A STUDY ON
KNOWLEDGE AND ATTITUDE
ABOUT EMERGENCY CONTRACEPTION
AMONG PRIMARY HEALTH CARE PROVIDERS
AT DANG DISTRICT

A Research report

SUBMITTED TO
TRIBHUVAN UNIVERSITY, INSTITUTE OF MEDICINE
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>COCs</td>
<td>Combine Oral Contraception</td>
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<td>COFP</td>
<td>Comprehensive of Family Planning</td>
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<td>DHO</td>
<td>District Health Office</td>
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<td>EC</td>
<td>Emergency Contraception</td>
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<td>ECPs</td>
<td>Emergency contraceptive Pills</td>
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<td>ED</td>
<td>Emergency Department</td>
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<td>FP Center</td>
<td>Family Planning Center</td>
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<td>GPs</td>
<td>General Practitioners</td>
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<td>HP</td>
<td>Health Post</td>
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<td>HIV</td>
<td>Human Immuno-deficiency Virus</td>
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<tr>
<td>IEC</td>
<td>Information, Education and Communication</td>
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<tr>
<td>IUD</td>
<td>Intra Uterine Device</td>
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<tr>
<td>JNMA</td>
<td>Journal of Nepal Medical Association</td>
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<tr>
<td>MMR</td>
<td>Maternal Mortality Rate</td>
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<tr>
<td>NMC</td>
<td>Nepal Medical College</td>
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<td>NSW</td>
<td>New South Wales</td>
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<tr>
<td>PHCC</td>
<td>Primary Health Care Center</td>
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<td>RHTC</td>
<td>Regional Health Training Center</td>
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<tr>
<td>SHP</td>
<td>Sub-Health Post</td>
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<td>USA</td>
<td>United States of America</td>
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<td>WHO</td>
<td>World Health Organization</td>
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ABSTRACT

The exploratory descriptive type of study was carried out to explore the knowledge and attitude of primary health care providers towards emergency contraception. This study was conducted at Dang district within 7 weeks of period. The purposive sampling technique was adopted for this study. The method of data collection was done through self-administration by using semi-structured questionnaires. The setting of study was PHCC, HP, SHP and FP center. The population was fifty in different position like doctor, health assistant, staff nurse, auxiliary health worker and assistant nurse midwife.

Result: The mean age of respondents was 31.25 years. Among 50 respondents, 86% of respondents had knowledge of emergency contraception, 84% respondents had indication knowledge of emergency contraception, 62% respondents had prescription knowledge of emergency contraception pills, 46% respondents had knowledge of IUD as a emergency contraception, 86% of respondents had emergency contraception side effect knowledge, 95.34% respondents had management of the side effect knowledge of emergency contraception, 56% respondents had knowledge of the need medical help after completing the emergency contraception course and 52% respondents had knowledge of effectiveness device IUD as emergency contraception. In this way, 58% respondents had positive attitude toward emergency contraception and 90% respondents had positive attitude toward emergency contraception user.

In Dang district, the primary health care providers' knowledge and attitude towards emergency contraception was better but not sufficient. It is likely that many providers in health care setting also need additional information and training about emergency contraception.
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CHAPTER-I

INTRODUCTION

1.1 Background of the study

Nepal is a developing, sovereign, independent, land-locked, democratic constitutional, non-aligned, Hindu kingdom. It lies between large and developed countries, India & China. It is a garden of four castes and thirty six shades' stated by late Great King Prithivi Narayan Shah. Diverse ethnicity and diverse culture is the main characteristic of Nepal. Even in the same ethnic group, culture customs are various according to their locality.

Each year, millions of women of Nepal have unprotected sex and are left in the days that follow, with fear of pregnancy and feeling that nothing can be done. In USA approximately 48% of the 6 millions pregnancies each year are unwanted and about half of these are due to some types of contraception failure and other half occur because no contraceptive was used at all. World Health organization (WHO) has estimated that there are 450,000 unplanned pregnancies per day & 150,00 abortions per day in the world. Higher the number of unintended pregnancy, more is the incidence of induced abortion and the rate of induced abortions is a good indicator of the current state of medical care and family planning in certain countries (NMC Journal 2001).

At 539 per 100,000 live births, Nepal has one of the highest maternal mortality ratios in the world. It is currently the only country in the world where the life expectancy of woman is shorter than that of men. Nepal's high maternal mortality is a reflection of the status of the health system as well as the social & economic condition that deny a women her fundamental right to survive pregnancy and childbirth. (Safe Motherhood Survey 2000).

Emergency Contraception refer to a particular type of contraception that is used as an emergency reduce to prevent pregnancy following unprotected, possibly fertile intercourse while most contraceptives are appropriate before intercourse, emergency contraceptives are to be used after unprotected sexual intercourse.

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. (J Am Med Womens Assoc 1998).  

The historical evolution of emergency contraceptive regimen begins in the 1920s with the discovery that oestrogen containing ovarian extracts interfered with pregnancy in mammals. The first documented case in human only appear in mid 1960s when physicians in Netherland applied in 13yrs old girl who had been raped in mid cycle. At the same time high dose oestrogen were being tried in USA, After the successful use of oestrogen, the combined regimen of oestrogen and progestrone was introduced in early 1976s and become popular as Yuzpe method till now. The IUD was used in the from of emergency contraception in 1996. (J Nep Med. Assoc. 1999).  

The awareness of emergency contraception (EC) among inner-city adolescents attending a general primary health care clinic survey on sexual activity, experience with contraceptives, attitude toward regency, experience with pregnancy, awareness of and intent to use EC: 71% of the sample was sexually experienced, 90% had been active within six months of the clinic visit. While 81% of the sexually experienced segment of the sample had ever used contraceptives, 53% reported having had sex at least once during the past six months without using contraception. Fifty-seven percent "worried" following unprotected intercourse about a potential pregnancy; 32% of the sample had been involved in a pregnancy. Only 30% of the sexually experienced had heard of EC, but more than 87% stated they would use it if the need arose in the future. Urban adolescents are at high risk for unintended pregnancy due to inconsistent contraceptive use and/or method failure. Level of awareness of EC was low in our sample, particularly as compared to adult women in the United States, and to women of all ages (including teenagers) in European countries. Intent to use EC was high, however, indicating a strong desire to avoid unintended pregnancy. Attention should be focused on increasing both adolescent awareness of and access to EC. (J Am Med Women's Assoc 1998).  

Knowledge of emergency contraception has improved over the past decade among the adults and teenagers in the developed world; however it not widely used
as should be specially in developing world because there are still many doctors and nurses who are not aware of the available form of emergency contraception and many people including doctors and nurses wrongly believe that emergency contraception causes abortion.(J Nep Med Assoc 1999)\textsuperscript{18}

1.2 Title of the study

A study on "Knowledge and attitude about emergency contraception" among primary Health care provider in Dang District.

1.3 Statement of the problem

Many research study suggest that health care providers do not have adequate knowledge and positive attitudes towards emergency contraception. Health care providers must have sufficient knowledge and positive attitude towards emergency contraception, provision of emergency contraceptive services any setting according to client needs to prevent septic and unsafe abortion.

1. What is the present knowledge and attitudes of primary health care providers towards emergency contraception ?

1.4 Objective of the study

General Objectives :

To find out the knowledge and attitude about emergency contraception among primary health care provider.

Specific Objective :

- To find out the existing knowledge of primary Health care provider about emergency contraception.
- To assess the attitude of primary Health care provider about emergency contraception.
- To identify attitude of primary Health care provider towards the emergency contraceptive user.
- To recommend the need of in-service education about emergency contraception to concern authority.
1.5 Statement of the hypothesis

a) Primary Health care provider working in family planning center have good knowledge towards emergency contraception than other Health institution (HP, SHP, PHCC ).

b) Primary Health care provider with higher educational background have higher knowledge than those with lower educational background.

c) Primary Health care provider getting training on emergency contraception or family planning have good knowledge about emergency contraception than those who have no training.

1.6 Rationale of the study

In our country Nepal, the national figure for the maternal mortality rate (MMR) is 539/100,000 live birth (WHO Bulletin 2000).

According to the study 15-30% of maternal mortality can be attributed to the complication of incomplete, spontaneous, induced abortion or septic abortion (JNMA 1997).

One third (37%) of women had unwanted pregnancy due to not using contraception and failure of contraception (Family Health Survey 1996).

One study found that 20-60% of admitted (hospitalized) female are hospitalized due to unsafe abortion and they need hospitalization for 3-7 days. The total cost for treatment is Rs: 1500 to 10,000 (Average Rs. 3918) (CREHPA 1998-99).

Emergency contraception was cost saving whether provided when the emergency occurred or in advance to be used on needed. More extensive use of emergency contraception could save considerable medical costs by reducing unintended pregnancy Emergency contraception reduce health care costs because the alternative of having an abortion or carrying a pregnancy to term one significantly more costly.

Unprotected sexual intercourse may lead unwanted pregnancy and unwanted pregnancy increase the number of induced or septic abortion. Induced abortion is the second common cause of maternal mortality and morbidity in Nepal. Immediate and correct regimen of emergency contraception reduce the number of being unwanted
pregnant and induced abortion also, there by reduce the maternal morbidity and mortality rate in the country.

The study find out the primary health care providers' knowledge and attitude about emergency contraception. The accurate knowledge and positive attitude will be promote the emergency contraception services which will be prevent the unwanted pregnancy. Prevalence of emergency contraception depends on primary Health care providers' knowledge and attitude.

There are many study carried out in developed countries but in Nepal the researcher think it is first step to describe the current status of primary Health care providers' knowledge and attitude about emergency contraception in Dang district.

Dang district is situated in the mid western development region of Nepal. Among the 75 district of Nepal, Dang is the one, begged valley among the Asian countries. There are different ethnic group residing in this district with different value and belief. Because of far most from Kathmandu valley (Capital of Nepal). Health services and Health care providers are limited. So, there are least Health services in preventive, promotive and curative aspect. People are unaware about Health preventive & promotion. So, unwanted, unplanned unprotected pregnancy is high because induced & septic abortion prevalence is also high. So, maternal morbidity and mortality is high in Dang district. By reminding such a point and circumstance, my glance focus high lighted on emergency contraception for prevention of septic & induced abortion.

