ORIGINAL ARTICLE

Barriers to accessing emergency contraception by victims of sexual assault in Addis Ababa, Ethiopia

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Abstract

Background: *Medical support including rape management to victims of sexual assault are not well organized and readily available to those who require this service in Addis Ababa.*

Objective: *This survey aimed at examining the potential barriers to accessing emergency contraception (EC) among sexual assault survivors in Addis Ababa, Ethiopia.*

Methods: *This is a quantitative and qualitative study conducted in July of 2006 in Addis Ababa, Ethiopia. The quantitative component was a survey of all hospitals in the city using a standardized questionnaire to evaluate the provision of EC for sexual assault victims. Since sexual assault victims often report to the police, the study included an in-depth interview with police women who were dealing with such cases.*

Results: *Five public hospitals and one model clinic of the Family Guidance Association of Ethiopia (FGAE) give treatment to victims of sexual assault in Addis Ababa. No private hospital provides treatment for such cases as the police do not refer such cases. Though there are five public hospitals, one of them has got a model rape clinic. In the survey, most victims of sexual assault were seen in the FGAE model clinic. This is because the police perceive that the service given by government hospitals is of poor quality. All public hospitals provide EC, a dedicated product called 'Postinor 2' free of charge. The interviewed police women had very little knowledge about EC, though they have worked for a long time with sexual assault victims. According to police women who worked for more than six years, most victims did not come within 3-5 days after the assault. And when victims do come, they often first visit police stations not hospitals. It was also found out that it is the police who determine as to where these victims should get treatment.*

Conclusion: *Public hospitals should improve the quality of service they provide to victims of sexual assault. It is crucial to provide health education on EC to community members and the police working with victims of sexual assault in order to ensure that patients seek care early to prevent unwanted pregnancy and receive timely and appropriate medical certificates to legal bodies. Furthermore, ways should be sought to increase the involvement of private hospitals in the management of victims of sexual assault in Addis Ababa.*

Keywords: *Emergency contraception; legal bodies; sexual assault; gender*

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Introduction

Emergency contraception (EC) refers to contraceptive methods that are used to prevent pregnancy following unprotected sexual intercourse. At present there are many contraceptive modalities utilized for EC. These include pills containing either estrogen with progesterone or progesterone only; and intra uterine contraceptive devices (IUD). The effectiveness of these methods in preventing pregnancy ranges from 55 to 94%, with an average of 74% (1, 2). While not as effective as the ongoing use of any regular method of contraception, EC use substantially reduces the risk of pregnancy after unprotected sexual intercourse, method failure, misused pills or sexual assault. No woman needs EC as desperately as a woman who has survived sexual assault. A woman who has been raped should be able to protect herself from a conception following the assault. EC is not only safe and effective in preventing unwanted pregnancy, but also empowers sexually assaulted women (SAW) with a sense of control and helps them cope with the trauma of sexual assault.

In the USA, about 12% of all women experience sexual assault in their life time and 4.7% of these assaults are complicated by pregnancy (3). There are more than 32,000 pregnancies that occur as a result of sexual assault each year in the USA. If EC had been used, around 28,000 of these pregnancies could be prevented (4). Immediate insertion of an IUD after a sexual assault is not generally recommended since there is the possibility of introducing infection into the uterus.

Many hospitals simply refer sexual assault patients to another hospital, or provide the victim a prescription to obtain EC in a pharmacy. Women who survive rape, are already in crisis and should not have to face the additional burden of tracking down EC after undergoing a clinical exam in an emergency room. In the USA, only 32% of all general hospitals provide EC for victims of sexual abuse (5) and only 21% of all sexual assault victims received EC (6).

There are few studies done on EC or sexual assault in Ethiopia. The limited information available indicates that sexual assault survivors seek medical care very late. A study conducted at two teaching hospitals in Addis Ababa, revealed that 6.5% of all alleged sexually abused women were pregnant at the time of medical care (7). There was also a significant delay in reporting to the police and for medical care, with a mean delay of 15.6 and 18.6 days, respectively.

This survey explored the extent of service provision and potential barriers to accessing EC among victims of sexual assault in health facilities of Addis Ababa. It assessed the number and percentage of public and privately owned hospitals that give EC for sexual assault victims 24 hours a day and seven days a week, on site and free of charge.

It also describes the process sexual assault victims pass through police stations and assesses the knowledge of police men and women about the use of EC by sexual assault victims. The findings generated are expected to be instrumental in formulating policies, regulation and programs related to EC provision for survivors of sexual assault. The results strengthen advocacy work and implementation of evidence based programs regarding EC in general and specifically for SAW.

The objectives of the study were to determine the proportion of hospitals that provide treatment for SAW; determine the proportion of hospitals in Addis Ababa that provide EC after sexual assault; determine the proportion of health facilities in Addis Ababa providing referral, information about EC for victims of sexual assault. The study also identifies potential service delivery barriers in Addis Ababa in accessing EC after sexual assault and assess the knowledge of police men and women in Addis Ababa about EC use after sexual assault.

Subjects and Methods

Both quantitative and qualitative methods were used in a cross sectional survey of all health facilities in Addis Ababa to assess EC provision after sexual assault. An in-depth interview was also conducted with key informants at police stations. The study was conducted in Addis Ababa, the capital city of Ethiopia. Addis Ababa is one of the eleven regional administrations in Ethiopia with an estimated four million residents. There are about 520 high, medium and low level private clinics, 24 hospitals (17 private and 7 public), 23 health centers and 9 government owned clinics. For the in-depth interviews, four police stations were selected randomly using lottery method out of the ten police stations in the city. These were Lideta, Gulele, Kirkos and Kolfe Keranyo sub city police stations.

Data was collected from July 16 to 30, 2006. A pre-tested questionnaire having three parts was used for the health facility surveys. The first and second part studied the identifiers of the facility and the provider, respectively. The last part assesses the service provision of EC for sexual assault victims. The physicians who were identified by the medical directors as the ones managing SAW were interviewed. If no service to SAW was provided by the facility, no further inquiry was made. Before conducting in-depth interviews at the police stations, permission was secured from the chief of the stations after the research objectives were explained, and the ethical approval letter from the Department of Obstetrics and Gynecology, Addis Ababa University was presented. With the assistance of each police station head, the key informant was identified based on the experience of the informant with sexual assault victims presenting to the police station.

All the key informants who were working in the crime investigation unit of each of the four police stations were police women. After informed verbal consent from each key informant, interviews were held privately in their offices. Interviews were recorded by a tape recorder and later noted down. Open ended questions followed by directed questions were asked as a follow up to the responses.

For the quantitative study, all medical directors of health facilities were briefed about the research and approval ascertained. Data entry, cleaning and analysis were done manually. Frequency, percentage and means were used to present the findings. For the qualitative study, the data collected was transcribed according to predetermined themes as well as newly emerging themes on the same day of data collection.

