be found in the top 20 best schools in Namibia. Mwshipandeka and Gabriel Taapopi secondary schools have two different groups of learners, one group is the learners who stay in the hostel and most of them are from rural areas and other parts of the country and the other group is learners who are day scholars, most of these learners are from the surrounding areas such as ‘New reception’ and Omatando.
Figure 3.1: Sketch map of Namibia showing the study area

3.1.2 Target and study population

The study population is a group or total amount of people, events, organization unit, case records or other sampling unit which helps to address the research questions. The group should have a given set of characteristics, about which the researcher wishes to draw conclusions (Welman, Kruger and Mitchell, 2005). This study was targeting all female secondary school learners from grade 8-12 in Ongwediva town, Oshana region, currently (2013) enrolled in the two secondary schools. According to statistics from the office of Director of Education, Oshana region (D. Shinyemba, personal communication, January, 2013) total population of female learners from the two secondary schools was 1024. There was no female learner who dropped out after school enrollment to the time of the study. This is because the study was conducted in January, two weeks after opening the school. That is 21st - 31st January 2013.

3.1.2.1. Inclusion criteria

- All female learners who are day and boarding schools.
- Female learners with and without hearing impairments-This is due to presence of sign language interpreters who are part of the teaching staff.
3.1.2.2 Exclusion Criteria

- Those that have visual impairment- They were excluded because they need special system of writing and reading (Braille) which the researcher could not afford because of financial and time constraints.

3.1.2.3 Sample and sampling process

According to De Vos et al. (2008), a sample can be defined as ‘elements of the population considered for actual inclusion in the study’. The researcher consulted a statistician from The University of Namibia, statistics department for Statistical Consultation with regard to drawing the sample size of 280 female learners (n=294). A probability, sample was chosen. The purpose of this sample is to include any subject who meets the researcher’s criteria.

3.1.2.4 The sample size

Is a part of an entire population that possesses attitudes, opinions, habits, or characteristics that a researcher wishes to study (Dattalo, 2008). The appropriate sample size is influenced by the researcher’s purpose in conducting the research. According to Dattalo, (2008) it is essential to use the correct sample size to accurately represent the population. Choosing a sample size that is too small may not give an accurate representation of the population distribution. Too large a sample size is wasteful and sometimes impossible to complete.
Before a sample size was calculated, a researcher determined a few things about the target population and the sample that is needed:

**Population Size** — the total number of Gabriel Taapopi and Mweshipandeka secondary school female learners in Ongwediva, Oshana region.

**Margin of Error (Confidence Interval)** — No sample will be perfect, so researcher need to decide how much error to allow. The confidence intervals determine how much higher or lower than the population mean researcher is willing to let sample mean fall. Common margin of error is +/- 5%.”

**Confidence Level** — This is how confident does a researcher want to be that the actual mean falls within a researcher’s confidence interval. The most common confidence intervals are 90% confident, 95% confident and 99% confident.

**Standard of Deviation** — This is how much variance does researcher expect in participants’ responses.

By considering the terms above, the researcher in this study calculated, the minimum required sample size electronically by Epi info version 3.5.1 using single proportion formula with the assumption of margin of error 5%, confidence level 95% and knowledge response distribution of 50% resulted in a sample size of 280 +5% contingency =294 female learners.
3.1.2.5 Sampling procedure

To obtain a representative sample, a stratified sampling was applied to select study participants from the source population. First, the female school learners were divided into two practical strata, which are female learners from Mweshipandeka and Gabriel Taapopi, each contributing 41% and 59% of the study sample respectively. Each stratum was again divided into substrata by grade 8, 9, 10, 11 and 12 each constituting 10%, 9%, 8%, 35% and 38% of the female student population at Gabriel Taapopi and 9%, 11%, 9%, 37% and 34% of the female student population at Mweshipandeka secondary high school for each substratum (grade).

A researcher received from the principal’s office the list of names of all students from grade 8-12. The lists are categorized into two groups arranged the first group being females and the second group, males. The names were arranged in alphabetical order and given the number starting from 1, 2, 3… to the last person. This was very easy for a researcher to identify all females apart from males, because the researcher’s target is only females. Simple random sampling was used to select the participants based on the proportion of each substratum. The random sampling was performed by using electronic research Randomizer. All female learners from grade 8 to 12 attending Mweshipandeka and Gabriel Taapopi were eligible for the study. The researcher replaced other respondents for those who were absent during the study by picking randomly from the list, the name of the students from the same grade as absentees.
Figure 3.2: Schematic presentation of the sampling design

Random sampling method

Gabriel Taapopi Secondary school
0.41 \times 294 = 121

Stratified disproportion fraction

- Grade 8 (A-B) = 61 → 12
- Grade 9 (A-B) = 53 → 6
- Grade 10 (A-B) = 49 → 4
- Grade 11 (A-I) = 215 → 49
- Grade 12 (A-J) = 229 → 54

Mweshipandeka secondary school
0.51 \times 294 = 173

Stratified disproportion fraction

- Grade 8 (A-B) = 38 → 22
- Grade 9 (A-B) = 45 → 25
- Grade 10 (A-B) = 36 → 21
- Grade 11 (A-I) = 158 → 54
- Grade 12 (A-I) = 144 → 51

Secondary school

Grade 8 (A-B) = 61
Grade 9 (A-B) = 53
Grade 10 (A-B) = 49
Grade 11 (A-I) = 215
Grade 12 (A-J) = 229
Grade 8 (A-B) = 38
Grade 9 (A-B) = 45
Grade 10 (A-B) = 36
Grade 11 (A-I) = 158
Grade 12 (A-I) = 144
3.1.3 Research Instruments

A self-administered structured questionnaire with open and closed ended questions written in English was used for data collections. This inclusion of both types of questions allows the researcher to obtain more insight into the respondents’ opinion (De vos, Strydom, Fouché and Delport, 2008). The items in the questionnaire were based on the research objectives and reviewed literature and was designed to capture all the relevant information regarding the proposed research topic by means of a variety of question types. The researcher consulted a statistician from the Statistics Department at University of Namibia with regard to the feasibility of the designed data collection instrument and to check whether all the variables could be tested statistically.

The questionnaire contained three sections. The first section was comprised of questions dealing with the demographic information. The second section consisted of questions on the knowledge and practices of female school learners with regards to emergency contraceptives. The third section consisted of questions on attitudes. Most of the questions were adapted from similar previously conducted study done by Etalemahu, (2007), with some changes based on the local context after consultation with the statistician and his recommendations were incorporated in the final questionnaire.