1.7 Significance of the study

i) This study will help to find out the knowledge and attitude about emergency contraception of primary health care provider. After finding such type of knowledge and attitude, we can give recommendation to higher authority to implement the programmes like providing IEC materials about emergency contraception, providing training about emergency contraception.

ii) Provides recommendation for planner & curriculum developer about need for modify and add course of emergency contraception in the curriculum according to needs of learners and society.

iii) The findings of this study will be helpful to the national policy maker to formulate the policy & plan programme for the effective services of emergency contraception.
1.8 Variables

a) Independent Variables

* Length of work experience.
* Training on emergency contraception.
* Educational background.
* Working area (FP Center, HP, SHP, PHCC).
* Age of worker.
* Sex of worker (Gender).
* Religion.
* Ethnic.
* Residence.
* Working environment.

b) Dependent Variables

* Knowledge about emergency contraception.
* Attitude toward emergency contraception.

1.9 Operational definition

i) Knowledge: Refers to possession of facts on various methods and aspects of emergency contraception.

ii) Attitude: Is the way of thinking and feeling toward emergency contraception and emergency contraceptive users.

iii) Emergency contraception: Refers to those contraception which is used after unprotected sexual intercourse to prevent pregnancy.

iv) Primary health care provider: Refers to health care provide to the client in the primary (grassroot) level. In my research only included doctor, health assistant, staff nurse, auxiliary health worker, assistant nurse midwife who is working in Dang district.

v) Working area: Primary health care provider where they engaged health related activities which lies in primary level of health institution like primary health care center, health post, sub health post and family planning center.
vi) **Working environment:** Refers to sufficient supply, regular supply and stock of required instruments/devices of emergency contraception in time, flow of clients for practices, relation within staffs and regular training receive in order to quality services.

vii) **Work experience:** Duration of exposure in health services of primary health care providers. Work experience divided into three parts.

   a) **Less work experiences:** Refers to less than fifteen years working experiences.

   b) **More work experiences:** Refers to more than fifteen years working experiences.

viii) **Training:** Training on emergency contraception plus family planning counseling.

ix) **Higher education:** Educational background of 10+2

x) **Lower education:** Educational background 10 class and below 10 class.

xi) **Married:** Person who had for once. (any type of marriage is included)

xii) **Unmarried:** Person who had never married.

xiii) **Widow:** Women whose husband is died

xiv) **Others:** It include double marriage, divorced, separated
The conceptual framework is prepared to visualize the variables and their relationship. In above figure shows the primary health care provider affects by socio-demographic factors (age, religion, education, residence, sex and ethnicity), motivating factors (training, working environment and working area) and professional factors (span or length of work experience and position of worker). Which results change primary health care provider knowledge and attitudes toward emergency contraception and its user. If primary health care provider have good knowledge and positive attitude towards emergency contraception and its user, provision of emergency contraception at any setting according to clients demand which lead to decrease induce and septic abortion.
1.11 Delimitation of the study

The study will have limitations to:

1. Primary health care providers working in primary level (grassroots level) institution only e.g.: HP, SHP, PHC and FP clinic only.

2. Doctor, HA, Staff nurse, AHW, and ANM are included in my study only.

3. The study was limited up to 50 samples so that it was difficult to generalize.

4. The duration of study was limited to 7 weeks.

5. It is limited only up to exploration of knowledge and attitude only.

1.12 Implication of the study

Despite some of the limitation of this small scale study, it highlights a number of implication for primary health care provider practice and health.

* For district health office:

✦ The findings of study help to plan further training on emergency contraception for primary health care provider to improve their knowledge and attitude, this will enable primary health care provider to provide better and quality service.

✦ The primary health care providers will know their areas of knowledge deficit so they can improve it by self directed learning.

✦ The findings helps police maker to plan and develop educational package for primary health care provider.

✦ The findings suggest curriculum developer to modify and add the content of emergency contraception in family planning unit.
* For nursing research

Further research is needed regarding emergency contraception practice and education in various settings. This study would provide background to other researcher related this subject and other related this subject in further.

1.13 Strength and limitation of the study

Strengths

- The study tried to explore the actual knowledge and attitude of primary health care providers regarding emergency contraception based on their working experience, educational background, training and working in different institutions.

- More emphasis was given to the development of research questionnaire to content validity.

- Research is new subject for an investigator. So that this study will be very beneficial for her to carry out further research in future.

- The investigator has gained confidence from this study to do large scale research.

- During the research action, the respondents gained new and recent information about emergency contraception.

- Researcher experienced easy in data collection due to support and cooperation of respondents from Dang district.

- Researcher has gained a lot of information about this topic from literature review, various books, journals, research reports were studied and also searched medline.

Limitation

- This small study cannot be generalized. This is done for partial fulfillment of academic requirement of bachelor of nursing degree course.

- This study was carried out only 50 primary health care providers at Dang district.
- Non probability purposive sampling technique was adopted to select required samples. So that they cannot be considered as representative of all primary health care provider of Dang district.

1.14 Difficulties faced during the study

- The time given for research study was very short.
- The researcher didn't get sufficient and related literature although a number of literature search done.
- Relevant and recent literature on same research topic was not found in Nepalese context.
- It was very difficult to identify the respondents in their institution because they were in home leave and other leave.

1.15 Plan for dissemination

After completing research study, the researcher has planned to disseminate the findings to the followings:

- Library, Nursing Campus, Maharajgunj, Kathmandu.
- Advisor, Ms. Milan Lopchan, Departmental Head(Community).
- District Health Office, Dang district.
- NHRC
CHAPTER-II

LITERATURE REVIEW

Literature review does concern with review of related literature includes both research and non-research reports, articles, documents, journals, books & literature from medline, pop made search. The aim of literature review is to extend the knowledge and find out evidences which support research data and provide the basis from which conclusion can be drawn in the study.

2.1 REVIEW OF RELATED LITERATURE

1.1 Socio-demographic factors

1.1 Age

Smit J et al (1998), concluded that awareness was significantly lower in the most rural area and among older less educated women knowledge of emergency contraception was superficial with 47.1% unsure of the appropriate interval between unprotected intercourse and starting EC and 56.6% not knowing whether it was available at the clinic. Few(9.1%) of those who knew of EC had used it. After explaining EC, attitudes toward its use were found to be positive, with 90.3% indicating that they would use it if needed. Awareness was lower than in developed countries, but higher than in other developing countries. Findings indicate that if women know of EC, where to get it, and how soon to take it, they would use it if needed.27

Sorenşen MB et al (2000), revealed that 64% were aware of pregnancy risk but only 4% had EC after the unprotected intercourse. 42% were estimated to sufficient knowledge to use hormonal emergency contraception. In a large background population, a calculated 29% used EC after a recognized unprotected intercourse. EC users were older, better educated, more abortions, and gestation age was less. However, younger women were in general better informed of EC. Knowledge of EC dose not necessarily transform into action. Neglect of risk after an unprotected intercourse is frequent in younger well-informed women and information has to be better targeted.28

Garham A et al (1996), concluded that 93.0% fourth year pupils aged 14-16 had heard of emergency contraception girls 32.7% and boys 27.5% had experienced sexual intercourse of girls who had sexual intercourse, 31.4% had used emergency
contraception. Knowledge of correct time limits was poor, sexual active girls being the most knowledgeable pupils attending schools ranked lower than the national average for academic attainment were less likely to have heard of emergency contraception and more likely to have been sexually active. 76.8% pupils knew they could obtain emergency contraception from their doctor. 82.5% pupils believed emergency contraception to be effective but 35.5% thought it more dangerous than the oral contraceptive pill. One third of sexually active girls aged under 16 in lothian have used emergency contraception. this may help explain the fairly constant teenager pregnancy rates despite increasing sexual activity. Scottish teenagers are well informed about the existence of emergency contraception. However, many do no know when and how to access it properly. Health education initiatives should target teenagers from less academic schools as they are more likely to be sexually active at a young age and are less well informed about emergency contraception.10

1.2 Sex of Worker

Virjo I et al (1999), proved that of all responding women and men, 12% had themselves or together with their partners used EC. The proportion of EC users was highest in the younger age group among both women and men. It was greater among single and cohabiting women than among married women. Only a minority of respondents knew that EC pills could be taken up to 72 hour after unprotected intercourse. Women who had used EC were most knowledgeable, as were also the younger age groups among both women and men. Awareness of the availability of EC and of its correct use should be further promoted to avoid unwanted pregnancies.31

Haggstrom^Nordin E and Tyden T (2001), concluded that the mean age was 16.5 years. Almost half (45.4%) of the teenagers had had sexual intercourse and of those, 28.3% stated that they themselves or their partner had used ECP. Four of five teenagers knew about ECP and where to obtain it if necessary. Many teenagers (67.3%) also knew that ECP prevented implantation. The main sources of information about ECP were youth clinics (n = 179) and friends (n = 159). The attitude toward using ECP in an emergency situation was positive, but the teenagers, especially girls, were restrictive as to whether ECP should be available without a prescription. The girls believed ECP could be used much more, and two-thirds of both sexes thought it could lead to negligence with ongoing contraception. Seventy-seven percent of teenagers preferred turning to a youth clinic when in need of ECP. One in four believed that concerns for side effects could deter them from using ECP. Based on the results in the present study, the importance of counseling in this situation is confirmed. The awareness about ECP was good, but teenagers also
expressed concerns about side effects. The girls were more hesitant than the boys about having ECP available over the counter.\textsuperscript{11}

Golden NH et al (2001), surveyed two hundred thirty three practicing pediatricians (24.4\%) completed the survey of the respondents, 23.7\% had been asked to prescribe EC to an adolescent and 49\% of these cases involved a rape victim. Only 16.7\% of pediatricians routinely counsel adolescent patients about the availability of EC, with female pediatricians more likely to do so most respondents (72.9\%) were unable to identify any of the food and drug. Administration approved methods of EC. Only 27.9\% of correctly identified the timing for its indication and only 31.6\% of respondents felt comfortable prescribing EC. Inexperience with use was cited as the primary reason for not prescribing EC by 70\% of respondents. Twelve percent cited moral or religious reasons and 17\% concerned about teratogenic effect there were no differences in comfort level based on age, gender, or practice type twenty-two percent of respondents believed that providing EC encourages adolescent risk-taking behavior and 52.4\% would restrict the number of times they would dispense EC to an individual patient. A minority of respondents (17\%) believed that adolescents should have EC available at home to use if necessary and only 19.6\% believed that EC should be available without a prescription. The vast majority (87.5\%) were interested in learning more about EC.\textsuperscript{9}

