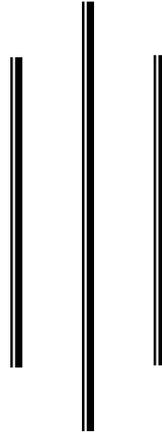


Knowledge and Attitude about Emergency
Contraception Among Health Care Providers and Drug
Sellers in Tanahun District of Nepal

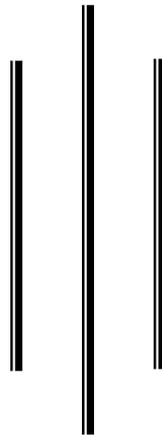


By:

Karuna Pandit

A Dissertation Submitted to

**The Central Department of Population Studies Faculty of
Humanities and Social Sciences for the Partial Fulfillment of the
Degree of Masters of Arts in Population Studies**



Tribhuvan University
Kirtipur, Kathmandu, Nepal
June 2009

RECOMMENDATION

The dissertation entitled **Knowledge and Attitude about Emergency Contraception Among Health Care Providers and Drug Sellers in Tanahun District** submitted by **Mr. Karuna Pandit** for the partial fulfillment of Master's Degree in Population Studies was completed under my supervision and guidance. This dissertation embodies the result of his empirical investigation. I, therefore, recommend it for the final evaluation to the dissertation committee.

Padma Prasad Khatiwada

Supervisor

Central Department of Population Studies

T.U. Kirtipur

LETTER OF ACCEPTANCE

The dissertation work entitled **Knowledge and Attitude about Emergency Contraception Among Health Care Providers and Drug Sellers in Tanahun District** by **Mr. Karuna Pandit** is prepared for the partial fulfillment of the requirements for the Degree of Master of Arts in Population Studies.

Approved by

Dr. Pushpa Kamal Subedi
(Head of the Department)

Mr. Ramesh Prasad Adhikari
(External Examiner)

Mr. Padma Prasad
Khatiwada
(Supervisor)
Dissertation Committee

TRIBHUVAN UNIVERSITY
FACULTY OF HUMANITIES AND SOCIAL SCIENCES
CENTRAL DEPARTMENT OF POPULATION STUDIES
KIRTIPUR, KATHMANDU,
NEPAL

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TERMS USED IN THIS DISSERTATION

Abortion: The deliberate ending of a pregnancy at an early stage.

Client: A person who uses the service or advice about emergency contraception of a health care person or hospital.

Contraceptive: A drug, device or practice used to prevent a woman becoming pregnant.

Emergency Contraception: A method which is used to avoid unwanted and unplanned pregnancy after unprotected sexual intercourse or contraceptive failure.

Family Planning: The process of controlling the number of children by using contraception.

Pregnant: having a baby developing inside of a woman's uterus.

ACRONYMS

AHW	:	Auxiliary Health Worker
AIDS	:	Acquired Immuno Deficiency Syndrome
ANM	:	Auxiliary Nurse Midwife
CVA	:	Cardio Vascular Attack
DGEP	:	Directorate General of Family Planning
EC	:	Emergency Contraceptive
ECP	:	Emergency Contraceptive Pill
EHC	:	Emergency Health Care
FP	:	Family Planning
HA	:	Health Assistant
HCP	:	Health Care Provider
HCW	:	Health Care Worker
HIV	:	Human immuno Dificency Virus
IEC	:	Information, Education and Communication
INGO	:	International Non Government Organisation
IUCD	:	Intra Uterine Contraceptive Device
MCH	:	Maternal and Child Health
MCHW	:	Maternal and Child Health Worker
NGO	:	Non Government Organisation

OPD	:	Out Patient Door
PID	:	Pelvic Inflammatory Diseases
PIEC	:	Pharmacists Perceptions and Behaviours Regarding EC
FFPAM	:	Federation of Family Planning Association, Malaysia
SN	:	Staff Nurse
SPSS	:	Statistical Package for Social Science
STD	:	Sexually Transmitted Disease
STI	:	Sexually Transmitted Infection
UK	:	United Kingdom
USA	:	United States of America
WHO	:	World Health Organization

ABSTRACT

Emergency contraception is identified as an important option for helping people to avoid unintended pregnancy. A descriptive, cross sectional and quantitative nature entitled **Knowledge and Attitude about Emergency Contraception Among Health Care Providers and Drug Sellers in Tanahun District of Nepal** was conducted to find out the level of knowledge and attitude on emergency contraception among health care providers and drug attitude sellers in Tanahun district of Nepal and study was finalized within three months. The sample size was 128 which was one third of the total 384 study population. The respondents were selected through simple random sampling method. In this study both female (63.0%) and male (37.0%) participated. About 78 percent respondents worked in government and private service and one fifth of them were business professional. Cent percent respondents had heard about EC. Among them most commonly used EC was oral pill (85.9%). More than 78 percent believed that EC would help to avoid unwanted pregnancy due to unprotected sex and rupture of condom. Two third respondents advised postinor as an emergency contraception followed by 55.0 percent who advised oral pill. Nearly all (92%) respondents did counseling their clients, counseling were mainly about EC doses and time to take contraceptive or insert contraceptive device, side effects, birth spacing and effectiveness of EC. More than 88 percent respondents mentioned emergency contraception never reduces the chances of STI and HIV and 11.7 percent were mentioned EC reduces the chances of STI & HIV.

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CHAPTER-1

INTRODUCTION

1.1 General Background

Study of emergency contraception is one of the important subject in the reproductive health and its scope is broadly identified among demographers and health experts. Emergency contraception is the methods which used to avoid unwanted and unplanned pregnancy after unprotected sexual intercourse or contraceptive failure. According to the WHO every year 46 million pregnancies aborted with unhygienic conditions where 22.0 percent and 61.0 percent pregnancies were unwanted and unplanned respectively (WHO, 1998).

According to the definition of the World Health Organization, "Emergency Contraception - or EC - is a method of preventing pregnancy within a few hours or a few days after unprotected sexual intercourse" (WHO, 1998). Pregnancy begins when the fertilized egg is implanted in the woman's uterine wall. This occurs at the end of the first week after conception. Emergency Contraception acts prior to implantation. Specific contraceptive methods used as emergency measures to avoid unwanted pregnancy after unprotected sexual intercourse. Emergency contraception is method that can be used by women to prevent pregnancy after an unprotected intercourse or contraceptive failure. Methods that are currently viable in the system such as oral pill, IUD can be used as an emergency methods by women are exposed to sex with out any contraceptive protection or where contraceptive have failed such as condom rupture, missing pill, dislodged IUD etc.

High maternal mortality rate, high neonatal mortality rate, unmet need of family planning methods and high fertility rate were main causes of rising EC demand and its importance was recognized among people. EC is available in Nepal though it is insufficient till to day. People of Nepal are unaware to proper uses of EC due to lack of knowledge of EC uses. In this context, Nepal government has recently launched emergency contraceptive programs in selected districts as sample programs with support of non-government organizations (MOH, 2007).

An emergency contraception pill has an important role in the range of contraceptive options available to women and couples. Emergency contraception is an increased dose of regular oral contraceptive pills used within 72 hours after unprotected sex to reduce a woman's chance of becoming pregnant. Insertion of a copper IUD within 5-7 days after ovulation in a cycle when unprotected intercourse has taken place is extremely efficacious in preventing pregnancy.

Emergency contraception sometimes referred to as "morning after" or postcoital contraception provides a second chance for women who experience contraceptive failure or do not use a method, as well as for women who experience unplanned intercourse, including coerced sex or rape. The two primary methods of emergency contraception are postcoital use of a higher dose of oral contraceptive pills and insertion of an intrauterine device (IUD). Both can significantly reduce a woman's chance of becoming pregnant (75% and 99% respectively). Knowledge of emergency contraception is crucial, since women must know they can prevent pregnancy after intercourse in order to seek out treatment. While rates of unwanted pregnancy vary in different countries and among

population groups, the need for emergency contraception is critical worldwide. However, the availability of emergency contraception differs widely. It is most extensively used in Europe, but is still a new method in other countries, including the United States (FHI, 2005).

