EMERGENCY CONTRACEPTION IN ADDIS ABABA: PRACTICE OF SERVICE PROVIDERS

by

DR DAWIT ASSEFA LEMMA

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SUPERVISOR: MRS MM VAN DER MERWE

JOINT SUPERVISOR: MRS JE SMITH

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"Many, O Lord my God, are the wonders which you have done, and your thoughts toward us: there is none to compare with you. If I would declare and speak of them, they would be too numerous to count" psalm 40:5

Summary

A quantitative, descriptive, explorative, contextual study was conducted to determine pharmacists and drug vendors' level of knowledge, attitude towards and practice on Emergency Contraceptive (EC) in Addis Ababa. Forty licensed service providers in Addis Ababa were randomly selected during 2008 and interviewed using a structured interview schedule. Data were analysed using a computer software package. The findings revealed that although these service providers were knowledgeable on the purpose and dosing schedule of EC, they lacked knowledge on side-effects, contra-indications, and types of ECs. Most respondents portrayed a subjective attitude towards easy EC access of especially adolescent girls, since they believed that it will encourage promiscuity and unprotected intercourse. Their knowledge and practice need to be improved, as it has a direct effect on potential users and reducing unwanted pregnancies among young.

KEY TERMS:

Drug vendors, EC service, knowledge, attitude and practice of service providers, pharmacists, unwanted pregnancy.

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LIST OF ABBREVIATIONS

AAU	Addis Ababa University
COC	Combined Oral Contraceptive pills
DACA	Drug Administration and Control Authority of Ethiopia
EC	Emergency Contraceptives
ESOG	Ethiopian Society of Obstetricians and Gynaecologists
FGAE	Family Guidance Association of Ethiopia
FP	Family Planning
FMOH	Federal Ministry of Health of Ethiopia
HIV/Aids	Human Immuno-deficiency Virus and Acquired immuno-deficiency syndrome
IUCD	Intra-uterine Contraceptive Device
MOH	Ministry of Health
NGO	Non-governmental Organization
POP	Progesterone-Only Pill
RH	Reproductive Health
STI	Sexually Transmitted Infection
TFPMFR	Task Force on Postovulatory Methods of Fertility Regulation
UNISA	University of South Africa

US	United States
USA	United States of America
WHO	World Health Organization

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

The principal goal in the provision of emergency contraception (EC) for women is to prevent unwanted pregnancy which might have resulted from method failure, sexual assault, and lack of knowledge or access to contraception, thereby reducing the need for abortions and the negative maternal health consequences associated with them. Regrettably, women, especially young women are still taking inadequate advantage of the contraceptive options available to them regardless of whether it is EC or regular contraceptive methods. The reasons for this state of affairs are several: negative attitudes and lack of competence of providers, socio-cultural and religious pressures, and the influence of certain pre-conceived notions about the method, and young people's unfamiliarity with their basic sexual and reproductive health (RH) rights.

Young women represent an important target population for EC because they make up such a huge part of our sexually active population. They also confront a broad range of negative health consequences, including sexually transmitted infections (STI), Human immuno-deficiency virus (HIV) and Acquired immune-deficiency syndrome (Aids), unwanted pregnancies, and unsafe abortions.

By the end of 1990, EC was widely recognised as a safe and effective method for all women at risk of unintended pregnancy. However, EC is not as effective as other contraceptives for regular use and it does not protect against sexually transmitted infections. Women should understand that an ongoing, correct use

of other contraceptives methods provides more protection from pregnancy. EC is provided in three ways: using progesterone-only branded product, using hormonal contraceptive pills either progesterone-only or combined oral contraceptives, or inserting a copper releasing intra-uterine contraceptive device (IUCD). All women can use EC, including women who have contra-indications for oral contraceptives, as there are no absolute contra-indications for its use (Deborah 2006: [Online]. http://www.plannedparenthood.org/health-topics/emergency-contraception-morning-after-pill.4363htm.)

Previously EC was commonly known by the name “morning-after” pill, but this misnomer is incorrect because EC involves more than one pill. It does not need to occur on the “morning after”, and should not be confused with the “abortion” pill, because EC cannot terminate an established pregnancy. EC also does not interfere with an established pregnancy or harm a developing embryo, but EC prevent pregnancy by inhibiting ovulation and fertilisation (Deborah 2006: [Online].http://www.plannedparenthood.org/health-topics/emergency-contraception-morning-after-pill.4363htm.)

Although options for and information about EC have increased, further efforts are needed to improve women’s access to this important backup method of birth control. Misinformation about EC, false claims about their safety and efficacy exist in many places. This undermines EC’s ability to improve sexual health of women. The dissemination of direct and unambiguous messages about EC is needed to ensure that the public, service providers and policy makers know the truth about the safety, efficacy, and potential public health benefits.

As the health facilities that provide RH services are often inaccessible to adolescents, clients usually make use of the services of pharmacists and drug vendors. The knowledge, attitudes and practices of these service providers on EC in Addis Ababa, Ethiopia, is not that much assessed and the current practice in this regard could even be detrimental to the health of young people.

1.2 BACKGROUND OF THIS RESEARCH

Unwanted pregnancy is one of the major reproductive health challenges faced by adolescents and women in Ethiopia (Federal Ministry of Health 2006:1). Early sexual debut and limited knowledge of sexual physiology, limited use of contraceptives, limited access to RH information and girls' limited control over their sex lives all contribute to the high rate of unwanted pregnancy. First experience of casual sex is common among female adolescents in Addis Ababa, as 71.0% of female adolescents aged 15-19 reported that they already have had a casual sexual experience. The main reason for this behaviour, according to Fekadu (2001:109) is a lack of or limited self-restraining capacity over their sexuality in the face of sexual advances made by male partners.

Statistics from health facilities across the country and from hospital-based studies show that overall annual maternal mortality rate in Ethiopia is 1.68 per 1,000 women aged 15 to 49 years, of which up to 32.0% is due to unsafe abortion, and also one of the top 10 causes of hospital admission of women. As can be expected, the cost of care to the health system for abortion complications is enormous, as confirmed by institution-based studies (Federal Ministry of Health 2006:1).

Family planning (FP) is incorporated into the health service delivery system of the country at all levels and is an integral part of maternal and child health care. Different strategies are being followed to increase the utilisation of FP methods in order to control the high fertility (5.9%) and population growth rate (2.7%) in Ethiopia. A recent national study revealed that up to 78.0% of unwanted pregnancies were attributable to contraceptive non-use, incorrect use, or method failure. It was also revealed that over 45.0% of all abortions occurred in adolescents and the younger age group (Mekbib, Gebrehiowot & Fantahun 2007:28).

In 2001, the Family Guidance Association of Ethiopia (FGAE) in collaboration with the population council initiated a pilot project to introduce EC in selected youth centre clinics in the country. This pilot project demonstrated that EC was popular among young people, and showed the need to expand services. Although these attempts were encouraging, there was no systematic and organised approach to address the widespread unmet need for this method. As a result, the Ministry of Health and its partners launched a new initiative which focuses on mainstreaming EC into the public and NGO sector.

However, a cross sectional survey study done in 13 high schools in Addis Ababa on adolescents on health service utilisation patterns and preferences showed a considerable proportion of the adolescents reported that existing health services are inaccessible (30.5%), unaffordable (20.2%) and unacceptable (24.2%). The major barriers to the utilisation of RH services are feeling of embarrassment (72%) and fear of being seen by family members or people who know them (67.8%) (Berhane, Berhane & Fantahun 2005:29). Due to the lack of access to user-friendly services in the health facilities and service providers' biases against this section of the population, the health seeking behaviour of these young people particularly to their RH need is very low. Recognising these facts, adolescents usually seek solutions for their immediate reproductive problem from pharmacists and local drug vendors.

A study done on pharmacists' attitudes toward and practices with adolescents in the United States (US) showed that adolescents often require pharmacy services, but many pharmacists feel inadequately trained in adolescent specific issues. Confidentiality may not be maintained by all members of the health care team, and a prescription may be refused by the receiving pharmacist (Conard, Fortenberry, Blythe & Orr 2003:361).

Bennett, Petraitis, D'Anella and Marcella (2003:261) conducted a cross-sectional study in Pennsylvania to examine pharmacists' knowledge and attitudes about

EC. The findings of this research revealed that only 35.0% of pharmacists indicated that they would be able to fill a prescription for EC. It was also clear that many community pharmacists do not have sufficient or accurate information about EC. In a logistic regression model, pharmacists' lack of information relates to the low proportion of pharmacists able to dispense it.

Information on EC especially for adolescents is conceived negatively by pharmacists with the assumption that such information will encourage them to practise unprotected sex; since the risk of pregnancy is reduced or eliminated they will expose themselves to STI and HIV infection. This was one of the findings of research done on pharmacists' knowledge and perceptions in South Africa. It was also revealed that several pharmacists were of the opinion that the use of the EC pills promoted promiscuity and repeated use, and increased the risk of contracting HIV and other STIs. Respondents also disapproved of increased provision of EC with the concern that it would encourage women to use the pills as a regular form of contraception and would reduce the likelihood of their partners using condoms for protection against HIV and STIs (Blanchard, Harrison & Sello 2005:172). However, numerous studies have been published to refute this opposing view on EC (Glasier & Baird 1998:4; Belzer & Marvin 2003:347; Harper & Cynthia 2005:483; Marston & Cicely 2005:8; Raymond, Stewart, Weaver, Monteith, Van der Pol 2006:1098-106; Gold & Melanie 2004:87). These studies demonstrated that while advanced access to EC does increase the chance of using EC, it does not alter sexual behaviour or the risk for contracting STIs. From a controlled randomized trial study of Raine, Harper, Rocca, Fischer, Padian, Jeffrey and Philip (2005:54-62) concluded that "given there is clear evidence of neither pharmacy access nor advance provision compromises contraceptive or sexual behaviour, it seems unreasonable to restrict access to EC".

A 2004 study substantiated the findings of previous studies on the advancement of provision (Gold, Wolford, Smith, Parker 2004:87-96). In this study adolescent

girls and young adult women aged between 15-20 years, were randomised into two groups. One group of females received EC plus education about EC whereas the comparison group of females received only education. In the first month of the study, the adolescents in the group who received the pills were twice more likely to use EC on a regular basis than the comparison group. They also took the pills an average of 10 hours sooner than the adolescents in the education only group; which is an important finding as EC's efficacy is time limited. The two groups did not differ in their rates of hormonal contraception use when followed up at the six months. Notably, the group that received the pills was more likely to report condom use at six months, than the education only group.

When women, especially adolescents, are faced with unprotected sex, failed contraception, or after sexual assault, the risk of contracting STI/HIV may not be reversed. However, not availing the information and services for EC with the assumption that: EC knowledge increase sexual activity (promiscuity[1]), while there is no evidence to suggest that this could only result in unwanted pregnancy and pregnancy related complications. It is estimated that half of the 3.5 million unintended pregnancies that occur each year in the United States of America (USA) could be averted if EC were easily accessible and used (Trussell & Raymond 2009:2-12; Alan 2003:9-51).

1.3 RATIONALE OF THE RESEARCH PROBLEM

Maternal mortality ratio indicates the risk of death a woman faces with each pregnancy. In settings with high fertility, such as Ethiopia, women face this risk many times in their lifetimes

[1] Promiscuity is when persons indiscriminately have a sexual relationship outside marriage or cohabitation (casual sex).

- Unsafe abortion is the most common cause of maternal mortality, accounting for 32.0% of all maternal deaths in the country (FMOH 2006:1).
- For each woman that dies from complications of unsafe abortion, many more sustain short and long term morbidities.
- In addition to the loss of productivity due to absence of morbidity, institutional-based studies have also shown that: the cost of care to the health system for abortion complications is enormous; this has an overall negative impact on the country economy.
- There is evidence that EC can decrease the rate of unwanted pregnancy, thereby reducing the need for abortion and the negative maternal health consequences associated with unwanted pregnancy.
- Therefore, increasing awareness and access of the service for women is essential in order to bring about impact at national level.
- One factor that affects access for service is providers' knowledge and attitude on the method.
- Information on the knowledge, attitude and practice of service providers on EC is very limited in Ethiopia and other developing countries (Haggai 2003:[Online].http://www.cababstractsplus.org/abstracts/Abstract.aspex?AcNo=20053014588).
- Since adolescents are less likely to utilise existing health services in search of privacy and anonymity, pharmacists and drug vendors are in a position to improve access, if they have the appropriate knowledge and practice on EC.
- It is therefore necessary to study the practice of the providers of EC services in an attempt to improve EC access in the future.

1.4 STATEMENT OF THE PROBLEM

In Ethiopia unwanted pregnancy and its untoward consequences on the physical and psychosocial wellbeing of adolescent girls and young adult women is a

problem. Unwanted pregnancy is one of the main factors for unsafe abortion[2]. Unsafe abortion in Ethiopia accounts for nearly 60% of all gynaecological admissions and almost 30.0% of all obstetric and gynaecologic admission. However, these figures represent only the tip of the iceberg due to the clandestine nature of unsafe abortion services (FMOH 2006:1). Improving access of service for EC is essential in reducing unplanned conception. Practices of service providers which are mainly based on their knowledge and attitudes are determining factors in accessing EC service. While many make use of the services of pharmacists and drug vendors, because contraceptives are dispensed without prescription; information on the knowledge, attitude and practices of pharmacists and drug vendors on EC in Addis Ababa is necessary. Without this information, it's difficult to design intervention which could improve access, and prevent unnecessary deaths, and sufferings.

From the above mentioned problem statement the following research questions were derived.

1.4.1 The research questions

In order to address the objectives of this study the following questions are posed:

- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge on the types and mode of action of EC?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have the knowledge when and how EC should be prescribed?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge on the side-effects and contra-indications of EC?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, give clients who seek EC's the correct advice?

[2] Unsafe abortions are abortions often conducted by lay people in unsterile conditions, which may lead to death of the pregnant woman.

- What are the attitudes of pharmacists and drug vendors towards providing EC service to women, especially to adolescents girls and young women, in Addis Ababa, Ethiopia?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia offer the correct type and dose at the right time?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia recommend unnecessary laboratory test before dispensing EC?

1.5 THE AIM OF THE RESEARCH

The aim of the research was to determine the level of knowledge, attitudes and practices of pharmacists and drug vendors in Addis Ababa, Ethiopia, on EC?

1.6 THE RESEARCH OBJECTIVES

The following are the objectives of this research. To explore and describe the:

- knowledge of pharmacists and drug vendors in Addis Ababa, Ethiopia, on the mode of action; when and how EC should be prescribed; side-effects and contra-indications of EC.
- attitudes of pharmacists and drug vendors towards providing EC service to women--especially to adolescents and young women, in Addis Ababa, Ethiopia.
- advice pharmacists and drug vendors in Addis Ababa, Ethiopia, provide to clients seeking EC services.
- practices on EC of pharmacists and drug vendors in Addis Ababa.