1.3 Religion

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1.4 Residence

Cohall AT, et al (1998), revealed that 71% of the sample was sexually experienced; 90% had been active within six months of the clinic visit. While 81% of the sexually experienced segment of the sample had ever used contraceptives, 53% reported having had sex at least once during the past six months without using contraception. Fifty-seven percent "worried" following unprotected intercourse about a potential pregnancy; 32% of the sample had been involved in a pregnancy. Only 30% of the sexually experienced had heard of EC, but more than 87% stated they would use it if the need arose in the future. Urban adolescents are at high risk for unintended pregnancy due to inconsistent contraceptive use and/or method failure. Level of awareness of EC was low in our sample, particularly as compared to adult women in the United States, and to women of all ages (including teenagers) in European countries. Intent to use EC was high, however, indicating a strong desire to avoid unintended pregnancy. Attention should be focused on increasing both adolescent awareness and access to EC.4

Weisberg E et al (1995), proved that Eighty-four rural and 76 urban GPs responded. More rural GPs were knowledgeable about emergency contraception than urban GPs (95% vs. 78%), and more women knew about it than men. More urban GPs frequently prescribed emergency contraception than rural GPs (26% vs. 6%) and female GPs prescribed it more readily than male GPs (22% vs. 12%). There was great variation in the regimens prescribed, especially among rural GPs. Twenty-five percent of urban GPs and 31% of rural GPs did not offer women information about emergency contraception. While 16% of both groups included such information in any discussion about contraceptive options, and 18% gave information only if requested by the women. More than 60% of GPs would provide information about emergency contraception as a back-up to use of barrier methods. The sex, attitude and knowledge of GPs influence the likelihood of women being made aware of or being given emergency contraception in NSW. There is a need to further educate both the public and practitioners about emergency contraception.32

1.5 Education

A.O Adekunle et al (2000), concluded that health care professionals knowledge of various methods that can used emergency contraception is very low due to lack of awareness of its use by health care professionals.2

Ngoc et al (1997), revealed that some providers and policy maker believe that easy access to emergency contraception will encourage risky sexual and
contraceptive behavior. Most health worker lacked accurate and detail information about emergency contraceptive method use.24

Linda J. Beckman et al (2001), proved that the frequency of prescription for emergency contraceptive pill increased significantly from base line to follow up. Knowledge in improve significantly attitude about emergency contraception showed little change. It is likely that many providers in other health care setting also need additional information and training about emergency contraception.18

Sherman CA et al (1996), concluded that one hundred sixty-four health care providers in a health maintenance organization were surveyed in 1996 regarding their knowledge of, attitudes toward, and perception of barriers regarding emergency contraceptive pills(ECPS), as well as their ECP prescribing practices. Providers reported primarily positive attitude regarding ECPS; those who had prescribed had more positive attitudes about ECPS. Knowledge of ECP provision was incomplete, with 40% believing treatment had to be initiated in 48 hours or less. Barriers identified by providers included lack of a dedicated product, lack of awareness of ECPS among providers, and liability issues.26

Cynthia Harper & Charlotte Ellertson (1995), revealed that focus-group discussions with a population of university students who have convenient access to emergency contraceptive pills show that basic awareness about this method is high, although specific knowledge on appropriate use, such as the time limit for use, the level of effectiveness and the possible side effects, is lacking. Approval of the method is widespread among both female and male students, although students did voice anxieties about irresponsible use and the lack of protection against the human immunodeficiency virus and other sexually transmitted diseases. Many of their concerns stem from incomplete information about how the regimen works. Students noted how rarely emergency contraceptive pills are discussed, and were curious to know more. They asked for routine education on the method, as well as more general discussion.5

Mann MC et al (1999), concluded that Half of the sample answered that the latest a woman could take emergency contraception after unprotected sex was three days. None of the sample knew that emergency contraception could be obtained up to five days. Twenty-nine percent of the sample reported sex without contraception during the menstrual cycle preceding attendance. Women who had ever used regular contraception in the past were statistically less likely to have reported unprotected sex in the menstrual cycle preceding attendance (p = 0.0000068). Professional women were statistically less likely to have reported unprotected sex in the menstrual cycle preceding the clinic visit. Fourteen per cent of the sample had genital warts at this first clinic visit, 10 per cent had Chlamydia trachomatis, seven
per cent had herpes simplex infection, six per cent had gonococcal infection and five per cent had trichomonal infection. Women who reported unprotected sex during the preceding menstrual cycle were not statistically more likely to have a sexually transmitted infection at this first clinic visit. A large number of women attending departments of genitourinary medicine are at risk of both pregnancy and also sexually transmitted infection. Staff working in all areas of sexual health need to have a good knowledge of both contraception and sexually transmitted infections in order to educate the clients on both aspects of unprotected sex.\textsuperscript{21}

Delbaco SF et al (1998), revealed that of the 1510 teenagers, only about one quarter (23\%) were aware that "anything" could be done after unprotected sex to prevent pregnancy. Slightly more (28\%) had heard of "morning after pills" or emergency contraceptive pills. Of the 423 teenagers who had heard of emergency contraceptive pills, one third (32\%) did not know that a prescription is necessary to obtain them, and three quarters (78\%) underestimated how long after unprotected intercourse the emergency contraceptive pill regimen could be initiated. Only 9\% knew that emergency contraceptive pills are effective as long as 72 hours after unprotected sex. After being told about the option of emergency contraceptive pills, two thirds (67\%) of teenaged girls said that they would be use emergency contraceptive pills. Among the 66\% of teenaged girls who had not previously heard of emergency contraceptive pills, 64\% said that they would be likely to use them. Emergency contraceptive pills have great potential as a tool for reducing unplanned pregnancies among teenaged girls in the United States. Few teenaged girls were that this option exists. Once informed, teenaged girls reported being very interested in taking emergency contraceptive pills if needed.\textsuperscript{6}

Larsson M et al (2002), proved that the response rate was 88\% (n = 518). As many as 43\%, among daily smokers 53\%, had experienced one or more previous legal abortions. The majority of the women (97\%) had discussed the decision about abortion with someone. The most cited reasons contributing to their decision were financial concerns, worries about the relationship and bad timing of the pregnancy. Though 85\% had used contraception during the previous year, 36\% of the women had not used any contraceptive method at the time of conception. The main reason given for not using contraception was the belief that they could not at that time become pregnant (35\%). Ninety percent of the women planned to use contraception after the abortion. Women's decisions regarding induced abortion are multifactorial. One important reason was "poor economy". One out of three did not use any contraception, as they believed they could not become pregnant. Women presenting for induced abortion are a risk - group for further terminations. Counseling must include information about the fertile window, effective contraceptives and the emergency contraceptive pill.\textsuperscript{15}
Gichangi PB et al (1999) revealed that Over 95% listed at least one regular contraceptive method but only 2.6% spontaneously listed EC as a contraceptive method, whereas 48% of the respondents had heard of EC. Significantly more nursing students than qualified nurses were familiar with EC. Knowledge about the types of EC, applications, and side effects was poor and 49% of the respondents considered EC as an abortifacient. Of those familiar with EC, 77% approved its use for rape victims and 21% for adolescents and schoolgirls. Only 3.5% of all respondents had personally used EC in the past, 23% of those familiar with EC intend to use it in the future, whereas 53% intend to provide or promote it. The view abortifacient negatively influenced the decision to use or provide EC in the future. The present findings suggest that the level of knowledge of EC is poor and more information is needed. These findings indicate the potential to popularize emergency contraception in Kenya among nurses and nursing students.8

2. Motivating factors

2.1 Training

Veloudis GM Jr & Murray SC.(1998), Proved that all primary care specialty housestaff. Main outcome measures' study variables were compared between specialty training, year of training, and abortion opinion. The average score on the survey was significantly different based one year of training. However, the average attending OG's score was significantly higher than for all the house staff (P value<.0001). Knowledge and utilization of postcoital contraception is dependent on specialty. Unfortunately, this knowledge does not appear to increase with year of training, suggesting that there is a lack of education during the years of training.30

Nguyen Thi Nhu Ngoc et al (1997), Concluded that knowledge and attitude about emergency contraception among Health workers in Ho Chi Minh City, Vietnam: In a series of focus groups and in in-depth interviews, physicians, midwives and other family planning providers in Ho Chi Minh City, Vietnam, were questioned about their knowledge and attitudes regarding use of three methods of emergency contraception- the The Yuzpe regimen, , a levonorgestrel-only regimen and postcoital insertion of a copper-bearing IUD. Most providers were familiar with the concept of emergency contraception and endorsed it's practice, but lacked accurate and detailed information about method use. They also overestimated contraindications and potential side effects. Providers advocated for additional training for themselves and for druggists, who provide these methods over the counter. Participants generally agreed about the need for more empirical information about the safety and efficacy of these methods, but disagreed about the degree to which emergency methods should be made readily available to women in Vietnam.24
Linda J. Beckman et al (2001), revealed that after educational programme about emergency contraception found that the frequency of prescription for emergency contraceptive pill increased significantly from base line to follow up. Knowledge in improve significantly attitude about emergency contraception showed little change. It is likely that many providers in other health care setting also need additional information and training about emergency contraception.\(^{18}\)

Golden NH et al (2001), revealed that despite the safety and efficacy of EC, the low rate of use is of concern. Pediatricians are being confronted with the decision to prescribe EC but do not feel comfortable prescribing it because of inadequate training in its use. Practicing pediatricians are aware of their lack of experience and are interested in improving their knowledge base.\(^{9}\)

2.2 Working environment

Muia E et al (1999), proved that the EC method is scarcely known or used. No extant policy or service guidelines address the method specifically, although revisions to several documents were planned. Yet policymakers felt that expanding access to emergency contraception would require few overt policy changes, as much of the guidance for oral contraception is already broad enough to cover this alternative use of those same commodities. Participants in all parts of the study generally supported expanded access to emergency contraception in Kenya. They did, however, want additional, detailed information, particularly about health effects. They also differed over exactly who should have access to emergency contraception and how it should be provided.\(^{23}\)

Langer A et al (1999), concluded that limited knowledge, but nevertheless cautious support for emergency contraception in Mexico. Health care providers and clients greatly overestimated the negative health effects of emergency contraception, although clients overwhelmingly reported that they would use or recommend it if needed. Although providers typically advocated medically controlled distribution, clients believed emergency contraception should be more widely available, including in schools and vending machines with information prevent in mass media and elsewhere.\(^{15}\)