Results

A. Quantitative study

Among the 576 health facilities in Addis Ababa, 6 (1.04%) were found to provide services to SAW. While all the 24 (7 governmental and 17 private) hospitals had various medical emergency services, only five (20.8%) of the public hospitals were managing SAW (Table 1). The single and non-hospital facility providing treatment to SAW was the FGAE sexual violence model clinic.

The five hospitals providing treatment to sexually assaulted women had 24 hours a day and seven days a week service provision; while the FGAE model clinic service was limited to 8 a.m. to 5 p.m. from Monday to Friday and 8:00 a.m. to mid-day on Saturdays. The load of cases were estimated by the key informants to vary between one to five SAW per week at each hospital while at the FGAE clinic, it was stated to be thirty SAW per week.

The five hospitals and the FGAE clinic were providing screening and treatment for STIs; and always provide counseling and provide EC to SAW. The public hospitals always provided a dedicated EC (i.e. '*Postinor 2*' containing two 0.75 mg *levonorgestrel*), on site and free of charge. On the other hand, FGAE clinic provided prescriptions that enabled the SAW to buy the EC at the pharmacy of the clinic for five Birr (0.5 USD). If the SAW could not afford the prescription, the EC was provided free of charge. In all the public hospitals, general practitioners, obstetrics and gynecologic residents and senior physicians provided care to SAW.

Table 1: Health facilities providing services to sexually assaulted women in Addis Ababa, Ethiopia, 2006

Type of health facility	Health facilities in Addis Ababa*	Facilities providing Services to SAW N (%)
Government hospitals	7	5 (%)
Private hospitals	17	0 (0.0 %)
Private, NGO clinics (lower, medium, higher)	520	1 (0.2%)
Government Health centers	23	0 (0.0 %)
Government clinics	9	0 (0.0 %)
Total	576	6 (1.04%)

**Source: Addis Ababa Bureau of health*

At FGAE clinic, the service was provided by a general practitioner who was specifically assigned for this purpose. On the other hand, the service provided at the Gandhi Memorial Hospital (GMH) model rape clinic is by a nurse but the treatment is also given by physicians and residents working at the hospital. Almost all SAW presented to the health facilities with a police letter for certification of amount of injury sustained. Any SAW presenting to these facilities without a police letter could get the service but would not be able to get the certificate until she produced such a letter.

The two government-hospitals, Ras Desta and Menelik II that were not managing SAW had no obstetric and gynecology service at all. The seventeen private hospitals were well equipped to manage SAW and were providing various medical emergency treatments but were not caring for SAW. In case a victim of sexual assault visited any one of these hospitals, she would be given referral to another government hospital.

B. In-depth interview

All key informants were police women who had long experience in handling SAW at the police stations. They had worked in sexual assault related crimes for six to nine years at different police stations in Addis Ababa. They are engaged in handling adult SAW only; as there were different units for sexually assaulted children. The first issue raised during the in-depth interviews was what happens when a case of sexual assault was reported to the police station. In all the four stations, SAW presenting at working hours would be interviewed by a police woman who was specifically assigned for such crimes. But, those SAW presenting at night or during weekends were interviewed by any of the duty police officers who could be a male or a female.

Victims come at any time of the day and some come soon after the assault, but if they come late they tend to come on working days. All the four police women mentioned that most SAW come very late after the incident seeking help. They observed that victims usually seek help when they are advised by friends or relatives to do so or when they get pregnant. Otherwise, it is rare that victims report within five days after the assault. The number of SAW seen by the four police stations varies from one to three cases per week. The difference was explained to be largely due to the location of the police station, the key informants reasoned out.

SAW seek help first by going to police stations rather than to health facilities. One police woman commented "*I don't remember in my nine years of service, a sexually assault victim who came to a police station after receiving treatment at hospital.*" According to the informants, the reason for reporting first at the police stations was that hospitals would not treat SAW unless they produce a police letter requesting for treatment and certification of evidence of assault. All the police informants suggested that SAW first be seen by the medical personnel at the hospitals as the victims could get timely treatment and collection of evidences. When a woman with sexual assault reports to a police station, she will be asked to describe the incident to the duty officer. She is asked when, where and how the assault occurred; the assailant's identity and about any witnesses that were present during the assault. One of the police woman mentioned that if the sexual assault has occurred just before the victim reports, the police woman visits the site of the assault for more evidences. The police women also inspect the victim's clothing and body for any sign indicating physical abuse like the presence of blood and wounds.

After all the required information is documented, the SAW will be given a referral paper to one of the health service facilities in the city. The average duration that this procedure takes was estimated by the police women to range from 20 to 60 minutes. But it could be longer if the police investigator has to visit the site where sexual assault has taken place to collect more evidence.

When key informants were asked as to which health service facility they refer cases, their answers were all similar. If the woman comes during the working days, she will be sent to the FGAE clinic, but, if she comes at night or during the weekends, she will be referred to one of the five government hospitals as the FGAE model clinic does not provide service at these times.

No police woman interviewed has ever referred cases to private hospitals, even when patients could afford the payment at these facilities. All police women prefer the FGAE clinic better than other hospitals. The reasons for preferring to the FGAE clinic were that it provides cards to SAW free of charge; SAW are seen right away and all investigations with their results are ready in one day; the physician's report of the case is ready in about three days; and the medical report is detailed and of good quality.

Hence, the police can present the medical reports with all the other evidences to the court within a short period of time.

In government hospitals, the informants explained that the SAW has to pay up to 10 Birr for the card; investigations take many days and, hence, the SAW and the attending police women have to make visits to these health facilities to finalize the investigations. One police woman commented that the final report of the physician may not be as detailed as it had to be. But the most important problem the police face at government hospitals is the time it takes to get the medical evidence and submit it to the court.

According to one of the police woman, "*The process may take 2-3 months to get a certificate from a government hospital.*"
As a result, the process of police investigation is delayed considerably and this leads to prolonged detention of the suspected perpetrator.

One key informant commented that GMH is improving these days and the report could be available in one week time. All police women have never referred SAW to private medical institutions. Various reasons were given for this. According to one key informant, "*Reports by physicians from private hospitals are not seriously taken by the district attorney compared to the ones that come from government hospitals*." Another one suggested by saying, "*Private hospitals may give false results especially for rich people who some time assault their house maids.*"

Three of the four police women were unaware of EC at all except one who stated that she had once seen a SAW having certain pills though she does not know much about these pills. When the police women were given explanations about the EC, they were excited and wanted to know more. After the information about EC provided by the interviewer, they suggested that the EC be widely available not only for SAW, but also to other women who may need it. They emphasized that it should be available easily in the nearby health facilities, especially at the health centers. One key informant also suggested that the EC be available at the police stations so that victims could get the drug right away. The police women also commented that police women who are usually dealing with sexual assault victims should be given health education about EC. From the discussion, all the police women were eager to help SAW to prevent unwanted pregnancy as a result of sexual assault.

They said that if police women had good knowledge about EC, they can hasten referral to hospitals so that SAW get treatment on time.