3.1.4 Data collection and quality control.

The researcher contacted the participants to explain the purpose of the study and to obtain their written, informed consent through their parents/guardians. The researcher
collected the actual information, which is data, using the instrument (questionnaire) that was developed and tested in the pilot study.

The advantage of the self-reporting technique are as follows: is less expensive in terms of time and money, It is the easiest to test for reliability and validity, the format is standard for all subjects and is dependent on the mood of interviewer and respondents not feeling a greater sense of anonymity and are more likely to provide honest answers.

The disadvantages of this technique are as follows: respondents may provide socially acceptable answers; respondents must be literate and hence may not be representative of the population (Kumar, 2011).

The questionnaire was written entirely in English, because all learners understand how to speak and write English. A life skill teacher was chosen to assist the researcher to administer the questionnaires to participants. The questionnaires were administered at the same time. All randomly chosen participants were called to gather in the gathering hall and given questionnaires to answer. Half day training was dedicated to a life skill teacher on the objectives, relevance of the study, confidentiality, informed consent and respondents’ right. An important aspect of the training was to maintain consistency in measurement: applying a standard protocol for the administration of the questionnaire.

3.1.5 Data Analysis

According to Brink, Van der Walt and Van Rensburg (2006) data analysis can be defined as the methods of organizing the raw data and displaying them in a fashion that
will provide answers to the research questions. It entails categorizing, ordering, manipulating and summarizing the data and describing them in meaningful terms. Data were entered in Epi-info version 3:5:1. A statistician from the University of Namibia was consulted with regards to analyzing the data using Epi info. The data were edited; coded, cleaned and analyzed using Epi-info version 3.5.1. This study was purely quantitative. Where the data is numerical, it was analyzed and presented in histograms and frequency distribution tables, the same applied when the data is categorical.

Analysis consisted of only univariate analysis with descriptive statistics and an examination of proportions.

3.1.6 Validity and Reliability

3.1.6.1 Reliability

Reliability can be defined as the degree to which an assessment tool produces stable and consisted results. This means that the variable that is measured will produce the exact measurements or all items in a test or scale calculate the same concept, if measured under the same conditions each time (Cohen, Manion and Marrison, 2011). In this study, the researcher considered only one characteristic (internal consistency) of reliability among three which are more commonly used. Internal consistency refers as the degree to which all items in a test or scale calculate the same concept (Brink, Van der Walt, and Van Rensburg, 2006, Bureau of Justice Assistance, 2010). A Pilot test was conducted to identify any possible practical problems and to ensure that the
questionnaire was easy to understand and complete. While reliability is necessary, it alone is not sufficient. For a test to be reliable, it also needs to be valid.

3.1.6.2 Validity

Validity can be defined as to how well a test measures what it is purported to measure (Cohen, Manion, Marrison, 2011). This includes content validity whereby an instrument represents all the components of the variable to be measured, face validity refers to the measurement technique, and if it actually appears to be measuring what it is supposed to measure (Brink, Van der Walt, and Van Rensburg, 2006). The researcher in this study constructed questionnaire based on the literature reviews. Such review reveals the essential aspect of the variable that must be included in the questionnaire. The intention of the questionnaire was to determine knowledge, attitudes and practices of female learners towards the EC, which was ensured by presenting the questionnaire to an expert in the field of family planning and statistician for the evaluation of content validity of the questionnaire and to ensure that statistical analysis was possible. This preceded the actual data collection. The pilot test also ensured that the questionnaire was free from ambiguity and inaccuracies, thus ensuring the validity.

3.1.7 Pilot study

Pilot study, sometimes referred as preliminary or feasibility study can be described as a small experiment or investigation designed to test logistics and gather information prior of the actual proposed research, so that to identify possible inadequacies in the measurement procedure, in order to improve the latter’s quality and efficiency. The
researcher, launched a pilot test of the data gathering instrument only before the commencement of the main study. This was done in Oshakati and Iipumbu secondary school by randomly selecting female learners from grade 8-12 asking learners to complete the proposed questionnaire. The respondents involved and data obtained in the pilot test were not included in the main study.

The pilot test took place over a period of one week, from 09 September 2012 until 15 September 2012. A minimum of 10 female learners from each school took part in the pilot test and regular cross checking, inspection on the research questionnaire was conducted by a researcher to ensure accuracy, relevance, completeness, consistency and uniformity of the data until no further changes needed to be made to the questionnaire as recommended by the statistician.

Research instruments were pre–tested for face validity to improve reliability of the responses. Pre-testing was performed on 10 respondents, from Oshakati and Iipumbu secondary schools.

3.1.8 Research Ethics

A researcher is responsible to conduct a study in an ethical manner; this is because any study involves human subjects as the special concern related to the protection of the rights of the human subjects. The precepts of the Declaration of Helsinki, which provide the basis for numerous ethical research guidelines had been assumed and these
statements of ethical principles for medical research involving human subjects were honored and applied in this study. The ethics include:

- Written consent for the research was obtained from the University of Namibia involved as well as from the respondents, and only those who were willing to participate, were included in the research.

- No respondent’s identity would be made known during the study or in any publication, and the information would be used for research purposes only.

- Those respondents who were willing to complete the questionnaire were not required to enter their names or to reveal any form of identity on the questionnaire.

- The consent form and questionnaire were separated to ensure the anonymity of the respondents; and the respondent’s right to recede from the research at any time was observed without any kind of favoritism or other negative outcome.

For obtaining informed consent, the respondents were given accurate and complete information regarding the purpose of the study, their responsibilities and the benefits and risks of the study. This was done prior to their participation in the study to ensure that all respondents understood the proposed research, enabling them to make an informed decision about their possible participation. Furthermore, participation was voluntary and all data were managed in a confidential way. The participants were given an opportunity to ask questions about the research. The researcher was available at all times to resolve whatever queries.
The only risk related to participating in the study was the fact that some of the questions were of a very sensitive nature and could possibly be experienced as distressful by a vulnerable participant. Yet since the questionnaire was self-administered the respondents' level of stress could have been minimal.

3.1.9 Dissemination of the results

The results will be presented to the University of Namibia, School of Nursing and Public Health, The study centers, which is Gabriel Taapopi and Mweshipandeka secondary schools and Oshana Regional Health Directorate.