McDonald G and Amir L (1999), proved that the majority of this sample population had heard of some form of emergency contraception and knew where to access it. However only 26% knew that emergency contraception should be taken within 72 hours of unprotected intercourse. Although 80% of the sample had heard of emergency contraception (or the morning after pill) only 9% used it in an attempt to prevent this pregnancy. The majority of the women surveyed support the
increased availability of emergency contraception by rescheduling it to a non prescription item and re-packaging as a single treatment.\textsuperscript{7}

Suzanne F et al (1997), proved that Americans are not well informed about EC pills. Only 36\% of respondents indicated that they know "anything could be done" within a few days after unprotected sex to prevent pregnancy. Fifty five percent said they had "heard of" emergency contraceptive pills, and only 2\% had ever used them. Ninety nine percent of obstetrician-gynecologists reported being "familiar" with emergency contraceptive pills. Twenty-two percent were "somewhat familiar". Among these who said they were "very familiar" with the method (77\%), the majority considered emergency contraceptive pills to be "very safe" (88\%) and "very effective" (85\%). Overall, 70\% of obstetrician-gynecologists surveyed said they had prescribed emergency contraceptives pills within the last year, but on an infrequent basis, 77\% of those who prescribed EC pills did so five or fewer times. Public knowledge about the availability and use of EC pills is limited, as is the practice of prescribing the pills among obstetrician-gynecologist.\textsuperscript{29}

Dr. C Karki (2001), proved that there are >150,000 induced abortion occurring every day with >20,000 maternal death occurring every year due to such unsafe abortion. In such circumstances emergency contraception provides a very effective to prevent pregnancy with out the need to consider an abortion. Again a wider knowledge of emergency contraception among patient including male partner and health care providers would be life saving for many thousand women. Therefore it is a fact that increasing the knowledge about safely and benefit of emergency contraception among patient and providers and making suitable provision for easy availability of emergency contraception will help in reducing the high maternal mortality and morbidity figures in our country.\textsuperscript{13}

2.3 Working area

Keshavarz R et al (2002), revealed that the 600 respondents were: 71\% male, 29\% female; 34\% academic, 26\% community, and 33\% resident physicians; and 7\% nurse practitioners and physician assistants. Many respondents (88\%) were inclined to after EC to those sexually assaulted by unknown assailants. More practitioners said they were willing to offer EC if the assailant was known to be HIV-infected rather than if the assailant had low HIV risk factors (90\% vs. 79\%, p < 0.01). More respondents would prescribe EC after sexual assault than consensual sex (88\% vs. 73\%, p < 0.01). The rates of willingness to offer EC were the same for practitioners in states with "abortion - related conscience clauses" and those from other states. Most ED practitioners said they were willing to offer EC. Although the risk of pregnancy exists after consensual sex, practitioners were less willing to prescribe EC
after those exposures than for sexual assault. "Abortion related conscience clauses" did not seem to influence willingness to offer EC.\textsuperscript{14}

Lee SW et al (1999), proved that a substantial proportion (33.0\%) of women was ignorant of the existence of emergency contraception. Only 10.0\% of women had used emergency contraception before and only 2.5\% had used it in an attempt to prevent this pregnancy. Of the 134 women who knew about emergency contraception, the main reason (41.8\%) for not using it was risk taking behavior. More nulliparous women (88.5\% versus 57.6\%; \( p < 0.001 \)) and women younger than 20 years (84.0\% versus 61.3\%; \( p < 0.01 \)) had heard of emergency contraception. Women who were educated beyond secondary school level (71.0\% versus 37.5\%; \( p < 0.01 \)) and unmarried women compared with married, cohabiting, or divorced women (87.1\% versus 49.5\%; \( p < 0.001 \)) were also more likely to have heard of emergency contraception. Women younger than 20 years were more likely to have used this form of birth control in the past (18.0\% versus 7.3\%; \( p < 0.05 \)). There is a need to improve women's education about emergency contraception in Hong Kong.\textsuperscript{17}

2.4 Source of information

Arowojolu AO et al (2000), revealed that the concept of emergency contraception (EC) was well known. Respectively, 32.4\%, 20.4\% and 19.8\% knew that combined pills, progesterone only pills and intrauterine contraceptive device (IUCD) were usable for EC, while 56.7\% mentioned the use of traditional method. Few students (11.5\% and 2.3\% respectively) knew the correct timing of EC pills and IUCD. The respondents reported varying circumstances under which EC was indicated but the majority cited condom breakage and sexual assault. The popular media represent the commonest source of information while hospitals/clinics were the commonest sources of procurement. About 37\% of the respondents planned to use EC in future while 58\% would not and 4.7\% were uncertain. Reasons for these responses were explored.\textsuperscript{3}

Aneblom G et al (2002), proved that the response rate was 88\% (\( n=518 \)). As many as 43\% had a history of one or more previous abortions and 43\% were daily smokers. Four out of five women, 83\%, were aware of ECP, but only 15 women used it to prevent this pregnancy. Fewer, 38\%, knew the recommended timeframes for use and 54\% had knowledge of the mode of action. The two most common sources of information about ECP were media and friends. One out of five, 22\%, had previously used the method, and at the time of conception, 55\% would have taken ECP if it had been available at home, and 52\% were positive to having ECP available over the counter. Emergency contraception is well known but is still
underused. Lack of awareness of pregnancy risk may be one limiting factor for its use. Making ECP available over the counter may be an important measure towards better availability. Information strategies to the public are needed before ECP will be a widely used back-up method.¹

Little P et al (1998), concluded that 523 women returned completed questionnaires (response rate 82%). Knowledge of contraception with no intervention was low with only 10 (12%) women knowing all the pill rules. Educational intervention had a highly significant effect on knowledge of: factors causing pill failure (likelihood ratio chi²=22); subsequent action (21); emergency contraception (24); and all the pill rules (22) (P<0.01 in all cases). Improvement in knowledge of all the pill rules occurred with provision of the summary leaflet (28% knew all the rules, adjusted odds ratio 4.04, 95% confidence interval 1.68 to 9.75), the Family Planning Association's leaflet (27%, 3.43, 1.45 to 8.09), and asking questions (26%, 3.03, 1.30 to 7.00). Asking questions in addition to provision of leaflets improved knowledge of contraception further for the summary leaflet (39%, 6.81, 2.85 to 16.27) but not for the Family Planning Association leaflet (21%, 2.58, 1.07 to 6.18). Women attending check ups for repeat prescriptions of the contraceptive pill should be provided with educational leaflets on contraception or asked relevant questions to help improve their knowledge of contraception. Asking questions in addition to providing a summary leaflet is time consuming, but results in the most knowledge gained.¹⁹

3. Professional factors

3.1 Position of worker

Loren Galvao et al (1999), concluded that nearly all respondents (98%) had heard of emergency contraception, but many lacked specific knowledge about the method. Some 30% incorrectly believed that emergency contraception acts as an abortifacient, and 14% erroneously believed that it was illegal. However, 49% of physicians who thought that the method induces abortion (which is largely illegal in Brazil) and 46% of those who thought that emergency contraception was itself illegal have provided it to clients. Most surprisingly, while 61% of respondents report having provided emergency contraception, only 15% these physicians could correctly list the brand name of a pill they prescribed, the dosage and regimen, and the timing of the first dose. Educational efforts that focus on specific prescription information and the introduction of a dedicated product would greatly improve women's access to this method in Brazil.¹³
2.2 SUMMARY OF LITERATURE REVIEW

Some available literatures revised by investigator. Various studies on knowledge, attitude and practice towards the emergency contraception different field of Health care provider like obstetrician-Gynecologists, Pediatricians etc. Moreover, these literature describe health care providers should have sufficient knowledge and better attitude toward emergency contraception.

The knowledge about safety and benefit of emergency contraception among clients and providers and making suitable provision for easy availability of emergency contraception will help in reducing the high maternal mortality and morbidity figures in our country. Emergency contraception is more effective & less costly procedure to prevent unwanted pregnancy and reduce the complication or maternal mortality and morbidity related to induced abortion. Proper and timely uses of emergency contraception by client is depends on the health care providers knowledge and attitude about emergency contraception.

Literature review process will be continued through out the study.
CHAPTER-III
RESEARCH METHODOLOGY

This part is concerned with the methodology used to assess the knowledge and attitude about emergency contraception of primary health care provider.

The methodologies consists of research design, study area, study population, sampling technique, sample size, nature of instruments, data collection and data analysis techniques.

3.1 Research design

The study is designed as descriptive and explorative in nature.

3.2 Study area

The study was carried out in Dang district different health institution like health post, sub health post, primary health care center and family planning center.

3.3 Study population

This study population was included doctor, health assistant, staff nurse, auxiliary health worker and assistant nurse midwife only in different health institution in Dang district.

3.4 Sampling technique

A purposive sampling technique was adopted because of time limitation.

3.5 Sample size

The study covered a fifty samples from different areas of health institution in Dang district.

3.6 Nature of instruments

Semi-Structured questionnaire were developed as per objectives and hypothesis of the study. Socio-demographic characteristics like marital status, working experience, working institution, training educational background etc; knowledge related to EC, attitude related EC. The questionnaires were designed in English after reviewing literature. Questionnaires were chosen by the investigator.
Part-I: Socio-demographic information.

Part-II: Question related to knowledge.

Statement related to attitude which was used to measure attitude of primary health care provider.

3.7 Validity and reliability

The validity of the instruments was maintained by consulting advisor and concerned teachers in the beginning through out the study.

The reliability was tested and modified during retesting. The reliability of instrument was maintained by using through pre-tested instrument in the non sample area where the sample characters is available. Researcher herself was collected the data by using self administered questionnaires.

3.8 Measures to reduce bias

i) Semi structured self administered questionnaire was used to collect data.
ii) There was not any discrimination on ethnicity, socio-economic condition of the subject.

3.9 Procedure for data collection

Semi-structured type of self administered question was used to collect the data after taking formal permission from authority of District Health office, Dang by Submitting an official letter.

3.10 Pretest

The instrument was pre-tested on five staff nurse and assistant nurse midwife of family welfare center, Chhetrapati, Kathmandu. Instrument was modified according to pretest and suggestions of adviser and experts on related field.

3.11 Data analysis procedure

All collected data was analyzed and categorized on the basis of research objectives and hypothesis by using simple statistical methods as graph, table and pie chart.
3.12 Ethical consideration

* Before giving questionnaire, a verbal consent was taken from all respondents.