Discussion

Compared to other parts of Ethiopia, Addis Ababa has a relatively higher number of health facilities and qualified health personnel. The city has more than 500 health service facilities including 24 hospitals with emergency rooms. These relatively higher numbers of facilities and personnel than rural areas may indicate relatively lesser barriers in accessing EC services. Nevertheless, this study has identified a number of barriers faced by SAW in accessing EC services in Addis Ababa.

One of the important barriers identified is the late presentation of SAW to either health facilities or the police stations. This delay was also noted in health facilities by a previous study in Addis Ababa that documented a mean delay of 18.6 days after the assault (7). In this study, the consequence of such delays was demonstrated by the rate of 6.5% of pregnancy among the SAW at presentation for medical care following the assault. Among the reasons for not seeking care at health facilities by SAW is low level of knowledge about EC in the society, which was identified as one of the serious programmatic problem (5). These women do not seek help till confronted by subsequent pregnancies at which time they may turn to unsafe abortion or carry on with the unplanned and unwanted pregnancies.

Another barrier for accessing services by victims of sexual assault is when staffs of health facilities send away victims to bring papers from the police before providing them with any of the services. Although the police believe that victims need to be examined first in hospitals, this practice is one of the deterring factors for getting timely medical help by SAM. There is no regulation that says victims have to be seen first by police; and then by the health facilities. It is obvious that if victims are asked to go to a police station first and report the sexual assault, and then come back to the health facility, this would inevitably delay not only the provision of EC but also the timely recording of the important evidence for the police.

SAW presenting without police letter to health facilities should be provided with all the necessary medical care and advised to report to the police immediately. The other barrier to accessing EC in the city is the presence of only few hospitals that provide treatment for SAW. There are only six health facilities that were providing services to SAW in Addis Ababa. However, there are seventeen private hospitals; which are well equipped and staffed by either a gynecologist or general practitioner and serving for twenty four hours a day and seven days a week, but unfortunately not providing services to SAW. FGAE model clinic takes the lion's share in providing care to SAW when compared to other health facilities. However the model rape clinic at GMH has not seen more than 150 patients in a year (most of whom were children), and this underutilization of services has to be taken up with the police to improve the situation.

From the in-depth interview it was possible to see that the police have negative attitudes towards the treatment given in government hospitals.In Addis Ababa, the government hospitals that could provide the necessary services are underutilized. According to the police, the main reason for this is the long time that hospitals take to give the medical certificate to the courts. Some hospitals would take up to three months to report while the model clinic at FGAE would do so in about three days. As a result, they frequently refer cases to the FGAE model clinic and to government hospitals only if cases come on weekends or at night.

The police also have a negative attitude towards the treatment given in the private hospitals and so they don't refer cases to the private clinics. The reasons why police women are not sending SAW to the private hospitals are not justified and supported by evidence.

To improve the situation, discussion should be initiated among health officials, private sector, the police and the judiciary about the role of these health institutions in the provision of care to such patients.

The other potential barrier is the fact that the police women who are dealing daily with SAW had very little knowledge about EC. In a study in Nairobi, Kenya, among clients of family planning users, EC was scarcely known or used (8).

In order to improve the care of SAW and increase their EC utilization, health education should be given using mass media and other outlets to inform the general population.

Government and private hospitals/clinics should have clear protocols on how to handle SAW. Victims should also be encouraged to go to hospitals first to seek help.

Health education should also be given to police women who are dealing with SAW about EC. Government and private health facilities should work on improving the quality of service given to victims of sexual assault, including the provision of EC. Standardizing formats during the registration of data about SAW should be considered by all sectors.

An efficient system has to be established where medical help and certification of findings are given to the police as soon as possible. Organizing a training program for health care providers on the management of sexual assault victims is an urgent task. Making EC widely available in health facilities so that it can be accessed at any time by SAW is an essential step that has to be taken by all stakeholders. Further research is recommended to assess the quality of services given by health facilities to SAW in Addis Ababa.

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ORIGIONAL ARTCILE

Emergency contraception provision for sexually assaulted women at health facilities in Addis Ababa, Ethiopia

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Abstract

Background: *There is a real challenge of emergency contraception (EC) provision at health facilities in Addis Ababa, Ethiopia.*
Objective: *The aim of the study was to assess EC provision for sexually assaulted women (SAW) during medical evaluation time.*
Methods: *The study employed both qualitative and quantitative methods of data collection. It focused on five health facilities where SAW in Addis Ababa and its environs were managed in 2005. A structured questionnaire was used to review the medical records of SAW attending these facilities, and who faced the risk of unwanted pregnancy. In-depth interviews with health care providers and selected SAW were also conducted.*
Results: *Out of the 384 cases included in the study, 28.4% were provided with EC. Fifty-five percent of the cases were evaluated within the first five days of the incident. Thirteen percent had already conceived by the time they were evaluated. All the five health facilities considered sexual assault as an emergency. Among the reasons for failure to report early were: threat from the assailant, financial constraints, abduction, and the lack of services in the nearby health facility. Some of the conditions that prompted rape survivors to report early to health facilities were presence of visible trauma, excessive bleeding from genitalia and fear of acquiring HIV.*
Conclusions: *In order to improve EC provision, the necessary efforts have to be made by key stakeholders. Moreover, to provide appropriate medical care including counseling for SAW, regular training has to be organized for service providers.*

Keywords: *sexual assault, risk of pregnancy, emergency contraception.*

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Introduction

Sexual assault is the fastest growing but the most under-reported violent crime in the world. It comprises 6% of all global crimes (1). Although its actual incidence is unknown, it is estimated that sexual violence increased by ten- fold between 1960 and 1994 (2, 3). In the USA, 44% of women are victims of attempted or completed rape 50% of these victims were attacked more than once (3). Generally, only 10% of assaults are reported to police, and only 18% seek medical care (4, 5).

For women aged 21 and under, the risk of sexual assault is estimated at 1 in 5, while women of college age face a 1 in 4 risk, and the lifetime risk stands at 1 in 3 (4). Seven percent of junior high school students and 12% of high school girls are sexually abused (5). In Ethiopian high schools, the prevalence of completed and attempted rape is 5% and 10% respectively (6). Sexual assault is not simply a sexual act but a violent act inflicting physical and psychological injuries, with approximately 1% ending in homicide (7). Non-genital injuries occur in 20-50% of the victims. Grossly visible genital injuries are present in 10 to 30% of victims, and most authors recommend colposcopy, which increases the yield to more than 90% (8, 9).

Worldwide, 50 million pregnancies are terminated each year. The unplanned pregnancy rate is much higher, constituting up to 90% in teenagers (10). The contribution of sexual assault to unplanned and unwanted pregnancy is substantial. Eighteen percent of unwanted pregnancies in Ethiopia are the result of rape (11). In Ethiopia, pregnancy occurred in 17% of rape survivors (6).