Unplanned and unwanted pregnancy is one of the leading causes of maternal mortality and morbidity in South Asia. It is assumed that most women with unwanted/unplanned pregnancies do not continue the pregnancy to the full-term and try to terminate it, often by traditional and harmful methods leading to serious health consequences. Despite the availability of a range of modern and effective contraceptives, unwanted and unplanned pregnancies continue to occur. Proportion of such unwanted pregnancies is subsequently high in South Asian countries. Each year about 210 million women around the world become pregnant. Among them, about 75 million pregnancies (36 percent) are unplanned and/or unintended. Most of these unplanned/unintended pregnancies are not carried to full term, but aborted often in unhygienic conditions leading to serious consequences. It is estimated that worldwide about 46 million pregnancies (22 percent of the total pregnancies and 61 percent of the unplanned/unintended pregnancies) are aborted. It is also estimated that among the total pregnancies each year in South and South-East Asia, about one-third are unplanned or unintended. For instance, 30 percent in Bangladesh, 21 percent in India, 35 percent in Nepal and 35 percent in Pakistan are unplanned pregnancies (FHI, 2005).

In Nepal major thrust of the FP program has been given on the methods that needed to be used on a continuous basis. The concept of emergency contraception is relatively new in Nepal. Despite availability of the method that can be used as emergency contraception there has been very little effort

to offer women with emergency contraception as a choice to prevent unwanted or mistimed pregnancies. Very recently a brand of emergency contraception "Postinor" has been marketed by the private sector and made available through pharmacies without proper IEC activities. "People still hold negative attitude toward abortion and unsafe abortion continues to rise due to lack of awareness," said Anand Tamang, chief of Center for Research on Environment, Health and Population Activities, a non-government organization. According to Tamang only 23 percent health service providers knew emergency contraception methods in Nepal (CREHPA, 2004).

In Nepal, 39.0 percent women are currently using contraceptives; we must acknowledge that there is still an unmet need especially among remote villagers, lack of health care providers and health facility who often do not adopt a continuous method (CBS, 2003). Lack of reproductive awareness and power in sexual decision making results in unplanned pregnancies and abortions these factors along with women. The only option for those who do not want to continue the pregnancies undertake life threatening measures to terminate the pregnancies. In such a scenario emergency contraception can be a valuable reproductive health option. It should also be an essential part of treatment of women who are victims of sexual assault.

1.2 Statement of the Problem

Emergency Contraception pills provide an elevated dose of the hormones in ordinary oral contraceptive pills and contain either a combination of estrogen and progestin, or progestin only. EC pills are generally taken within 72-120 hours of unprotected intercourse. The sooner they are taken the more likely they are to prevent pregnancy. An IUD, when inserted within seven days after unprotected intercourse, may also be used as an EC method.

Unintended or unwanted pregnancy is a major public health problem that affects not only the individuals directly involved but also society. Insurers in both the public and private sectors generally cover the medical costs of unintended pregnancy outcomes, with coverage for abortion showing the most variation. Making ECs more widely available in the USA is one of the consequent needs for abortion (Trussel J. et. al., 1997).

Despite the availability of highly effective methods of contraception, many pregnancies are unplanned and unwanted as all current methods of contraception sometimes fail. Emergency contraception is an important backup when routine contraception fails to work properly, when a condom breaks or a diaphragm or IUD becomes dislodged. These pregnancies carry a higher risk of morbidity and mortality, often due to unsafe abortion. Many of these unplanned pregnancies can be avoided using EC. Emergency contraception is an important way by which family planning and reproductive health programs can improve the quality of their services and better meet the needs of their clients, Emergency contraception is needed because no contraceptives methods are 100 percent reliable and few people use their methods perfectly each time they have sex (Trussel J. et. al., 1997).

The Population Council has conducted studies on emergency contraception throughout the world, including clinical trials to identify simpler regimens and to extend the time limit of use and operations research studies on the introduction of emergency contraception in a number of countries. The goal of the research is to mainstream the method through both national family planning programs and the private sector. In both developed- and developing-country settings new modes of service delivery were explored, including nonprescription pharmacy and over-the-counter access to

emergency contraception. In Europe, the Council worked with colleagues in France, Norway, Portugal, and Sweden to gather information about pharmacy access to emergency contraception. Data collection is complete and a draft manuscript is currently being prepared for publication. Preliminary analysis shows that women in these four countries found pharmacy access to emergency contraception quite acceptable (Kaum A. et. al., 1988).

In Honduras, a three-year study aims to expand knowledge of and access to emergency contraception. The project consists of three main activities: a baseline knowledge, attitudes, and practices survey and a follow-up survey; dissemination of survey results to providers and policymakers; and the adaptation of Spanish-language emergency contraception materials (e.g., postcards and flyers) to the Honduras setting. Emergency contraceptive pills (ECPs) have become more available in many developing countries. However, limited provider knowledge and negative attitudes, as well as poor user awareness and access, have hindered adolescents in learning about and using ECPs. With limited access to contraceptive methods, women have relied upon abortion services to manage unwanted pregnancies. However, until two years ago, Nepal's legal code prohibited abortion, except to save the life of the woman, highly restrictive abortion law did not eliminate the demand for abortion, however; rather, it forced women to seek clandestine, unsafe abortion services. Result was one of the highest maternal mortality ratios in South Asia (539 per 100,000 live births), with 15 to 30.0 percent of maternal deaths attributable to complications from unsafe abortion (MOH, 2004).

Very limited studies were done on EC in Nepal, though those were conducted with limited variables and service center based. Demanding EC services is now universal but on EC related information's were lack among health professionals, those persons who provide health and EC services, they have improper knowledge on EC. In this context, I personally, as a researcher feel that "study on knowledge and attitude on emergency contraception among health care providers and drug sellers" is urgent. With limiting information researcher was undertaken this study.

1.3 Objective of the Study

The general objectives of this study is to find out the current knowledge on emergency contraception among health care providers and Drug sellers. The specific objectives are as follows:

-) To find out source of information of EC;
-) To find out knowledge and risk reduce of HIV/STI's;
-) To explore demographic and socio-economic characteristics of the service receiver;
-) To find out the knowledge on side effects of EC after using and
-) To find out knowledge on emergency contraception.

1.4 Significance of the Study

Nepal is a under development country, where still family planning services are insufficient. Oral pill, IUD and Postinor are available in Nepalese market though people are not using due to lack of knowledge on emergency contraception and importance of EC. At first we need to know health care providers and drug seller's knowledge and attitude because they are the grass

route level health worker and who are directly related to rural and urban illiterate people for giving EC service. Some how little EC services are providing with limited knowledge and practice though it is insufficient. In Nepal, very few researches were done on this area. Through the current research we are trying to know the level of knowledge of health care provider and drug seller. The findings of this research may help the health planner and policy maker in adopting new policy and plan.

1.5 Limitation of the Study

This study has some limitations. These are:

- i. This study is mainly concentrated on the knowledge and attitude about emergency contraception among health care providers and drug sellers in Tanahun district. So it may not possible to show clearly the whole aspects of emergency contraception in Tanahun district.
- ii. This study include those persons who are currently working under government organizations and private organizations and inhabitation of Tanahun districts. Those exclude who don't want to participate in interview so it may not show the whole health care provider's and drug seller's knowledge and attitude about emergency contraception of other districts.
- iii. The study can not compared with the study about other methods of contraception.

1.6 Organization of the Study

The whole study has been summarized into six different chapters. The first chapter deals with general background, statement of the problem, objectives, significance, limitations and organization of the study. The second chapter is about literature review. The research methodology has been described in chapter third. Chapter four gives the demographic characteristics and analysis of the answers of respondents. The fifth chapter includes analysis of knowledge and attitude about emergency contraception of respondents. The sixth chapter includes the summary of findings, conclusion from the present study and recommendations.

CHAPTER – TWO

2.1 Literature Review

Generally, Emergency contraception is used in the condition of unintended and unplanned pregnancy. High doses progesterone only or with estrogen and Intra-Uterine Device used in the method of emergency contraception. Till date people do not have proper knowledge about ECs service. Many literature shows that, health care provider also do not have proper knowledge about ECs which stopped them to advice about EC.

Interest in synthetic hormones as postcoital contraceptives originated several decades ago, with the first published study on the subject appearing in 1967 (Demers L. 1971). A few different drugs were studied, with a focus on high-dose estrogens, and it was originally hoped that postcoital contraception would prove viable as an ongoing contraceptive method (Demers L. 1971).

The first widely used methods were five-day treatments with high-dose estrogens, using diethylstilbestrol (DES) in the US and ethinyl estradiol in the Netherlands (Jonson J. H. 1984).

In the early 1970s, the Yuzpe regimen was developed by AA Yuzpe (Yuzpe et. al. 1974); progestin-only postcoital contraception was investigated (Valleg, 1975); and the copper IUD was first studied for use as emergency contraception (Valleg, 1975). Danazol was tested in the early 1980s in the hopes that it would have fewer side effects than Yuzpe, but was found to be ineffective.