3.2 SUMMARY

Chapter 3 contained a detailed discussion of the research methodology, explaining how the data were collected, entered in epi info version 3.5.1 and analysis carried out. The following chapter 4 will deal with the results.
CHAPTER 4: RESULTS

4.1: INTRODUCTION

This chapter presents the results of the findings of quantitative data, the data consists information which is in the form of numerical. The findings include demographic and socioeconomic information on respondents, knowledge, attitude and practices of the respondents towards emergency contraception, which is corresponding to the sections in the questionnaire. The distributions of variables were presented by means of histograms and/or frequency distribution tables. For the purposes of this research report, all percentages were rounded off to the nearest decimal.

Out of the 294 female learners selected for the study, 274 agreed to participate, this is after absentees replacement; and out of the 274 three respondents had incompletely filled the questionnaires and hence were discarded. This yielded a response rate of 92.2%. A full response was obtained from 271 participants hereafter referred to as female learners.

4.2. DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The data obtained from questions one to ten contained the respondents’ demographic information, providing the researcher with the background detail of each respondent who completed the questionnaire.

The age of female learners ranged from 13 to 21 years with mean age of 17+/− with a standard deviation of mean age, 1.07. Most of the respondents 191 (71%) were within
the age group of 16-18 years. The least, 17 (6%) of respondents were at the age of 19-20 years (See Figure 4.1).

Figure 4.1: Age distribution of respondents, January 2013 (N=271)

The data in figure 4.2 below indicate that grade 12 had respondents 101 (27.3%) followed by respondents 97 (35.8%) in grade 11 while 27 (10%) were from grade 10, and grade 8 had also the same number of respondents 27 (10%) as grade 9. The fewest number of respondents of 19 (7%) was from grade 10.
As depicted in figure 4.3 below, data indicate that 267 (98.5%) were Christians. But two of the respondents (0.7%) were Muslims and two (0.7%) were believers of traditional faiths. Nevertheless, none of the respondents indicated any ‘other religion.
4.2.1 Socioeconomic characteristics of the head of the respondents’ household

Table 4.1 below shows that is only 1 respondent who mentioned a child as the head of the household, and majority 199(73.7%) doesn’t know the income of their head of household. One respondent did not respond to the question of education status of the head of the household and two did not respond to the question of the occupancy status of the head of the household.
Table 4.1 Frequency distribution of the head of the household of respondents by education, occupation and monthly income.

<table>
<thead>
<tr>
<th>Head of the household (n=271)</th>
<th>Response</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aunt</td>
<td>18</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>Brother</td>
<td>2</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Child headed</td>
<td>1</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>104</td>
<td>38.4</td>
<td></td>
</tr>
<tr>
<td>Grandfather</td>
<td>18</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>Grandmother</td>
<td>39</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>78</td>
<td>28.8</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>4.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education status of the head of the household(n=270)</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>52</td>
<td>19.3</td>
</tr>
<tr>
<td>Primary school</td>
<td>19</td>
<td>7.0</td>
</tr>
<tr>
<td>Secondary school</td>
<td>107</td>
<td>39.6</td>
</tr>
<tr>
<td>Tertiary school</td>
<td>92</td>
<td>34.1</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation status of the head of the household(n=269)</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government employee</td>
<td>119</td>
<td>44.2</td>
</tr>
<tr>
<td>Private employee</td>
<td>53</td>
<td>19.7</td>
</tr>
<tr>
<td>Trader</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Farmer</td>
<td>19</td>
<td>7.1</td>
</tr>
<tr>
<td>Peasants</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Jobless</td>
<td>60</td>
<td>22.3</td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
<td>2.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income of the head of the household(n=270)</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No income</td>
<td>54</td>
<td>20.0</td>
</tr>
<tr>
<td>1-4000N$</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>4001-7000N$</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>7001-10000N$</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>More than10000N$</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>I don’t know</td>
<td>199</td>
<td>73.7</td>
</tr>
</tbody>
</table>
4.3. KNOWLEDGE OF RESPONDENTS ON EC

Data as shown in figure 4.4 below indicates that out of 271 respondents, 226 (83.4%) respondents have heard of any method that girl/woman might use to prevent herself from becoming pregnant after she made sex without protection, if she wished, and 45 (17.6%) of respondents haven’t heard any method that a girl or woman could use after been engaged in unprotected sex.

Figure 4.4: Distribution of respondents who heard of any method that can prevent girl or a woman becoming pregnancy after unprotected sex (N=271)
4.3.1 Awareness on methods available for emergency contraception

The majority (140) 47% mentioned taking contraceptive as one of the methods that can be used to protect a girl from pregnancy. ‘Others’ option was mentioned by 22 (7.4%) of the respondents. Total number of respondents compare higher (298) to the actual number (271) because the participants were instructed to choose more than one option if they know more than one method (See Table 4.2).

Table 4.2: Frequency distribution of respondent’s views on the methods of preventing pregnancy after unprotected sex

<table>
<thead>
<tr>
<th>Method of preventing pregnancy</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking contraceptives</td>
<td>140</td>
<td>47.0</td>
</tr>
<tr>
<td>Vaginal wash</td>
<td>24</td>
<td>8.1</td>
</tr>
<tr>
<td>Abortion</td>
<td>60</td>
<td>20.1</td>
</tr>
<tr>
<td>Insert some stuff in vagina</td>
<td>22</td>
<td>7.4</td>
</tr>
<tr>
<td>Taking some medicine</td>
<td>30</td>
<td>10.0</td>
</tr>
<tr>
<td>Others</td>
<td>22</td>
<td>7.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>298</td>
<td>100</td>
</tr>
</tbody>
</table>

4.3.2 Perceptions on factors responsible for unprotected sex among young people

Section 4.3.2 does not reflect the specific objectives of the study but is byproduct information from the questionnaire which is very useful information about the knowledge or understand of the participants regarding the factors/conditions the female learners mentioned which lead to unprotected sex among young people. The number is higher 1144 compared to 270 as the participants instructed to choose more than one condition if they know more than one. (See table 4.3)
Table 4.3. Frequency distribution of condition/factors which makes a girl to engage in unprotected sex.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Frequency(n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntarily</td>
<td>68</td>
<td>5.9</td>
</tr>
<tr>
<td>Missed/failed protection</td>
<td>113</td>
<td>9.9</td>
</tr>
<tr>
<td>Unable to say no</td>
<td>190</td>
<td>16.6</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>207</td>
<td>18.1</td>
</tr>
<tr>
<td>Forced physically</td>
<td>174</td>
<td>15.2</td>
</tr>
<tr>
<td>Influence of alcohol</td>
<td>215</td>
<td>18.8</td>
</tr>
<tr>
<td>Influence of substances</td>
<td>101</td>
<td>8.8</td>
</tr>
<tr>
<td>Tradition</td>
<td>71</td>
<td>6.2</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1144</td>
<td>100</td>
</tr>
</tbody>
</table>