Among rape cases reported to hospitals in Addis Ababa, vaginal penetration and attempts at penetration constitute the major forms of assault, accounting for 97.4% of all cases. More than three-quarters of the rape survivors were aged between 11 and 25 years. Almost all, at 99%, had no previous sexual experience. The mean reporting time at hospitals was 18.4 days after the assault. Two-thirds of the survivors reported after 48 hours, and delays of more than one month were not uncommon, seen among 14.4% of the victims (12).

Medical personnel are required to provide certain services to rape survivors when they present for medical care. Alongside the prevention of pregnancy, these services include the collection of forensic evidence, and the management of injuries, sexually transmitted infections (STIs) and psychological trauma. For fertile women, the risk of pregnancy after a single unprotected act of intercourse is 1-8% (13, 14). Emergency contraception (EC) is a method used to prevent pregnancy after unprotected sexual intercourse, but before pregnancy is established (15, 16).

The objective of this study was to address the effectiveness of EC services offered to sexually assaulted women (SAW)at the time of their seeking medical care in five health facilities in Addis Ababa. The study is intended to provide information relevant to essential programmatic issues, such as whether sexually assaulted women present themselves early to become eligible for EC use whether EC pills are available at the time of seeking medical care; reasons for delays; and to what degree the health services are prepared for the challenges of EC provision.

Materials and Methods

The study employed both quantitative and qualitative methods. A structured questionnaire was used to review all available medical records at five health institutions providing medical care to SAW in Addis Ababa and its vicinity. In-depth interviews of health care providers and SAW were used to assess various issues and processes in EC provision, and its utilization after sexual assault.

The study was undertaken in Addis Ababa, Ethiopia, which has a population of approximately 3.5 million. There are over 500 health facilities in the city, which include 30 hospitals, of which 17 are private and 13 public. SAW in Addis Ababa and its vicinity can receive medical care in five of these hospitals. Three are teaching hospitals: Tikur Anbessa (TAH), Gandhi Memorial (GMH), and St. Paul's (SPH); one is a non-teaching hospital, Yekatit 12, and another the Family Guidance Association of Ethiopia (FGAE) model clinic. All survivors of sexual assault that presented to these facilities from January 1, 2005 to December 31, 2005 were considered as eligible for the study.

The inclusion criterion for the study was a SAW facing a risk of pregnancy. The exclusion criteria included the non-reproductive age group, and women who were pregnant at the time of the assault.

In-depth interviews were conducted with health providers involved in the care of rape survivors In order to gain insight to the perspective of the SAW, in-depth interviews with 25 SAW who presented themselves at the five institutions were also conducted. For the quantitative study, data entry and analysis was performed using EPI INFO version 2002; while the interviews were analyzed as case studies.

The structured questionnaire was anonymous and confidential, and was completed by medical staff of the respective health facilities. SAW for interview were all briefed about the study and verbal consent was taken before proceeding with the interview.

Ethical clearance was sought from the Research and Publication Committee of the Obstetrics and Gynecology Department, Faculty of Medicine, Addis Ababa University. The medical directors and heads of out-patient departments of the health facilities were informed and permission obtained.

Results

There were a total of 791 SAW seen at the five health facilities, and 384 (48.5%) were at risk of pregnancy at the time of the sexual assault. Table 1 describes the socio-demographic characteristics of the respondents. Ninety percent of the women were from Addis Ababa. The mean age was 17 years and the median age 16 years. Fifty-five percent of the cases either had no formal education or elementary education and 82% were single.

Over 28% (n=109) of the SAW were provided with EC. The most common EC method provided was Postinor-2 (n=67, 61.5%) while combined pills accounted for 19.3% (n=21) of the methods. An intrauterine contraceptive device (IUD) was provided to two women (Table 2).

Table 1: Socio-demographic characteristics of sexual assaulted women at risk of pregnancy seen in Addis Ababa health facilities, 2005 (n=384).

Category	Frequency	Percentage
Address		
Addis Ababa	348	90.6
Out of Addis Ababa	33	8.6
Unknown	3	0.8
Age		
<15 years	76	19.8%
15-19 years	238	62%
20-24 years	50	13%
25-29 years	12	3.1%
30-34 years	6	1.6%
35-39 years	1	0.3%
40-44 years	1	0.3%
Marital Status		
Single	314	81.8
Married	12	3.1
Divorced	15	3.9
Widow	4	1.0
Others	39	10.2
Education		
No formal education	71	18.5
Elementary	149	38.8
High school	36	9.4
College / University	3	0.8
Unknown	125	32.6

Table 2: Emergency Contraception, by type, provided to SAW at risk of pregnancy seen at health facilities in 2005, Addis Ababa, Ethiopia (n=384)

EC provision and type	Sexually Assaulted Women
EC provided	109 (28.4%)
Levonorgestrel	67 (61.5%)
COC 4 tab 2 doses	16 (14.6%)
COC 2 tab 2 doses	5 (04.6%)
IUD	2 (01.8%)
Unknown EC method	19 (17.4%)
EC not provided	275 (71.6%)

In 333 of the 384 cases, the time interval between assault and report to health facilities showed that 25% (n=83 of 333) of cases reported to health facilities within 24 hours of the incident and 55% (n=183 of 333) within 120 hours. The average time of reporting was 34.6 days, the range being 2 hours to 2 years (Table 3).

Of the 183 cases who reported within 120 hours of the assault, 40% (n=74) were not supplied with EC. Fifty-one percent of cases were reported to health facilities within the first 48 hours of reporting to police, and 2.6% (n=10) reported to police after they were seen in health facilities (Table 4).

Thirteen percent (n=50 of 384) of the assaults were already pregnant at the time they reported to a health facility.

In-depth interviews were conducted with 22 SAW . The age range was 13-21 years and the average age was 15.3 years. Seventeen were from Addis Ababa, two from Bishofitu (45 kms from Addis), and one each from Akaki, Sandafa, and a Somali refugee. Several cases reported first to a police station, and obtained a police paper that they then presented at a health facility. Others reported initially to a health facility for a "virginity" check-up before involving the police.

Table 3: Time interval between occurrence of sexual assault, and reporting to police stations and health facilities in Addis Ababa, 2005.

Time interval between incident and reporting	Reported Institutions			
	Health Facility		Police Station	
	Number	Percentage	Number	Percentage
1 day	83	21.6	88	22.9
2 days	35	9.1	23	6
3 days	28	7.3	19	4.9
4-5 days	37	9.6	13	3.4
6-30 days	74	19.3	44	11.5
>1 month	82	21.4	52	13.5
Missed value	51	13.3	145	37.8
Total	384	100	384	100

Table 4: Time interval between reporting to the police and reporting to health facilities, Addis Ababa, Ethiopia, 2005.