1.7 SIGNIFICANCE OF THE RESEARCH

Emergency contraception, which is used to prevent pregnancy following unintended intercourse, could prove invaluable to a country like Ethiopia which has a high fertility rate and high morbidity and mortality of women due to

pregnancy related complications. Even though EC has been in use for long time, in Ethiopia, information provided to users by service providers seems to be limited and in consequence the needed impact is not yet realised. Therefore, to introduce the method effectively, awareness and training of service providers is as important as the client awareness. Since there is a time-frame within which women must use EC, not only should service users have awareness and knowledge of the method in advance, but a good knowledge and practice on EC is needed from the part of service providers. Investigating the knowledge and attitude of pharmacists and drug vendors on EC service provision is therefore important to improve the understanding of the current access to EC; the promotion of the use of this method; access to EC providers; and future prevention of unwanted pregnancies in the country.

1.8 OPERATIONAL DEFINITIONS

►**Emergency contraception**: is a form of oral contraception that can be used immediately after sexual intercourse but before pregnancy is established. It is intended for emergency situations such as unprotected intercourse, contraceptive failure or rape (Castle & Coeytaux 2000:6).

The term *emergency contraception* used in this dissertation refers to an effective method of birth control that prevents pregnancy after unprotected sex in adolescent girls and young adult women of Addis Ababa. It also refers to the progestin only as well as combined regular birth control pill given in specified doses by pharmacists and drug vendors.

►**Practice of service providers**: The concept, *practice of service providers*, is used in this study to describe a regular overt behaviour of pharmacists and drug vendors' service provision on EC. The practice of pharmacist and drug vendors is also based on scientific knowledge, the necessary skills and attitudes to provide effective EC services ([Online].http://encyclopedia.thefreedictionary.

com/pharmacist). Practice on EC service provision include, filling prescription and/ or giving advice on EC to clients by pharmacists and drug vendors.

►**Service providers**: Service providers in this study refer to: health professionals who have attained a bachelor of pharmacy degree (pharmacists) and a diploma in pharmacy (drug vendors). They need to have graduated from a recognised institution and be registered by the Ministry of Health to work as pharmacist and drug vendor in the country ([Online]. http://encyclopedia.thefreedictionary.com/pharmacist).

►**Attitudes**: refers to the study subjects' opinion, out-look and intentions towards EC methods. Respondents' willingness to use, consider EC as useful or recommend EC, are categorised as respondents with a positive attitude. Respondents who have concerns and hence don't recommend or object the use of EC are considered as respondents with a negative attitude ([Online]. http://www.thefreedictionary.com/attitude).

►**Knowledge of service providers**: Knowledge of service providers, in this dissertation refers to the information, understanding and skills possessed by pharmacists and drug vendors on EC method ([Online]. http://en.wikipedia.org/wiki/knowledge). Knowledge on EC includes the types of EC, mode of action, how and when to use EC and their effectiveness, side-effects and contra-indications.

1.9 RESEARCH METHODOLOGY

A quantitative, explorative, descriptive and contextual research design was used to study the knowledge and attitudes and practice of the pharmacists and drug vendors on EC use of women mainly adolescents and young adults in Addis Ababa.

1.9.1 Quantitative research

In quantitative studies, research designs tend to be highly structured and controlled (Polit & Beck 2008:66). Information on service providers' knowledge and their attitudes towards providing EC to women were effectively assessed in previous studies a using similar research design (Blanchard et al 2005:172; Bennett et al 2003:261; Lech & Bonati 2001:87). A quantitative research design is considered to be the most suitable for this study which was to assess variables such as knowledge, attitudes and practice of pharmacists and drug vendors. A structured interview schedule was prepared before the study began and then used to gather and quantify information obtained through interviewing respondents.

1.9.2 Explorative research

Explorative research explores and gathers information on the factors related to a phenomenon and studies it in order to answer the research questions (Polit & Beck 2008:20). This research is conducted in such a way that the topic can be explored and information gathered. Exploration typically begins with a search of published data (Cooper and Schindler 2001:67). The research was explorative in nature as it sought to explore the attitude and practice of pharmacists and drug vendors on EC as there is no published research finding on this topic in Addis Ababa.

1.9.3 Descriptive research design

The purpose of descriptive studies is to observe, describe, and document aspects of a situation as it naturally occurs (Polit & Beck 2008:274). Descriptive research focuses on the present prevailing conditions on how a person or group behaves or functions in the present. This research is descriptive in nature as the data collected has been described and contrasted with findings of different

literatures to enable other readers study the research findings and apply it to benefit the community. This research studied the knowledge, attitude and practice that service providers had on EC, in Addis Ababa. The findings were analysed, interpreted and described to be used by policy makers and health planners to improve the present provision of EC in Addis Ababa.

1.9.4 Contextual design

A phenomenon must be studied in its natural setting because individuals take their meaning from themselves within their context (Newman 1997:331).

This research was conducted in Addis Ababa, which is the capital city of Ethiopia with an estimated population density of 4 million. There are 104 pharmacies and 126 drug shops; pharmacies are required to have at least one pharmacist and drug shops must at least have one drug vendor to be registered by the Drug Administration and Control Authority of Ethiopia (DACA). DACA renew license of each pharmacy and drug shops every year based on the fulfilment of the requirements needed by the authority. Most facilities dispense FP products and users don't necessarily need a prescription from a physician or other medical professional in order to access these products.

1.9.5 Conceptual framework of the research

A conceptual framework represents an attempt of organising phenomena and dealing with abstractions (concepts) that are assembled by virtue of their relevance to a common theme. In a quantitative study, researchers often start with a theory, framework, or conceptual model. On the basis of theory, researchers make predictions about how phenomena will behave in the real world if the theory is true (Polit & Beck 2008:57).

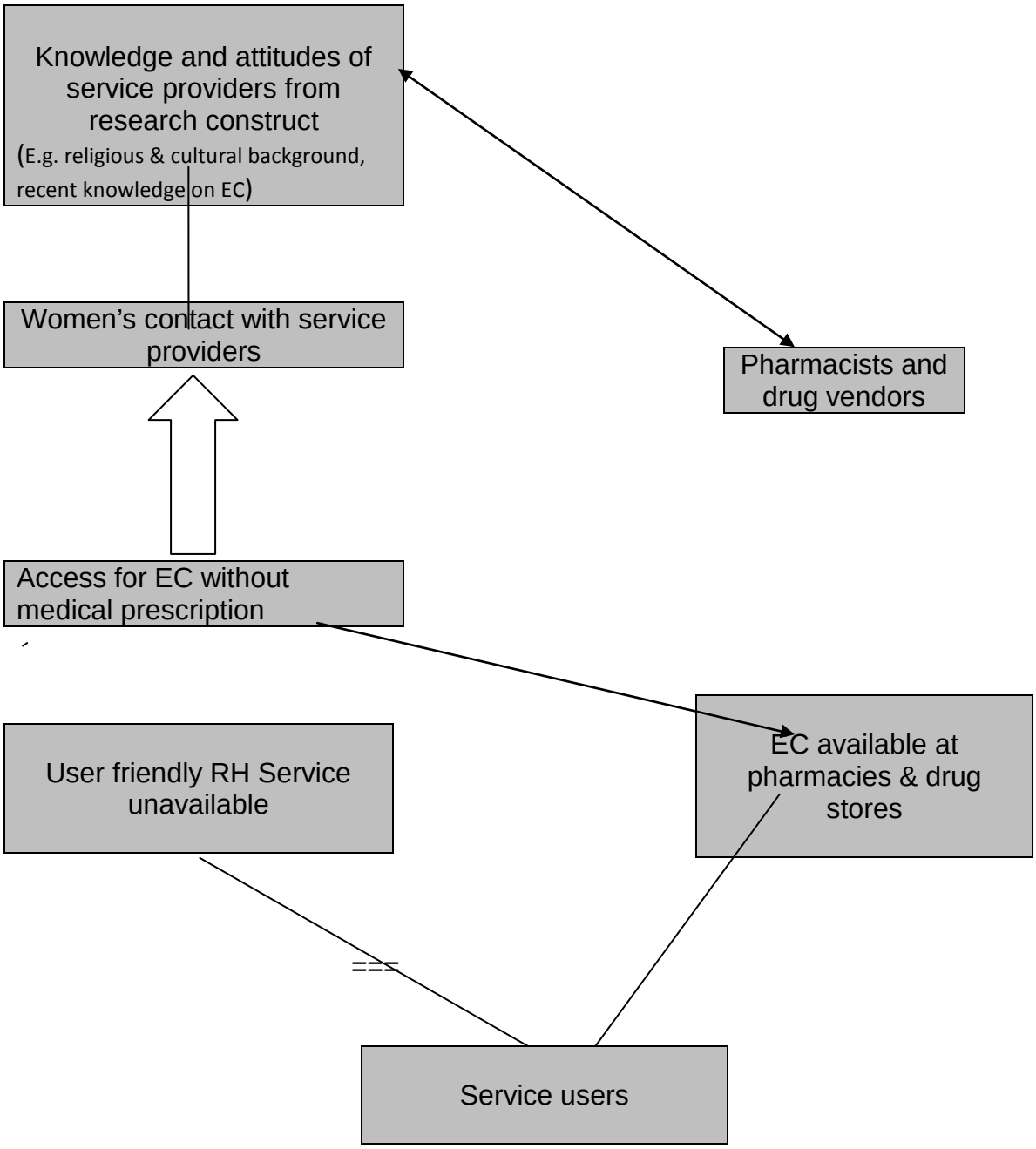

Figure 1.1: Conceptual framework of the research based on the objectives and research questions

The objectives and research questions formed the basis for the conceptual framework of this research. Each objective has been sub-divided to cover all possible factors. See figure 1.1.

The attitudes of the service providers would for instance be influenced by religion, culture, ethics and so forth. Special consideration must be given to adolescents as they account for the highest percentage of unwanted pregnancies and unsafe abortion. Bias to this section of population by service providers and lack of youth-friendly services would limit access to service users. Service providers must maintain a good rapport with clients and gaining their confidence is crucial in ensuring compliance with instructions. To ensure effectiveness of EC, it must be dispensed to clients appropriately and to do so service providers must know EC types and their mode of action, how and when to use EC, symptoms of side-effects and how to manage this side-effects.

This framework has been applied in Chapter 2 to direct the discussion of the variables and their interrelationships. It has also been used for the logical organisation of questions in the interview schedule.

1.9.6 Research population

A research population always comprises the entire aggregate of elements in which a researcher is interested (Polit & Beck 2008:337). In Addis Ababa, 104 pharmacies and 126 drug shops are registered by DACA and provide services for Addis Ababa population in the year 2008. Pharmacists and drug vendors working in these facilities are the study population in this research. Currently DACA has no information on the overall number of pharmacists and drug vendors working in Addis Ababa, but it was assumed that all licensed and functional facilities have at least one pharmacist or drug vendor. The pharmacists included in this study have a degree level qualification in pharmacy from a recognised institution and the drug vendors have a diploma in pharmacy.

Eligibility criteria for inclusion of facilities in this study were providing retail pharmacy services, being located in the study area and provision of FP products to clients.

1.9.7 Sampling method

A probability sampling method has been used in this research. This technique involves random selection in choosing the elements from a population. Random sampling involves a selection process in which each element in the population has an equal, independent chance of being selected, and probability sampling is the more respected approach than non-probability sampling because of that greater confidence can be placed in the representativeness of the sample (Polit & Beck 2008:340). A list of all pharmacies and drug shops in Addis was considered to be the sampling frame from which the sample has been chosen.

A systematic random sampling technique employed to select facilities randomly and service providers working in these facilities were chosen to be interviewed until the required sample size was reached. A total of 230 pharmacies and drug shops were identified as functioning facilities in Addis Ababa, and a minimum of one service provider is assumed to be available per facility. Where there were more service providers in a facility, they were all interviewed until 40 service providers in total were interviewed. Therefore, 40 service providers from 230 pharmacies and drug vendors were interviewed.

1.9.8 Data collection method

A good deal of information can be gathered by questioning people, and this is known as the interview method of data collection (Polit & Beck 2008:369). In order to yield meaningful data that are effective in answering the research questions, a structured interview schedule has been used during an interview of the respondents. Moreover, the interview method is considered being superior

as response rates tend to be high and the interviewer has the chance to clarify matters. The interview schedule consisted of mainly closed questions, but some open-ended questions have been used in order to allow respondents to respond and express their views in their own words. Pre-existing instruments and the literature have been studied and then the research instrument was compiled by the researcher. The interview schedule was pre-tested to identify any questions that may have been difficult to understand, to determine whether the sequencing of the instrument is sensible, and the time needed to administer was realistic.

Information gathered included: demographic characteristics of respondents, perceptions on EC use, knowledge on the available types of EC, mode of action, how and when to use EC, side-effects, and contra-indications. The data is collected by the researcher himself due to expenses associated with employing and training of other interviewer.

The interview schedule and how it was developed, pre-tested and used is discussed in more detail in chapter 3.

1.9.9 Analysis of data

Data collected during the interview using the interview schedule were entered into the computer for analysis mainly using Micro-soft Excel and Epi-info 6.04 DOS version 2001. Before data analysis, some internal consistency checks were made to assess the quality of the data. The analysis part consisted of descriptive statistics (frequency tables and graphs) to summarise and describe the data.

1.10 RELIABILITY AND VALIDITY OF THE RESEARCH

Researchers must measure what they think they are measuring and do so with an instrument that records observations in a consistent manner. The research instrument used in this study was tested for reliability and validity.

1.10.1 Reliability

The reliability of a research instrument refers to the accuracy or precision of an instrument (De Vos et al 2008: 168). It is the relative absence of unsystematic, random measurement error (Stommel & Wills 2004: 209). The research instrument of this study (structured interview schedule) was compiled and adapted by the researcher after the literature was reviewed, as well as consulting experts in the field. The instrument was then pre-tested at pharmacies by interviewing service providers who did not participate in the actual study.

1.10.2 Validity

A research instrument can be considered to be valid when it accurately measures what it is supposed to measure (Wood & Haber 2002:314, Stommel & Wills 2004:222).

The research instrument used to measure the knowledge and perceptions of service providers on EC was properly calibrated by defining each concept and assessed for content validity by experts in the field, the supervisors at the University of South Africa (Unisa) and during the pre-testing of the instrument.

Reliability and validity will be discussed in more detail in chapter 3.

1.11 AN OVERVIEW OF THE ETHICAL CONSIDERATIONS

Permission to collect data was obtained from the Ethics Committee of the Department of Health Studies, University of South Africa (annexure B). Verbal permission was also obtained from the pharmacy and drug shop owners; Respondents were informed about the research if they were interested to participate in this study on the pharmacists' knowledge and attitude on EC methods. Respondents were also told that they could withdraw from the study at

any time of the process and their participation was voluntary, confidential, and risk/benefit ratio considered. An informed consent form was signed before data collection began (Annexure C). Data were collected in a private interview room and respondents were assigned numbers and no identifying information was appended to study materials.