4.3.3 Knowledge and awareness on emergency contraceptives

The results below in figure 4.5 indicate that two 259 (95.6%) of the respondents have not heard about emergency contraceptives and only 12 (4.4%) of respondents heard about emergency contraceptive.
Participants who heard about emergency contraceptive were not restricted to choose only one method. The most frequently selected method has been oral pills (55.8%) (See Figure 4.5).
4.3.4 Source of information on emergency contraception

Out of 12 (4.4%) of the respondents who reported of having heard about EC, 29.8% of the respondents choose friends/family member as the source of information. The participants were not restricted to only one source (see Figure 4.7).
4.3.5 Knowledge on timing of emergency contraceptive use

With regard to when EC should be taken to prevent pregnancy, 41.5% of twelve (12) respondents said they did not know, 27.5% said it should be taken immediately after sex and 18.6% of respondents said within 24 hours at the right time to take EC in order to prevent pregnancy. Within 72 hours as the right time to take EC was mentioned by 7.8% of the respondents, while 3% mentioned after missing menstruation could be the
right time of taking EC. Within 5 days after sex and one week after sex was mentioned by 1.2% and 0.4% of the respondents respectively (See Figure 4.8).

Figure 4.8: Percentage distribution of respondents on time of taking EC of respondents, who had heard EC, (n=12)
4.3.6 Knowledge on accessibility of emergency contraception to potential users

Regarding accessibility of the EC majority (45.4%) of respondents know that EC is available at public health facilities. The respondents were not restricted to one ‘option’ (see Figure 4.9).

Figure 4.9: Distribution of respondents per accessibility of EC.
4.3.7 Knowledge of how EC works

Out of the 12 who heard about EC, 68.5% of them said EC works by preventing pregnancy from happening, and 21.7% of respondents reported not knowing how EC works. 2 respondents (8.7%) mentioned that EC works by inducing abortion while 1.2% thought that it works through other means (See Figure 4.10).

Figure 4.10 Percentage distribution of respondents on how EC works, January 2013 (n=12)
4.4. Attitude and practices of respondents towards emergency contraceptives

4.4.1. Practices
The results from the figure 4.5 on (page 77) indicate that only twelve (4.4%) of the total respondents had heard about emergency contraceptives and two hundred and fifty nine (95.6%) had not heard about emergency contraceptives.

Out of 12 (4.4%) who heard about emergency contraceptives, 11 (91.7%) ever used emergency contraceptives and 1 (8.3%) who heard about it, had never used emergency contraception. (See figure 4.7)

When asked which method of emergency contraceptive used, ten out of twelve (90.9%) who had made use of EC mentioned oral pills, and one mentioned option of other unspecified or unproven method while one respondent did not respond to the question. One respondent who heard of EC did not respond to the question (see Figure 4.12).
Figure 4.11: Number of respondents who heard of emergency contraceptives, January 2013 (n=12)
Figure 4.12 Distribution of the respondents who had heard of emergency contraceptive and ever used it. (n=11)

![Distribution of respondents who had heard and used EC](image)

Figure 4.13 below shows those 10 (90.9%) participants’ who ever used EC, mentioned oral pills. None of the respondent responded to IUCD as a type/method of emergency contraceptives that ever used.
4.4.2. Attitudes

4.4.2.1 Attitude, after previous experience with emergency contraception

Figure 4.14 below show the distribution of feeling or experience, the respondents who had heard and use EC felt after using EC.
Figure 4.14: Distribution of respondents’ feelings after using emergency contraceptives (n=11)

4.4.2.2 Attitude towards future use of emergency contraception

The results from figure 4.15 indicate that out of those respondents who had used emergency contraceptives eight (72.72%) said they will consider using emergency contraceptive in the future and 3 (27.27%) said they would not consider using it in the future. Their reason for saying so was not explored by the study.
4.4.3 Attitude of the Respondents towards selected sexual practices among young people

The study also explored attitude of the learners towards some sexual practices among young people. The findings from the responses are presented in Table 4.4 below:
Table 4.4. Respondents’ attitude on selected sexual practices among young people

Attitudes towards EC

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Not sure</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Having sex without protection is not a concern in my area</td>
<td>36(13.3)</td>
<td>18(6.6)</td>
<td>63(23.2)</td>
<td>18(6.6)</td>
<td>136(50.2)</td>
</tr>
<tr>
<td>b) Making sex without protection is acceptable to school girls</td>
<td>16(5.9)</td>
<td>6(2.2)</td>
<td>19(7.0)</td>
<td>4(1.5)</td>
<td>226(83.4)</td>
</tr>
<tr>
<td>c) The chance of a school girl engaging in unprotected sex without her consent is low.</td>
<td>47(17.3)</td>
<td>47(17.3)</td>
<td>95(35.1)</td>
<td>25(9.2)</td>
<td>57(21.0)</td>
</tr>
<tr>
<td>d) Making emergency contraceptives that prevent pregnancy after sex available promotes sex among young girls</td>
<td>137(50.6)</td>
<td>43(15.9)</td>
<td>40(14.8)</td>
<td>14(5.2)</td>
<td>37(13.6)</td>
</tr>
</tbody>
</table>

The table 4.4 above shows that the majority of the respondents disagreed/strongly disagreed with the statement that having sex without a condom is not a concern in their area. About 23% were not sure whether it is a concern or not and 13.3% agreed with the statement.

Over 80% of the respondents disagreed with the statement that making sex without protection is acceptable to school girls, but 5.9% of the respondents agreed with the
statement. Also, 35% of the respondents did not know whether the chance of a school girl engaging in unprotected sex is low while about 30% disagreed with the statement and 17.3% agreed.

Over half of the respondents (50.6%) thought that making emergency contraceptives that prevent pregnancy after sex available promotes sex among young girls while 13.6% strongly disagreed with the statement and almost 15% were not sure about the assertion.