Time interval	Number of cases	Percentage
<48 hours	196	51.0%
48-72 hours	17	4.4%
73-96 hours	10	2.6%
>96 hours	18	4.7%
Police paper not found	133	34.6%
First seen at health facility	10	2.6%
Total	384	100%

Reporting times ranged from two hours after the assault to 100 days, in the case of two women. Fifteen of the 22 cases visited a health facility within five days of the assault. Three were referrals from the other centers, while one was a self referral after receiving disappointing service at the first clinic visited. A woman who presented 74 days after the initial assault had been kept forcibly captive by her assailant. Twelve of the women were issued with EC after reporting to a health facility; however, three women did not receive EC even though they reported within 120 hours of the incident.

Reasons for timely presentation to health facilities included major trauma, fear of sexually transmitted infections, including HIV; and strange assailants and gang rape. Meanwhile, reasons cited for late presentation included threats by the assailant; financial constraints; abduction; and the perceived inadequacy of the police certificate.

At the Family Guidance Association of Ethiopia (FGAE), services for sexual assault survivors are available only during working hours, from 8:00a.m to 5:00p.m in the week days and from 8:00a.m to 12:00pm on Saturdays. Each of the health facilities, with the exception of FGAE, involved in the study provided services to SAW at any time of the day and week on an emergency basis. With occasional exceptions, when the staff member responsible failed to refill the kit, EC pills (Postinor-2) were available during all working and emergency periods. On arrival at the health facilities, the SAW were treated based on their complaints and a paper from police was not mandatory.

The primary care givers were general practitioners at Yekatit 12 hospital and FGAE, and gynecology residents in TAH, GMH, and SPH. Occasionally trained nurses are asked to participate in the primary care at FGAE.

Discussion

Sexual assault is a criminal act that victims frequently suffer alone learning all its physical, sexual, and psychological consequences. Cases where the assailant was unknown to the victim, and where physical injury was present, are significantly associated with police involvement in rape cases (2).

In this study, these factors are associated additionally with early presentation to a health facility, besides frequent police involvement. Of those reporting to health facilities, approximately 48% presented within the first five days (120 hours) of the assault.

The interval between a sexual assault and presentation to a health facility ranged from two hours to nearly two years after the incident, with 20% of survivors taking between six and 30 days to report. The frequency of presentation beyond the window of opportunity for the collection of forensic evidence compromises the ability of health staff and police personnel to respond adequately to each incident. It also means that substantial proportion of rape survivors are not eligible for receiving EC, and thus are unable to protect themselves against pregnancy.

In addition, the long interval between incident and presentation lessens the likelihood of the survivor obtaining a certificate, which is often their primary objective (12). In this study, only 21.6% of survivors presenting at the health facility had fresh genital lesions, and spermatozoa was detected in just seven cases. An earlier study conducted in two hospitals in Addis Ababa found an average time interval of 18.4 days between sexual assault and presentation to the health facility. The average time interval in this study is 34.6 days; an almost twofold increase. Two-thirds of the cases reported after 48 hours of the assault in the previous study in Addis Ababa (12). Our study also showed similar findings, as only 30.7% reported in the first 48 hours.

The 72 hours deadline for EC has been challenged as evidences are available supporting its use in up to 120 hours (17) and the trend is being adopted in our situation as well. Of the 183 cases who reported within 120 hours of the assault, 60% (n=109) were provided with EC, while 40% (n=74) were not. Thirty three women presented after 72 hours but within 120 hours, of whom 13 were issued with EC. At the time of this study, the window of opportunity for EC provision was widely held to be 72 hours after sexual intercourse. This time interval has now been revised upwards to 120 hours (5 days) by the WHO and International Consortium of EC (ICEC).

Those presenting late for EC provision should be briefed about EC in the event of a repeat request, of which a frequency as high as 50% is being reported (15), to prevent similar delays in the future. The high proportion of eligible women (i.e. reporting within 120 hours and not already pregnant) not receiving EC indicates the alarming extent of missed opportunities. The quality of EC service provision is also occasionally inadequate, with incorrect dosages being observed. Although the efficacy of EC is not 100%, no single case has reported back with failure of the provided contraception in the study period, which reflects perhaps inadequate follow up of clients.

We have seen that 50 women were pregnant by the time they reported, and considering the 5% chance of conception from an assault, this suggests that thousands of women are silent victims not reached by our study. Some of the sexual assault cases reported early because of the fear of acquiring HIV, and were screened and became sero-negative. The sero-status of the assailant is not known but considering the sexual behavior and the prevalence of HIV in this part of the world, the worry of the victims is not something to be ignored.

Health facilities involved in the management of sexual assault cases are providing the service on an emergency basis; referral or a police paper is optional.

The majority of sexual assault cases initially report to a police station, and are referred onwards by the police for a medical check- up. Threats from the assailant, abduction and financial constraints are some of the reasons behind the delay in seeking medical care. Visible external injury, fear of HIV transmission, and an unknown assailant were associated with early reporting.

Besides the impact of the delay on EC provision, the managing clinicians failed to supply the EC to 40% of cases who presented within 120 hours of the assault. We observed a few cases (n=13) being supplied with EC between 72 hours and 120 hours. Follow up was very poor and only 23 cases appeared for HIV retesting after the sixth month. One of the two cases for whom an IUD was inserted didn't show up even after a year. For EC to be effective, the timing and proper dosage of the approved drugs is mandatory.

There is a significant delay in seeking medical care, and such missed opportunities would have prevented unwanted pregnancies and produced timely evaluation results to legal bodies. Those involved in the management and care of sexual assault cases need on-job training about the effective provision of EC, including timing, options and dosage. Further studies need to be conducted to assess the reasons behind poor follow up and to improve care of the sexual assault survivors.

Acknowledgements

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ORIGINAL ARTICLE:

Knowledge and Practice on Emergency Contraception among High School Students of Jimma University Community High School, Jimma, South West Ethiopia

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Abstract

Background: Emergency contraceptive (EC) reduces the risk of occurrence of unwanted pregnancy in situations of unprotected sexual intercourse.

Objective: To measure and analyze the knowledge and practices of EC among female students of Jimma University Community High School.

Method: A cross sectional descriptive study involving all grade 9-12 female students enrolled at Jimma University Community High School in Jimma town, South West Ethiopia was undertaken from February 26- 29, 2006.

Results: There were a t5otal of 106 respondents, the majority 95(89.6%) being in the group 14-17 and few were between the age of 18-21(10.3%). Most of them were single 94(88.7%). Seventeen (16%) were sexually active, five (4.7%) have given a history of previous pregnancy and two had a history of induced abortion. Sixty eight (64.1%) had heard about EC and the most cited sources of information were school teachers and health professionals. Out of those who have heard about EC, only 13(19%) of the respondents were able to tell correctly the recommended time for EC use (i.e. within 72 hours of unprotected sex). Awareness about EC was not found to be associated with either age or education level (p>0>1). EC use among those with prior knowledge was found to be very low 3(4.4%).