In this research, the ideas, words, or data of others were not implied as the authors own; and the work of others copied in this study are cited or credited. Maintenance of a clear and complete record of data acquired was also practised in this research.

1.12 OUTLINE OF THE DISSERTATION

This research report has been divided into the following chapters:
Chapter 1: Introduction and background information
Chapter 2: Literature review
Chapter 3: Research methodology
Chapter 4: Data analysis and discussion.
Chapter 5: Summary, limitations, conclusions and recommendations

1.13 CONCLUSION

EC is the only contraceptive method that can be used following unprotected sex to prevent pregnancy. It's an important "second chance" to prevent pregnancy if a contraceptive method used has failed, if no contraceptive method used or if there was forced sex. EC has been proven to be safe and effective. Studies indicate that greater access to EC can lead to reduction in unintended pregnancy and abortion. Moreover, studies on contraceptive behaviour of adolescent women who use EC do not abandon ongoing contraception, do not engage in unprotected sex more frequently, do not repeat EC use, and do not decrease use of condom.

Unwanted pregnancy is one of the major RH challenges of women in Ethiopia. The maternal mortality rate is 1.68 per 1,000 women aged 15 to 49 years, and unsafe abortion is estimated to account for about 32% of all maternal deaths in the country (FMOH 2006:1). Improving EC access to women and young adults could play an important role in preventing unplanned and unwanted pregnancies in the country.

As documented from different studies in different countries, women especially young adults and adolescents use pharmacists and drug vendors as first contact of service providers to access FP products, due to lack of access to user-friendly services in the health facilities. However, information on the knowledge, perceptions and practices of these pharmacists and drug vendors on FP methods in general, and on EC service in particular is very limited in Ethiopia. The purpose of this study is to generate information on knowledge and attitude of pharmacists and drug vendors on EC as they are in a position to directly affect access to services. Since EC must be taken within a specific time period to be effective in preventing pregnancy and many women have difficulty accessing their doctors within this short time frame especially over the weekends and after hours and most importantly because RH service provision in many places of developing countries are not user-friendly, women resort to use these service providers (pharmacists and drug vendors) in order to access services.

This study is a descriptive type of research, designed to assess the level of knowledge and perceptions of pharmacists and drug vendors on EC in Addis Ababa, as their knowledge is an important factor in accessing appropriate service for EC. The findings from this study will inform authorities on the existing situation and design an intervention to improve access.

In this chapter, the background of the research, the rationale, objectives and research questions, as well as the conceptual framework of the research were briefly outlined. An overview was also given of the design and methodology used

to collect data and of the reliability and validity of the research instrument discussed. Ethical aspects pertaining to the research was also considered and addressed.

In the next chapter, a literature review relevant to emergency contraception and the practice of service providers have been presented.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Researchers rarely conduct research in an intellectual vacuum; their studies are usually undertaken within the context of an existing knowledge base and researchers almost always do a literature review to familiarise themselves with that knowledge base. There are a range of activities associated with conducting a literature search and preparing a written review, including locating and critiquing studies and drawing conclusions about existing evidence. A written research review should provide readers a well-organised summary of the current state of knowledge on a topic. The review should point out both consistencies and contradictions in the literature and offer possible explanations for inconsistencies (Polit & Beck 2008:105).

The primary purpose of this study was to explore and describe the knowledge, attitude and practice of pharmacists and drug vendors in Addis Ababa on Emergency contraceptives (EC). In the following sections of this review all key concepts and aspects on EC covered. The key concepts reviewed for the topic were; the current state of knowledge on EC such as types of EC available, ECs' effectiveness, when and how EC administered and if there are any contra-indications or side effects for its use.

Further the researcher reviewed the situation of unwanted pregnancy and related morbidity and mortality in the country, the available evidence on the role of EC in preventing unwanted pregnancy and the national strategy in preventing maternal

morbidity and mortality. A recent National study confirmed that up to 78.0% of unwanted pregnancies were attributable to contraceptive non-use or incorrect use and over 45.0% of all abortions occurred in adolescents and the younger age group (Mekbib et al 2007:28). Misinformation and false claims on safety and efficacy of EC and though EC is available, its use requires the ability of recognising pregnancy risk, undermined EC's ability to improve sexual and reproductive health of women (Williamson, Buston & Sweeting 2005:310-15; Aziken, Okonta & Ande 2003:84-7; Bako 1998:151-3; Schiappacasse & Diaz 2003:301-9).

2.2 PURPOSE OF THE LITERATURE REVIEW

A literature review helps to lay the foundation and provides the context for a new study. By doing a thorough review, researchers can determine how best to make a contribution to the existing base of evidence, for example, whether there are gaps or inconsistencies, or whether a replication with a new study was done. Reviewing the literature also can also help to identify relevant conceptual frameworks or appropriate research methods. A literature review also plays a role at the end of the study as researchers try to make sense of their findings (Polit & Beck 2008:106).

The reviewed literature helped to identify the conceptual framework for this study as follows:

2.3 THE CONCEPTUAL FRAMEWORK OF THE RESEARCH

In this section the conceptual framework as compiled by the researcher will be discussed according to the figure provided in Chapter 1.

2.3.1 Service providers' knowledge

In Ethiopia contraceptives are available in pharmacies and drug shops without medical prescription and women usually prefer to get services from these facilities because of inaccessible RH services and pharmacies and drug shops are better situated in terms of access to services (Berhane et al 2005:23-36; Gardner, Hutchings, Fuller & Downing 2001:172-5). However, no study could be found that assessed the knowledge, attitude and practice of these service providers in Addis Ababa (Ethiopian Journal of Health Development 2008. [Online]. http://www.cih.uib.no/journals/EJHD.

Emergency contraception can reduce the risk of pregnancy after unprotected intercourse, and it is provided in three ways: using a progesterone-only contraceptive product; using hormonal contraceptive pills either progesterone-only birth control pills or combined oral contraceptives; or inserting a copper-releasing Itra-uterine Contraceptive Device (IUCD) (Association of Reproductive Health Professionals 2008. ([Online]. http://www.arhp.org/publication-and-resources/clinical-fact-sheets/facts-about-ec; Planned Parenthood 2008. [Online]. http://www.plannedparenthood.org/health-topics/emergency-contraception-morning-after-pill-4363.htm).

The combined oestrogen and progesterone EC reduces the risk of pregnancy by roughly 75% if started within 72 hours of unprotected intercourse. Not every woman at risk of pregnancy actually becomes pregnant. On average only 8 out of 100 women will become pregnant after having unprotected sex during their second or third week of their menstrual cycles. But if they take EC only two out of those 100 will become pregnant. When used within 72 hours of unprotected intercourse, progesterone-only EC was found to reduce the risk of pregnancy by 85%, when taken within 24 hours of unprotected intercourse, it was found to reduce pregnancy up to 95% (Rodrigues, Grou & Joly 2001:531-7; Ethiopian

Society of Obstetric & Gynaecology 2005 ([Online]. http://www.esog.org.et/emergency-contraception-guideline.htm).
Two time factors influence the efficacy of EC: the amount of time elapsed after unprotected intercourse, and the point in a woman's cycle at which she had sex. The earlier EC is taken after unprotected intercourse, the more effective it is (Task Force for Postovulatory Methods of Fertility Regulation 1998:428). EC is not as effective as correct and consistent use of pre-coital contraceptive methods and it does not protect against STIs (Zieman & Herndon 2004:853).

Factors affecting women's access to RH services was assessed by consulting various research findings such as health service utilization pattern and preference of adolescents in Addis Ababa, which has showed a considerable proportion of adolescents reporting that existing health services were inaccessible (Berhane et al 2005:29). Improved knowledge of pharmacists and drug vendors on EC regarding the types of EC available, contra-indications for EC, EC's effectiveness and mode of action in preventing pregnancy would make them able to dispense correctly at the right time, in the right dose and they could provide appropriate information to clients, thus improving effectiveness of EC in preventing unwanted pregnancy. A study was done in the United States of America (USA) to determine EC's administration associated with service provider's knowledge and attitude regarding efficacy, side-effects, and its appropriate use. The result of the study showed *knowledge variable* is associated with EC related practice and *knowledge deficit* is significantly associated with low level of EC administration and counselling (Golden, Seigel, Fisher, Schneider, Quijano, Suss, Bergeson, Seitz & Saunders 2001:287). A cross-sectional study conducted on pharmacists' knowledge and attitudes about EC showed pharmacists' lack of information relates to the low proportion of pharmacists ability to dispense it (Bennett et al 2003:261).

A multi-centre situational analysis on EC provision and utilization in the public centre in South Africa showed that provider knowledge of EC was good.

Although most providers were familiar with EC's mode of action, 12 out of 197 believed it was an abortifacient – (a chemical or drug that causes abortion) (Blanchard et al 2005:172).

Many community pharmacists in Pennsylvania do not have sufficient or accurate information about EC, and their lack of information relates to the low proportion of pharmacists able to dispense it (Bennett et al 2003:261).

2.3.2 Service providers' attitude

Alarmingly, some pharmacists are refusing to fill prescriptions for EC and other birth control pills, when presented with a lawful prescription from a woman's doctor. "They claim that filling the prescription is in conflict with their personal, and moral beliefs. It is outrageous for health care professionals, having accepted the responsibility of helping patients, to put their personal beliefs ahead of the health care needs of patients they are meant to serve" (Planned Parenthood 2006. [Online]. httm://www.covermypills.org. May 03).

It went on to say that, "EC is just that, contraception, just like "the pill". EC is not an abortion. EC helps to prevent pregnancy; medication prescribed specifically for an abortion helps to terminate pregnancy. Opponents of women's reproductive health access continue to disseminate misinformation on this point. According to the standard medical definitions, pregnancy begins when a pre-embryo completes implantation into the lining of the uterus. American College of Obstetricians & Gynecologists endorse this definition. Hormonal methods of contraception, including EC pills, prevent pregnancy by inhibiting ovulation and fertilisation".

A study from South Africa revealed that pharmacists believe that greater access to EC would promote promiscuity, increase the incidence of STIs and decrease the use of barrier methods. A majority approved providing EC's to married and

single women, although smaller proportions approved of advance provision to nulli-parous women or women younger than 18. Respondents who disapproved of the advance provision said they were concerned that having an advance supply would encourage women to use the pills as a regular form of contraception and would reduce the likelihood of their partners using condoms as a barriers method for protection against HIV and STI (Blanchard et al 2005: 172). Cultural, religious background and information on RH issues of service providers affect their attitude on the use of EC. Pharmacists and drug vendors with negative attitudes towards EC due to their religious or cultural influence or due to lack of appropriate information on EC, might refuse to fill prescription or misinform clients on the use of EC. In Burkina Faso, one notable challenge during the introduction of EC was pharmacists' limited knowledge of EC, which at times has resulted in opposition to the method (EC afrique bulletin 2004:1-14). Adolescents often require pharmacy services, but many pharmacists in Indiana feel inadequately trained in adolescent-specific issues. Confidentiality may not be maintained by all members of the health care team, and a prescription may be refused by the receiving pharmacist (Conard, et al 2003:361).

Pharmacists' attitudes and practice towards provision of EC to adolescents in the United States revealed that adolescents often require pharmacy services but many pharmacists felt inadequately trained in adolescent-specific issues (Conard et al 2003:361).

Pharmacists in Johannesburg (South Africa) were generally knowledgeable about EC and perceived EC to be an important option for preventing unintended pregnancy. However some pharmacists reported unwarranted fears about health risks and increase in unprotected sex, and thus greater exposure to HIV. A substantial number of respondents in this research didn't believe EC to be appropriate for women younger than 18 (Blanchard et al 2005:172).

2.3.3 Access to EC

Access to EC depends on various factors including, availability and quality of service provided and this ultimately concerns providers' knowledge, attitude and practice. Pharmacists and drug vendors are better placed in terms of easy access for EC where a user friendly RH service in the health care facilities is a challenge. Direct pharmacists provision of EC in Toronto is an effective pregnancy prevention strategy that is well accepted by the women who access it (Dunn, Brown, Cohen, Cockerill, Wichman, Weir & Pancham 2003:923). A study in the US also showed that obtaining EC directly from a pharmacist reduces the number of unintended pregnancies and is cost saving (Marciante, Gardner, Veenstra, & Sullivan 2001:164).

2.4 CONCLUSION

Existing knowledge on EC types, effectiveness, and mode of action, side-effects and contra-indications have been explored and the latest information on the method have been reviewed in this chapter.

Different sources have indicated that EC use has significant impact in reducing unwanted pregnancies but EC's use in countries like Ethiopia where there is a higher burden of maternal mortality due to unsafe abortion is low and EC's impact in preventing unwanted pregnancy is not realised. The Ethiopian Society of Gynaecologists (ESOG) in its 7th annual conference deliberated on illegal and unsafe abortion in Ethiopia, and strongly recommended that EC promotion and use in the country would reduce the incidence of unwanted pregnancies (Ethiopian Society of Obstetrics and Gynecology – ESOG. 2005. [Online] http://www.esog.org.et/emergency-contraception-guideline.htm).

Health service utilisation documented of women especially adolescents for their RH need is documented to be low. Evidences from different settings support the

pharmacists' role in improving access, as adolescents often require pharmacy services, and in Ethiopia contraceptives and back-up method could be accessed from pharmacists and drug vendors without prescription. However, information on these service providers' knowledge, attitude and practice on EC in Addis Ababa pharmacies and drug shops is very limited.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In Chapter 2, important aspects relevant to the study found in the literature have been discussed.

This chapter outlines the procedures used to obtain data that yield the strongest possible evidence to answer the research questions. In designing a quantitative study researchers have to take into consideration a number of aspects, including various practical, ethical, and theoretical challenges (Polit & Beck 2008:248).

3.2 THE AIM OF THE RESEARCH

The aim of the study was to determine the level of knowledge, attitudes and practice of pharmacists and drug vendors in Addis Ababa on EC, and this could be demonstrated through executing certain tasks on randomly selected service providers working in pharmacies and drug shops in the area.

3.2.1 Research questions

The formulated research questions and objectives which were in fact important factors involved in EC service provision have basically formed the conceptual framework of this research. As it was mentioned in chapter 01, it was decided to execute the following questions in order to determine the level of knowledge, attitude and practice of pharmacists and drug vendors in Addis Ababa:

■ Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge on the types and mode of action of EC?

■ Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have the knowledge when and how EC should be prescribed?

■ Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge on the side-effects and contra-indications of EC?

■ Do pharmacists and drug vendors in Addis Ababa, Ethiopia, give clients who seek EC's the correct advice?

■ What are the attitudes of pharmacists and drug vendors towards providing EC service to women, especially to adolescents girls and young women, in Addis Ababa, Ethiopia?

■ Do pharmacists and drug vendors in Addis Ababa, Ethiopia offer the correct type and dose at the right time?

■ Do pharmacists and drug vendors in Addis Ababa, Ethiopia recommend unnecessary laboratory test before dispensing EC?