### 4.4 SUMMARY

In this chapter analysis and interpretation of data collected was made. The results revealed that the respondents generally had a poor knowledge, practices and attitudes towards emergency contraception, which is only 4.4% of the total respondents. Most of those participants who are aware of EC heard about it from friends/family.
CHAPTER 5: DISCUSSION, RECOMMENDATION AND CONCLUSION

5.1 INTRODUCTION

This chapter explains in details about the findings of the study, this includes the level of knowledge of learners in comparison with the similar study done in other places of the country or outside the country. Implication, impacts, limitations of the study are also discussed and recommendations were made based on the objectives, literature review, the findings of the study and its discussion. The findings from the study have revealed important gaps in the knowledge of reproductive health issues pertaining to contraception, specific availability and use of emergency contraception. The conclusions based on the objectives set in Chapter 1; paragraph 1.6 is discussed in this chapter. The aim of this study was to assess the knowledge, attitudes and practices of female school learners of Mweshipandeka and Gabriel Taapopi High school on emergency contraception. The research questions in this study were about the pattern and level of knowledge of female school learners on EC, positive and negative attitudes towards the EC among female school learners. The objectives were of a descriptive nature, the data collection, analysis and interpretation was based on the objectives as indicated in paragraph 1.6
5.2 DISCUSSION

5.2.1: Knowledge of female learners towards emergency contraception.

The main aim of this study was to assess the knowledge, attitudes and practices of female learners on emergency contraceptives. Such knowledge empowers the learners to take responsibility towards preventing unwanted pregnancies should they engage in unprotected sexual intercourse that may result in pregnancy. Recent demographic and health surveys in Namibia have pointed to the fact that young women have early sexual experience. Early sexual activity in young girls is fraught with a relatively higher chance of unprotected sexual intercourse. This is because of the nature of their relationship with their partners, which may involve difficulties in negotiating safe sex as well as problems in having a steady relationship (Happer, Cheong, Rocca, Darney and Raine 2005). Hence, when young women choose to have sexual intercourse, multiple strategies are necessary to encourage them to avoid unintended pregnancies. One such strategy is to increase awareness of EC among them.

In Namibia, legal abortions are scarcely performed, no concerted government information is given to communities about legal abortion despite the fact that the Government of Namibia adopted the Abortion and Sterilization Act of 1975 from South Africa, which gives the right to women in Namibia to terminate a pregnancy only in restricted circumstances, such as health risks or in cases of rape and incest (Shipanga, 2013).
Fifty-nine percent of the women in Namibia dying of abortion related complications are under the age of 25. Morbidity associated with abortion is preventable to a great extent through the use of suitable contraception (Shipanga, 2013).

Introduction of EC through government supply has a potential to significantly change the scenario by empowering the young females including female school learners in Namibia. Emergency contraception was only provided at 29% of surveyed health facilities in Namibia offering family planning services in 2009 (Smith, 2011). Because of the lack of research to date, the current number is unclear.

This study was aimed to assess and explore knowledge, attitudes and practices among female school learners of Mweshipandeka and Gabriel Taapopi secondary school (Grade 8-12). The finding has revealed that out of 271 female learners, only 4.4% of the respondents had heard about EC, which is very low compared to studies done in Switzerland, which showed that 89.3% of the respondents knew about emergency contraception, and in Scotland (31.4%), Sweden (67.3%), South west Ethiopia (64.1%), Kenya (57%) (Alemu and Tema, 2009 and Singh, Mirembe and Kiggundu, 2005).

The depressed degree of cognition and awareness about emergency contraception indicates that the information about the EC is not made available for possible users in Namibia. This may be referable to a deficiency of a comprehensive school wellness program that includes family planning instruction, as well as matters relating to emergency contraception. According to the literature review the study of awareness of learners in Switzerland is very high compared to other African countries, like Ethiopia,
Kenya, South Africa and Namibia. It may then be aware of family planning and contraception is higher in the more developed and industrialized countries probably due to better education, family life education and the health system and other social infrastructure. The study also assessed the knowledge of the learners regarding the timing of the use of emergency contraceptives. The time frame differs with the type of emergency contraception method, and according to literatures reviewed EC should be taken within 72 hours of unprotected sexual exposure (MOHSS, 2012). Correct timing of use is necessary for the effectiveness of the EC method. The longer you delay taking emergency contraceptive after unprotected sex, the more chance of getting unwanted pregnant. In this study it was evident that knowledge of right timing for use was very dispirited. Most respondents in this study were unaware when to initiate EC, just about 7.8% knew that EC should be started within 72 hours, and the rest of respondents did not know the correct timing. The 7.8% of respondents who knew when to correctly use EC is low when compared with studies performed in Nigeria in which 88.2% of school learners who ever heard EC knew the correct time frame of the EC, and Durban, South Africa where 11.8% of the respondents recognized the right timing (Akani, Enyindah and Babatunde, 2008).

Access to information on EC is instrumental to use of the EC when necessary. The knowledge of female learners towards EC depends much on where they received or they are receiving information. This study has categorized source of information as Health Care Workers (HCWs) which include nurses, doctors and pharmacist, friends and family members such as boyfriends, mother, father, uncle, aunt, brother, cousin, etc.
Print media such as newspapers, magazine, leaflets and the Internet, including the social media are becoming a very important source of information, especially for young people, is very cheap and people can access internet around the clock. The study also put the category of others as a source of information; this can be traditional birth attendants (TBAs).

In this study the finding shows that 29.8% of respondents mentioned friends and family as the source of information about emergency contraception and HCWs by only 12.4% of respondents. This is slightly lower compared to other study done in some African countries like Cameroon which showed the 69.9% of respondents mentioned friend and family as the source of information on EC, Health personnel 19.9% which is slightly higher. Many studies showed that the major source of information about the EC is friends and family. This could be a cause of low knowledge of respondents of EC, simply because at that place is a higher possibility of misinformation, distortion, falsehood and misconceptions, and often times self-centered from friends and family rather than if the major origin of information would be from formal education or HCWs, with the assumption that HCW know more about EC and have access to the family planning policy and guideline documents (Abiodun, Adisa, and Aderemi, 2001).

The method of EC mentioned in this study was oral pills, IUCD, injectable, implants. According to literature, including the Namibia National Family Planning Guideline, Implant is not part of the emergency contraception method (MOHSS, 2012). It was included in the study in order to assess the knowledge of respondents towards EC. 7%
of respondents mentioned implant as the method of EC! And this can be contributed by the source of information as many female learners had heard of EC from friends and family who are more likely to distort the information.