Conclusion: This study has shown that though a significant number were practicing sex where as the general awareness, detailed knowledge and practice of EC among adolescent high school student very low. It is recommended that adolescent reproductive health/family planning programs be initiated/expanded in school. Furthermore ensuring on sex practices and access to adolescent friendly EC information and services should be promoted.

Keywords: Emergency contraception, knowledge, practice, family planning

Introduction

Many young people today start sex before marriage, and they face more risk of unwanted pregnancy (1). Between 20% and 60% of pregnancies to women younger than twenty are unplanned (2). Over 133 million births occur in the world annually, one in four (33 million) of which are estimated to be unintended, either mistimed or never wanted. In addition, an estimated 46 million induced abortion are performed annually with 78,000 deaths each year (3).

A large proportion of unmarried adolescents are sexually active; although many of them have infrequent sexual intercourse. In many cases, they are irregular users of contraception or do not use a reliable contraceptive method at all, exposing themselves to unwanted pregnancy (4). Studies in eight sub-Saharan countries have found out that 20% to 47% of adolescent women become pregnant before marriage (4).

Other factors that enhance adolescent's risk of pregnancy related complications include poverty, malnutrition, lack of education and lack of access to prenatal, intra natal and post natal care (5). Although Emergency contraception (EC)has existed for the last 30 years, it has remained relatively unknown worldwide (6). Most researchers have pointed out that lack of knowledge of the method is the major barrier to use (7).

In Ethiopia, young people lack knowledge about the use of EC, and they do not have information about the service, and are unaware of the availability of a dedicated product. Moreover, there are few date available on adolescent's knowledge, altitudes and practices towards EC in the country. This study aimed at assessing the knowledge and practices of high school adolescent girls towards EC and associated factors

Subjects and Method

The study was conducted in Jimma University community high school, situated in Jimma town 335km away from Addis Ababa, in south west Ethiopia. Located in the main university campus, the school has a total of 1340 students among which 765 are males and 575 are females in the study year. Of these, there were a total of 193 male and female students who were attending grade 9-12. 106 of them were females while the rest 87 were males.

The town has four family planning service providing sites: one referral hospital, one health center one health station and one non-governmental clinic. A cross sectional study was conducted among all grade 9-12 students who were enrolled during the study period February 26 to 29, 2006. Data was collected using self administered structured questionnaire and completed by the respondents.

The questionnaire included questions on the back ground information of respondents and their knowledge and practice of EC. Data analysis was performed using SPSS statistical software. Frequency tables and graphs were used to express the results. A p-value of less than 0.05 was considered significant.

Results

There were 106 female respondents and almost all 95 (89.62%) of respondents were within the age group of 14-17 years and 11 (10.13%) were with in the age group of 18-21 years. The majority 94 (88.67%) were single. Most 52(49.05%) were Orthodox Christians. Muslims, Protestants and Catholics accounted for 22(20.7%), 22(20.7%) and 10(9.4%) respectively (Table. 1.)

As shown in Table 2, 17 (16.1%) were found to be sexually active, the majority being from junior high school, 6(35.5%). Five (4.7%) gave a history of previous pregnancy; the majority of which were currently enrolled in grade 12. Among the five previous pregnancies reported; three were said to have been terminated early in pregnancy.

Sixty-eight (64.1%) of the total respondents were found to be aware of the existence of EC. The majority, 63 (92.6%) were young adolescents (14-17) and were in grade 9. However, knowledge of EC were not found to be statistically associated with either age or level of education (P>0>1) (Table 3).

Knowledge concerning the timing of EC usage was very low, only 13(19.1%)of the respondents who were previously aware of EC were able to mention the correct timing, i.e. within 72 hours of unprotected sex (Table 4).

Table 1: Socio-demographic characteristic of female students of Jimma University Community School (Grade 9 -12), Feb, 2006, Jimma, Ethiopia (n=106).

Characteristics		Number	%
Age (in year)	14-17	95	89.63
	18-21	11	10.37
Marital status	Single	95	89.62
	Married	7	6.60
	Divorced	3	2.84
	Widowed	1	0.94
Residence	Urban	83	78.31
	Rural	23	21.69
Religion	Orthodox	52	49.05
	Muslim	22	20.75
	Protestant	22	20.75
	Catholic	10	9.45
Educational Status	9	61	57.54
	10	8	7.55
	11	26	24.53
	12	11	10.38

Table 2: Previous sexual experience of female students of Jimma University Community School by education level, Jimma, Ethiopia (n=106).

Education level	Previous Sexual Experience				Total
	Yes		No		
	n	%	n	%	
Grade 9	9	8.49	52	49.05	61
Grade 10	2	1.89	6	5.66	8
Grade 11	4	3.77	22	20.75	26
Grade12	2	1.89	9	8.49	11
Total	17	16.04	89	83.96	106

The most cited source of information were school teachers and health professionals. Overall the practice of EC among all of the respondents was significantly low 3 (2.8%)

Discussion

The result of this study has shown that two third (64.1%) of the total respondents were aware of the existence of EC. This figure is much higher than those reported by Ammanual from Jimma, Ethiopia (50.1%) (8), 23% from Mexico, but it was lower than those reported from a UK (85%) high school adolescent's study (9).

Similar to what many other studies have shown; our young female students also lack specific details like does and time frame of the method (19%). This is low when compared with the study done in UK, 30%. The prevalence of EC usage was 2.8%, which is quite very low when compared to a study done in UK, 62% and in Ethiopia 11.5% (8).

This study has shown no significant association of EC use with level of education which was contrary to many other studies.

The commonest source of information about EC in this study were school teachers and health professional followed by friends and family and was consistent with USA and Scotland studies which have shown 39% school, 22.6% friends 17.5% family and 9.2% health professionals (9).

Given a high prevalence of sexual activity 16%, very low awareness of EC and lack of an appropriate knowledge on the specifics of the method among the study group; it was not surprising to find a 4.7% past pregnancy rate a higher tendency to practice unsafe abortion (60%).

When source of information about EC in this in this study was explored, health institution (mainly FGAE and Marie Stopes) took the lead followed by partner/ neighborhood radio and school, respectively.

Table 3: Awareness of EC by educational level among female students of Jimma University community school (Grade 9-12) February 2006, Jimma. Ethiopia.

Awareness of EC	Ever heard of EC: Yes No	%	No	%	Total	X^2	p.value
Age							
14-17	63(60.96)	66.3%	32(34.05)	33.9	95	1.068	p>0>1
18-21	5(7.06)	45.45	6(3.94)	54.5	11		
Total	68		38		106		
Education							
Grade 9	43(39.13	70.5	18(21.87)	29.5	61		
Grade 10	5(5.13	62.5	3(2.87)	37.5	8		
Grade 11	12(16.68)	46.5	14(9.32)		53.45	26	5.183
Grade 12	6(7.056)	4.5	5(3.94)		45.45	11	p>0>1
Total	68		3 8			106	

Table 4: Awareness of EC timing among female students of Jimma university community school (Grade 9.12) Feb.2006, Jimma, Ethiopia.