Over time, interest in progestin-only treatments increased. The Special Program on Human Reproduction, an international organization whose members include the World Bank and World Health Organization, "played a

pioneering role in emergency contraception" by "confirming the effectiveness of levonorgestrel." After the WHO conducted a large trial comparing Yuzpe and levonorgestrel in 1998, combined estrogen-progestin products were gradually withdrawn from some markets (*Preven* in the United States discontinued May 2004, Schering PC4 in the UK discontinued October 2001, and *Tetragynon* in France) in favor of progestin-only EC, although prescription-only dedicated Yuzpe regimen products are still available in some countries (FDA, 1997).

In 2002, China becomes the first country in which mifepristone was registered for use as EC.

Ebuehi OM et. al. conduct a study in the 2004 where, a sample of 256 health care providers within Lagos State were surveyed about their knowledge and attitudes toward and provision of emergency contraceptives, using a 25 item, self-administered questionnaire. Frequencies were calculated for the various measures, and chi-square tests were used to determine significant differences. Nine in 10 providers had heard of emergency contraception, but many lacked specific knowledge about the method. Only half of them knew the correct time frame for effective use of emergency contraceptive pills, and three-fourths knew that the pills prevent pregnancy; more than a third incorrectly believed that they may act as an abortifacient. Less than a third of respondents who had heard of the pills knew that they are legal in Nigeria. Of those who had heard about emergency contraception, 58% had provided clients with emergency contraceptive pills, yet only 10% of these providers could correctly identify the drug, dose and timing of the first pill in the regimen. Furthermore, fewer than one in 10 of those who knew of emergency contraception said they

always provided information to clients, whereas a fourth said they never did so (Ebuehi et. al, 2006).

Olufunke Margaret et. al. Olufunke and Ebuehi, conducted another study in the year 2006 where they found emergency contraception can play an important role in reducing the rate of unintended pregnancies in Nigeria, a sample of 256 health care providers within Lagos State were surveyed about their knowledge of, attitudes toward and provision of emergency contraceptives. Nine in 10 providers had heard of emergency contraception, but many lacked specific knowledge about the method. Only half of them knew the correct time frame for effective use of emergency contraceptive pills, and three-fourths knew that the pills prevent pregnancy; more than a third incorrectly believed that they may act as an abortifacient. Less than a third of respondents who had heard of the pills knew that they are legal in Nigeria. Of those who had heard about emergency contraception, 58% had provided clients with emergency contraceptive pills, yet only 10% of these providers could correctly identify the drug, dose and timing of the first pill in the regimen. Furthermore, fewer than one in 10 of those who knew of emergency contraception said they always provided information to clients, whereas a fourth said they never did so (Olufunke et. al., 2006).

In Turkey, A cross-sectional research design was applied and using face-to-face interview methods and questionnaire methods was used for information, 156 health-care providers were covered. As 16 participants had not heard of emergency contraception, 140 health-care providers (general practitioners [n = 51] and nurses and midwives [n = 89]) were included. Of the health-care providers, almost one in 10 was unfamiliar with the term 'emergency contraception'. Only a few health-care providers knew how to use the intra-

uterine contraceptive device (IUCD) for emergency contraception and the doses of emergency contraceptive pills. Some health-care providers included emergency contraception in routine consultations, but many did not support the use of emergency contraception in Turkey. Many of the providers thought that young people should not know about emergency contraception (Sevil et. al., 2006).

A study of USA, in a world today where unplanned or unintended pregnancies occur in exuberant numbers there is a great need for a solution. Emergency contraception is one that comes to mind. In the United States approximately 3.2 million of the total six million annual pregnancies are accidental, half of these ending in abortion. Eighty percent of teen pregnancies are unintended, and each year, one in nine young women aged 15-19 become pregnant; more than half become mothers. Widespread use of emergency contraception could prevent an estimated 1.7 million unintended pregnancies and 800,000 abortions each year. As of September 1998, the Federal Drug administration (FDA), which regulates the introduction of new drugs into the marketplace, has approved a total of 10 brands of combination-hormone pill brands suitable for use as emergency contraception pills. For those who are unable to take the hormone pills there is an option of an intrauterine device. Raising awareness of emergency contraception and allowing health care workers to provide emergency contraception pills to patients who may be at need in the future could dramatically decrease the numbers of unintended pregnancy and all the consequences that result (EC in the US Today, 1998).

Klima, C. S. & Lindberg C.E. wrote in journal of nurse that, emergency contraceptive pills are ordinary birth control pills containing the hormone

estrogen and progestin. They are also called postcoital contraception or "the morning after pill." Emergency contraception Pills (ECP's) can prevent pregnancy after unprotected intercourse by as much as 75% when the first dose is taken within 72 hours and the second dose taken 12 hours later. ECP's affect the menstrual cycle. Administering oral contraceptives as emergency contraception at or near time of ovulation, when pregnancy is most likely to occur, appears to disrupt the ovarian function, which results in an absent or dysfunctional luteal phase. Another option would be the insertion of a copper intrauterine contraceptive device within 5 days of unprotected intercourse. (Demers L., 1971). The intrauterine device (IUD) causes an inflammatory response, making it difficult for implantation to occur on the endometrium. Other types of emergency contraception include "mini-pills" and mifepristone. "Mini-pills" as they are often called are progestin-only pills. They are a good option to those who can not take estrogen and are not good IUD candidates. They may be as effective as the Yuzpe regimen. However, the progestin-only method has not been as extensively studied as the combined pills. The progestin-only pills also need to be taken within 48 hours of intercourse to be effective. The future of emergency contraception may depend on the success of mifepristone (RU-486) which is currently being studied for use in the U.S. It appears to be better tolerated and more effective when used as an emergency contraceptive, not as a medical abortion. The adverse side effects found with combined oral contraceptives occurred less frequently for the groups given mifepristone than those given the Yuzpe regimen. This drug works by binding to the progesterone receptor sites, thus blocking the action of progesterone. As this drug becomes available to the U.S., it may become the emergency contraceptive of choice. It is often a concern to patients whether

emergency contraception is an abortifacient. The answer is no. In fact, emergency contraception prevents pregnancy and therefore reduces the need for induced abortion. Medical science defines the beginning of pregnancy as the implantation of a fertilized egg in the lining of a woman's uterus. Implantation takes place five to seven days after fertilization. Emergency contraceptives work before implantation and not after a woman is already pregnant. So, women should be advised that fertilization may not be prevented by ECP's that are taken too late. Should pregnancy occur and it is decided to continue pregnancy, women worry that congenital anomalies may result after using emergency contraception. Unfortunately, there have been no studies that specifically evaluated the risk of congenital anomalies. There have been 48 cases of method failure in women who have chosen to continue their pregnancies. Only one infant was born with a congenital anomaly: a missing kidney. Thus, there is no reason to suspect that one time emergency use of the pills would be associated with birth defects if the pill fails to prevent pregnancy or if they are taken after a woman is already pregnant (Klima C.S., 1998, Lindberg C.E., 1997).

Morgan, K. & Deneries conducted a study in the year 1997 where, for thousands of years, human beings have been willing to take the risk of pregnancy while having sexual intercourse to later find themselves searching for a remedy after the fact. Remedies once believed to aid in achieving postcoital contraception include herb douches, sneezing, hopping, jumping, and dancing. These remedies date back to 1500 B. C. In the 1920's scientists found that estrogenic ovarian extracts could prevent pregnancy in mammals. This led to a solution for veterinarians when horses and dogs mated accidentally. In the 1960's clinical use of postcoital estrogen alone was first

documented as a treatment for victims of sexual assault. In the 1970's, a Canadian physician named Yuzpe began to study the combination of ethinyl estradiol with a progestin. This became known as the "Yuzpe regimen" and is accepted as the gold standard in emergency contraception. The most important step in assisting women in preventing unintended pregnancy is in educating health care providers about emergency contraceptives so that all patients have access to this method. A survey performed in 1993 indicated the need for more awareness. Two Hundred Ninety Four reproductive health care providers, family practitioners, and emergency department physicians were surveyed to determine how often they provided emergency contraception in the preceding year. The results suggested that the respondents prescribed emergency contraception an average of 3.4 times in the preceding year with one third of those prescribed for victims of sexual assault. Ninety percent of the respondents never or rarely spoke to their patients about emergency contraception and only 10% had literature available for patients about the method (Trussel J. et. al, 1997).