When respondents were asked if they know any method of preventing pregnancy after unprotected sex, out of 271 respondents, 83.4% of the respondents answered yes, and only 45 respondents answered no; and when they were asked ‘Have you ever heard EC method?, Only 12 respondents answered yes.

When asked to type of EC method for those who had heard it, the findings in the study revealed that 83.3% of respondents mentioned EC method as oral pills, this is higher compared with the study done in India in which only 54% of the respondents mentioned the pill and in another study in the southern part of India where 73% of the respondents mentioned oral pills. Many studies show that respondents are more aware of oral pills as emergency contraception method compared to another method of EC (Ottesen, Narring, Renteria and Michaud, 2002; Eygene, 2007; Puri, Bhatia, Swami, Singh, Sehga, Kaur, 2007).

In the present study, 8.3% of the respondents mentioned other methods of emergency contraception of no proven efficacy, such as washing soap, petrol, this was lower compared to the study done in India which showed that, 12.2% claimed knowledge of ‘other methods’ of emergency contraception of no proven efficacy such as herbs, cosmetics, aspirin and concentrated tea or jumping backwards. The finding in the present study compares with the Nigerian study that found 6.5% of the respondents
claiming other methods for emergency contraception that included post-coital douching and a mild oral analgesic. The 8.3% who claimed knowledge of ‘other methods’ indicates that yet without modern EC, the communities will undertake to provide EC emphasizing the level of unwanted pregnancies. This misconception was also apparent in the findings by the Legal Assistance Centre, where girls reported things like warm water, tea and aspirins as EC methods (LAC, 2010). None of the respondents knew of IUCD as an EC, whereas in Nigeria about 5.3% knew of IUCD as an EC. This may reflect the problem of limited availability or use of IUCD in family planning services in Namibia, since knowledge is influenced by what is available.

The study also assessed the knowledge of the respondents regarding the mechanism of action of emergency contraceptives. Most of the participants (68.5%) knew that EC prevents pregnancy from happening and some (8.7%) thought that emergency contraception causes abortion. 21.7% did not know how EC works. Misconceptions regarding the mechanism of action could be a factor in its low use. The EC has always been confused with medical abortion. Studies show that EC does not interrupt an established or harm a developing fetus. A few (1.2%) female learners, responded ‘other’ option, they thought the pills destroy the fertilized ovum, which is not true.

The low level of awareness among the learners on the EC may have influenced their practice of the use of EC. Merely 4.4% reported having used EC. Taking into consideration the problem of teenage pregnancy and school drop-out in Namibia the practices of female learners regarding EC are very low reflecting the inadequate
knowledge among the learners. Other reasons for the low use could be the misconceptions about family like ‘Abortion is one of EC methods.’ which was evidently mentioned by 8.7% of the female learners. Those with firm Christian and Islamic values may also not use EC because of the belief that it is against the will of God to start sex before wedlock, even though religion didn’t affect knowledge in this field.

Apart from the knowledge and practices of the learners towards the EC, the study also seemed at the attitude of the learners regarding EC. The female learners in Mweshipandeka and Gabriel Taapopi secondary schools in Ongwediva, Oshana region, Namibia had mostly negative attitudes towards emergency contraception; the majority (50.6%) of the female learners agreed that the availability of emergency contraception would lead to or promote sex hence increase unwanted pregnancies, induced abortions and school dropouts. Almost all the cases of induced abortion seen in Namibia occur among the young age group (Smith, 2012). Every one in four adolescents who get pregnant will induce an abortion in Namibia. The attitude displayed by the learners might have been influenced by the fact that abortion is not legalized in Namibia except in few medical indications and society does not accept attempts to open discussions on legalizing abortion in the country.

The attitude of the learners towards unprotected sex revealed a different pattern. More than 56% of respondents had positive attitudes towards unprotected sex by strongly disagreeing that unprotected sex is an issue in Ongwediva. This is an indication that
something needs to be done in order to stop unprotected sex for young girls. An overwhelming majority of respondents (83.4%) strongly disagreed that making sex without protection is acceptable to school girls in Namibia. This is a very positive development for female learners, and it indicates that if they will be taught how to protect themselves, then they will be willing to accept and to follow, indicating the need and acceptability of family planning and contraceptive education in the schools. The female learners were also mostly in favor of promotion of EC in schools in order to prevent/reduce unwanted pregnancies.

5.2.2 Limitations of the study

5.2.2.1 Strength of the study

The questionnaire was self-administered. This helped the study subjects to feel free to express their views since the study touches on the sensitive and personal issues. The study target the young people who are at risk of unintended pregnancy, hence are the group that highly needed emergency contraception.

5.2.2.2 Weakness of the study

Certain limitations to this study, such as using only a secondary school (grade 8-12) female population as a sample group, might have a negative effect on the validity of the findings. This study was conducted among the secondary education population, and
therefore learners, who were not enrolled at Mweshipandeka and Gabriel Taapopi secondary school, as well as other sexually active groups, were excluded from this study.

Furthermore, this study was limited in that information was gathered by means of a questionnaire only. The results of this study were dependent on the accuracy and truthfulness of the participants’ responses, and due to the sensitive nature of this topic the researcher could not explore issues like self-reported sexual behavior in more depth. The participants’ disclosure of personal information and their honesty might have affected the data that were obtained.

Only female learners were included in the study. The boys who are often the companion of the girls and who have more influence for the female learners were not included in the study.

Female learners without hearing impairments. Young female with disability like hearing impairments are also experience or in need of emergency contraceptives as the young female without disability.

The use of self-administered questionnaire does not provide an opportunity to follow-up and clarify some issues with the respondents. Self-reported information is subjected to errors and missed information.
5.3: RECOMMENDATIONS

5.3.1 Improve female learners’ knowledge of emergency contraception

The study revealed that the knowledge regarding emergency contraception was very low. There were substantial misunderstandings about EC. Hence their knowledge should be improved. There is need to avail accurate, detailed information about EC to female learners in secondary schools in Ongwediva, Oshana region, information like usage and correct timing of EC in order to make it effective. This can be achieved by providing educational and motivational activities and improvement in family planning services which are needed to promote the use of emergency contraceptives and reduce the high rate of unwanted pregnancies and its consequences. Incorporating such information into health education and life skills sessions in the schools will help to empower the learners with information and know-how to take responsibility for their lives. The Ministry of Education should organize a workshop for the Life Skills and Health Education teachers across the country to equip them with the requisite knowledge and skills to enable them impart same to their learners.