* The survey was self administered and respondents was written their responses alone without being observe by the researcher.

* Respondent's privacy was maintained.

* The responses from respondents are kept in confidential manner which was explained to respondents prior to data collection.
CHAPTER IV
DATA ANALYSIS AND INTERPRETATION

As mentioned in research methodology, this small scale study has been conducted in Dang district.

This chapter deals with the descriptive analysis and interpretation of the responses given by the primary Health care provider of PHCC, HP, SHP & family planning clinic of Dang district regarding knowledge and attitude towards emergency contraception. The total number of respondents were fifty. Analysis and interpretation was done on the basis of statistical tool eg, number, frequency, percentage mean, standard deviation, table, bar graph, pie chart and frequency polygon. For hypothesis testing chi-square test was used.

4.1 Socio-demographic characteristics

Table No. 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=50</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Age groups in year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 - 24</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>25 - 34</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td>35 - 44</td>
<td>15</td>
<td>30%</td>
</tr>
<tr>
<td>Above 44</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>Sex of worker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>29</td>
<td>58%</td>
</tr>
<tr>
<td>Female</td>
<td>21</td>
<td>42%</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>43</td>
<td>86%</td>
</tr>
<tr>
<td>Unmarried</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>49</td>
<td>98%</td>
</tr>
<tr>
<td>Christian</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brahman</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td>Chhetri</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>Newar</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Others</td>
<td>15</td>
<td>13%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary (9-10)</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>Higher Secondary (10+2)</td>
<td>24</td>
<td>48%</td>
</tr>
<tr>
<td>Above higher Secondary</td>
<td>22</td>
<td>44%</td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>30</td>
<td>60%</td>
</tr>
<tr>
<td>Urban</td>
<td>20</td>
<td>40%</td>
</tr>
</tbody>
</table>

Table No. 1 showed that out of 50 respondents, majority of respondents were in the age group of 25-34 years were (56%), 35-44 years were (30%), 15-24 years (8%) and 45-54 years were (6%).
Among 50 respondents, most of respondents were male (58%) and female were 42%.

Out of 50 respondents, majority of respondents were married (86%) and unmarried were 14%.

In my study, among 50 respondents, most of respondents were Hindu (98%) and 2% were Christian.

Among 50 respondents, majority of respondents were Brahman ethnicity (40%), other (30%), Chhetri (28%) and Newar (2%).

The above Table showed that most of the study population have completed education higher secondary(10+2) were 48%, above higher secondary were 44% and secondary (9-10) were only 8%.

Among the 50 respondents, majority of people residence were rural 60% and 40% were urban.

4.2 Motivating factors

<table>
<thead>
<tr>
<th>Table No. 2</th>
</tr>
</thead>
</table>

Percentage distribution of respondents according to their motivating factors

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number n=50</th>
<th>Percentage 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>60%</td>
</tr>
<tr>
<td>Types of training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COFP (FP)</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Reproductive Health</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Both</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Duration of training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-10 days</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>10-20 days</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>20-30 days</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Training area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RHTC, Surkhet</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>Bheni Zonal Hospital, Nepalgunj</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>DHO, Dang</td>
<td>2</td>
<td>10%</td>
</tr>
</tbody>
</table>

Table No. 2 showed that out of 50 respondents, 40% respondents have received training and 60% respondents had no training. Among 20% respondents, COFP
including emergency contraception training have 75%, reproductive health including emergency contraception training have 20% and both training have 5% . Out of 20 respondents, 80% got 10-20 days training duration, 10% have 0-10 days and 10% have 20-30 days training duration. In this way, 45% respondents got training from RHTC, Surkhet, 45% respondents got training from Bheri Zonal Hospital, Nepalgunj & 10% respondents only got training from District Health Office, Dang.

**Figure No.1**

Percentage distribution of respondents according to their working institution

![Pie chart showing percentage distribution of respondents by their working institution.](image)

The above pie chart showed that out of 50 respondents, 44% of respondents were working at health post, followed by 36%, 12% and 8% at primary health care center, family planning center and sub-health post respectively.
Table No. 3

Percentage distribution of respondents according to their working environment

<table>
<thead>
<tr>
<th>Variables</th>
<th>Yes Number</th>
<th>Percentage</th>
<th>No Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient supply of required instruments/devices for emergency contraception.</td>
<td>26</td>
<td>52%</td>
<td>24</td>
<td>48%</td>
</tr>
<tr>
<td>Regular supply of required instruments/devices for emergency contraception.</td>
<td>27</td>
<td>54%</td>
<td>23</td>
<td>46%</td>
</tr>
<tr>
<td>Storage of required instruments/devices for stock.</td>
<td>29</td>
<td>58%</td>
<td>21</td>
<td>42%</td>
</tr>
<tr>
<td>Good relationship within the staffs.</td>
<td>50</td>
<td>100%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Emergency contraception services regular run in your institution.</td>
<td>14</td>
<td>28%</td>
<td>36</td>
<td>72%</td>
</tr>
<tr>
<td>Regular training receive in order to provide quality services.</td>
<td>26</td>
<td>52%</td>
<td>24</td>
<td>48%</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table No. 3 showed that 100% of respondents have good relationship within the staffs, 58% of respondents have storage of required instruments/devices for stock, 54% of respondents have regular supply of required instruments/devices, 52% of respondents have sufficient supply of required instruments/devices, 52% of respondents have regular training receive in order to provide quality services for emergency contraception and 28% of respondents have emergency contraception services regular run in their institution.
4.3 Professional factors

Table No. 4

Percentage distribution of respondents according to their professional factors.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of work experiences</td>
<td>n = 50</td>
<td>100</td>
</tr>
<tr>
<td>1 - 5 years</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>10-15 years</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Above 15 years</td>
<td>14</td>
<td>28%</td>
</tr>
</tbody>
</table>

Position of worker

- Doctor: 1 (2%)
- Health Assistant: 7 (14%)
- Staff Nurse: 5 (10%)
- Auxiliary Health Worker: 25 (50%)
- Assistant Nurse Midwife: 12 (24%)

Table No. 4 showed that out of 50 respondents, the highest working experience was 28% and the lowest experience was 22%.

Among 50 respondents, most of respondents were auxiliary health workers followed by assistant nurse midwife 24%, health assistant 14%, staff nurse 10% and doctor 2% only.

4.4 Knowledge regarding emergency contraception

Table No. 5

Percentage distribution of respondents knowing of emergency contraception

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of emergency contraception</td>
<td>n = 50</td>
<td>100</td>
</tr>
<tr>
<td>Yes</td>
<td>43</td>
<td>87%</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>14%</td>
</tr>
</tbody>
</table>

Sources of information

- Refresher training: 20 (46.51%)
- Health Personnel: 12 (27.90%)
- Radio: 7 (16.27%)
- News paper: 2 (4.65%)
- Others: 2 (4.65%)

The above table showed that 43 (86%) of respondents had information about emergency contraception and 7 (14%) of them have had not. Out of 43 respondents, majority of respondents got information of emergency contraception by refresher
training were 46.51%, health personnel were 27.90%, radio were 16.27%, newspaper were 4.65% and others source were 4.65%.

**Figure No. 2**

Percentage distribution of respondents knowing the name of emergency contraception available in Nepal

![Bar chart showing knowledge of emergency contraception](chart.png)

Above bar chart showed that 82% of respondents had knowledge on the name of emergency contraception available in Nepal but 18% of respondents had not. Among 82% of respondents, 97.56% respondents known about combine oral contraceptive pills (COCs), 70.73% of respondents known about intra uterine device (Copper T) and only 19.51% of respondents known about progestin only pills.
Table No. 6
Percentage distribution of respondents knowledge about indication of emergency contraception

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number (n=50)</th>
<th>Percentage (100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of indication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>42</td>
<td>84%</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>16%</td>
</tr>
<tr>
<td>Indication*</td>
<td>n=42</td>
<td></td>
</tr>
<tr>
<td>When no contraception method has been used</td>
<td>26</td>
<td>61.90%</td>
</tr>
<tr>
<td>Condom rupture</td>
<td>40</td>
<td>95.23%</td>
</tr>
<tr>
<td>Condom misuse</td>
<td>38</td>
<td>90.47%</td>
</tr>
<tr>
<td>Failed coitus interruption</td>
<td>37</td>
<td>88.09%</td>
</tr>
<tr>
<td>Miscalculation of periodic abstinence method</td>
<td>31</td>
<td>73.80%</td>
</tr>
<tr>
<td>I.U.D. expulsion</td>
<td>33</td>
<td>78.57%</td>
</tr>
<tr>
<td>When the women has been victim of sexual assault</td>
<td>36</td>
<td>85.71%</td>
</tr>
</tbody>
</table>

* Response by duplication.

Above table No. 6 showed that majority of respondents have knowledge about indication of emergency contraception i.e. 84% and 16% of respondents have had not. Among 84% of respondents who have knowledge about indication of emergency contraception, majority of respondents have known about it, they were, condom rupture 95.23%, condom misuse 90.47%, failed coitus interrupts 88.09%, when the women has been victim of sexual assault 85.71%, IUD expulsion 78.57%, miscalculation of periodic abstinence method 73.80% and when no contraception method has been used 61.90%.
Table No. 7

Percentage distribution of respondents' knowledge about prescription of emergency contraceptive pills

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number n=50</th>
<th>Percentage 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription related to COCs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>31</td>
<td>62%</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td>Time of EC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 72 hours</td>
<td>19</td>
<td>61.29%</td>
</tr>
<tr>
<td>Within 24 hours</td>
<td>6</td>
<td>19.35%</td>
</tr>
<tr>
<td>Within 48 hours</td>
<td>3</td>
<td>9.67%</td>
</tr>
<tr>
<td>Within 6 hours</td>
<td>3</td>
<td>9.67%</td>
</tr>
<tr>
<td>Dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 tabs</td>
<td>23</td>
<td>74.19%</td>
</tr>
<tr>
<td>3 tabs</td>
<td>3</td>
<td>9.67%</td>
</tr>
<tr>
<td>2 tabs</td>
<td>5</td>
<td>16.12%</td>
</tr>
<tr>
<td>Interval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 hours</td>
<td>23</td>
<td>74.19%</td>
</tr>
<tr>
<td>6 hours</td>
<td>5</td>
<td>16.12%</td>
</tr>
<tr>
<td>24 hours</td>
<td>3</td>
<td>9.67%</td>
</tr>
</tbody>
</table>

Table No. 7 showed that 62% of respondents had knowledge about prescription of emergency contraception and 38% of respondents had no knowledge. Out of 62% of respondents, 61.29% of respondents had knowledge regarding prescription of emergency contraception within 72 hours, 19.35% of respondents had within 24 hours, 9.67% of respondents had within 48 hours and 9.67% of respondents had knowledge within 6 hours prescription knowledge of emergency contraception.