Clearly there was a need for health care providers to be more informative. In 1996 the Reproductive Health Technologies Project and Bridging the Gap Communications began their own education campaign. They spread the word about emergency contraception nationwide by use of public service announcements and advertisements in magazines and outdoor venues. These two organizations also started the Emergency Contraception Hotline. This hotline informs callers about emergency contraception and provides information about where to access the service in their area. In addition a website was launched. For the past 20 years, emergency contraception has been available to women and their health care providers but has been under

used for a variety of reasons in part because of health care givers lacking in knowledge and differences within pharmaceutical and governmental agencies. Now, with more awareness about emergency contraception, it should be available to any patient who requests it. There is no reason to deny the method based on when in the cycle the unprotected intercourse occurred. Planned Parenthood Federation of America recently changed its medical standards and guidelines to allow provisions of emergency contraceptive pills to any patient with a history of unprotected intercourse in the past 72 hours and a normal last menstrual period regardless of medical risk factors for oral contraceptives. In addition, they offer their patients who have had a complete history and physical exam in the last year the option of receiving emergency contraceptive pills for use in the future if the need arises (Morgan and Demers, 1997).

American journal of Public health presented that, the Yuzpe method of emergency contraception is often considered the best regimen because of its lower incidence of side effects as compared to estrogen. Although the side effects of ECP's are not serious, they may effect whether a client will be able to complete the regimen which could decrease the effectiveness of the method. Nausea is the most common side effect associated with emergency contraceptive use and occurs in 50-70% of women who use the method. In addition, approximately 25.0% of women will experience vomiting. Antiemetics may be given to reduce the nausea and vomiting. Breast tenderness, irregular bleeding, and headaches may also occur. These side affects usually begin to disappear one or two days after the second ECP has been taken. (An American General of Public Helath) Women may also

experience a change in the length and timing of their next period. If ECP's are used frequently, periods may become irregular and unpredictable.

According to American journal of public health, the IUD is often considered the most effective form of emergency contraception and the only method that provides long-term contraception. However, because of the risk of pelvic inflammatory disease in women who are at risk for sexually transmitted diseases (STD's) makes it difficult to find women who can be given an IUD. In other words, victims of sexual assault or promiscuous women should be discouraged from using an IUD until screening for STD's can be done. Along with STD's, limitations should be made to women who have a history of ectopic pregnancy, or severe dysmenorrhea, or menorrhagia. Some side effects for IUD insertion may include abdominal discomfort, vaginal bleeding or spotting and infection. Possible side effects of IUD use include heavy menstrual flow, cramping, infection, infertility, and uterine puncture (Trussel J. et.al., 1997).

Trussel et. al. conducted a study in the year 1997, examining the cost-effectiveness of emergency contraceptive pills, minipills and the intrauterine device has been done. The comparison was between a single contraceptive treatment following unprotected intercourse and emergency contraceptive pills provided in advance. The results showed that in a managed care setting, a single treatment of emergency contraception after unprotected intercourse saves \$142 with emergency contraceptive pills and \$119 with minipills. The copper intrauterine device is not cost-effective as an emergency contraceptive alone, but savings quickly result as use continues. Advance provisions of emergency contraceptive pills to women using barrier contraceptives, spermicides, withdrawal, or periodic abstinence saves from

\$263 to \$498 annually. In conclusion, emergency contraception is cost-effective whether provided when the emergency arises or in advance to be used as needed. Greater use of emergency contraception could reduce the considerable medical and social costs of unintended pregnancies (Trussel J. et. al., 1997).

Josaphat K. B. et. al. conducted another study where they found that, health care workers (HCWs) play an important role in making emergency contraceptives (ECs) available to clients. They can influence accessibility positively through counseling, prescribing or advocating the use of ECs. However, in some settings, HCWs have been blamed for unfavorable attitudes and lack of accurate information. The total number of health units at different levels of health care delivery in Kampala (894) was obtained. Probability proportional to size (PPS) technique of sampling was applied. Some 247 HCWs completed a self-administered questionnaire on their knowledge about EC, including methods, mechanism of action, prescription of EC, sources of information, attitudes towards EC, and if and how it should be made available. Of the HCWs, 80% had knowledge of ECs. However, 1 in every 4 was not sure about the time limit within which EC is effective. A total of 50 percent of the participants had obtained information from a physician (26.4%) or from a training school (24%). The Yuzpe regimen was the most commonly mentioned and prescribed method of EC. The HCWs attitudes to EC were generally positive, and it was suggested that the community should be informed and sensitised about EC. There was a significant difference between having had a family planning educational update or not in the last year and knowledge of EC (Josaphat et. al, 2006).

Borrego ME et. al. conducted a study in the year 2006, where a cross-sectional study method was used and pharmacists were participated study shows, of the total participants, 555 (40%) were returned and 523 (38%) were usable; 136 contained written comments. Pharmacists had overall knowledge scores of 71.2 percent + /- 11.3 percent. Pharmacists who had participated in a state-approved EC prescribing training program and had time in their practice setting to prescribe EC had significantly higher knowledge scores. Mean scores indicated that pharmacists have positive attitudes and beliefs toward prescribing EC. Overall, 40 percent of respondents indicated that they would like to become certified to prescribe EC. Pharmacists who agreed that they would like to be certified to prescribe EC were significantly more likely to be male, non-Hispanic, non-Christian, to have liberal or moderate political views, and to indicate that they had employer/manager approval, time, and privacy in their practice setting to prescribe EC (Borrego et.al, 2006).

Monastersky N and Landau SC conducted a research in the year 2006, where they found EC is both safe and effective in reducing the risk of unintended pregnancy after unprotected intercourse, yet awareness of and demand for the medication has not been high, and it often is not stocked in pharmacies. Various advocacy organizations are engaged in educating the public and physicians about EC, but relatively little attention and few resources have been targeted to ensure that the pharmacy community is aware of and educated about EC. Increased visibility and access to EC in the several states that allow pharmacists to provide EC directly to women have resulted from the active participation and leadership of pharmacists. In these states, women are showing interest in and receptivity to reproductive health

services provided by pharmacists. In California, some 3000 pharmacists statewide have completed training, and in 2004 they provided EC directly to approximately 175,000 women. Pharmacists who provide EC overwhelmingly (91%) report that they do so because they see it as an important community service, and many (57.0%) recognize the opportunity for professional development (Monastersky et.al, 2006).

In USA 2006, qualitative study using depth interviews, Community pharmacists in Manchester, Salford and Trafford (Greater Manchester), and Lambeth, Southwark and Lewisham (London) Health Action Zones in the UK. Forty-four community pharmacists supplying EHC in Manchester were participated in the study. Pharmacists were broadly very positive about their experiences supplying EHC via the group prescribing protocol. Pharmacists identified many benefits of the EHC schemes for clients, in particular, improved access to EHC at no cost to clients. The confidential nature of the scheme was also seen as an advantage as was the scope for referral to other service providers. Pharmacists also believed that the scheme had benefits for the profession in terms of enhanced professional standing. However, their concerns included the extent of repeated use of EHC, the possible impact on contraceptive behaviors and sexually transmitted infections and its impact on male coercive sexual behavior (Bissell et.al, 2005).

Sevil U et. al conducted a study in the year 2006, where they found that, a cross-sectional design using and face-to-face interview plus questionnaire methods were used. In the study 18 primary health-care units were selected in Manisa, western Turkey and sample size was 182 health-care providers (general practitioners [n = 72]; nurses and midwives [n = 110] were invited to participate in the study, but 26 of them declined. Of the health-care

providers, almost one in 10 was unfamiliar with the term 'emergency contraception'. Only a few health-care providers knew how to use the intra-uterine contraceptive device (IUCD) for emergency contraception and the doses of emergency contraceptive pills. Some health-care providers included emergency contraception in routine consultations, but many did not support the use of emergency contraception in Turkey. Many of the providers thought that young people should not know about emergency contraception (Sevil et.al, 2005).

University of Columbia conducted a research in USA, where these report found that research has examined providers' knowledge, attitudes and prescribing behaviors with regard to emergency contraception, none has used a theory-based approach to understanding the interplay of these factors. A cross-sectional survey of 96 faculty physicians from one Southern and three Midwestern universities was conducted in 2004 to assess factors associated with intention to prescribe emergency contraception. The theory of reasoned action guided the study hypotheses and survey design. Correlation and regression analyses were used to examine the data. Only 42% of respondents strongly intended to prescribe emergency contraception for teenagers, but 65-77% intended to do so for all other specified groups (women who ask for the method, who have had a method problem, who have experienced rape or incest, and who have had unprotected sex). Consistent with the theory of reasoned action, high intention to prescribe emergency contraception was associated with positive attitudes toward doing so and with the perception that specific colleagues or professional groups support prescribing it; however, the perception of support by colleagues or professional groups in general did not predict intention. Also

consistent with the theory, physicians' knowledge about emergency contraception and their demographic characteristics were not significant (Sable, et. al. 2006).