MOHSS needs to look at revising the school health program in order to include information on emergency contraception, and also lay strategies of presenting the information to the female students of teachers' colleges who will in turn hand it on to the students.
Emergency contraception should be included in the curriculum of the students with the other family planning methods and also in the curriculum of teacher’s college and this should be compulsory.

There is a need to empower female learners of secondary school, to discuss sexually and contraception issues in order to increase awareness, knowledge and use of EC among the younger people. This will also reduce unintended pregnancies and hence unsafe abortions and the maternal mortality and morbidity associated with it. This can be done by intensive use of media (including television, radio, newspapers, internet, pamphlets, posters, information on packaging and notice boards) and by informal education (including public talks, classes, workshops and seminars, campaigns, shows, displays, projects, awareness days/weeks and face-to-face talks on contraceptives) whereby friends and other family members of learners will be invented, as the study show that many learners heard about EC from their friends/ family members.

5.3.2 Encouraging learners’ to introduce and attend religious and moral education classes

As the findings in this study indicate that more than 90% of learners are Christians and few are Muslim. By introducing religious and moral education classes and instruct them according to their faith will help many learners to switch their sexual behavior, as the study done in Australian show that their sexual behavior is always what puts them at danger and leads to unwanted pregnancy and other STIs. The outcome of religious
classes will be abstinence and to be God fearing people this is according to anecdotal evidence.

5.3.3 Increasing the learners access to various sources of contraceptives particularly EC.

The findings of this study revealed that students did not have adequate information about where exactly they can find EC; learners should therefore be provided with accurate, specific information regarding accessibility of EC. This information should be easily accessible and widely available. Secondary schools could become more involved by using different media as discussed above.

5.3.4. Recommendation for further Research

This study has highlighted important findings, but its limitations have also been highlighted. The study focused on only two Secondary Schools in Namibia and was mainly quantitative in nature. It was likewise restricted to female learners in higher levels.

There is a need to conduct the similar study comprise of quantitative and qualitative design in the region which is highly affected with unwanted pregnancies or with high rate of secondary school dropout and if possible all learners who drop out of school will be conducted to participate in the study.
As this study was conducted among secondary female learners who are educated young people, further studies could assess the knowledge of illiterate young people.

5.4: CONCLUSION

Female secondary school learners are one of the vulnerable groups for unsafe/unprotected sexual intercourse resulting in unintended pregnancy and exposed to STIs. EC is a backup method and is an effective means of preventing unintended pregnancy and its consequences, but unfortunately more than half of the female secondary school learners in Ongwediva were unaware of EC. Among the respondents who were aware (4.4%), very few of them, were familiar with its correct meaning, correct time of use and other related aspects. Some respondents thought that emergency contraception has an abortifacient effect. The absence of correct information about EC could be a barrier from being utilized by individuals who need it, including the young people who are at more risk of unintended pregnancy. This contributes to higher chances of unintended pregnancy. Friends and schools (formal education) play a very important role in the dissemination of information to female learners and the need to empower the teachers, family members and the population at large on issues pertaining to emergency contraception is highlighted.
5.5: SUMMARY

In this chapter 5 the findings were discussed in details by comparing with the similar studies done in various countries and possible reasons for the difference in the knowledge of the female learners. Weaknesses, strength together with the limitations of this study were also discussed.

The overall recommendation was that school learners should be provided with accurate, specific information regarding emergency contraception, which should be easily accessible and widely available in order to decrease learners’ unwanted pregnancy and its effects. This problem of unwanted pregnancy could be reduced by providing the correct information on the matter by increase learners’ knowledge this includes the use of media, formal/ informal education. It can therefore be concluded that in this study the objectives of the research were achieved, research questions and questions answered were met

The problem statement, aim and specific objectives of this study were identified which supported by comprehensive literature review which include historical background on EC. Research methodology based on purely quantitative was selected for this study. The data gathered, analyzed and the findings and appropriate literature were also discussed. The overall conclusion was that learners’ knowledge regarding emergency contraception at a higher education institution was generally very low.
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102-6.
Appendix i

Consent Form

Title of Study

Knowledge, attitudes and practice of female secondary school learners on emergency contraception in Ongwediva, Oshana Region.

Introduction

I am Emmanuel Magesa from school of nursing and public health, University of Namibia. I am here inviting you to participate in a research study on Knowledge, attitudes and practice of female secondary school learners on emergency contraception in Ongwediva, Oshana Region.

Purpose

The purpose of this study to assess your knowledge, attitudes and practices towards emergency contraceptives and information generated from the study will help us (health workers) to develop strategies to assist you better by taking emergency contraceptive in case of unsafe sex which will eventually lead to a reduction in unwanted pregnancies among young people.

Risk
As far I can tell there should be no risk or much discomfort to you in sharing your information. No name should be written on the questionnaire. Some questions may be a bit personal and cause some discomfort. The information gained will be treated confidentially, I therefore ask you kindly to answer all the questions as honestly as possible.

Study procedure

During the study, you will be required to fill a questionnaire that contains questions regarding your knowledge, attitudes and practice about emergency contraception. I will keep a record of who has participated in this study; your name will not be used during analysis, so that data will not be linked with your name. All data will be stored in a secure place and no unauthorized person will access the data. Your identity will not be revealed when study is reported or published.

Benefits

The study has no direct benefits to the participants, but the information obtained will help in designing and implementing programs aimed at improving the reproductive health of young people.

Questions

If you have any questions about the study or about participating in the study, please feel free to ask me (Emmanuel Magesa) you may call me at 0813689057
Withdraw from the study

Your participation in this study is totally voluntary. You are under no obligation to participate. You have the right to withdraw at any time if you care to, without repercussion or penalty, even in the middle of the interview.

The study and procedures have been approved by the appropriate people and research committee of University of Namibia.

I have discussed the above points with the subject. It is my opinion that the subject understands the risks, benefit and obligations involved in participating in this study.

………………………..           …………………….

Investigator                                 Date

I understand that my participation is voluntary and that I may refuse to participate or withdraw my consent and stop taking part at any time without penalty.

I hereby freely consent to take part in this research study

………………………           ……………………           ………..