Time when to take EC	No	%
After 24 hrs of unprotected sex	42	61.76
Any time after unprotected sex	11	16.18
Before unprotected sex	2	2.94
Within 27 hrs of unprotected sex	13	19.12
Total	68	100.00

Although the number of respondent who got information on EC was very low to make an inference, still the role of NGO's working on reproductive health is not undermined. But it didn't mean that efforts of these organizations were satisfactory; rather it needs to be strengthened.

We therefore recommended; a combination of providing sex education in school, including provision of EC information to students at an early age and make contraceptives widely available. School clinics should play a major role in this activity.

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ORIGINAL ARTICLE

Knowledge, Attitude and Practice of Emergency Contraception among Female Bahir Dar University Students, Northwest Ethiopa

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Abstract

Background: Unwanted pregnancy has many negative consequences on the health and wellbeing of women. Emergency contraception (EC) plays an important role in the prevention of unwanted pregnancy and contributes in the reduction of unnecessary maternal deaths due to complications of unsafe abortion.

Objective: The aim of the study was to assess knowledge and practice (KAP) of female students in Bahir Dar University.

Method: A cross-sectional study was conducted from May 6 to 11, 2008 among female students in Bahir Dar University. Data was collected using a pre-tested, structured questionnaire. A total of 400 female female students were enrolled in this study. The collected data was cleared manually and analyzed using Epi-Info version 3.4.3 software package. The result of the study was presented by tables and percentage.

Results: Among the total of 400 respondents 386 (96.5 %) have knowledge about family planning, 334 (83.5%) heard about EC. Awareness about EC was found relatively higher among natural than social students (OR 1.82, X^2 3.54). The main source of information on EC and family planning was dominantly from family member and mass media. Out of 334 respondents, who were aware about EC, only 129 (73.4 %) used EC. Two hundred forty-nine (62.3%) of the respondents believe that their religion has influence to their attitude towards EC use.

Conclusion: Majority of the respondents heard about EC and family planning, however there is a great knowledge and attitude gap among respondent as they lacked detailed information and specific knowledge about EC. In order to increases knowledge about EC and to bring attitudinal change among female University students there should be continuous education on family

planning and specific information about EC and establishment of family planning club is recommended.

Keywords: Emergency contraception; knowledge, attitude and practice; female university students; Bahir Dar University; Ethiopia.

Introduction

Emergency contraception (EC) is a drag administered after unprotected sex to prevent pregnancy. It is also known as "post-coital contraception", is less effective than regular contraception, and it is intended for occasional or emergency use only and not as a regular contraception. It is associated with a failure rate of 0.2% to 3 % (1). There are various methods of EC. They include hormonal contraceptive pills, intrauterine contraceptive devices and mifepristone. Formerly, EC pills were thought to be effective only within 72 hours, but recent studies have confirmed that they are effective for up to 120 hours (2, 3).

Any pregnancy whether intended or unintended is known to have some risk and expose the women to a variety of hazards which might even threaten her life (4). Unintended pregnancy poses a major challenge to the reproductive health (RH) of young adults in developing country(50. With decreasing age of menarche and onset of sexual activity, young people are exposed early to unplanned and unprotected sexual intercourse leading to unwanted pregnancy and invariably abortions.

The World Health Organization (WHO) estimates that 84 million unwanted pregnancies occur annually worldwide (6). On average, 46 million abortions take place every year, out of which 20 million are performed under unsafe conditions (6, 7). Approximately 13% of pregnancy-related mortality worldwide is due to unsafe abortions and the majority of these deaths (and morbidity) occur in low-and middle-income countries (9).

Accordingly, to the national survey an abortion conducted by Ethiopian Society of Obstetricians and Gynecologist (ESOG), the low status of women, poor access to family planning service, lack of information about available RH service and RH rights are major factors that aggravated the prevailing unacceptable situation (9).

A study conducted in Durban, South Africa to assess the KAP of EC among tertiary students with a total of 436 students, showed that 56.5 % had heard about EC, few know the correct time limit in which it must be used, only 60 students (7.8 %) know how effective EC was in preventing

pregnancy, 91 students (11.8 %) had used EC and 50 % responded that if they had to, they want use it and recommended to others (10). They survey showed the need for a carefully designed education program and promotion of EC.

In Ethiopia 15-60 % of adolescent pregnancies are unwanted or unintended, resulting from unprotected sexual intercourse. Unintended pregnancy is one of the enormous problems female youth face due to early most often unprotected and unsafe sexual practices. Emphasis is made on EC. Thus, the objective of this study is to assess the knowledge, attitude and practice (KAP)of female university students on EC.

Subjects and Methods

The study was conducted at Bahir Dar University in Bahir Dar town which is a capital city of Amhara Regional State from May 6 to 11, 2008. Bahir Dar town is located in Northwest part of the country and it is 555 km from Addis Ababa. The town has one specialized hospital, two health centers, two governmental clinics, six higher privet clinics and four medium private clinics. It has also one university, five colleges, one vocational training center, two precollege schools and three high schools. Bahir Dar University has two campuses and this study was conducted in both campuses.

It is a cross sectional study conducted to assess KAP of female university students towards EC. All students enrolled in Bahir Dar University during the year 2008 were the source of the study population. Few studies in the country showed a knowledge and attitude prevalence of 47 %. Thus, the sample size was calculated by using the prevalence rate of 50 % and 95 % level of significance, marginal error of 5 % and none students. Samples were taken from two campuses by proportion.

Data collection was carried out by pre-tested self-administered questionnaires, which covered socio-demographic information and KAP on EC. The questionnaires were distributed to the study subjects randomly at their dormitory in the two campuses.

The collected data was cleaned, coded, entered and analyzed by using Epi-Info version 3.4.3 statistical software package. Ethical clearance was obtained after the objective of this study and procedure was discussed with concerned bodies of Bahir Dar University and verbal consent Privacy and confidentiality was ensured during the study.

Results

A total of 422 students were planned to be enrolled in this study, but with 5 % non response rate 400 respondents were involved in this study, The age of study participants ranged from a minimum of 18 years to maximum of 29 years.

The mean age was 20+1.6 years. Majority of the students were single, Orthodox in religion and Amhara in their ethnic group i.e. 92 %, 75% and 62.5 %, respectively (Table 1). From the total of 400 respondents 386 (96.5 %) of students know about family planning.

Regarding knowledge on method of family planning, about one fourth of respondents 107 (27.7 %) knew about pills followed by 62 (16.1 %), injectables, 42(10.9 %) intra-uterine device (IUD) or loop and 38 (9.8 %) of the respondents had knowledge for pills, injectables and implants (Table 2)

Table 1: Socio-demographic characteristics among femal university students at Bahir Dar University,

Northwest Ethiopa, May 2008 (N=400).