Case studies in EC revealed that general practitioners are the major source of emergency contraception in the United Kingdom. Everyone in the United Kingdom is entitled to register with a general practitioner. For contraceptive services, women may also visit a general practitioner other than the one they are registered with, although this option is not widely known. General practitioners are the major source of emergency contraception in the United Kingdom. Everyone in the United Kingdom is entitled to register with a general practitioner. For contraceptive services, women may also visit a general practitioner other than the one they are registered with, although this option is not widely known. Women in most cities and large towns may also seek emergency contraception at National Health Service family planning clinics. Since 1972, these clinics have provided contraceptives free of charge. The clinics offer anonymity to women reluctant to consult their general practitioner and may be open in the evenings and on weekends; however, not all towns—and few villages— have such centers, and at least half of these clinics are open only once a week. The nonprofit Brook Advisory Centres, which provide services to young people in cities throughout England and in Edinburgh, Scotland, provide emergency contraception. Some hospitals' accident and emergency departments also provide hormonal emergency contraception. National data on the prevalence of emergency contraception do not exist, but reports from clinics suggest that use has been rising rapidly. Knowledge of emergency contraception is fairly high; surveys from the late 1980s found that 65-75% of women

undergoing induced abortion had heard of emergency contraception. A small, unpublished survey conducted by Schering in 1994 found that 90% of women had heard of emergency contraception. However, many women continue to be unaware of the 72-hour time limit or of the method's ready availability. Levels of knowledge of postcoital IUD insertion are low. Schering's sales data for PC4 indicate that about 353,700 packets were sold in 1992, and 420,500 were sold in 1993. Schering has sold 2.5 million packets of PC4 since the regimen was licensed in 1984. use of emergency contraception has doubled in the last five years and now accounts for about 4% of the 47,000 visits made to the facility annually. There is no way of estimating the extent to which Ovrán is prescribed for emergency contraception or how many IUDs are inserted for postcoital indications, since these contraceptives are also used on an ongoing basis (Glasier et. al, 2004).

Emergency contraception is, however, available from both pharmacies and private physicians in Malaysia. Although Postinor and Estinor both fall under the regulations of the Poisons Act, they may be purchased without prescription if the woman provides her name, address and identification card number to the pharmacist. Very rough estimates based on sales by pharmacies indicate that at least 20,000 women obtained emergency contraceptives in 1994. The exact number is difficult to determine because some women purchase just the tablets they need to cover one act of unprotected intercourse, whereas others buy extra pills. Few women receive emergency contraception from FFPAM clinics; only 60 did so in 1993. These women were 20-40 years old and requested emergency contraception for a variety of reasons: unexpected and unprotected intercourse missed pills

and ruptured condoms. In addition, some pharmacies report that Estinor is used by sex workers, as well as by rape victims. At pharmacies in Malaysia, the strip of 10 pills-enough to cover five episodes of unprotected intercourse-costs the purchaser \$3-\$6. At private clinics, the cost for 1-3 tablets is approximately \$4, which includes the consultation fee (Glasier et. al, 2004).

EC strategy meeting (South Africa 2005) paper presented that, first of all, in contrast to the providers' generally poor acknowledgement of STI risks, familiarity with correct ECP regimens was universally high. Every mystery client who received ECPs was correctly advised to take the first dose within 72 hours of unprotected sex, followed by the second dose, 12 hours later. Every client was also asked how long ago the act of unprotected sex took place. In terms of technical knowledge, therefore, both pharmacists and clinic-based providers (the only two authorized to provide ECPs) performed equally well. Where discrepancies began to appear, however, was in the attention given by providers to the potential side effects of ECPs: how to minimize them and what to do should vomiting occur within two hours. Based on 26 interviews with all five groups of providers, only one group consistently informed users to take ECPs with food and to return for another dose should vomiting occur within 2 hours. That group was the clinic-based OPD and MCH/FP nurses. Peer counselors and community sales agents also scored poorly on this indicator, though the importance of such an omission was probably less, given the fact that neither group was authorized to actually distribute First of all, in contrast to the providers' generally poor acknowledgement of STI risks, familiarity with correct ECP regimens was universally high. Every mystery client who received ECPs was correctly

advised to take the first dose within 72 hours of unprotected sex, followed by the second dose, 12 hours later. Every client was also asked how long ago the act of unprotected sex took place. In terms of technical knowledge, therefore, both pharmacists and clinic-based providers (the only two authorized to provide ECPs) performed equally well. Where discrepancies began to appear, however, was in the attention given by providers to the potential side effects of ECPs: how to minimize them and what to do should vomiting occur within two hours. Based on 26 interviews with all five groups of providers, only one group consistently informed users to take ECPs with food and to return for another dose should vomiting occur within 2 hours. That group was the clinic-based OPD and MCH/FP nurses. Peer counselors and community sales agents also scored poorly on this indicator, though the importance of such an omission was probably less, given the fact that neither group was authorized to actually distribute (EC SM, 2005).

Takkar N et. al. study was designed to investigate knowledge and use of contraceptive methods and awareness of emergency contraception among Indian women working in the hospital. Settings: Educated workingwomen in a medical college hospital. Cross-sectional study design was applied and study was carried out among women belonging to three categories; staff nurses, ministerial staff and others. A pre tested mixed questionnaire containing open as well as closed ended questions was administered. The women were asked questions concerning knowledge and use of contraceptive methods and awareness of emergency or postcoital contraception. Of the 284 employees 258 women consented for the interview. All the subjects were literate and majority (97.2%) had an urban background. Of the 190 married women, 154 (81.1%) practiced

contraception; among them (73.3%) were regular users. Eighty respondents underwent abortions of which 46 had spontaneous and 34 had induced abortions. Among the available contraceptive methods, condom was the most popular method in 89 (57.8%) followed by Copper T in 38 women (24.7%). The use of hormonal contraception was very low 2.6%. Print and electronic media were the common source of public awareness in 149 subjects (57.7%). Twenty-nine women (11.2%) were aware and only three women used emergency contraception (Takkar N. et. al, 2003).

Ball DE et. al. conducted another study in the year 2006, where a self-administered questionnaire was developed to elicit pertinent demographic information as well as awareness of and concerns about EC in Kuwait and administered to the senior pharmacist in 51 randomly selected private retail pharmacies. The median practice experience of the pharmacists was 6 years. Oral contraceptives and male condoms were universally available in the pharmacies, but none stocked emergency contraceptives, female condoms, or diaphragms. Twenty respondents said they were aware of EC, and four (7.8%) that they had ever offered EC. Nine (17.6%) respondents saw EC as offering no advantages over other contraceptive measures and effectiveness was perceived to be low. Most cited concerns were of encouraging irresponsible behaviour and women relying on EC in place of regular contraceptive measures. Religious opposition (41.2%), lack of awareness by clients (51.0%) and lack of awareness by health providers (35.3%) were seen as the most significant obstacles to provision of EC (Ball et. al, 2006).

CHAPTER- THREE

METHODOLOGY

3.1 The Study Area

This study area was purposively select. Emergency contraception is an emerging issues in Nepal. Additionally there is very few research done in Nepal in this issue. During meeting with health care provider and drug seller the researcher grabbed the opportunity to feel and understand about the knowledge and attitude of people and the situation of family planning in the context of Nepal.

3.2 Nature of Data

This study is based on primary data. The primary information was collected from field survey. Additionally other information's included in this study were collected from different source such as survey reports, census report, generals etc.

3.3 Sampling

The respondents of this study were health care providers and drugs sellers in Tanahun district. Total 384 health care provides and drug sellers of Tanahun districts, who were inhabitants and currently working personnel in this field were the original population for this research. For the purpose of this study one third of the total population has been selected depending on time and other factors. The respondents were selected through simple random sampling method. According to procedure 128 were sample size of this study.