Among 62% of respondents, 74.19% of respondents had knowledge about 4 tabs dose of emergency contraception, 16.12% had knowledge about 2 tabs dose and 9.67% had knowledge about 3 tabs dose. The knowledge about interval between first dose and second dose of emergency contraception was 74.19% were 12 hours, 16.12% were 6 hours and 9.67% were 24 hours of interval knowledge.
Table No. 8

Percentage distribution of respondents regarding knowledge about emergency contraceptive IUD

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number n=50</th>
<th>Percentage 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of emergency contraceptive IUD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>46%</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>54%</td>
</tr>
<tr>
<td>Possible day for insertion of IUD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 5 days</td>
<td>8</td>
<td>34.78%</td>
</tr>
<tr>
<td>Within 2 days</td>
<td>5</td>
<td>21.73%</td>
</tr>
<tr>
<td>Within 7 days</td>
<td>5</td>
<td>21.73%</td>
</tr>
<tr>
<td>Within 1 day</td>
<td>4</td>
<td>17.39%</td>
</tr>
<tr>
<td>Other(within 45 days)</td>
<td>1</td>
<td>4.34%</td>
</tr>
</tbody>
</table>

Table No. 8 showed that majority of respondents 54% had no knowledge about emergency contraceptive IUD and 46% of respondents had knowledge about emergency contraceptive IUD. Among 46% of respondents who had knowledge, 34.78% of respondents had knowledge of insertion of IUD within 5 days, 21.73% had knowledge within 2 days, 21.73% had knowledge within 7 days, 17.39% had knowledge within 1 day and 4.34% had other(within 45 days) knowledge of insertion of IUD.
## Table No. 9

Percentage distribution of respondents regarding knowledge about possible side effects and management of emergency contraception

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge regarding side effect of EC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>43</td>
<td>86%</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Possible side effect</strong></td>
<td>n=43</td>
<td>-</td>
</tr>
<tr>
<td>Nausea</td>
<td>43</td>
<td>100%</td>
</tr>
<tr>
<td>Vomiting</td>
<td>43</td>
<td>100%</td>
</tr>
<tr>
<td>Irregular uterine bleeding</td>
<td>36</td>
<td>83.72%</td>
</tr>
<tr>
<td>Breast tenderness</td>
<td>36</td>
<td>83.72%</td>
</tr>
<tr>
<td>Headache</td>
<td>42</td>
<td>97.67%</td>
</tr>
<tr>
<td>Dizziness</td>
<td>43</td>
<td>100%</td>
</tr>
<tr>
<td>Spotting</td>
<td>34</td>
<td>79.06%</td>
</tr>
<tr>
<td>Others (Rash, itching)</td>
<td>5</td>
<td>11.62%</td>
</tr>
<tr>
<td><strong>Knowledge regarding management of side effect</strong></td>
<td>n=43</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>41</td>
<td>95.34%</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>4.65%</td>
</tr>
<tr>
<td><strong>Management of side effect item</strong></td>
<td>n=41</td>
<td></td>
</tr>
<tr>
<td>Take each dose with food</td>
<td>36</td>
<td>87.80%</td>
</tr>
<tr>
<td>Take first dose at bed time</td>
<td>35</td>
<td>85.36%</td>
</tr>
<tr>
<td>Give anti-emetics prophylactically</td>
<td>34</td>
<td>82.92%</td>
</tr>
<tr>
<td>Repeat the dose if vomiting within 2 hour</td>
<td>31</td>
<td>75.60%</td>
</tr>
<tr>
<td>Administered repeat dose vaginally</td>
<td>6</td>
<td>14.63%</td>
</tr>
<tr>
<td>Provide extra treatment (8 tabs pills)</td>
<td>16</td>
<td>39.02%</td>
</tr>
</tbody>
</table>

*Response by duplication*

Table No. 9 showed that majority of respondents 86% have knowledge about possible side effects of emergency contraception and 14% of respondents had no knowledge.

Among 86% of respondents who known about possible side effects of emergency contraception. Those were, nausea 100%, vomiting 100%, dizziness 100%, headache 97.67%, irregular uterine bleeding 83.72%, breast tenderness 83.72%, spotting 79.06% and other 11.62%.
Among 50 respondents, majority of respondents have knowledge of side effects' management of emergency contraception i.e. 82% and 18% respondents have not knowledge. Out of 82% of respondents, the highest management of side effect knowledge had take each dose with food (87.80%) and the lowest management of side effect knowledge had administered repeat dose vaginally (14.63%).

Table No. 10

Percentage distribution of respondents regarding seek medical help after taking complete course of emergency contraception

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge regarding seek medical help</td>
<td>n=50</td>
<td>100</td>
</tr>
<tr>
<td>Yes</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
<td>44%</td>
</tr>
<tr>
<td>Seek medical help items</td>
<td>n=28</td>
<td></td>
</tr>
<tr>
<td>Within 1 weeks</td>
<td>8</td>
<td>28.57%</td>
</tr>
<tr>
<td>Within 4 weeks</td>
<td>7</td>
<td>25%</td>
</tr>
<tr>
<td>Within 2 weeks</td>
<td>6</td>
<td>21.42%</td>
</tr>
<tr>
<td>Within 3 weeks</td>
<td>5</td>
<td>17.85%</td>
</tr>
<tr>
<td>More than 4 weeks</td>
<td>2</td>
<td>7.14%</td>
</tr>
</tbody>
</table>

Table No. 10, showed that majority of respondents 56% have knowledge about seek medical help and 44% had no knowledge about seek medical help after taking complete course of emergency contraception. Out of 56% of respondents, only 17.85% of respondents identified correct answer like within 3 weeks but 28.57% of respondents have knowledge within 1 week, 25% have knowledge within 4 weeks, 21.42% respondents have knowledge within 2 weeks and 7.14% of respondents have knowledge about seek medical help more than 4 week.
Figure No. 3 showed that majority of respondents have knowledge about effectiveness of emergency contraception, intra uterine device (Copper T) 52% and 48% of respondents have knowledge about effectiveness of emergency contraception is combine pills. Among both method, intra uterine device (Copper T) is the effective method said by respondents.

4.5 Attitudes regarding emergency contraception

There was 10 items used to assess the primary health care providers' attitude towards emergency contraception. The items was based on Likert type scales (summated scale). In which there were five categories of strongly agree, agree, undecided, disagree and strongly disagree. An approximately equal number of positively word statements were chosen to avoid bias.

During analysis, the respondents response of strongly agree and agree was kept as positive response and undecided, disagree and strongly disagree response was kept as negative response score '1' is rewarded for positive responses and score '0' was graded for negative or wrong responses. The positive response is rewarded as positive if respondents response in strongly agree and agree for positive statement and rewarded as negative or '0' score if respondents response strongly disagree, disagree and undecided for positive statement and vice versa.
Frequency Polygon No. 1

Percentage distribution of respondents according to attitudes toward emergency contraception

The above frequency polygon No. 1 showed that:

- Attitude scores of respondents ranging from 0 to 9 score.
- Majority of respondents obtained 6 score.
- 8 respondents obtained 9 attitude score out of attitude score maximum 10 score.
- 3 respondents attitude score was 0, out of maximum attitude score 10.
- 58% of respondents have more than 6 attitude score and 42% of respondents have 6 and less than 6 attitude score.
- The mean attitude score was 6.58 with median 7 and mode value 6. The standard deviation was 1.56.

4.6 Attitudes regarding emergency contraception user

There was 7 items used to assess the primary health care providers' attitude towards emergency contraception user. The items was based on Likert type scales (summatied scale). In which there five categories of agreement. disagreement and undecided. Such as strongly agree, agree, undecided, disagreement and undecided. Such as strongly agree, agree, undecided, disagree and strongly disagree. An
approximately equal number of positively word statements were chosen to avoid bias.

During analysis, the respondents response of strongly agree and agree was kept as positive response and undecided, disagree and strongly disagree response was kept as negative response. Score '1' is rewarded for positive responses for positive statement and score '0' was graded for negative responses for negative statement. The positive responses was rewarded as positive if respondents response in Strongly agree and Agree for positive statement and rewarded as negative or '0' score if respondents response Undecided, Disagree and Strongly disagree for positive statement and vice versa.

**Frequency Polygon No. 2**

Distribution of respondents according to attitudes towards emergency contraception user

![Frequency Polygon](image)

The above frequency polygon No. 2, showed that:
- Attitude scores of respondents ranging from 0 to 7 score.
- Majority of respondents obtained full attitude score 7.
- 3 respondents attitude score was 0 out of maximum attitude score 7.
- 48% of respondents have attitude score which was maximum attitude score and 52% of respondents have less than 7 attitude score.
- The mean attitude score was 6 with median 6 and mode value was 7. The standard deviation was 0.87.
4.7 Hypothesis testing

Hypothesis No. 1

Primary Health Care Provider working in family planning center have good knowledge towards emergency contraception than other health institution (HP, SHP, PHCC).

Table No. 1

Emergency contraception knowledge on side effects' management according to working institution.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Knowledge of side effects' management (+)</th>
<th>Knowledge of side effects' management (-)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working in family planning center</td>
<td>6 (100%)</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Working in other institution (HP, SHP, PHCC)</td>
<td>35 (79.5%)</td>
<td>9 (20.4%)</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>41 (82%)</td>
<td>9 (18%)</td>
<td>50</td>
</tr>
</tbody>
</table>

Above table shows that 100% of respondents had knowledge about side effects' management on working in family planning center and 79.5% of respondents had knowledge on side effects' management and 20.4% of respondents had no knowledge about side effects' management on working in other institution.

Let us take the hypothesis that side effects' management knowledge is difference between working in family planning center and other institution.

The table value of $\chi^2$ for 1 degree of freedom at 5% level of significant is 3.841. Then in this case the calculated value is $\chi^2 (1.47)$ is lesser than table value. Therefore there is no association between working institution and knowledge of side effects management. Result is independent on working institution so that stated hypothesis is statistically rejected.
Hypothesis No. 2

Primary Health Care Provider with higher educational background have higher knowledge than those with lower educational background.