Signature of witness              Signature of Subject           Date
Appendix ii

QUESTIONNAIRE.

Thank you for taking your time to fill in this questionnaire, your name will remain anonymous. The purpose of this questionnaire is to assess your knowledge, attitudes and practices towards emergency contraceptives and to develop strategies to assist you better by taking emergency contraceptive in case of unsafe sex.

Section 1. Socio-demographic characteristics

1. Age in years………………

2. Which grade are you?
   - ☐ Grade 8
   - ☐ Grade 9
   - ☐ Grade 10
   - ☐ Grade 11
   - ☐ Grade 12

3. Religion?
   - ☐ Christian
   - ☐ Muslim
   - ☐ Tradition religions
   - ☐ Other. Specify…………….

4. Who is the household head?
   - ☐ Father
   - ☐ Mother
   - ☐ Aunt
   - ☐ Brother
   - ☐ Grandmother
   - ☐ Grandfather
   - ☐ Child headed
   - ☐ Others, Specify…………………………………………………

5. What is education status of head of household?
   - ☐ Illiterate
   - ☐ Primary school
   - ☐ Secondary school
   - ☐ Tertiary institution

6. What is the occupation of the head of the household?
   - ☐ Governmental employee
   - ☐ Private employee
   - ☐ Trader
   - ☐ Farmer
   - ☐ Peasants
   - ☐ Jobless
   - ☐ Others, Specify…………………………………………………

7. What is the income of the head of the household?
No income  □  1-4000 N$  □  4001-7000N$  □  7001-10000N$  □  More than 10000  □  I don’t know

Section 2. Knowledge of Emergency contraceptives

8. Have you heard of any method that girls/women might use to prevent themselves from becoming pregnant after they made sex without protection, if they wish?  □ YES  □ NO

9. If YES, what methods of protection do you know? (You can choose more than one method)
   a) Taking contraceptives
   b) Vaginal wash
   c) Abortion
   d) Inserting some stuff into the vagina
   e) Taking some medicines
   g) Others (specify)__________

10. What are the consequences of making sex without protection?  □ Pregnancy  □ HIV  □ AIDS  □ Psychological trauma  □ School dropout  □ Others. Specify...........

11. What conditions do you believe make a girl or woman engage in unprotected sex?
   a) Voluntarily  □ Yes  □ No
   b) Missed/failed protection  □ Yes  □ No
   c) Unable to say no  □ Yes  □ No
   d) peer pressure  □ Yes  □ No
e) Forced physically   □ Yes   □ No
f) influence of alcohol □ Yes   □ No
g) influence of substances □ Yes   □ No
h) tradition         Yes   □ No
i) Other Yes (specify)______                      No

12. Do you know or have you heard of someone/student/peer that is engaged in sex without protection?   □ Yes   □ No

13. If YES, what was the condition in which that person was engaged in sex without protection?
   (List the conditions)

..............................................................

14. What was the result/consequence of that experience?
   □ Pregnancy □ HIV □ STI □ Psychological trauma, □ Don’t know
   □ Other. Specify………

15. Is there anything that could be done to prevent a girl/woman from becoming pregnant after engaging in unprotected sex    □ Yes   □ No   □ I don’t know

16. Have you ever heard about Emergency contraceptives that can be used to prevent a girl/woman from becoming pregnant after engaging in unprotected sex? □ Yes □ No

17. If YES, for question 17. Which method(s) of emergency contraception have you heard of?
   □ Oral pills □ Injectable □ IUD □ Implants
18. Who/what was your source of information about Emergency Contraceptive? (You can choose more than one option)
- Friends/ Family
- Formal education
- Radio/Television
- Print media
- Health worker
- Internet
- Others, Specify

19. How soon after an unprotected sex should an emergency contraceptive method be taken to prevent pregnancy?
- Immediately after sex
- within 24 hours
- within 72 hours
- within 5 days
- Within one week after sex
- After missed period
- I don’t know

20. How does an Emergency contraceptive work?
- Prevent pregnancy from happening
- Induce abortion
- I don’t know
- Other. Specify

21. Where can you get emergency contraceptives? (You can choose more than option)
- Public hospitals
- Private hospital
- Institutional health centers
- Community health centers
- Other. Specify

Section 3. Attitude and practices of emergency contraceptives

22. Have you ever used emergency contraceptive
- Yes
- No

(If NO go to question 30)

23. If YES, which method of emergency contraceptives have you used?
- Oral pills
- Intra Uterine Device
- Others, specify

24. What was the reason that you were not able to protect yourself from the sex you said you used an Emergency contraceptive?.
Condom slippage  □ Forced sex  □ Not used any contraceptive
□ Forgot to take my regular contraceptive  □ Others, Specify_____________

25. Did the emergency contraceptives protect you from becoming pregnant?  
   Yes  □ No  □

26. Did you experience any side effect from the Emergency contraceptives you took?  
   Yes  □ No  □

27. If YES, what side effects did you experience?  
.................................................................................................................................

28. How did you feel after using that Emergency contraceptive pill?  
   □ Innocent  □ Normal  □ Guilty  □ I don’t want to do it again  □

29. Would consider using emergency contraceptive in the future?  
   Yes  □ No  □

30. Please indicate by putting a tick how much you agree or disagree with each of the following statements:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Strongly agree</th>
<th>moderately agree</th>
<th>Not sure</th>
<th>moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Having sex without protection is not a concern in my area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Making sex without protection is acceptable to school girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) The chance of a school girl engaging in unprotected sex without her consent is low.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Making contraceptives that prevent pregnancy after sex available promotes sex among young girls</td>
<td></td>
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</tbody>
</table>
LETTER OF PERMISSION: POST GRADUATE STUDENTS

Date: 08 January 2013

Dear Student: Mr Emmanuel Magesa
Student number: 201119102

The post graduate studies committee has approved your research proposal.

ASSessment of the Knowledge, Attitudes and Practices of the Emergency Contraceptive Among Two Female Secondary School Learners in Ongwediva, Oshana Region

It may be required that you need to apply for additional permission to utilize your target population. If so, please submit this letter to the relevant organizations involved. It is stressed that you should not proceed with data collection and fieldwork before you have received this letter and got permission from the other institutions to conduct the study. It may also be expected that these organizations may require additional information from you.

Please contact your supervisors on a regular basis

Ms. L. van der Westhuizen
Deputy Associate Dean (SoNPH)