3.3 SUMMARY OF THE MODUS OPERANDI FOLLOWED

The following steps were taken in this research project:

- A preparatory literature review was undertaken to assess the state of evidences available on the research problem, and to provide background information necessary to proceed with the required research.
- Appropriate design and sampling method was chosen.
- Key concepts were defined or explained.
- Information on pharmacists and drug vendors practising at the time and the facilities available in Addis Ababa was obtained from the Drug Administration and Control Authority (DACA).
- A data collection instrument was designed by adapting from the National training Material for service providers on EC and from other instruments used for similar studies in the past.

- The data collection instrument was submitted for approval by the supervisors of the dissertation.
- The researcher applied for permission to conduct the research project to the Research and Ethics Committee, of the Department of Health Studies, Unisa.
- Permission was requested to conduct this study in Addis Ababa and was obtained from the Ethical Board of Addis Ababa University, Facility owners
- Pharmacists and drug vendors were approached and asked to take part in this study.
- Service providers willing to be interviewed on the subject were briefed on the purpose of the study and on the role of the interviewee. They were also required to sign a consent form.
- The data collection instrument was pre-tested by interviewing five service providers who were not part of the pilot study.
- A simple random sampling method was used to select facilities in Addis Ababa and service providers practising in those facilities.
- The data were analysed with the help of a computer, Epi 6.04 DOS version 2001 program, and with the guidance of supervisors and a statistician.
- The analysed data were presented in tables and graphs and discussed in Chapter 4 and 5.

3.4 RESEARCH METHODOLOGY

The research design of a study spells out the basic strategies that researchers adopt to develop evidence that is accurate and interpretable (Polit & Beck 2008:203).

The methodological approach employed in this study was a quantitative, explorative, descriptive and contextual design. The appropriateness of the design was assessed in order to determine whether it addresses the research

questions and objectives and produces results that are interpretable and meaningful.

The concepts related to the research design are explained below:

3.4.1 Quantitative research

According to Burns and Grove (1997:27), quantitative research is a formal, objective, systematic process in which numerical data are utilised to obtain information about the world.

The research approach used in this research is quantitative as it employs pre-determined questions to interview service providers to gather and quantify data that are submitted for statistical analysis.

3.4.2 Explorative research design

According to Polit & Beck (2008:20) explorative research explores and information gathers information on factors related to the phenomenon and studies it in order to answer the research questions. This type of research design is usually employed in qualitative research design. However, since structured methods are used in this study and since it seeks to explore the attitude and practice of pharmacists and drug vendors on EC and there has been no published research finding on the topic in the country being studied, this research design could also be considered as explorative in nature.

3.4.3 Descriptive research

The purpose of descriptive studies is to observe, describe, and document aspects of a situation as it naturally occurs (Polit & Beck 2008:274). The researcher of this study describes the level of knowledge and attitudes of EC of

service providers practising their profession therefore the study is descriptive in nature.

3.4.4 Contextual research design

As this research was executed through interviewing a certain group of pharmacists and drug vendors at certain facilities in Addis Ababa at a specific period of time, the research design is contextual in nature.

3.5 RESEARCH POPULATION

A research population always comprises the entire aggregate of elements in which a researcher is interested in (Polit & Beck 2008:337). In Addis Ababa, 104 pharmacies and 126 drug shops are registered by DACA and they are providing services for Addis Ababa population in the year 2007. Pharmacists and drug vendors working in these facilities are the research population.

3.6 SAMPLING METHOD AND SAMPLE

As Polit and Beck (2008:339) described sampling, it's the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made.

3.6.1 The Sample

A sample is a subset of population elements drawn from the target or accessible research population (Polit & Beck 2008:339; Burns & Grove 2008:226). A systematic random sampling is employed in this research. Systematic sampling involves the selection of every *n*th case from a list so that an essentially random sample is drawn. A list of 230 facilities in Addis Ababa were obtained from DACA, pharmacist & drug vendors working in this facilities accessed by randomly

selecting facilities from the list of facilities obtained from DACA. Every 5th facility selected from the list and facilities with more than one service provider were all interviewed until the required sample size reached.

The sample size of this research was 40, which is approximately 17% of the total research population of 230 service providers in Addis Ababa.

3.6.2 The sampling criteria

Researchers must specify criteria that define who should be included in the sample. The criteria that specify population characteristics are referred to as eligibility criteria or inclusion criteria (Polit & Beck 2008:338).

In this study, the eligibility criteria were as follows:

- Pharmacists and drug vendors who have a license to practise in Ethiopia.
- Facilities licensed for the year 2008.
- Facilities providing retail pharmacy service.
- Facilities selling EC products to clients.
- Being located in the study area.

Facility owners' and service providers who were willing to participate in the study were contacted and chosen according to a convenient date and time for an interview. It was explained that study participants would be interviewed on EC service for about 20–30 minutes in a session.

3.7 DATA COLLECTION

Data was collected through interviewing participants using a structured interview schedule.

3.7.1 The Interview

A large amount of information can be gathered by interviewing people using questions. This is known as the interview method of data collection (Polit & Beck 2008:369).

The interview was chosen as the data collection approach because the researcher believed that the data collection process would be much quicker than sending questionnaires per pos to respondents and it would have a better response rate (Wood & Haber 2002:303; Burns & Grove 2001:421-422).

In a structured interview the researcher always operates by making use of a written, prepared research instrument which is known as the interview schedule. In this research an interview schedule was used for questioning respondents face-to-face and for their answers which were written down by the researchers in this schedule.

3.7.2 The research instrument

Pre-existing instruments and the literature have been studied, prior to the research instrument being compiled by the researcher.

3.7.2.1 The interview schedule

According to Polit and Beck (2008:414) the instrument is an interview schedule when the questions are asked orally in either face-to-face or telephone interviews. In this study participants were asked to respond to the same questions in the same order. The instrument had mainly closed questions with a few open-ended questions in order to allow respondents to express their views in their own words.

The interview schedule consisted of the following main aspects:

Section A

This section covered respondents' demographic and previous training qualification information.

Section B

Items used to assess the knowledge of respondents on types, mechanism of action, and side effects on EC were included in this section.

Section C

This section consisted of items where attitudes of respondents towards EC service provision were assessed.

Section D

In this section items which were used to assess the practice of respondents on EC included.

3.7.3 Pre-testing of the interview schedule

As Brink and Wood (1998:259) stated, pre-testing of an instrument involves determining the feasibility of using a given instrument in a formal study. Even when existing instruments are used, the instrument package should be pre-tested to determine its length, clarity, and overall adequacy (Polit & Beck 2008:390).

In this study, five service providers who were not part of the main study were interviewed in order to:

- Determine how much time it takes to administer the entire instrument (whether participants find it burdensome).

- Identify any part of the instrument that may have been difficult to understand or was misinterpreted.
- Determine whether the sequencing of questions are sensible

The following minor changes had to be made to the interview schedule after pre-testing:

- Question B5: Another possible response had to be included, namely: '*other (specify)*' since one of the respondents mentioned a time of administration other than the listed choices.
- Question B.6.1 & B.6.2: Another response, namely: *'I know it's effective, but don't know in %'* had to be included in the interview schedule since the choice included assumed that interviewees who responded by guessing a percentage knew about the effectiveness of EC.
- Question D2-7: The choices provided in the interview schedule were '*always, often, sometimes and never*'. The '*often*" choice was erased as the words '*always*' and '*often*' differentiation didn't make much sense in the real practice.

3.7.4 Coding of the interview schedule

The interview schedule was compiled in such a way that the interviewer could apply a specific pre-determined code for the answer chosen by the interviewee. The interview schedule was coded to facilitate the analysis of the data using Micro-soft Excel and Epi-info 6.04 DOS version and with the help of the statistician and supervisor.

3.8 VALIDITY AND RELIABILITY OF THE RESEARCH

It is important to discuss strategies applied to strengthen a quantitative research design which includes ways to enhance rigor by minimising biases and

controlling extraneous variables. The two main quantitative measures that have been applied to assess the quality of this study are discussed as follows.

The *reliability* of a research instrument concerns the extent to which the instrument yields the same results on repeated trials. The tendency towards consistency found in repeated measurements is referred to as reliability (De Vos et al 2005:168). Polit and Beck (2008:452) described reliability of a quantitative instrument as a major criterion for assessing its quality and adequacy. The less variation an instrument produces in repeated measurements, the higher its reliability. Thus, reliability can be equated with a measure's stability, consistency, or dependability. Reliability also concerns a measure's accuracy. An instrument is reliable to the extent that its measures reflect true scores. The three key aspects of reliability are of interest to the researcher collecting quantitative data, namely stability, internal consistency, and equivalence.

Therefore, in order to enhance the reliability of the instrument used for this study, the following steps were taken by the researcher

- As time could affect the *stability* of a measure, in this study data collection was conducted over a short period of time, and respondents were requested not to inform others about the study.
- To ensure *internal consistency* the researcher made use of items adapted from previously done research that explored service providers' knowledge, practice and attitudes related to EC; consulted different literatures on the subject and pre-tested the instrument.

The second important criterion for evaluating a quantitative instrument is its *validity.* Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck 2008:457). Like reliability, validity has a number of aspects and assessment approaches, such as face validity, content validity, and criterion-related validity and construct validity.

Face validity refers to whether the instrument looks as though it is measuring the appropriate construct. The researcher as well as the supervisor and the co-supervisor were of the opinion that the research instruments used in this research were on face value, valid. This judgment was also based on their expert knowledge of the subject as well as the knowledge that the instrument had been used by other studies.

The instrument was also judged for *content validity* based on the fact that the instrument has the appropriate and relevant samples of items for the construct being measured. The instrument items were partly adapted from the National Training Curriculum on EC, which is developed by a group of experts in the field in order to assess knowledge on EC in the pre and post-tests of service providers, and partly adapted from instruments of similar studies conducted. To assess whether the instrument covered all dimensions of the construct, literature and experts in the field were consulted. No other tests for validity of the research instrument were conducted.

3.9 ETHICAL CONSIDERATION

The researcher must address a range of ethical issues especially when a study involves human as study participants. In observance of ethical concerns of the study, the following aspects were considered:

3.9.1 Permission to collect data

For this study, a letter of permission to collect data was sought and obtained from the Ethics Committee of the Department of Health Studies, University of South Africa (Unisa) and from each pharmacy and drug shop owner, verbal permission was obtained to conduct the study. (See annexure B).

3.9.2 The right to self-determination

The principle of self-determination means that prospective participants have the right to decide voluntarily whether to participate in a study, without risking any penalty or prejudicial treatment (Polit & Beck 2008:172). In this research, respondents (pharmacists and drug vendors) were treated as 'autonomous agents' and the following steps were taken. The respondents were:

- informed of the study's objectives
- requested to participation in the study
- informed of their rights and that they were allowed to withdraw from the study without fear of any penalty
- not coerced or deceived to participate. Their participation was totally voluntary

3.9.3 The right to privacy

Privacy is the freedom an individual has to determine the time extent, and general circumstances under which private information will be shared with or withheld from others (Burns & Grove 2001:162).

In this research the privacy of respondents was protected by interviewing them in a private interview room and where no other person was be present during the interview.

3.9.4 The right to confidentiality and anonymity

Respondents were assigned numbers and no identifying information was appended to research materials, therefore any information respondents provided could not be traced back to them. The researcher assured the respondents and authorities who granted permission to conduct the study that the letters of

permission provided will be removed from the final copies of the dissertation and will be kept in the Department of Health Studies, Unisa, South Africa for perusal.

3.9.5 The right to protection from discomfort and harm

The risk/benefit ratio was explained to respondents as the study has the potential to improve the health and wellbeing of women, and the risks being minimal. Minimal risk is defined as a risk anticipated being no greater than those ordinarily encountered in daily life (Polit & Beck 2008:175).

3.9.6 Informed consent

Informed consent means that respondents have adequate information regarding the research, and have the power of free choice, enabling them to consent to or decline participation voluntarily (Polit & Beck 2008:176).
In this research every respondent was given the opportunity to choose whether to participate in the research or not. The following information was given:

- The purpose and objective of the study.
- The time/duration required during the interview.
- The type of participation required or expected in the study.
- How results will be available/published.
- How confidentiality, anonymity and privacy would be ensured.
- The identity and qualification of the researcher.

3.10 CONCLUSION

Describing service providers' knowledge, attitudes and practice of EC is important in understanding access to such kind of contraceptive method by women. This will contribute in reducing the incidence of unwanted pregnancies in Addis Ababa. Similar studies were conducted using the same design in various countries of different socio-economic status. The researcher used a

similar design to determine the knowledge and attitudes of service providers of EC. The methodological approach of this study is a quantitative, explorative, descriptive design, contextual design and it has been reviewed for its ethical considerations. From all licensed pharmacies and drug shops in Addis Ababa, service providers working in randomly selected facilities were interviewed on the knowledge, attitude and practice of EC using a structured data collection instrument adapted from previous studies and this instrument was checked for its relevance and content validity in consultation with experts in the field.

In Chapter 4 the data analysis and interpretation will be presented.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

The previous chapter outlined the methodology that was used to conduct this research. The quantitative, exploratory, descriptive, contextual research design used in this study as well as the research instrument, namely the interview schedule was discussed.

The main purpose of this chapter is to discuss and interpret the findings of this research. In this chapter the analysed data was obtained from 40 service providers working in pharmacies and drug shops by interviewing them using a structured pre-tested instrument. The response rate was 100% as the respondents were interviewed at their health facilities by the researcher. The data from the interview schedule were presented in four sections.

4.2 RESEARCH QUESTIONS

As discussed in chapter 1 and 3 the aim of this research was to determine the level of knowledge, attitude and practices of pharmacists and drug vendors in Addis Ababa on Emergency Contraceptives.

The following research questions, based on the objectives of the research, were also formulated:

- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge on the types and mode of action of EC?

- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have the knowledge when and how EC should be prescribed?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge on the side-effects and contra-indications of EC?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia, give clients who seek EC's the correct advice?
- What are the attitudes of pharmacists and drug vendors towards providing EC service to women, especially to adolescents girls and young women, in Addis Ababa, Ethiopia?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia offer the correct type and dose at the right time?
- Do pharmacists and drug vendors in Addis Ababa, Ethiopia recommend unnecessary laboratory test before dispensing EC?

4.3 DISCUSSION OF THE FINDINGS OF THE INTERVIEW SCHEDULE

The four sections of the interview schedule were the sections that follow below. The discussion of the findings will also be divided in those sections.

Section A

This section covered respondents' demographic and previous training information.

Section B

Items used to assess the knowledge of respondents on EC included in this section.

Section C

This section consisted of items where attitude of respondents towards EC is assessed.

Section D

In this section items which were used to assess the practice of respondents on EC included.

4.3.1 RESPONDENTS' DEMOGRAPHIC INFORMATION (SECTION A)

In this section respondents' information such as age, gender, religion, occupation, qualification, type of facility and whether they were trained on the study topic or otherwise was collected.