Table No. 2

Emergency contraception knowledge on side effects of EC according to educational background.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Knowledge on side effects of EC (+)</th>
<th>Knowledge on side effects of EC (-)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education (above higher secondary)</td>
<td>22 (91.66%)</td>
<td>2 (8.33%)</td>
<td>24</td>
</tr>
<tr>
<td>Lower education (below higher secondary)</td>
<td>22(84.6%)</td>
<td>4(15.3%)</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44 (88%)</strong></td>
<td><strong>6(12%)</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

Above table shows that 91.66% of respondents had knowledge and 8.33% of respondents had no knowledge about side effects of EC on Higher educational background and 84.6% of respondents had knowledge and 15.3% of respondents had no knowledge about side effect of EC on Lower educational background.

Let us take the hypothesis that knowledge of side effect of EC is difference between Higher education and Lower education.

The table value of $\chi^2$ for 1 degree of freedom at 5% level of significant is 3.841. Then in this case the calculated value of $\chi^2$(0.56) is lesser than table value. Therefore there is no association between educational background and knowledge of side effect of EC. Result is independent on educational background so that stated hypothesis is rejected and statistically rejected.
Hypothesis No. 3

Primary Health Care Provider getting training on emergency contraception or family planning have good knowledge about emergency contraception than those who have no training.

Table No. 3

Emergency contraception knowledge on indication of EC according to training.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Knowledge on indication of EC(+)</th>
<th>Knowledge on indication of EC(-)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained</td>
<td>19 (95%)</td>
<td>1 (5%)</td>
<td>20</td>
</tr>
<tr>
<td>Non-trained</td>
<td>20 (66.6%)</td>
<td>10 (33.3%)</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>39 (78%)</td>
<td>11 (22%)</td>
<td>50</td>
</tr>
</tbody>
</table>

Above table shows that 95% respondents had knowledge and 5% of respondents had no knowledge about indication of EC on trained personnel. And 66.6% of respondents had knowledge and 33.3% of respondents had no knowledge about indication of EC on non-trained personnel.

Let us take the hypothesis that indication of EC knowledge is difference between trained and non-trained personnel.

The table value of $\chi^2$ for 1 degree of freedom at 5% level of significant is 3.841. Then in this case the calculated value of $\chi^2(5.6)$ is greater than table value. Therefore there is association between training and knowledge of indication of EC. Result is dependent on training so that stated hypothesis is accepted.
Chapter-V

5 Discussion; Conclusion & Recommendations

5.1 Discussion

5.1.1 Regarding knowledge of emergency contraception

- 86% of respondents have knowledge of emergency contraception but 82% known name of emergency contraception are available in Nepal* due to the inapplicability in their working environment, less priority given to emergency contraception services than abortion and the health workers are not confident about emergency contraception than abortion. Therefore, information strategies to the primary health care provider are needed in emergency contraception. The length and regularity of practice based training seems inevitable.

- Even though 84% of the respondents have the knowledge of the indications of emergency contraception, only 62% of them possess the knowledge of pills and 54% primary health care providers possess the knowledge of prescribing IUD as emergency contraception due to the lack of the proper knowledge and regular training. Altogether 20% of them have received emergency contraception training still only a few of them have prescription knowledge. They reported that the training duration was short-termed and a sketchy knowledge was given. Much emphasis was not given to emergency contraception and top priority was given to the other contraceptive devices. The knowledge of emergency contraception may have been incomplete due to the fact that the primary health care providers might have viewed it as mercenary purpose or as a means of formality. I came to the conclusion that their attitude towards this contraceptive should be positive, which can be enhanced through motivation and an in-depth knowledge. The clients should also be aware of it. If more clients are attracted to it, the health care providers will also have a sound knowledge of prescribing it.

- 86% of them are familiar with the side-effects of emergency contraception but among them 95.34% respondents know about the management of the side effects therefore they need continue monitoring and supervising periodically and frequently for refreshment.
- Only 56% respondents have the knowledge of seeking medical assistance after completing the emergency contraception course. 40% of the respondents had the knowledge of emergency contraception by training because of the fact that the rest of them had not taken any training concerning emergency contraception. Less equipments and devices were supplied scantily. The services were not run in 72% working institutions.

- 52% of the respondents reported that IUD is more effective than Combine pills because the former is free from hormone, less side effects, high success rate. Thus IUD is not only an effective method in rural areas or primary level but also Combine pills are equally effective at primary level because it is easy to prescribe, need no trained manpower, cost saving quality and its availability in every institutions.

* Foot Note: Literature Review From Nguyễn Thi Nhu Ngoc etal.

5.1.2 Regarding attitude of emergency contraception

- 58% of respondents have positive attitude toward emergency contraception and 90% of respondents have positive attitude toward emergency contraceptive user. It is emergency situation which may comes to every person and it should be prevented. The attitude level depend on level of knowledge score because higher knowledgeable person has positive (higher) attitude score and vice versa.

The significant of hypothesis was tested by using $\chi^2$ test, it shows that one hypothesis is accepted and two are rejected statistically, trained primary health care provider have good knowledge about EC than those having no training. Since calculated value of $\chi^2 (5.6)$ is greater than tabulated value (3.841).
5.2 Conclusion

After reviewing the above findings and discussion, the conclusion can be drawn as primary health care providers at Dang district are familiar with EC but they have inadequate knowledge about EC.

The finding revealed that the most knowledgeable areas are indications, side effects, and management of EC and least knowledgeable areas are prescription method (eg IUD, pills) and seeking for medical help. They are familiar with the contraception but they don't know about the contraception as a EC. It may be due to lack of knowledge, training, in-service education as needed and lack of awareness of community people towards EC. The degree of practice on EC depends on knowledge of health workers and awareness of women of reproductive age, For this male education should be given to different areas by using various media and methods to improve its utility and effectiveness so that unprotected sex can be prevented which further decrease the unsafe and septic abortion.

The literature review shows that obstetric/gynecologist, pediatrician and others departmental staffs also have inadequate knowledge, the above findings also revealed the high prevalence of knowledge deficit on different aspect of EC. So this research highlighted the need of extra training to all types staffs. The PCL nursing curriculum should have detailed content about it, the community and health worker should aware about it so that they acquire better (positive) attitude towards EC which ultimately increase the degree of practicing EC, that decrease the unsafe and septic abortion so MMR of country is gradually decreased.

It is concluded that higher education, more experience, training, working environment, designation (postion) of worker, sex, ethnicity and their residence are not great factor for better knowledge and positive attitude, self initiation, motivation, philosophy of life, personal and family background etc are the major factors for modification of good knowledge and better attitude and refresher training also help to update their knowledge of EC. So it is highlighted that the concerned body should (geared towards it) glance on this result.

5.3 Comparison of findings with literature review

According to the literature reviewed, regarding knowledge and attitude towards emergency contraception, the results of the research demonstrated as follows:

1. Aneblom G et. Al. (2002), concluded that the two most common sources of information about ECP were media and friends but in this study most
common sources of information about ECP were refresher training (40%) and health personnel (24%). Thus this literature supports this research study.

2. Keshavarz R et al. (2000), found that 71% male, 29% female; 34% academic, 26% community, and 33% resident physicians; and 7% nurse practitioners and physician assistance. Similarly, in this study 58% male, 42% female; 2% doctor, 14% health assistant, 16% staff nurse, 50% auxiliary health worker and 24% assistant nurse midwife. Thus, this literature support this research study.

3. Nguyen Thi Nhu Ngoc et Al. (1997), found that most providers were familiar with the concept of emergency contraception and endorsed its practice, but lacked accurate and detailed information about method use. Similarly, in this study 86% have knowledge about emergency contraception but 62% respondents had COCs prescribing knowledge and only 10% had knowledge about IUD prescription.

4. Haggstrom - Nordin E and Tyden T found that the mean age was 16.5 years. But in this study the mean age was 31.25% years.

5. Weisberg E et. Al. (1995), found that 84 rural and 76 urban GPs respondents. Similarly, in this study 60% respondents were from rural and 40% respondents were from urban area.

6. Virjo I et.al. (1999), revealed that only a minority of respondents knew that EC pills could be taken up to 72 hour after unprotected intercourse. Similarly, in this study 61.29% of respondents knew that EC pills could be taken up to 72 hour after unprotected intercourse.

7. Smit J et. Al. (1997), concluded that after explaining the EC, attitudes toward its use were found to be positive, with 90.3% indicating that they would use it if needed but in this study, majority of respondents' attitudes regarding emergency contraception was positive with mean = 6.58, median = 7, mode = 6 and standard deviation = 1.56.

8. Ngoc et. Al. (1997). concluded that some providers and policy maker believe that easy access to emergency contraception will encourage risky sexual and contraceptive behavior. Similarly, in this study majority of respondents (76%) were agree in easily available of emergency contraception will increase risky sexual behavior in attitude statement.
5.4 Recommendation

- To Health Service Division:

  I observed that most of the health care providers were male in the sub health posts therefore women were hesitant to get service from them. Therefore at least one Female Health Personnel should be provided to each of the sub health posts for better emergency contraception services.

- To NHTC:

  It seems important that training should be conducted in all the areas from primary to tertiary in order to provide better services of emergency contraception to prevent septic and unsafe abortion. For this purpose, the length and quality of training should be extended on practical basis.

- To IEC:

  It will be better if there is health information regarding emergency contraception throughout the HP, SHP, PHCC, and FP center to the service user via other A/V aid in Dang District. Emergency contraception has a major role to play in saving maternal lives because many deaths are the result of unregulated fertility and unwanted pregnancy. Therefore, primary health care provider (ANMs, AHWs, HAs, staff nurses and doctors) should be trained in emergency contraception service who is working in primary (Grassroot) level.

- For nursing student:

  * A quasi experimental study can be conducted in other District.

  * A study can be conducted on primary health care providers practice on emergency contraception.

  * A study can be conducted on Gynecologist knowledge, attitude and practice on emergency contraception.

- An educational package should be given for every institution like HP, SHP, PHCC, hospital and FP center. So that primary health care providers can see and follow in any difficulty situation as a protocol.
TRIBHUVAN UNIVERSITY
INSTITUTE OF MEDICINE
NURSING CAMPUS, MAHARAJGUNJ

RESEARCH QUESTIONNAIRE

TOPIC: A study on "Knowledge and attitude about emergency contraception" among primary health care provider at Dang district.