3.4 The Questionnaire

For the collection of information about the emergency contraception of health personal and drug sellers, questionnaire was designed with the help of previous dissertations and other survey questionnaire regarding with EC base on the objectives of this study. The questionnaire consisted both opened and as well as closed ended questiontions the questionnaire was divided into two sections. The first sections for the questionnaire presents background caratericts of the respondents. The second section presents their knowledge and attitude about emergency contraception.

3.4 Method of Data Collection

For this study data were collected thought direct personal interview with the help of structured questionnaire.

3.5 Data Processing

Field questionnaire was carefully checked for possible errors. The data were carefully edited and processed with the help of computer using data base computer programs. Then the required table were generated by using SPSS /PC + software programmed.

3.6 Data Analysis

The data collected through personnel interview was presented in suitable tables. They were analyzed and tabulated according to the objectives of the study.

CHAPTER – FOUR

Demographic and Socio-Economic Background

4.1 Demographic Background

In this section, respondents' background variables and knowledge related information's were presented as univariate analysis methods.

4.1.1 Demographic Characteristics of Respondents

The study revealed (Table 4.1) majority of the respondents were female (63.3%) and males (36.7%). More than half (58.6%) respondents were Brahmins followed by Janajati (33.6%), Newar (6.3%) and only 1.6 percent respondents were Dalit (Table 4.1).

The age range was 18 to 52 years, where respondents below 25 years old and above 40 years old were equal (11.7%). Respondents aged 30– 34 years were 24 percent aged 35–39 years were 25 percent. Finally, 27 percent of the respondents were aged between 25 years-29 years (Table 4.1).

Respondent's profession and duration of work experience related information were also collected, where 78 percent respondents worked in government and private service holder and other 21.9 percent respondents were running their activities as business motive. Out of 128 respondents 32 percent had 10-14 years working experience and followed by 5-9 years (23.4%), 1-4years (19.5%) and 11.7 percent had 15 and above working experience respectively (Table 4.1).

Table 4.1: Distribution of Respondents According to their Background Characteristics

Description	Number (N=128)	Percent
Sex		
Male	47	36.7
Female	81	63.3
Caste		
Janjati	43	33.6
Brahmin	75	58.6
Dalit	2	1.6
Newar	8	6.3
Age group		
Below 25 yrs	15	11.7
25-29 yrs	35	27.3
30 - 34 yrs	31	24.2
35- 39 yrs	32	25.0
40+ yrs	15	11.7
Type of profession		
Service	100	78.1
Business	28	21.9
Years of work experience		
Below 1 yrs	25	19.5
1 - 4 yrs	17	13.3
5 - 9 yrs	30	23.4
10 - 14 yrs	41	32.0
15+ yrs	15	11.7

Source: Field Survey, 2008

4.1.2 Characteristics of the Clients

Age and sex are important demographic components affecting other demographic and socio-economic components. Age and sex both affect the marital status of people. Economic status may affect their behaviour of contraceptive use.

Table 4.2: Distribution of characteristics of the client or service receiver

Description	Frequency (N=40)	Percent
Age group		
Below 20 yrs	5	12.5
21-39yrs	35	87.5
Sex		
Male	17	42.5
Female	14	35
Both	9	22.5
Economic status		
High	2	5
Middle	26	65
Low	3	7.5
All level of status	9	22.5

Source: Filed Survey, 2008

Vast majority (87.5%) of clients aged between 21 to 39 years and only (12.5%) client aged below 20 years. Sex of clients was quite impressive, (42.5%) male were come for EC service, (35%) female and (22.5%) come both (male and female) for receiving EC service. Sixty-five percent clients were middle class according to economic status, all level of status (22.5%), (7.5%) were low and (5.0%) were from high economic class respectively received EC services (Table 4.2).

4.1.3 Distribution of respondents according to their knowledge on EC, indication of EC and source of knowledge

All of the methods of EC are not equally effective and equally available. Oral pills is popular regular contraceptive method. Perhaps, due to this reason most of the respondents have knowledge about oral pills.

There are some for the conditions for the use of emergency contraception. Especially EC is used after unprotected sexual intercourse or if regular method is missed.

Table 4.3: Respondent's knowledge on EC, indication of EC and source of knowledge

Description	Frequency (N=128)	Percent
Type of EC*		
Oral Pill	110	85.9
IUD	38	29.7
Postinor	43	33.6
Indication of EC*		
Unprotected sex	100	78.1
For rape victims	92	71.9
Ruptured of condom	94	73.4
Regular family planning methods	22	17.2
For population control	18	14.1
To avoid unwanted pregnancy	45	35.2
As back up service of family planning	8	6.3
For prolonged separation	4	3.1
Source of knowledge*		
Book/ Journal/ News paper	37	28.9
Medicine company	6	4.7

Doctors/ Health Professionals	16	12.5
Training	105	82.0

*Number and percent may exceed 100 due to multiple responses

Source: Field Survey, 2008

All the respondents had heard about emergency contraception. Further question was asked among them regarding on name of emergency contraceptive methods, all of the respondents could mention any name of some emergency contraceptive methods, among them most commonly mentioned methods was oral pill (85.9%), postinor (33.6%) and (29.7%) were mentioned IUD (Table 4.3).

More than 78 percent were believed that it would help in unprotected sex, (73.4%) rupture of condom, (71.9%) for rape victims, (35.2%) said that it could help in avoiding unwanted pregnancies,(17.2%) regular family planning method, (14.1%) for population control and (6.3%) as back up to service of family planning methods. Only (3.1%) mentioned that emergency contraception would be useful for partners separated from each other for a prolonged period. Eighty- two percent of the respondent, who were known about emergency contraception methods from training, about 29.0 percent respondent learned about emergency contraception through book, journal and newspaper and rest of the respondent (12.5%) and (4.7%) heard from medicine company, doctor and other health professional respectively (Table 4.3).

4.1.4 Distribution of respondents by clients history for EC

A question asked to respondents about clients visit history for EC service in last year. Generally, it was asked to know how many people want to take the service of EC method. This helps to imagine the public awareness about EC.

Table 4.4: Distribution of respondents according to history for EC

Description	Frequency (N=128)	Percent
Clients asked EC to you in last year		
Yes	40	31.3
No	88	68.7
Number of clients visit in last month		
One	8	20.0
Two	13	32.5
Three	7	17.5
Four	7	17.5
Five	5	12.5
Generally, how clients asked for EC?		
For unsafe sex	12	30.0
For methods failure	15	37.5
To avoid pregnancy	10	25.0
To stop menstruation	3	7.5
Prescribed EC methods*		
Oral Pill	22	55.0
Postinor	26	65.0
IUD	3	7.5

*Number and percent may exceed 100 due to multiple responses

Source: Field Survey, 2008

Out of total respondent around 31.0 percent were agreed the statement and they provide EC service to clients as well. Only 31.0 percent respondents had been asked about number of clients visit in last months, among them 32.5 percent were replied two persons were visit their center for EC, only one (20%), 3 and 4 persons (17.5%) and 5 persons (12.5%) respectively responded EC service. When Respondents asked, generally how clients asked to Emergency contraceptives, most (37.5%) of mentioned, that clients asked EC due to their method failure, i.e. rupture of condom natural methods failure etc. 30.0 percent unsafe sex, 25.0 percent to avoid pregnancy and

only 7.5 percent mentioned to stop menstruation. About 65.0 percent respondents responded that they prescribed postinor emergency contraception, 55.0 percent prescribed oral pill and only 7.5 percent prescribed IUD (Table 4.4).

4.1.5 Distribution of respondents by their knowledge about dose time for EC methods

Effectiveness of EC depends on right does of the EC. Question has included in the questionnaire in order to explore right knowledge of respondents.

Table 4.5: Respondent's knowledge of dose and proper time to take or insert EC methods

Description	Frequency (N=128)	Percent
Oral pill doses		
Correct answer	36	28.1
Wrong answer	80	62.5
No response	12	9.4
Appropriate time to take oral pill for proper work		
Correct answer	63	54.3
Wrong answer	53	45.7
Postinor doses		
Correct answer	25	19.5
Wrong answer	6	4.7
No response	97	75.8
Appropriate time to take postinor for proper work		
Correct answer	21	67.7
Wrong answer	10	32.3
IUD set		
Correct answer	17	13.3
Wrong answer	2	1.6
No response	109	85.2
Appropriate time to insert IUD for proper work		
Correct answer	14	73.7
Wrong answer	5	26.3

The appropriate time and does to take emergency contraception

Method	Dose	Time
Pills	4 tabs stat and 4 tab after 24 hrs.	Within 72 hrs
Postinor	1 tab stat and 1 tab after 24 hrs	Within 72 hrs
IUD	1 does	5 to 7 days after menstruation

The study revealed that vast majority (62.5%) of the respondents had given the doses of oral pill wrong answer where as only (28.1%) gave the correct answer and (9.4%) were not responded. Among 28.0 percent, 54.3 percent were known the appropriate time to take oral pill for proper work and 45.7 percent couldn't. According to table 4.5, 75.5 percent respondents did not respond about doses of postinor, where only 19.5 percent mentioned correct answer and 4.7 percent mentioned wrong answer. Among 19.5 percent, 67.7 percent of the respondents knew appropriate time to take to postinor for proper work and 32.3 percent could not mentioned correct answer. Similarly, more then 85.0 percent respondents had not responded the set of IUD as well, more than 13.0 percent mentioned correct answer and only 1.6 percent mentioned wrong answer about IUD set. Among 13.0 percent, more than 73.0 percent of the respondents knew appropriate time to insert IUD for proper work and 26.3 percent could not (Table 4.5).