4.3.1.1 Age distribution of respondents (N=40) (Item A.1)

The age distribution of pharmacists and drug vendors in this study ranged from younger than 30 years (55%, n=22) to up to 59 years (2.5%, n=1) of age. Most of respondents were younger than 30 years (55%, n=22) as indicated below in Table 4.1.

Table 4.1 Age distribution of pharmacist and drug vendors (N=40)

Age in years	N	%
< than 30	22	55.0%
30–34	9	22.5%
35–39	3	7.5%
40–44	2	5.0%
45–49	1	2.5%
50–54	2	5.0%
55–59	1	2.5%
Total	**40**	**100%**

4.3.1.2 Gender of respondents (N=40) (Item A.2)

The majority of respondents 72.5% (n=29) were male and 27.5% (n=11) were female.

4.3.1.3 Respondents' religious background (N=40) (Item A.3)

Of the respondents 85.0% (n=34) were Christians and 15.0% (n=6) were Muslims. None belonged to any other religious background.

4.3.1.4 Respondents' years of service (N=40) (Item A.4)

The year of service as pharmacist or drug vendor ranges from less than 2 years (20.0%, n=8) to more than 9 years (25.0%, n=10) as indicated below in Figure 4.1.

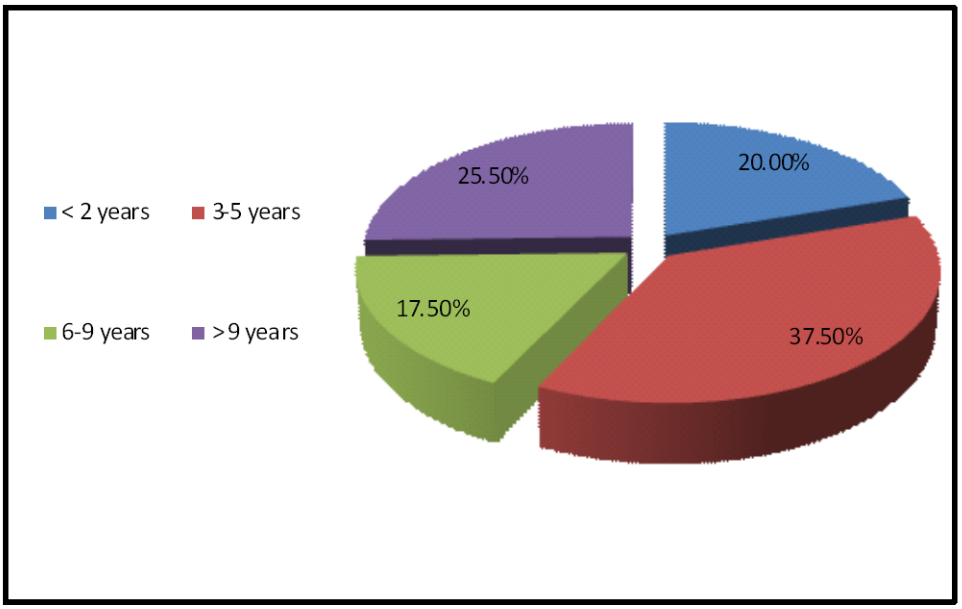

Figure 4.1: Years of service of respondents (N=40)

4.3.1.5 Highest qualification attained by the respondents (N=40) (A.5).

Of the respondents, 47.5% (n=19) were pharmacist i.e. those with pharmacy degree and 52.5% (n=21) were drug vendors who had diplomas in pharmacy qualifications.

4.3.1.6 Training received by respondents in the past 2 years (N=40) (Item A.7)

In the past two years 55.0% (n=22) of the respondents received further training while they were on service and 45.0% (n=18) did not receive any further training.

4.3.1.7 The type of training received by respondents (n=22) (Item A.8)

In an open-ended question the respondents were asked to explain what subject area was the training they have received in the past 2 years. The 22 respondents responded as follows:

- “Anti-retroviral therapy (ART)” (54.5%, n=1
- 2)
- “Trained on EC” (31.8%, n=7)
- “Received training on Reproductive Health (RH)” (4.5%, n=1
- “Other training” (9.1% (n=2).). See Figure 4.2.

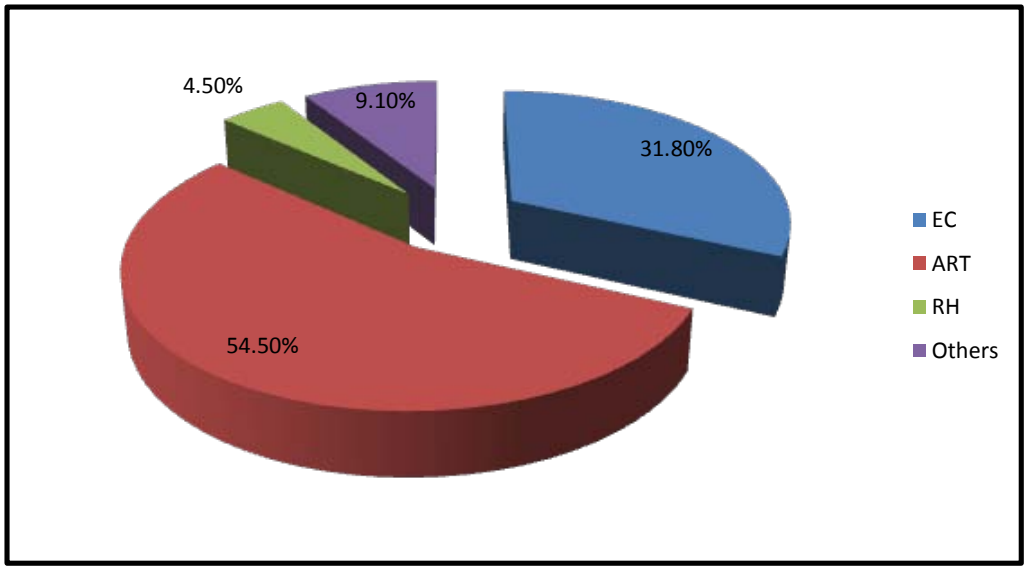

Figure 4.2: Further training received by respondents in the past 2 years (n=22)

4.3.2 KNOWLEDGE OF RESPONDENTS' ON EMERGENCY CONTRACEPTIVES (SECTION B)

In this section data on service providers' knowledge on the types, timing of administration of EC, indication and contra-indication, side effects, effectiveness and mechanism of action of EC were covered.

4.3.2.1 Respondents' knowledge on the purpose of EC (N=40)(B.1)

Majority of the respondents (90%, n=36) have agreed with the statement describing the purpose of EC is to prevent unwanted pregnancy after unprotected intercourse (which was incidently correct), 10% (n=4) of the respondents therefore answered incorrectly. According to Parker (2005:1) EC adds an important option for helping sexually active adolescents avoid unintended pregnancies. EC, which prevents pregnancy after unprotected sexual intercourse, has the potential to significantly reduce the incidence of

unintended pregnancy and the consequent need for abortion (Trussell, Stewart, Guest & Hatcher 1992: 269-73).

4.3.2.2 Respondents' knowledge whether EC is approved by MoH (N=40) (B.2)

From this study, majority of the respondents (90%, n=36) knew EC is approved by the Ministry of Health, 7.5% (n=3) have said that, 'they don't have any information' and one respondent said that 'EC is not approved by the Ministry'. It is important to note that there is an enabling policy and legal environment to expand, promote and ensure the availability and access of family planning as well as EC service in the country (Ethiopian Society of Obstetrics & Gynecology 2005: [Online]. http://www.esog.org.et/emergency-contraception-guideline.htm.

4.3.2.3 Respondents' knowledge of different types of EC (N=40) (B.3)

In an open-ended question the respondents were requested to list the types of EC they knew. The majority of the respondents 70.0% (n=28) knew the progestin only pill (POP) to be used for EC, 15.0% (n=6) knew both types i.e. Combined Oral Contraceptive (COC) pills and POP, and 15.0% (n=6) did not have any information on the types of EC. Unlike the South African study where majority of service providers have adequate knowledge on types of EC, in this study service providers have inadequate knowledge on the use of high dose COC pill for EC and this is similar with the Nigerian study where less than half (35.1%) of respondents were aware that COC or POP can be used as EC (Adekunle et al 2000:284). According to the training curriculum developed by Ethiopian Society of Obstetrics & Gynecology (2005: [Online] http://www.esog.org.et/emergency-contraception-guideline.htm.), there are two types of EC regimen in use: an increased dose of combined oral contraceptives containing ethinyl estradiol & levonorgestrel and high dose progesterone only pills containing levonorgestrel.

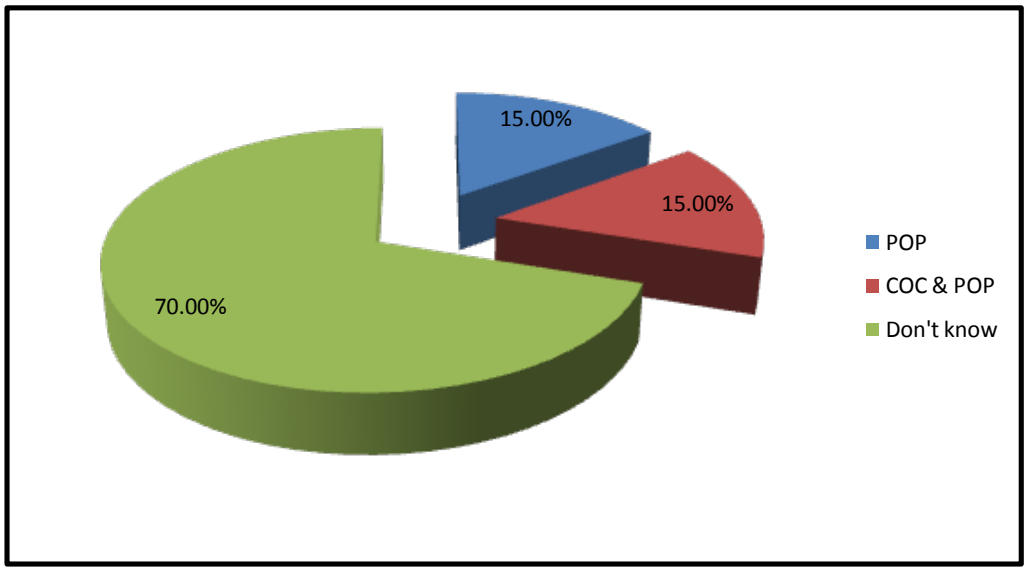

Figure 4.3: Respondents' knowledge on different types of EC (N=40)

4.3.2.4 Respondents knowledge on the timing of administering EC (N=40) (Item B.)

The timing to administer EC after an unprotected sexual event was accurately mentioned to be up to 72 hours by 97.5% (n=39) of respondents. Only 2.5% (n=1) indicated the wrong timing (4 hours) in administering EC. EC are most effective when taken within 72 hours (3 days) after unprotected intercourse (Castle & Coeytaux 2000:6).

4.3.2.5 Respondents' knowledge on the indications of EC (N=40) (B.4)

Circumstances under which EC could be used from the listed three indications namely in case of contraception failure, sexual assault, and contraceptive non-use; 67.5% (n=27) of service providers agreed to all three indications. Twenty percent (n=8) said "yes" to two of the three indications, and 7.5% (n=3) said "yes" to only one of the three indications listed. Among the total respondents 5.0%

(n=2) said they don't know any of the three indications listed. Most of the service providers (92.5%) were of the opinion that sexual assault would be the appropriate indication for EC use.

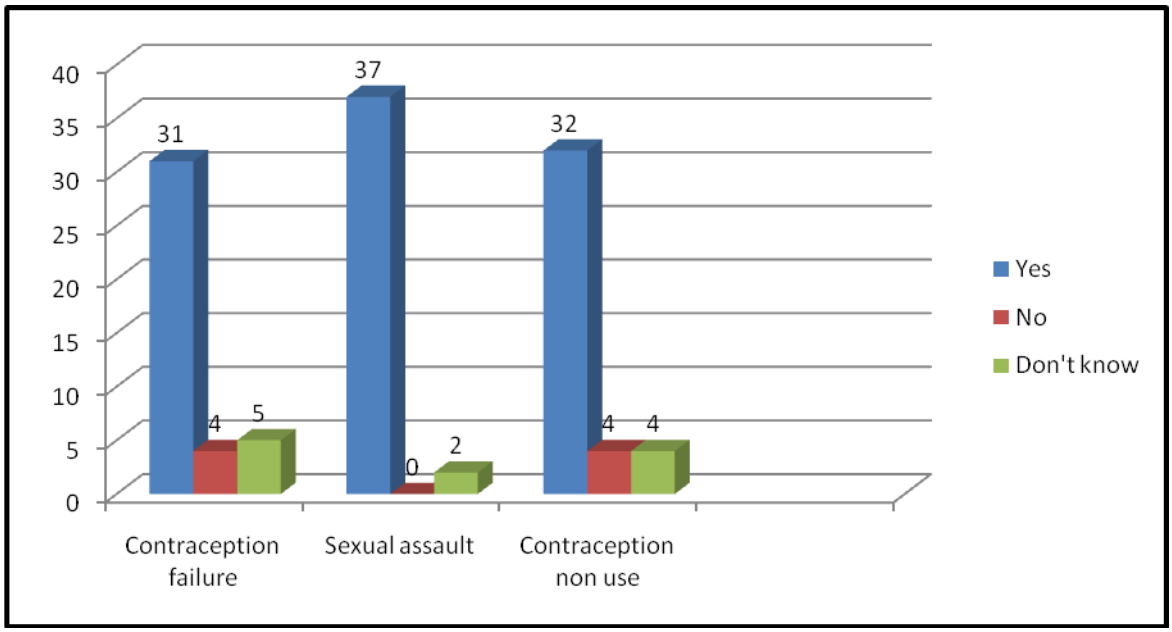

Figure 4.4: Service providers' response to indications of EC (N=40)

The majority of the service providers were aware of the circumstances under which EC use could be beneficial for their clients. According to Castle & Coeytaux (2000:6) EC is intended for emergency situations such as unprotected intercourse, contraceptive failure or sexual assualt (rape).