Direction: Each respondent is requested to answer the following questions. The obtained information will be used only for study purpose and it will be kept confidential.

PART-I

SOCIOGRAPHIC INFORMATION

1) Date:
2) Name of respondent:
3) Sex:
4) Post:
5) Age group in year:
   a) 15-24 years
   b) 25-34 years
   c) 35-44 years
   d) 45-54 years
   e) 55-64 years
   f) Above 64 years
6) Marital status:
   a) Unmarried
   b) Married
   c) Widow
   d) Other
7) Ethnicity:
   a) Brahman
   b) Chhetri
   c) Newar
   d) Other
8) Religion of worker:
   a) Hindu
   b) Buddhist
   c) Muslim
   d) Christian
   e) Other

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9) Which of the following educational level have you completed?
a) Primary Level (1-5)
b) Lower Secondary (6-8)
c) Secondary (9-10)
d) Higher Secondary (10+2)
e) Above Higher Secondary

10) Where is your residence?
a) Rural
b) Urban

11) Which types of your working institution?
a) Primary Health Care Centre (PHCC)
b) Health Post (H.P)
c) Sub Health Post (SHP)
d) Family Planning Centre

12) How many years of working experiences do you have?
a) 1-5 years
b) 5-10 years
c) 10-15 years
d) Above 15 years

13) What kind of environment have in your working institution?

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<th>WORKING ENVIRONMENT</th>
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<th>No</th>
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<tbody>
<tr>
<td>a.</td>
<td>Sufficient supply of required instruments/devices for emergency contraception.</td>
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<tr>
<td>b.</td>
<td>Regular supply of required instruments/devices for emergency contraception.</td>
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<tr>
<td>c.</td>
<td>Storage of required instruments/devices for stock.</td>
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<tr>
<td>d.</td>
<td>Good relationship within the staffs.</td>
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<tr>
<td>e.</td>
<td>Emergency contraception services regular run in your institution.</td>
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<tr>
<td>f.</td>
<td>Regular training receive in order to provide quality services.</td>
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</table>

14) Do you have training regarding emergency contraception?

a) Yes □
   b) No □

If Yes: What How Long From Where
i)  
ii)  
iii)
PART – II

Section-A: Question related to knowledge on Emergency Contraception

Carefully read the following statement and give your responses by placing a tick (√) against the statement in the appropriate box.

1) Have you ever heard about emergency contraception?
   a) Yes □      b) No □

If Yes, What is the main source of hearing it?
   a) Radio □      b) Newspaper □
   c) Television □ d) Pre-service training □
   e) Refresher training □ f) Health personnel □
   g) Other (Please specify) □

2) Do you know the name of the emergency contraception available in Nepal?
   a) Yes □      b) No □

If Yes, what are these method ? (Tick the option as much as possible).
   a) Combine oral contraceptive pills (COCs) □ b) Progestin only pills □
   c) Intra uterine device (cupper ‘T’) □ d) Other (Please specify) □

3) Do you know the indication of emergency contraception?
   a) Yes □      b) No □

If Yes, what are these indication ? (Tick the option as much as possible).
   a) When no contraception method has been used. □
   b) Condom rupture □
   c) Condom misuse □
   d) Condom slippage □
   e) Failed coitus interruption □
   f) Miscalculation of the periodic abstinence method □
   g) I.U.D expulsion □
   h) When the woman has been victim of sexual assault □

4) How would you prescribe/suggest combine oral contraceptive pills if you have to give it as emergency contraception? (Dose, Time, Interval)

5) Do you know way of prescribing Intra Uterine device (Copper ‘T’) as emergency contraception?
   a) Yes □
   b) No □

If Yes, how long after unprotected sex can I.U.D be inserted? (Tick the only one correct answer):
   a) Within 1 day □
   b) Within 2 days □
   c) Within 5 days □
   d) Within 7 days □
   e) Other (Please specify) □
7) Do you know about side effect of emergency contraception?
   a) Yes □   b) No □

   If Yes, what are these? (Tick the option as much as possible).
   a) Nausea □
   b) Vomiting □
   c) Irregular uterine bleeding □
   d) Breast tenderness. □
   e) Headache □
   f) Dizziness. □
   g) Spotting. □
   h) Other (Please specify) □

8) Do you know about management of side effect of emergency contraceptive pills?
   a) Yes □   b) No □

   If Yes, what are the management? (Tick the option as much as possible).
   a) Take each dose with food □
   b) Take first dose at bed time □
   c) Give anti-emetics prophylactically □
   d) Repeat the dose if vomiting within 2 hours □
   e) Administered repeat dose vaginally □
   f) Provide extra treatment (8 tablets combine oral contraceptive pills) □

9) Do you think you need to seek medical help if you don't have period's (menses) even after taking emergency contraception?
   a) Yes □   b) No □

   If Yes, when the client should return to be clinic if she has no menses?
   (Tick the only one correct answer).
   a) Within 1 week. □   b) Within 2 week. □
   c) Within 3 week . □   d) Within 4 week. □
   e) More than 4 weeks.

10) Do you know about symptoms of early pregnancy?
    a) Yes □   b) No □

    If Yes, what are the symptoms? (Tick the option as much as possible)
    a) Breast tenderness □
    b) Nausea □
    c) Change in the last menses (light flow, short duration etc) □
    d) Other (Please specify) □

11) Do you know, which method of emergency contraception is more effective?
    (Tick the only one correct answer).
    a) Combine pills □
    b) Intra uterine devices (cupper 'T') □
Section-B: A statement related to attitude toward emergency contraception.
Please, read statements given below and give your responses by placing a tick (✓) mark against the statement in the appropriate column of the code.
SA - Strongly agree   D - Disagree  A - Agree
SD - Strongly disagree  U - Undecided.

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<tr>
<th>S.N.</th>
<th>SCORING STATEMENTS SCALE</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
<th>Score</th>
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<tbody>
<tr>
<td>1.</td>
<td>Use of emergency contraception causes abortion.</td>
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<td>2.</td>
<td>Pregnancy test should be negative before prescribing emergency contraception.</td>
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<td>3.</td>
<td>Emergency contraception should not be prescribed for unmarried girls.</td>
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<td>4.</td>
<td>Emergency contraception should be easily available for potential user.</td>
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<td>5.</td>
<td>Emergency contraception is more effective than regular contraception</td>
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<td>6.</td>
<td>Emergency contraception is more cheapest than induce abortion.</td>
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<td>7.</td>
<td>Information about emergency contraception should be provide to all potential user.</td>
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<td>8.</td>
<td>Easily availability of emergency contraception increase risky sexual behavior.</td>
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<td>9.</td>
<td>Repeated use of emergency contraception may cause health risk.</td>
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<td>10.</td>
<td>Wider use of emergency contraception is less expensive and safe than abortion &amp; child bearing</td>
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Section - C: A Statement related Attitude toward emergency contraception user.

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<td>Need respect for the emergency contraception user</td>
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<td>2.</td>
<td>Listen their problem attentively.</td>
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<td>3.</td>
<td>Maintain confidentiality of the emergency contraception user.</td>
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<td>4.</td>
<td>Emergency contraception use only by commercial sex worker:</td>
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<td>5.</td>
<td>One of the rights of emergency contraception user is good service seeking.</td>
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<td>6.</td>
<td>Need to explain about emergency contraception to user.</td>
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<td>7.</td>
<td>Culturally acceptance.</td>
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* Thanks *
CONSENT AGREEMENT

Title of the study: Knowledge and attitude about emergency contraception among primary health care providers at Dang district.

I am Durga laxmi shrestha and studying B.N final year in Maharajgunj, Nursing Campus. I am going to do small scale research study on primary health care providers' knowledge and attitude about emergency contraception. Knowledge means possession of facts on various aspects of emergency contraception and attitude means psychological representation which predispose an individual to respond in a particular way. I would like to ask you to participate as a subject in my research. If you agree to participate in my research study, I will give you some questionnaires related to emergency contraception, it will take 10-15 minutes of your time.

You will be entirely confidential and your name won't be linked with any of your answer. You give your participation in the study in entirely voluntary. There will not be any direct benefits to you from this study but it will help to understand primary health care providers' knowledge and attitude towards emergency contraception and provide baseline for educational intervention / in-service education / training package for primary health care providers. If possible, I will provide educational learning guide to your institution for study.

Respondents written agreement:

I understand what this research is about to participate in your research study.

Date:

Signature:
1. Aneblom, G. et al.(2002). Knowledge, use and attitudes towards emergency contraceptive pills among Swedish women presenting for induced abortion. BJOG 109(2),155


BOOK CITATION


## APPENDIX 2

**TRIBHUWAN UNIVERSITY**  
**INSTITUTE OF MEDICINE**  
**NURSING CAMPUS MAHARAJGUNJ**  
**OPERATIONAL PLAN FOR RESEARCH**

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<th>Research</th>
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**SUMMER VACATION**
ल्याइ आवश्यक सहयोग भए दिने बारे।

भाषाम विज्ञापन
पत्रिका हर्म अफिम

यस व्यस्तात्मक अभावात्मक भएकोल स्थल भनेर नै नै अभावसम्बन्धको लागि नस्ल पत्रिका हर्म अफिम आफूल्लो। त्यसै वितिहारीलो भने रामरो लागि आफूल्लो। त्यसै आवश्यक सहयोग भए दिनुहोस्।

लेखक जिने दिनुहोस्

प्रदेशक अव्याप्सक प्रमुख
ई. राज्य सुरक्षा सेना एवं राष्ट्रीय सुरक्षा मंत्रालय

जिला स्वास्थ्य कार्यालय

पत्र संख्या: 20X2146
चलानी नम्बर: X66

विधि: प्रमाणित गारिता ।

भी नायिका याज्ञवल्लास, महाराणाज, काउण्टी नामक

उपर्युक्त स्थानवासी ओत्तर्युक्त स्थानवासी वि. राज्य सेना के कल्पना अध्यक्षता के श्रेष्ठ हृदय के विशेष रूप से उत्कृष्टमूर्ति अनुमय व्यक्ति श्रीमती उपर्युक्त को श्रीमती उपर्युक्त को श्रीमती उपर्युक्त जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला जिला

(साईं बामाकुमार दोंगड़ी)

जिला स्वास्थ्य कार्यालय