4.1.6 Respondent's Counseling

Counseling on EC can be measured on the ground of providers personal attitude and level of knowledge obtained. Those respondents who believe on the effectiveness of EC may likely to advice clients compared who have less faith on the effectiveness of EC.

Table 4.6: Distribution of respondents according to counseling, side effects and contraindication of EC

Distribution	Frequency (N=40)	Percent
Counseling about EC		
Yes	37	92.5
No	3	7.5
Matters of counseling		
EC is not a regular FP methods	3	7.5
Dose, time and using methods	27	67.5
Effectiveness of EC	4	10.0
Side effects and birth space	6	15.0
Description	Frequency (N=128)	Percent
Side effects*		
Nausea and vomiting	114	89.1
Bleeding and spotting etc	55	43.0
Vertigo, headache and dizziness	102	79.7
Congenital malformation	8	6.3
Incomplete abortion	8	6.3
Ectopic pregnancy	2	1.6
Breast tenderness	5	3.9
Don't know	4	3.1

*Number and percent may exceed 100 due to multiple responses

Source: Field Survey, 2008

The study revealed that 92.0 percent respondents did counseling their clients. Among them majority (67.5%) of the respondents did counseling to the clients about EC doses and time to take and use or insert, nearly (26.0%)

did counseling about side effects, birth spacing, effectiveness of EC and (7.5%) did further counseling that EC is not regular family planning methods (Table 4.6).

Regarding side effects, respondents had mentioned both correct and incorrect answer. As side effect they replied nausea and vomiting 89.1 percent, vertigo/dizziness/headache 79.7 percent, bleeding and spotting, 43.0 percent were the most commonly mentioned side effects. However congenital malformation 6.3 percent, incomplete abortion 6.3 percent, 3.9 percent mentioned breast tenderness, 3.1 mentioned don't know and only 1.6 percent mentioned ectopic pregnancy as the most common side effects (Table 4.6).

4.1.7 Respondents distribution according to opinion

A question was asked regarding on whether respondents opined either miss used of EC or well use. Because, if respondents give the answer that EC is misused they tend to not giving the EC service to their clients.

Table 4.7: Respondents distribution according to opinion about proper uses of EC services

Description	Frequency (N=128)	Percent
Use of EC Service		
Well Use	51	39.8
Miss use	35	27.3
Don't know	42	32.8
If misuse, why?		
Abortion	4	11.4
Unnecessary use	13	37.1
Negligence with sex	10	28.6
Adolescent Feel easy and free sex	4	11.4
Rise prostitute	2	5.7
Use unmarried women	2	5.7
Use as regular contraceptives?		
Yes	23	18.0
No	105	82.0
If no, why?		
Emergency method	40	38.1
Not working at all	15	14.3
High side effects	26	24.8
Irregular menstruation	4	3.8
High dose	22	21.0
Expensive method	2	1.9

Source: Field Survey, 2008

More than 39.0 percent of the respondents were opined that EC was well used, 27.0 percent were opined miss use and rest of (32.8%) could not mentioned any options. Describe the reasons of miss use, 37.1 percent replied that there would be unnecessary use and 28.6 percent were concern about the negligence with sex. Moreover, approximately one third of respondents expressed their concern that abortions, adolescent feel easy and free sex, rises prostitute and chance of used EC to unmarried women (Table 4.7).

CHAPTER – FIVE

Socio-Economic Analysis

5.1 Socio-Economic Analysis

Few cross tabulation were presented in this chapter to see association between some dependent variables (sex & age of work experience) and some independent variables (knowledge, opinion & practice on EC).

5.1.1 Association between experience and knowledge

It is said that longer the professional experience higher the knowledge in positive. Age of work keeps important because it adds additional knowledge regarding the profession.

Table 5.1: Respondents distribution according to their knowledge on type of EC by age of work experience (N=128)

Type of EC*	Below 10 years		Above 10 years	
	Frequency	Percent	Frequency	Percent
Oral Pill	58	80.6	52	92.9
IUD	19	26.4	19	33.9
Postinor	27	37.5	16	28.6

*Number and percent may exceed 100 due to multiple responses

Source: Field Survey, 2008

Study show the association between age of work experience and knowledge of EC, Respondents who had working experience below 10 years had more (37.5%) knowledge about new device postinor with compared above 10 years experience (28.6%) and on the other hand oral pill was more (92.9%) popular among above 10 years experience respondents than below 10 years

(80.6%). Similarly IUD was also popular among above 10 years experience than fewer experiences (33.9% & 26.4%) respectively (Table 5.1).

5.1.2 Association between sex and knowledge

Generally, oral pill is a commonly used female regular contraceptive method. Therefore, the prevalence of this method as EC was obtained high among female respondents then male.

Table 5.2: Association between sex and knowledge on type of EC

Type of EC*	Male		Female	
	Frequency	Percent	Frequency	Percent
Oral Pill	37	78.7	73	90.1
IUD	9	19.1	29	35.8
Postinor	27	57.4	16	19.8

*Number and percent may exceed 100 due to multiple responses

Source: Field Survey, 2008

Study show, the association between sex and knowledge of EC, male respondents had more (57.4%) knowledge about new device postinor with compared female (19.8%) and other hand oral pill was more (90.9%) popular among female respondents than male (78.7%). Similarly IUD was also popular among female than male (35.8% & 19.1%) respectively (Table 5.2).

5.1.3 Association between sex and knowledge and practice on EC

Table 5.1.3 shows that association between sex and some independent variables on EC knowledge, opinion & practices. Cent percent female were counseled but only about 90.0 percent male were counseled. Regarding on opinion of male participation on EC, Majority (66.0%) of male respondents were opined that there should be male participated on EC service than female (28.4%). Male respondents were more knowledgeable then female in terms of uses of EC as regular contraceptives, where male respondents were opposed to EC was as regular contraceptives than female (95.7% & 74.6%) respectively. Female respondents had misconception on EC reduce the chance of STI and HIV than male, Where female respondents were yes respond than male (16% & 4.3%) respectively.

Table 5.3: Association between sex and knowledge and practice on EC

Description	Male		Female	
	Frequency	Percent	Frequency	Percent
Do you provide counseling service? (N=40)				
Yes	28	90.3	9	100.0
No	3	9.7		
Male participation on EC Service (N=128)				
Yes	31	66.0	23	28.4
No	16	34.0	58	71.6
Use as regular contraceptives? (N=128)				
Yes	2	4.3	21	25.9
No	45	95.7	60	74.1
EC reduce the chance of STI and HIV (N=128)				
Yes	2	4.3	13	16.0
No	45	95.7	68	84.0

Source: Field Survey, 2008

CHAPTER – SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

Emergency contraception adds an important option for helping people to avoid unintended pregnancy. Unprotected sex, improper use of regular contraceptives, failure of barrier methods and sexual violence often lead to an unwanted pregnancy. In such situations emergency contraceptive oral pill give women a last chance to prevent unwanted pregnancy from unprotected intercourse. Emergency contraceptives; oral pill contain increased doses of hormone used in regular contraceptive oral pill and should be taken within 72 hours of unprotected intercourse. Insertion of a copper IUD within 5 to 7 days after ovulation in a cycle when unprotected intercourse has taken place is extremely efficacious in preventing pregnancy.

A descriptive, cross sectional and quantitative in nature study was conducted to find out the current level of knowledge on emergency contraception among health care providers and Drug sellers in Tanahun district of Nepal. In this study following are the major findings:

Major findings

-) Majority of the respondents were female (63.3%) and rest of the participants (36.7%) were male participated in this study. More than half percent (58.6%) respondents were Brahmins and only 1.6 percent respondents were Dalit. The age range was 18 to 52 years, where nearly 12.0 percent were below 25years and above 39 years respondent were also 12.0 percent.