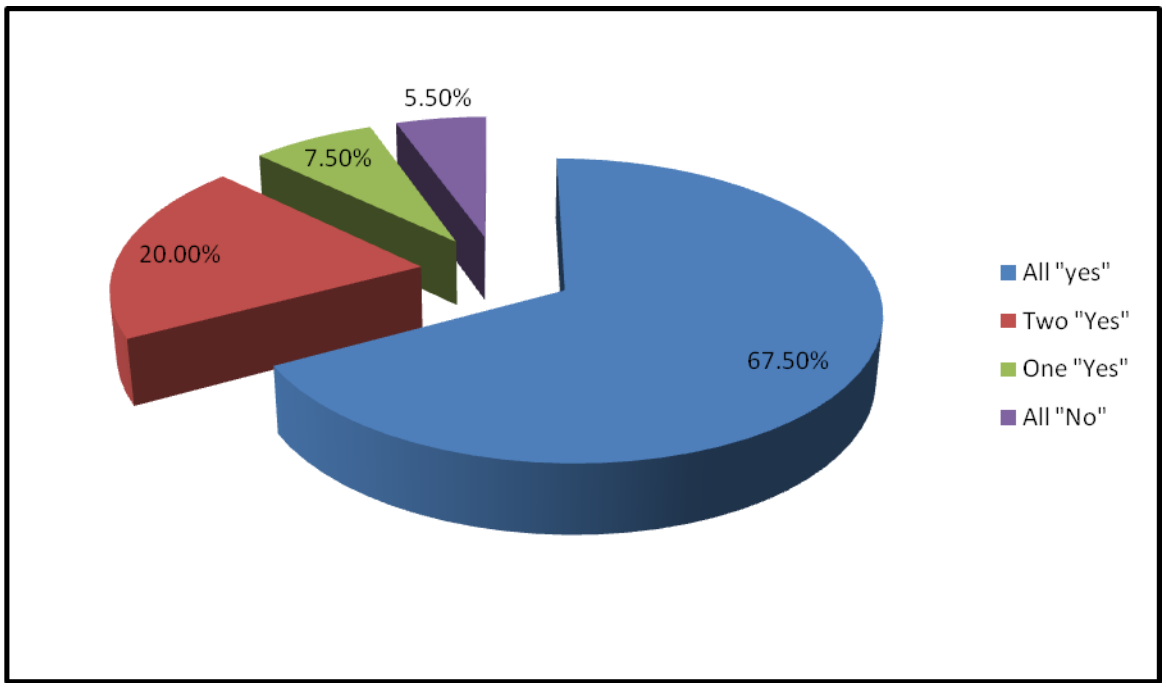

Figure 4.5: Number of indication for EC chosen by respondents (N=40)

4.3.2.6 Response on the effectiveness of EC (N=40) (B.6)

The majority of respondents 87.5% (n=35) said that they do not know how effective the combined oral contraceptive (COC) type of EC was and only 2.5% (n=1) mentioned correctly that COC type is 75% effective. Four (10%) of the respondents did not answer the question.

To the question on the effectiveness of progesterone only pill, 32.5% (n=13) said that they do not know how effective it is, and 65.0% (n=26) mentioned different percentages ranging from 75% to 100% effectiveness and only 2.5% (n=1) correctly mentioned effectiveness around 85%.

Generally, more than half of the service providers believed that POP type is effective, whilst the majority of the service providers did not have information on the effectiveness of the COC type. According to evidence available, the use of EC could reduce the probability of becoming pregnant from unprotected sexual

intercourse by approximately 75% in the case of COC pills, and 85% in the case of POPs (Ethiopian Society of Obstetrics & Gynecology 2005: [Online] . http://www.esog.org.et/emergency-contraception-guideline.htm; Castle & Coeytaux 2000:6). Several studies have also indicated that both regimens are more effective the sooner after unprotected sexual intercourse the EC are taken (Trussell & Raymond 2009:4).

4.3.2.7 Respondents' knowledge of the commonest side-effects of EC (N=40) (B.7)

In the answer to an open-ended question: "What is/are the commonest side-effect(s) of EC?" the respondents answered as follows:
"It causes

- uterine and breast cancer" (17.5%, n=7)
- excessive vaginal bleeding and abdominal pain" (17.5%, n=7),
- gastrointestinal side effects like nausea and vomiting (12.5%, n=5)
- no side effects" (12.5%, n=5),
- nausea, vomiting and irregular vaginal bleeding" (5%, n=2),
- excessive vaginal bleeding and cancer" (2.5%, n=1)
- skin pigmentation and vaginal bleeding" (2.5%, n=1)
- high blood pressure and headache" (5.0%, n=2)
- other" (5.0%, n=2)

Twenty percent (n=8) of the respondents indicated that they did not know of any side-effects of EC.

In this study only 5% of respondents accurately mentioned nausea, vomiting and irregular vaginal bleeding as side effects of EC. Nausea is the most common side effect in EC use, vomiting occurs in 20% of COC users and 5% of POP users, and some women may experience irregular vaginal bleeding or spotting following EC use (Ethiopian Society of Obstetrics & Gynecology 2005: [Online] .

http://www.esog.org.et/emergency-contraception-guideline.htm; Trussell & Raymond 2009:6).

4.3.2.8 Respondents' knowledge of the contra-indications of EC (N=40) (B.8)

In the next open-ended question the respondents were asked to indicate what were the contra-indication/s for EC and the respondents answered as follows:

- Twelve respondents (30%) accurately indicated that "pregnancy and late timing in seeking EC are contraindication for its use".
- 20% (n=8) said they "don't know any about the contraindications."
- Other respondents 50% (n=20) mentioned: STI/HIV, high blood pressure, alcohol, cancer, allergy as contra-indication of EC.

From this study service providers' knowledge on contraindication for EC is low. According to the latest WHO medical eligibility criteria, there are no situations in which the risks of using EC outweigh the benefits. WHO notes specifically that women with previous ectopic pregnancy, cardiovascular disease, migraine, liver disease and women who are breastfeeding may use EC (Trussell & Raymond 2009:6). The use of EC in known or suspected pregnancy is contraindicated not because it is unsafe in this circumstance, but because it will not work (Bixby Center for Global Reproductive Health 2008 [Online]. http://bixbycenter.ucsf.edu/.)

4.3.2.9 Respondents' knowledge of what the intervals between administration of EC be (N=40) (B.9)

Most of the respondents (85%, n=34) accurately mentioned that the time interval between doses of EC pills is 12 hours and only 10% of service providers wrongly mentioned 24 hours and 48 hours. The EC prescription requires taking two doses at a 12 hour interval (Castle & Coeytaux 2000:6-19).

4.3.2.10 Response on EC whether EC could cause an abortion (N=40) (B.10)

Around half of the service providers, 52.5% (n=21) correctly disagreed to the statement: "*EC can cause abortion*", 27.5% (n=11) said they don't know whether EC can cause abortion or not, and 20.0% (n=8) incorrectly agreed to the statement that EC can cause abortion.

Several clinical studies have shown that combined EC pills and the progestin only pills can inhibit or delay ovulation (Ling, Robichaud, Zayid, Wrixon & MacLeod 1979:297-302). EC does not interrupt an established pregnancy defined by medical authorities such as the United States Food and Drug Administration/National Institute of Health and the American College of Obstetricians and Gynaecologists, therefore, ECs are not abortifacient (Trussell & Raymond 2009:6-19).

4.3.2.11 Response on EC effectiveness when used as a regular method of contraception (N=40) (B.11)

More than half of the service providers 62.5% (n=25) correctly indicated that it was not true that EC is effective as a regular method, 22.5% (n=9) incorrectly agreed to the statement, and 15.0% (n=6) said that they were uncertain about it. EC is less effective than the most popular pre-coital methods of contraception, and in general practice, women only turn to EC in emergencies, as a backup to their usual birth control method (Deborah 2006:[Online].http://www.plannedparenthood.org/health-topics/emergency-contraception-morning-after-pill.4363htm.; Ethiopian Society of Obstetrics and Gynecology – ESOG. 2005. [Online]. http://www.esog.org.et/emergency-contraception-guideline.htm.)

4.3.3 ATTITUDES TOWARDS THE USE OF EC (SECTION C)

This section covered information on the service providers' attitudes towards the use of EC by women especially young adults and issues related to the availability of EC service. In this section the respondents had to indicate to what extent they agreed or disagreed to the statements provided in Section C.

4.3.3.1 Respondents' belief whether the provision of EC service for adolescents would encourage promiscuity (N=40) (C.1.1)

Respondents described their level of agreement or disagreement to the statement: '*Providing EC to adolescents will encourage promiscuity*' as follows: 42.5% (n=17) of respondents strongly agreed with the statement, 45.0% (n=18) of respondents agreed, 10.0% (n=4) disagreed and 2.5% (n=1) strongly disagreed with the statement. Therefore, the majority of respondents (87.5%) incorrectly believed that EC service provision will encourage promiscuity among the adolescent girls and young women. Studies of the use of EC among young women show an increased access to EC does not result in inappropriate use of EC, nor an increase in number of sexual partners, nor an increase in frequency of unprotected intercourse, or an increase in the frequency of sexually transmitted diseases (Raine et al 2005:54-62; Raine et al 2000:1-7; Belzer et al 2003:122-3).

4.3.3.2 Respondents' opinions that provision of EC would discourage compliance to other contraceptive methods (N=40) (C.1.2)

More than half of the respondents 62.5% (n=25) agreed and 20% (n=8) strongly agreed with the statement that '*EC provision would discourage compliance to the use of regular methods of contraceptives*' and only 17.5% (n=7) disagreed with the statement. Therefore, in general the majority of the service providers (82.5%) incorrectly believed that EC service provision discourages compliance to

the use of the other contraceptive methods. However, the available evidence indicates that making EC easily available does not cause adolescents to have more unprotected sex or stops them from using hormonal contraceptives or condoms, but it does help adolescents use it sooner after unprotected intercourse thereby increasing the efficacy of the treatment (Hubacher & David 2002:120-8).

4.3.3.3 Respondents' opinions that repeated use of EC pose a health risk (N=40) (C.1.3)

Of the total respondents, 70.0% (n=28) incorrectly indicated that repeat use of EC pill pose a health risk, 22.5% (n=9) said 'don't know' and 7.5% (n=3) of respondents accurately said that the repeated use of EC has no health risks. More than half of the service providers erroneously believed that the repeated use of EC pose a health risk, and this finding is similar with Blanchard et al (2005:172) findings in South Africa. Major medical organisations agree that the repeated use of EC is safe. The World Health Organization (WHO) says that the "repeat use of EC poses no known health risks" and according to the American College of Obstetrics and Gynecology (ACOG) "EC may be used even if the woman has used it before, even within the same menstrual cycle". Additionally, the Association of Reproductive Health Providers (ARHP) state that "there is no contraindication to repeated EC use, and women should not be denied a repeat access to EC if needed"
(Reproductive Health Technologies Project 2006. [Online]. http://www.rhtp.org/contraception/emergency/documents/RepeatUseofEC.pdf).

4.3.3.4 Respondents' opinions that clients should be advised to continue her pregnancy if she encountered failure to prevent the pregnancy (N=40) (C.1.4)

About 52.5% (n=21) of respondents have said 'they would advise women to continue her pregnancy', even if she has used EC; 17.5% (n=7) respondents have said that they wouldn't advise woman to continue her pregnancy; and 30% (n=12) of respondents said 'better to refer the client to a physician'. A meta-analysis of data by Raman-Wilms, Tseng, Wighardt, Einarson and Korena (1995:141-9) show that the overall first trimester exposure to sex hormone particularly oral contraceptives does not induce change in external fetal genitals. If EC fails to prevent pregnancy or a women takes EC when she's already pregnant, there will be no harm to her, the pregnancy, or the fetus (Bixby Center for Global Reproductive Health. 2008 [Online]. http://bixbycenter.ucsf.edu/)

4.3.3.5 Motivation of "yes" or "no" answers to previous question (N=40) (Item C.1.5)

Of those respondents (n=21) who have correctly answered that they 'would advise the woman to continue with the pregnancy' indicated that they would do it because:

- 80.95% (n=17) explained that prior EC use has no problem to the foetus
- 14.3% (n=3) said that there is no better option or alternatives
- 4.7% (n=1) said that 'better than having an abortion'.

Of those respondents (n=19) who have erroneously believed that they 'would not advise the woman to continue with the pregnancy' indicated that they would do so because:

- 36.8% (n=7) explained that EC has a possible side effect on the foetus e.g. malformation
- 63.4% (n=12) said they 'would refer her to a physician'.

4.3.3.6 Provision of EC prior to an episode of unprotected sexual intercourse (N=40) (C.1.6)

Of the respondents 10.0% (n=4) strongly agreed that EC should be provided to clients prior to an episode of unprotected sexual intercourse and 32.5% (n=13) agreed, while 15.0% (n=6) of respondents strongly disagreed and 42.5% (n=17) disagreed that EC should be provided to clients prior to unprotected sexual intercourse. In this study, 57.5% of service providers did not support advance provision of EC for they have a belief that advance provision changes the use of other kinds of contraception or changes sexual behaviour. A Cochrane review of studies showed that, women who had EC in advance were more likely to use EC, and to use it sooner after sex. Having EC on hand did not change use of other kinds of contraception or change sexual behaviour (Polis, Schaffer, Blanchard, Glasier, Harper & Grimes 2007:). See figure 4.6 below:

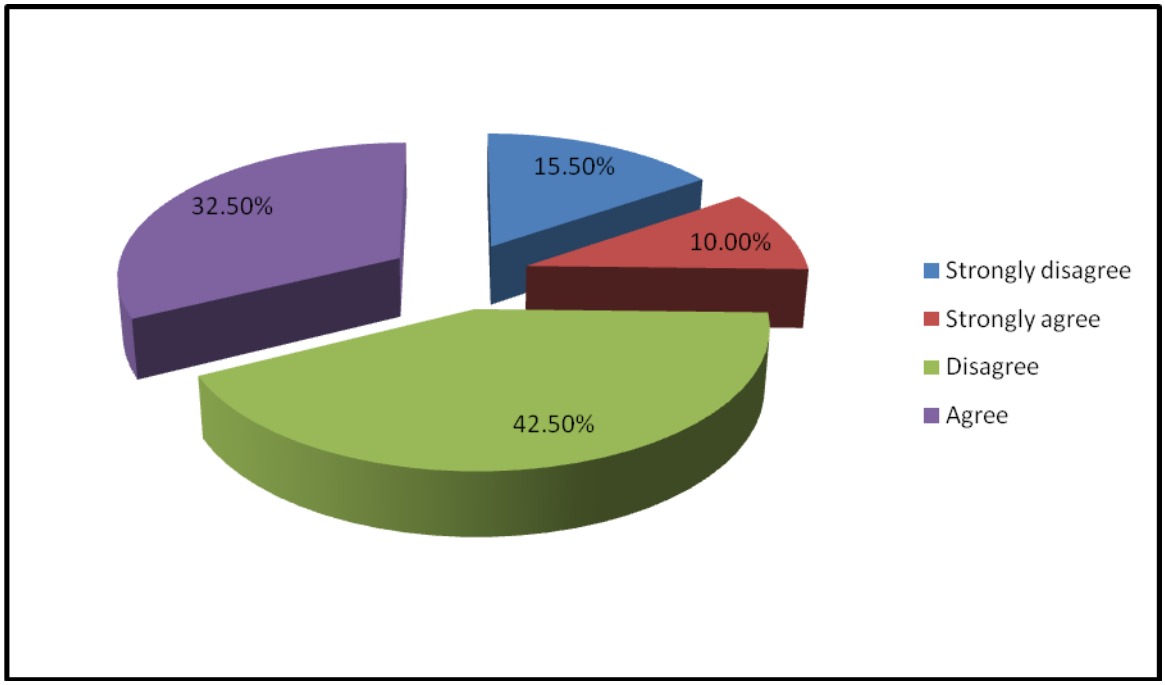

Figure 4.6: Provision of EC prior to an episode of unprotected sexual Intercourse (N=40)

4.3.3.7 Respondents' explanations for their answers in 4.3.3.6 (N=40) (C.1.7)

The respondents explained as follows:

- Respondents 57.5% (n=23) who disagreed for prior provision explained that:
  "It will encourage negligence to the use of other contraceptives"
  "Increase risk taking behaviour (unprotected intercourse)".
  "Misuse of the method [will take place]".
- The respondents who agreed 42.5% (n=17) with the statement accurately explained that:
  "Prior provision will increase access for immediate use of EC".
  "The earlier EC used, the better its effectiveness".
  "because sexual assault is common, it is better that women have [EC] on hand prior so that they use it any time".

4.3.3.8 Respondents opinions whether EC should be available over the counter, without prescription (N=40 (C.1.8)

Those who strongly agreed that EC should be available over the counter were (25%, n=10); respondents that agreed that EC should be available over the counter were (42.5%, n=17); and those who disagreed were 30%, n=12 and strongly disagreed were 2.5%, n=1. Therefore, those who favour EC's availability without prescription are greater than those who did not favour its used. Evidence which suggests that by making EC available over the counter, EC access would increase. The proportion of women obtaining EC from pharmacies has almost doubled, due to easy EC access, with pharmacists becoming the most popular source for obtaining EC without prescription (Contraception and sexual health 2005: [Online]. www.statistics.gov.uk)

4.3.3.9 Respondents opinions whether EC should be dispensed to any clients who have asked for EC, for example age15yrs (N=40) (C.1.9)

Of the respondents, 7.5% (n=3) strongly agreed that EC should be dispensed to any client who've asked for it; 37.5% (n=15) agreed, but 40.0% (n=16) disagreed and 15.0% (n=6) strongly disagreed. Therefore, in this study more than half of service providers (55%) did not agree in dispensing EC to any client who've asked for it. Their explanations are provided in the section below.

4.3.3.10 Respondents' explanations for their disagreement to dispense EC to any client who have asked for it (N=22) (C.1.10)

The respondents (55.0%) who disagreed explained that:

- "Such kind of practice will encourage unsafe sex" (50%, n=11).
- "[It would] encourage earlier sexual debut for adolescents" (13.6%, n=3).
- "[It would] encourage misuse" (18.2%, n=4).
- Other reasons like [it] has side-effect and clients should have a prior medical examination were given.

4.3.4 PRACTICE OF SERVICE PROVIDERS (SECTION D)

This section covered information on the current practice of service providers on EC such as:

- type of EC dispensed,
- advice given and prescription,
- laboratory or prescription needed,
- limitations on repeated use of EC.

4.3.4.1 Whether respondents ever provided EC to clients (N=40) (D.1)

The majority of the respondents, 90.0% (n=36) have provided EC to their clients and 10.0% (n=4) did not ever provide any EC.

4.3.4.2 How often respondents dispensed the following contraceptives for EC (N=36) (D.2)

In this question respondents had to indicate how often they themselves have prescribed the following EC pills:

4.3.4.2.1 Microgynon (N=36) (Item D.2.1)

Of the total respondents, the majority (88.9%, n=32) have never dispensed or prescribed Microgynon for their clients, and only 11.1%, n=4 of respondents have dispensed Microgynon to their clients. Though, Microgynon is widely available in pharmacies and drug shops of Addis Ababa, majority of respondents did not have the experience of whether Microgynon could be used as EC or not.

4.3.4.2.2 Lo-ovral (N=36) (Item D.2.2)

None of the respondents had dispensed Lo-ovral to be used for EC, as it is not available in the country studied.

4.3.4.2.3 Levonergestrel (N=36) (Item D.2.3)

The majority of respondents (86.1%, n=31) dispensed frequently the POP type named ‘Postpill’ and 13.9%, n=5 said that they sometimes dispensed this pill. Therefore, from the respondents experience on dispensing EC, most of them are familiar with the POP type only.

4.3.4.2.4 IUCD (N=36) (Item D.2.4)

The respondents never inserted a IUCD, as it is beyond their scope of practice as pharmacists and drug vendors.

4.3.4.2.5 Other hormonal (N=36) (Item D3)

No other hormonal method that those already mentioned were dispensed by all respondents

4.3.4.3 Respondents' description of how they advised their clients to administer EC (N=36) (Item D.4)

Respondents who have experience in dispensing EC to their clients have explained '*how they advise to administer EC to their client to be taken orally*' as follows:

- 86.1%, n=31 of respondents accurately explained "the POP type pill 'postpill' dispensed to clients to be taken one pill as first dose orally and then to repeat (one) pill orally after 12 hours; if the client accessed service within 72 hours of unprotected sex".
- One respondent (2.8%) accurately explained..."for both POP and COC type of EC - if the client came within 72 hours of unprotected intercourse, the COC type would be dispensed 4 pills as first dose orally then to repeat another 4 pills after 12 hours; and for the POP type (one) pill as first dose and then to repeat (one) pill after 12 hours orally".
- Others incorrectly explained that "2 pills [should be given] immediately for post pill; 02 tab for three days for COC type; if client came before 12 hours 2 pills [should be dispensed] immediately, and if after 12 hours one pill in 12 hours interval' were given by the rest of respondents 11.2%, n=4.

According to the National EC Training Curricula (Ethiopian Society of Obstetrics and Gynecology – ESOG. 2005. [Online]. http://www.esog.org.et/emergency-contraception-guideline.htm.) EC should be dispensed as follows:

"when high dose pills containing 50mcg of ethinyl estradiol and 0.25mg of levonergestrel are available, two pills should be taken as the first dose as soon

as convenient, but not later than 72 hours. When low dose pills containing 30mcg ethinyl estradiol and 0.15mg of levonorgestrel are available, four pills should be taken as the first dose as soon as convenient but not later than 72 hours to be followed by another four pills 12 hours later. When pills containing 0.75mg of levonorgestrel are available, one pill should be taken as the first dose as convenient but not later than 72 hours to be followed by another one pill 12 hours later".

4.3.4.4 How often respondents limited number of times EC is dispensed to a client (N=36) (Item D.5)

Of the respondents (n=36) who indicated that they prescribed EC to their clients, 44.4% (n=16) indicated that they always limited repeated use, 19.4% (n=7) respondents answered that they sometimes limited repeated use of EC, and 36.1% (n=13) said they never did so. Service providers' (63.8%) unnecessarily preferred to limit repeat use of EC. According to the available data, there is no medical danger associated with repeat use of EC
(Reproductive Health Technologies Project 2006. [Online]. http://www.rhtp.org/contraception/emergency/documents/RepeatUseofEC.pdf.)

4.3.4.5 Reasons provided by respondents why they would limit the number of times a client could use EC (N=36) (Item D.6)

The respondents 63.8% (n=23) who indicated that they would like to limit the repeat use of EC explained that:

- "EC has side effects" (69.6%, n=16).
- "EC should not encourage unsafe sex" (8.7%, n=2).
- "Women should use the regular method" (8.7%, n=2).
- "EC may cause cancer" (4.3%, n=1).
- '[It is not prescribed again as] to discourage misuse" (4.3%, n=1).

One (2.5%) respondents did not provide a reason.

4.3.4.6 Respondents requiring laboratory pregnancy test before dispensing EC (n=36) (Item D.7)

The majority of respondents 86.1% (n=31) reasonably have never requested a pregnancy test before dispensing EC to clients, while 8.3% (n=3) of respondents requested one and 5.6% (n=2) said they always need to have pregnancy test done before they dispense an EC.

4.3.4.7 Respondents requiring a prescription before dispensing EC (n=36) (Item D.8)

Oral contraceptives and EC are dispensed to clients without prescription in Ethiopia. Of the service providers 77.8% (n=31) said that they never requested a prescription to dispense EC, and 19.4% (n=7) said that they sometimes requested a prescription for EC before they dispense it.

4.3.4.8 Estimated average number of clients provided with EC service by the respondents (N=36) (Item D.9)

Respondents were asked to estimate the average number of clients per month who requested for EC at their facility. Though information gathered this way do not reveal the exact demand for the service and prone to over or under-reporting of these service providers, it will give a highlight to estimate the current demand on the service.

In an open-ended question respondents were asked to indicate their estimate of how many clients (average number of clients per month) demand or get service on EC in their facility.

From those who have dispensed EC to clients (90%; n=36), 52.7% (n=6) of service providers estimated in an average 20 clients per month, 13.9% (n=5)

estimated to 10 clients per month, 8.3% (n=3) to 30, 25 and 12 clients per month, and 5.6% (n=3) to 100 clients per month were estimated to demand the service. The average estimate per service providers was 22.5 clients per month.

4.4 CONCLUSION

This Chapter described the findings of the research obtained through interviewing service providers using a structured interview schedule.

Interpretation and discussion of findings of the research for each sections of the interview schedule namely demographic and training history, knowledge on EC, attitude towards EC, and current practice on EC of service providers has been presented.

In the next Chapter, findings will be summarised, limitations of the research and conclusion with recommendations will be described.

CHAPTER 5

SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous Chapter, data obtained from the structured interview schedule were analysed, interpreted and presented graphically. The analysis and interpretations covered each section of the study namely: the demographic and training history of respondents; knowledge on EC; attitude on EC; and current practice on EC of service providers working in pharmacies and drug shops in Addis Ababa.

In this chapter, the research findings, limitations of the research and conclusions from the research findings are discussed. Recommendations in order to improve EC access based on the research findings, and also recommendations for future study areas on the topic is described.

5.2 SUMMARY

Unwanted and unplanned pregnancy is one of the major reproductive health problems of women in Ethiopia. Unsafe abortion is estimated to account for about 32% of all maternal deaths in the country. In 2001, MOH in collaboration with local and international organisations launched a pilot project to introduce EC in selected youth centre clinics in the country. This pilot project has demonstrated that EC is popular among young women and there was a need to expand services. There have been research done on young adults and women's

knowledge and attitudes towards EC use, however to date there is no information on service providers' knowledge, attitudes and practice of EC in Ethiopia.

The aim of this research was to determine the level of knowledge of service providers on EC, their attitude towards EC use and the current practice of these service providers in Addis Ababa. The formulated research objectives of this study were considered as important factors involved with regard to service provision of EC, from the service providers' perspectives and this has formed the basis of the conceptual framework of the research. The objectives of the research as discussed in the previous chapter according to the research questions were to:

- determine whether pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge of the types and mode of action of EC.
- determine whether pharmacists and drug vendors in Addis Ababa, Ethiopia, have the knowledge of when and how EC should be prescribed.
- identify whether pharmacists and drug vendors in Addis Ababa, Ethiopia, have adequate knowledge of the side-effects and contra-indications of EC.
- explore whether pharmacists and drug vendors in Addis Ababa, Ethiopia, provide clients the correct advice for those who demand EC service.
- determine the attitudes of pharmacists and drug vendors towards providing EC service to women especially to adolescents, in Addis Ababa, Ethiopia.
- explore the practice of pharmacists and drug vendors on EC (do they dispense EC for their clients, is the dosing schedule accurate, do they request for prescription or recommend unnecessary lab investigation, and so forth).

The methodological approach employed to execute this research was a quantitative, cross sectional, descriptive design, where the appropriateness of

the design assessed in terms of whether it addresses the research questions and objectives and produce interpretable and meaningful results.

The research population comprised of service providers working in 104 pharmacies and 126 drug shops of Addis Ababa. A systematic random sampling was employed in order to select 40 service providers for this study.

The necessary permission to collect data were obtained from concerned institutions and prospective participants of the study. Privacy and confidentiality were also ensured during the process of collecting and utilising data.

Data collection was done by interviewing respondents using a structured interview schedule consisting of closed and open-ended questions. The interview schedule was adapted from pre-existing instruments and it was designed to obtain the following information:

- Biographical data and training history of respondents
- Knowledge of service providers on EC
- Attitude of respondents towards EC service provision
- Practice of service providers on EC

The instrument was pre-tested and the corrected research instrument was then used to collect data. (See Section 3.7.3). The interview schedule was coded and the data analysed by computer using Microsoft Excel and Epi 6.04 Dos version 2001 soft ware.

5.3 CONCLUSIONS

The conclusions based on the research findings are as follows:

5.3.1 Demographic and training history of service providers

The most important findings of the demographical and training history of respondents were as follows:

- The majority of respondents were male (72.5%; n=29), younger than 30 years of age (55.0%; n=22), and Christian (85.0%; n=34). This study has found that only 31.8% of the respondents (pharmacists and drug vendors) were trained on EC and even fewer (4.5%) were trained on RH and FP. Most of the service providers had 3 to 5 years of service and 25.0% of respondents had more than 9 years of service as pharmacist and drug vendor.

5.3.2 Knowledge of service providers on EC

The analysed data on knowledge of EC among service providers revealed the following findings:

- Most of the respondents knew the purpose of EC and its approval by the Ministry of Health. One dedicated product, the progesterone-only EC pill known as 'postpill' was available in most of the pharmacies and drug shops during the study period of this research. Most of the service providers (70.0%; n=28) knew this progesterone-only pill and very few (15.0%; n=6) knew both the progesterone-only and the combined oral contraceptives that could be used as EC.
- Although the commonly used oral contraceptive pills can normally be used for EC, dispensing these pills is not uncommon and the knowledge of the respondents on dose calculation is also poor.
- Many of the service providers have indicated that they knew EC is effective in preventing pregnancy but could not translate the effectiveness of EC into percentages. More than half of the respondents (62.5%; n=25)

correctly said that they did not believe that EC is as effective as regular oral contraceptive methods.

- Almost all of the respondents have said that, it is within the first 72 hours of unprotected intercourse that EC should be administered, and that 12 hours should be the interval time between the following doses of EC ingestion.
- The majority of the service providers indicated that sexual assault 92.5% (n=37), contraception failure 77.5% (n=31), and non-use of contraception 80.0% (n=32)are indications for EC. They also indicated that the use of EC is mainly used in clients with sexual assault.
- The findings revealed that the respondents did not have adequate knowledge of the side-effects and contra-indications of EC. They have incorrectly indicated that EC could cause uterine and breast cancer, skin pigmentation, abdominal pain, and high blood pressure. Only 5% (n=2) of the service providers mentioned that nausea, vomiting and irregular vaginal bleeding as possible side-effects of EC and 30% (n=12) said that pregnancy and late timing in seeking EC are contra-indications for EC. The fact is that almost any woman and adolescent who need EC can use it safely, even if she has the contra-indication of ongoing use of regular oral contraceptives (Guillebaud 1998:416-7).
- Almost half of the service providers (47.5%;n=19) didn't know how EC could prevent pregnancy, and out of these 20% (n=8) of them believed that EC is an abortifacient.

5.3.3 Service providers' attitude towards EC use

The analysed data on service providers' attitude towards EC use revealed the following important points:

- The majority of the respondents believed that EC service provision for women and adolescents will encourage promiscuity and decrease compliance to the use of regular contraceptive methods.