-) Nearly 80 percent respondents were worked in government and private service holders and one fifth (21.9%) respondents were business professionals. Out of 128 respondents 32 percent had 10-14 years working experience and 11.7 percent had 15 years above working experience.
-) Most of the respondents had knowledge on emergency contraception, among them most commonly EC was oral pill (85.9%). More than 78 percent were believed that it would help in unprotected sex, (73.4%) rupture of condom and (71.9%) for rape victims.
-) Eighty-two percent of the respondent, who were known about emergency contraception methods from training, about 29.0 percent respondent learned about emergency contraception through book, journal and newspaper.
-) Out of total respondent only 31.0 percent were agreed the statement and they provide EC service to clients as well. Among them 32.5 percent were replied two persons were visit their center for EC service.
-) Most of mentioned that clients asked EC due to their method failure, i.e. rupture of condom, natural methods failure etc. 30.0 percent unsafe sex, 25.0 percent to avoid pregnancy and only 7.5 percent mentioned to stop menstruation.
-) Nearly two-third (65%) respondents responded that they prescribed postinor emergency contraception, 55.0 percent prescribed oral pill and only 7.5 percent prescribed IUD.

- J Slightly over one quarter (28.1%) gave the correct answer dose of oral pill and among them more than half (54.3%) had knowledge about appropriate time to take oral pill for proper working.
- J Nearly one-fifth (19.5%) mentioned correct answer dose of postinor, among 67.7 percent of the respondent had knowledge about appropriate time to take to postinor.
- J More than 13.0 percent mentioned correct answer set of IUD, among them more than 73.0 percent of the respondents had knowledge about appropriate time to insert IUD for proper working.
- J Vast majority (87.5%) of clients aged between 21 to 39 years who were visit service center for EC. Where (42.5%) of the male, (35.0%) female and (22.5%) both were visit for EC service. Sixty-five percent clients were middle class according to economic status.
- J AN overwhelming majority (92%) respondents did counseling their clients. Among them majority (67.5%) of the respondents did counseling to the clients about EC doses and time to take and use or insert, nearly (26.0%) did counseling about side effects, birth spacing, effectiveness of EC.
- J Regarding side effects, respondents had mentioned both correct and incorrect answer. As side effect they replied nausea and vomiting 89.1 percent, vertigo/dizziness/headache 79.7 percent, bleeding and spotting 43.0 percent were the most commonly mentioned side effects.
- J Nearly two-fifth (39%) of the respondents were opined that EC was well used but 27.0 percent were opined miss used. Moreover,

- approximately one third of respondents expressed their concern that abortions, adolescent feel easy and free sex, rises prostitute and chance of used EC to unmarried women.
-) Vast majority (82.0%) of the respondents were not agree with emergency contraception uses as regular contraceptives. Described the reasoned of EC is not regular contraceptives, (31.1%) were mentioned high side effects, (21.0%) mentioned high doses and (14.3%) mentioned not working at all time.
 -) Out of the 128 respondents 88.3 percent mentioned emergency contraception never reduces the chances of STI and HIV and 11.7 percent were mentioned EC reduces the chances of STI & HIV.
 -) The study showed the association between age of work experience and knowledge of EC, Respondents who had working experience below 10 years had more (37.5%) knowledge about new device postinor with compared above 10 years experience (28.6%).
 -) The association between sex and knowledge of EC, male respondents had more (57.4%) knowledge about new device postinor with compared female (19.8%) and other hand oral pill was more (90.9%) popular among female respondents than male (78.7%).
 -) Regarding on IUD set and time male were slightly knowledgeable than female (14.9% & 12.3%) respectively in terms of dose and other hand in terms of insert time female gave correct answer than male (80.0% & 66.7%) respectively. Similarly postinor's dose was known among male respondents than female (40.4% & 7.4%) respectively.

-) Association between age of working experience and knowledge on EC dose and time, regarding on oral pill dose above 10 years work experienced respondents were slightly knowledgeable than below 10 years (35.7% & 22.2%).
-) Association between sex and some independent variables on EC knowledge, opinion & practices, cent percent female were counseled but nearly 90.0 percent male were done same.
-) Regarding on opinion of male participation on EC, Majority (66%) of male respondents were opined that there should be male participated on EC service than female (28.4%). Male respondents were more knowledgeable than female in terms of uses of EC as regular contraceptives, where male respondents were opposed to EC as regular contraceptives than female (95.7% & 74.6%) respectively.
-) Female respondents had misconception on EC reduce the chance of STI and HIV than male, Where female respondents were yes respond than male (16% & 4.3%) respectively.

6.2 Conclusion

This study has been carried among 126 respondents. All respondents have known about any of the EC methods. But among them some respondents have accurate knowledge on EC method and some have lack of accurate knowledge about his. Accurate knowledge affects provider's competence and the total goal of practice. Only by the respondents have gained knowledge about EC by training. But non of the respondents received training on Only for ECO on the session of training this subject matter was informal.

Most of the respondents are aware about EC Pill (85.9%). Most of the and some respondents are aware about IVD and positron. But most of the respondents have not knowledge about dose and time. Various researches don at international level show higher level medical professionals also lack of complete knowledge on ECs and this is completely new phenomenon for Nepalese health professional, therefore, it is common for no enough knowledge.

There are various negative beliefs regarding ECs, unnecessary suspects the respondents have expressed which are never just. For example, only 39.0 percent of the respondents were opined that EC was well used by 27% of the respondents were opined miss used. Moreover approximately one third of the respondents expressed their concern that abortion, adolescent feel easy and free sex, rise prostitute. It is not factual being easy accessibility of ECs these behaviour increases; it depends on the morality of an individual.

EC are methods of preventing pregnancy often unprotected sexual intercourse. They do not protect against sexually transmitted infectious. EC can be used when a condom breaks, after a sexual assault, or any time unprotected sexual intercourse occurs. This is not well to use EC as only protection against pregnancy if one sexually active or planning to be. Because this method is not a best way than other ongoing contraceptives method.

6.3 Recommendations

1. Higher knowledge would be an advantage for the wide acceptability of ECs. Higher knowledge and accurate knowledge increase the quality of counseling. The study shows many of the health are providers and drug sellers personnel lack knowledge and even accurate knowledge.

Therefore programs should be launched in order to increase the knowledge also care providers and drug sellers.

2. It is therefore, necessary to create enabling environment where each of the health professional can deliver the knowledge of ECs for clients. Government should manage training for health professional on EC.
3. Some of the respondents during study expressed the negative attitude on EC. Therefore accurate knowledge should be delivered them.
4. Awareness on use of ECs in the community level may be an advantage for preventing unwanted pregnancy and unsafe abortion
5. Information for adolescents on ECs may prevent them from being early age mother, unwanted pregnancy and unsafe abortion. Academic curriculum should contain a chapter on ECs together with family planning.
6. In country like Nepal with low level of contraceptives prevalence rate, if the ECs would be enhanced it would add an additional strength to reduce fertility and the unwanted pregnancy.

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APPENDIX

Knowledge and Attitude about Emergency Contraception Among Health Care Provider and Drug Seller in Tanahun Distirct, Nepal.

Study Questionnaire

Date:.....

A. Background Informations

1. Name
2. Sex:.....
3. Age (in completed years):.....
4. Occupation:
 - A. Service Post: 1 HA 2 Staff Nurse 3 AHW 4 ANM 5 Other.....
 - B. Business

5. Years of Working Experience:

B. Knowledge and Attitude on EC Related Informations

6. Do you know about Emergency Contraception?
 1. Yes
 2. No
7. If yes, what are the methods of EC?
 1. Pills
 2. IUD
 3. Postinor
 4. Other (specify).....
8. Where you know about EC? (Multiple answer)
 1. Book/Journal/ News paper
 2. Radio/TV
 3. Medicine company
 4. Doctors/Health Professional
 5. Training
 - Other (specify).....
9. Did you participate in training on EC?
 1. Yes
 2. No
10. What is the indication of Emergency contraception? (Multiple answer)
 1. Unprotected sex
 2. For rape victims
 3. Ruptured of condom
 4. Regular family planning methods
 5. For population control
 6. To avoid unwanted pregnancy
 7. As back up service of family planning
 8. For prolonged separation
 9. Other (specify).....
 98. Don't know