- The respondents seem to have unwarranted concern on the repeated use of EC as they believe it would pose a health risk for these women.
- The findings revealed that should a pregnancy continue despite the use of EC, half of the respondents would advise the client to continue her pregnancy even if she has used EC. From those who have said that they would advise a woman to continue her pregnancy; the majority explained that EC does not pose a problem either to the foetus or the mother, and only a few of the respondents admitted that they would do so because there is no other choice. The respondents who indicated that they would not advise a woman to continue her pregnancy, explained that EC has side-effects to the foetus (e.g. can cause malformation), and that they would also prefer to send the client to a medical doctor for consultation, since they have limited knowledge on the subject.
- More than half of respondents were not in favour of advanced provision of EC to a client and the main reasons being: “prior provision encourages negligence, increase risk taking behaviour, and misuse of method”. Whereas less than half of the respondents were in favour of advanced provision by explaining that: “prior provision increase access for immediate use, and the earlier EC used the better the outcome”.
- Approximately two thirds of respondents 65.0% (n=26) have supported over-the-counter availability of EC, while approximately one third (32.5%; n=13) did not.
- Dispensing EC to any client who has asked for it e.g. young adolescent girls was not supported by half of the respondents since they believed that EC “would encourage unsafe sex; promote earlier sexual debut; increase misuse of method; and has side-effects. And they said that there has to be ‘precaution’ [restricted access] in availing and providing EC service especially to adolescent girls so that misuse of the method will be avoided”.

5.3.4 Service providers practice on EC

Analysed data on the practice of service providers on EC revealed the following findings:

- From the total of service providers interviewed, 90.0% (n=36) provided EC to their clients, and they accurately explained how they would advise their clients on the dosing schedule for the progesterone-only pill.
- Though the regular combined oral contraceptives are widely available without prescription in pharmacies and drug shops of Addis Ababa, the majority of respondents have never dispensed these pills as EC. The progesterone-only type pill is widely used in pharmacies and drug shops of Addis Ababa as EC.
- Of the respondents who practised EC, more than half tended to limit repeated EC use for their unfounded concern: “EC has side-effects when used repeatedly; not to encourage unsafe sex; and some of them believed that in order to enforce the use of regular contraceptive pills, repeated use should be discouraged”.
- In this study the majority of respondents revealed that it was not necessary to obtain a prescription or laboratory test in order to provide EC for their clients.

Therefore:

- Pharmacists and drug vendors in Addis Ababa are providing progesterone-only type EC pill for their clients, and they are knowledgeable on the purpose and indications of EC and dosing schedule of this EC pill.
- Providers were rarely considering the combined oral contraceptives to be used for EC and their knowledge on the dosing schedule for this type of pill is poor.

- Pharmacists and drug vendors in Addis Ababa have inadequate knowledge on the side-effects, contra-indications, and mechanism of actions of EC.
- Pharmacists and drug vendors in Addis Ababa are unsure and are not knowledgeable on the safely and effectiveness of EC. They incorrectly believed that the repeated use of EC will pose a health risk.
- Pharmacists and drug vendors in Addis Ababa have an unwarranted concern in that EC service would encourage adolescent girls and adult women to have unsafe sex and increase promiscuity. They also have a belief that EC could compromise compliance to regular contraceptive method among women (Polis, Schaffer, Blanchard, Glasier, Harper & Grimes 2007).
- Advanced provision of EC to women was apparently associated with risk taking behaviour of women by pharmacists and drug vendors in Addis Ababa.

5.4 LIMITATIONS

This study has several limitations.

- Though a census of all pharmacists and drug vendors in Addis Ababa was conducted, the results could not be applied to the rest of Ethiopia. However, there is no reason to believe that the findings could not be generalised to other pharmacists and drug vendors in the similar areas.
- Information gathered, relied on service providers' self-report and this might have affected the information obtained through over-reporting.
- Another research paradigm such as qualitative research could have elicited different findings.

5.5 RECOMMENDATIONS

The following recommendations can be made based on the findings of the research:

- In order to improve the quality of EC and FP service in Addis Ababa, there is a need to up-date, train and re-train all service providers working in pharmacies and drug shops about types of ECs, mechanism of action, safety and effectiveness, side-effects and contra-indications.
- Service providers need to be informed that the repeated use of EC has no associated serious health risks.
- Most current available data on research findings of other countries on the impact of availing EC service to adult women and young adolescents need to be made accessible and available to foster change in attitude among service providers to favour EC service provision.
- Service providers need to be up-dated on current information and vigorous attempts should be made in educating providers on dosage and the use of the commonly dispensed oral contraceptives as alternative method of EC in addition to the progesterone-only pill.
- Vigorous attempts need to be exerted in order to ensure improved EC access coupled with its safe use especially among adolescent girls and young adult women.
- It should be stressed and clearly communicated to adolescent girls and young adult women and men that EC will not and cannot prevent STI/HIV.

5.5.1 Recommendations for future research

More research is needed to improve access and quality of EC services in Addis Ababa:

- Research is necessary to address the assumption among service providers that availing EC service will increase promiscuity among young

adults and will compromise the use of regular, barrier methods of contraception. It is therefore necessary to do research to understand the underlying reason for the above assumption and the hesitant attitude towards EC service provision among service providers.

- Research should be conducted on the increased risk taking behaviour of women and how it could be addressed.
- The demand and use of EC among adolescent girls and young adult women in Addis Ababa should be studied further.

5.6 CONCLUDING REMARKS

This chapter covered the summary of the study, limitations of the study, conclusions and recommendations for future interventions.

This study is of particular importance as knowledge and attitudes of service providers will have a direct impact on potential users of EC. In view of the fact that, in Ethiopia morbidity and mortality associated with unsafe abortion is a major public health problem, the Ministry of Health in collaboration with its partners, undertook activities to mainstream EC into the public-sector services from 2004 to 2006. Many pharmacies and drug shops in Addis Ababa currently provide the EC pill for their clients, although it seems that the provision of EC in a higher dose of regular combined contraceptive pills has not been greatly practised by these pharmacists and drug vendors. Therefore, most of the service providers mentioned only the progesterone-only type of EC and a few of them knew both types of EC.

The findings of this research revealed a lack of knowledge amongst service providers on the combined oestrogen/progesterone type of EC, side-effects and contra-indications of EC pills in general, and a subjective attitude towards easy access and prior provision especially for adolescent girls and young adult women of the emergency contraceptive method.

They were however knowledgeable on the purpose and prescribing dose schedule of EC. It is therefore of the utmost importance to provide the appropriate information and research findings on EC to the attention of service providers in pharmacies and drug shops of Addis Ababa to effect the impact of EC service on adolescent girls and young adult women lives.

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ANNEXURE A

ANNEXURE A

INTERVIEW SCHEDULE FOR THE STUDY ON PRACTICE OF SERVICE PROVIDERS ON EMERGENCY CONTRACEPTIVE.

Interviewee code no.

Interviewee occupation: _____**Qualification:** _____

Type of facility: Pharmacy ☐ **Drug shop** ☐

Facility Ownership: **Private** ☐

Public ☐

Other (specify) _____ ☐

SECTION A

DEMOGRAPHICAL DATA

A1 What is your age? _____

Less than 30 years	=	1
Between 30 - 34 years	=	2
Between 35 -39 years	=	3
Between 40 - 44 years	=	4
Between 45 - 49 years	=	5
Between 50 - 54 years	=	6
Between 55 - 59 years	=	7
60 years and older	=	8

A1 ☐

A2 What is your gender?

Male	=	1
Female	=	2

A2 ☐

A3 Which religion do you belong to?

Christian	=	1
Muslim	=	2

Other = 3

Don't have any = 4

A3 ☐

A4 How many years of service have you worked as pharmacist / drug vendor?

Less than 2 years = 1

Between 3-5 years = 2

Between 6-8 years = 3

More than 9 years = 4

A4 ☐

A5 What is your highest educational qualification?

Degree = 1

Diploma = 2

Certificate = 3

Other = 4

A5 ☐

A6 Did you receive any further training on health matters during the past 2 years?

Yes = 1

No = 2

A6 ☐

A7 Describe or list the type (subject area) of training that you have received.

SECTION B

KNOWLEDGE OF RESPONDENT ON EMERGENCY CONTRACEPTIVES:

B1 Which of the following statements describe the purpose of EC the best?

- EC are used before unprotected intercourse to avoid unwanted pregnancy = 1

- EC are used after unprotected intercourse to avoid unwanted pregnancy = 2

B1 ☐

B2 Do you know whether EC is approved by MoH?

Yes, it is approved = 1
No, not approved = 2
Don't know = 3

B2 ☐

B3 Would you please list the types of EC pills you know?

_____

_____

B4 Which of the following are the indications for EC use?

Yes = 1
No = 2
I don't know = 3

B4.1 In case of contraception failure

B4.1 ☐

B4.2 In case of sexual assault

B4.2 ☐

B4.3 In case of non use of contraception

B4.3 ☐

B5 EC pills should be administered

- Up to 24 hours after unprotected intercourse = 1
- Up to 48 hours after unprotected intercourse = 2
- Up to 72 hours after unprotected intercourse = 3
- Up to one week after unprotected intercourse = 4
- I don't know = 5

B5 ☐

- Other (Please specify)

_____

B6.1 How effective is EC pills?

Combined oral contraceptives are: _____% effective.

I know it's effective, but don't know in % = 1

I don't know = 2

B6.1 ☐

B6.2 Progestin only contraceptives are: _____% effective.

I know it's effective, but don't know in % = 1

I don't know = 2

B6.2 ☐

B7 What is/are the commonest side-effect(s) of an EC?

B8 What is/are the contra-indication(s) for EC?

B9 What should the interval between doses of EC be?

- 6 hours = 1
- 24 hours = 2
- 12 hours = 3
- 48 hours = 4
- I don't know = 5
- Other = 6

B9 ☐

Please specify "other"_____

B10 In your opinion, can EC cause an abortion?

Yes = 1

No = 2

Uncertain /I don't know: = 3

B10 ☐

B11 Is EC effective when used as a regular method of contraception?

Yes = 1

No = 2

Uncertain/I don't know = 3

B11 ☐

SECTION C

ATTITUDES TOWARDS EC USE

C1.1 How strongly do you agree/disagree that the provision of EC to adolescents would encourage promiscuity?

Strongly agree = 1
Agree = 2
Disagree = 3
Strongly disagree = 4

C1.1 ☐

C1.2 How strongly do you agree/disagree that the provision of EC would discourage compliance to other contraceptive methods?

Strongly agree = 1
Agree = 2
Disagree = 3
Strongly disagree = 4

C1.2 ☐

C1.3 Would repeated use of EC pose a health risk?

Yes = 1
No = 2
I don't know = 3

C1.3 ☐

C1.4 At times EC fail to prevent pregnancy. Do you then advise the client to continue her pregnancy if she encounter such a failure?

Yes = 1
No = 2
Other = 3

C.1.4 ☐

Please specify "other"

_____

C1.5 If your response to C.1.4 is "yes" or "no", would you please explain why?

_____

C1.6 How strongly do you agree/disagree that EC should be prescribed for a client to have on hand prior to an episode of unprotected sexual intercourse?

Strongly agree = 1
Agree = 2
Disagree = 3
Strongly disagree = 4

C1.6 ☐

C1.7 Would you please provide a reason for your response to C.1.6

_____

C1.8 How strongly would you agree/disagree that EC should be available over the counter, without prescription.

Strongly agree = 1
Agree = 2
Disagree = 3
Strongly disagree = 4

C1.8 ☐

C1.9 How strongly do you believe that EC should be dispensed to any clients who have asked for EC, for example age15years.

Strongly agree = 1
Agree = 2
Disagree = 3
Strongly disagree = 4

C1.9 ☐

C1.10 If you do not agree with the statement provided in C1.9, please provide reasons.

_____

SECTION D

PRACTICE OF SERVICE PROVIDERS

D1 Have you provided EC to your clients?

Yes = 1

No = 2

D1 ☐

D2 If you answered "yes" to the question in D1, how often do you dispense the following contraceptives for EC?

Use the following key:

Always = 1

Sometimes = 2

Never = 3

D2.1 Microgynon

D2.1 ☐

D2.2 Lo-ovral

D2.2 ☐

D2.3 Levonorgestrel 0.75mg

D2.3 ☐

D2.4 IUCD

D2.4 ☐

D2.5 Other hormonal (please specify)

D2.5 ☐

D3 Please specify "other hormonal" EC.

_____

D4 Please describe how you advise your clients to administers the EC mentioned in D2. Mention e.g. dosage (no of pills), and time of administration.

_____

_____

D5 How often do you limit the number of times EC is dispensed to a client?

Always = 1

Sometimes = 2

Never = 3

D5 ☐

D6 Please provide the reasons why you would limit the number times you would dispense EC to a client.

D7 Do you require a laboratory pregnancy test before you dispense EC?

Always = 1

Sometimes = 2

Never = 3

D6 ☐

D8 Do you require a prescription before you dispense EC?

Always = 1

Sometimes = 2

Never = 3

D7 ☐

D9 On average for how many clients have you dispensed EC during any of the following periods?

In the past 1 months _____, or

In the past 6 months _____, or

In the past 1 year _____.

THANK YOU FOR YOUR COOPERATION.

ANNEXURE B

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Research & Ethics Committee
(HSREC)
College of Human Sciences

CLEARANCE CERTIFICATE

Date of meeting: **21 August 2008** Project No: **3585-007-8**

Project Title**: Emergency contraception: Practice of service providers**

Researcher**: Dr Dawit**

Supervisor/Promoter**: Mrs MM van der Merwe**

Joint Supervisor/Joint Promoter**: Mrs JE Smith**

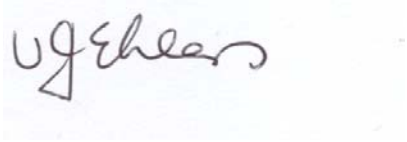
Department: **Health Studies**

Degree: **MPH**

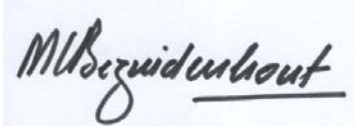
DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

Date: **27 August 2008**



Prof VJ EHLERS
RESEARCH COORDINATOR: DEPARTMENT OF HEALTH STUDIES



Prof MC Bezuidenhout
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE C

ANNEXURE C

INFORMED CONSENT FORM

I understand that I have been asked to participate in a research studying the knowledge and practice of pharmacist and drug vendors in Addis Ababa on emergency contraception (EC). If I agree to participate in the study, I will be interviewed for approximately 20-30 min about my knowledge and experience on EC. No identifying information will be included and there are no known risks associated with this study.

I realize that my participation in this study is entirely voluntary, and I may withdraw from the study at any time I wish.

I have read and understood this consent form, and I agree to participate.

Signature of subject Date

_____ _____

Signature of investigator Date

_____ _____

ANNEXURE D