Socio-demographic	*Characteristics*	*Frequency (n)*	*Percent (%)*
Age	18-21	313	78.3
	22-25	81	20.2
	>	6	1.6
	25	300	75
Religion	Orthodox	46	11.5
	Muslim	44	11
	Protestant	6	1.5
	Catholic	4	1
Ethnicity	Amhara	251	62.8
	Oromo	70	17.5
	Tigire	45	11.3
	Other	34	8.5
Marital Status	Single	368	92
	Married	31	7.8
	Divorced	1	0.3
Educational Level	First year	127	31.8
	Second year	161	161
	Third year	96	24
	Fourth Year	16	4

Table 2: Knowledge of female university student's bon family planning methods in Bahir Dar University

Northwest Ethiopa, May 2008 (n=386).

Methods	Frequency (n)	Percent (%)
Pill	107	27.7
Injectable	62	16.1
Loop	42	10.9
Implant	27	7
Those who knew two methods	66	17.6
Those who knew tree methods	60	15.4
All	20	5.2

Among the respondents, 334 (83.5%)of the ever heard about EC, 165 (49.4 %)and 28 (8.4 %) know about pills and loop, respectively the rest, 141 (42.2 %)know both loop and pills. Awareness about EC was found relatively higher among natural than social science students (OR 1.82, X^2 3.54). The major sources of information is females who heard about EC responded correctly about EC never reduce the change of contracting a sexually transmitted infection, and nausea was the most major common sid-effect5 of EC 87 (26 %) and 31 (9.3 %), respectively

Of the 334 women who were aware of EC, only 129 (38.6) correctly identified 72 hour as the time limit for the method use. Concerning the time on which condition EC is needed, 117 (35 %) responded that it can be used during sexual intercourse without family planning, followed by either of two conditions happened 87 (26.1 %) and during condom rupture 66 (19.8 %). Few respondents knew use of EC in all conditions (Table 3).

Concerning attitude question of EC from the total respondents 381 (95.3%) of students think that family planning is important and 324 (81 %) of respondents also believe that EC can prevent unwanted pregnancy. More than half of the students 234 (58.5 %) believe that couples have equal

awareness about EC and most of the respondents 287 (71.8 %) agree that EC is effective in reducing morbidity and mortality of females due to unwanted pregnancy.

Regarding the negative influence of their religion towards use of EC 249 (62.3 %) of the respondents believes use of EC 249 (62.3 %) of the respondents believe t5hat religion has influence to their attitude towards EC use (Table 4).

Among the respondent 124 (31 %) had practiced unsafe sex in their life time. Of those practiced unsafe sex 32 (25.8 %) encountered unwanted pregnancy.

Table 3: Knowledge of female university students on which conditions EC can be used in University of Bahir Dar, North Ethiopia, May 208 (n=334)

Characteristics on which condition EC can be used		Frequency (n)	Percent
When sex performed without family planning	117	35	
If condom rupture during intercourse	66	19.8	
If there is rape	52	15.6	
Those who knew either of the two above conditions	87	26.1	
In all condition	12	3.6	

Table 4: Response of family university students on attitude questions towards EC use, at Bahir Dar University, Northwest Ethiopia, May 2008.

Attitude questions	Yes n (%)	No n (%)
Do you think planning is important?	381 (95.3 %)	19 (4.8)
Do you believe that EC can prevent un wanted pregnancy	324 (81 %)	76 (19 %)?
Do you believe that couples have equal awareness about EC	234 (58.5%)	166 (41.5 %)?
Would you like to discuss about EC with your friend or husband	262 (65.5%)	138 (34.5 %)?

Do you agree that EC is effective in reducing mortality and morbidity of females from unwanted pregnancy?	287 (71.8 %)	113 (28.3 %)?
Does your religion influence your knowledge on family planning	249 (62.3 %)	151 (37.8 %)?

Ninety-one (73.4 %) used EC 33 (26.6 %)did not take EC after unprotected sex. Of those who used EC more than half of them used pills to prevent unwanted pregnancy. The students obtained E3C commonly from pharmacy, clinics and family planning agents.

Discussion

Female Bahir Dar university students seemed to have quit adequate knowledge of family planning in general and EC in particular. However, they don't have clear information with regard to were to get EC, when to take it and information about the time interval between the two doses. Unprotected sex was reported by almost 27 % of the respondents.

This piece of information is vitals it is detrimental in order to prevent unwanted pregnancy among these students.

The study findings indicate that the female students EC source of information were their family members and the media. This indicates that there are very limited activities in the campus towards improving their RH information and services.

In conclusion, there is an urgent need to educate young people in universities about RH and family planning and skills on how to prevent HIV/STIs including unwanted pregnancy. Awareness creation activates have to be designed with IEC/BCC materials that are attractive and innovative to yang people.

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ORIGIONAL ARTICLE

Mainstreaming EC in Ethiopia's Public Sector: Project Results and Implications for Scale-up

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Abstract

Background: *Building on nearly a decade of momentum, the Federal Ministry of Health (FMOH), the Ethiopian Society of Obstetricians and Gynecologists (ESOG) and Population Council (EC Afrique) launched a two-year project in 2004 to mainstream emergency contraception (EC) in the public sector.*

Objective: *The project aimed at improving reproductive health (RH) care among young women and to reduce the abortion rate by expanding access to EC in the country. Its overall goal was to demonstrate the feasibility of integrating EC within the public sector's broader contraceptive mix.*

Methods: *The project undertook a set of activities aimed at improving provider competency, increasing public demand and ensuring commodity security. The final evaluation drew on service statistics from 33 intervention sites, and knowledge, attitude and practice surveys conducted with family planning service providers and clients in the health facilities involved in the project.*

Results: *EC users were primarily unmarried women between the ages of 20-24, although male partners were increasingly involved in EC decision-making and procurement. This runs counter to predominant perceptions of EC users as adolescent girls. Sexual assault was the least commonly cited reason for EC use, reflecting its current position as primarily a family planning method. Television advertisements and clinic-based health education were the most commonly sited forms of communication on EC, while print media reached the fewest respondents. Both clients and providers believe that pharmacy provision of EC is socially acceptable, and agree that one Birr is the optimal price for sale in the private sector.*

Conclusion: *Scaling up EC mainstreaming activities in Ethiopia will effectively position EC as a core component in the national family planning program and post-rape care services. Furthermore, there is need to strengthen the capacity of providers so as to encourage EC users to seek HIV/STI counseling and testing services. To ensure that EC serves as a gateway to more comprehensive RH care, it is critical to stress "bridging" as a key element of the services.*

Keywords: *Emergency contraception, family planning, adolescents, levenorgestrel*

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Introduction

Recognition of the need to introduce emergency contraception (EC) into the public sector began in 1997, when the National Reproductive Health (RH) Needs Assessment noted that EC could play a critical role in "limiting unwanted pregnancy, reducing the need for unsafe abortion; ... lowering rates of maternal morbidity and ...[providing] an additional tool for rape management" (1). The Assessment also found that access to family planning services was limited by providers who were perceived to be "out of touch" with the needs and concerns of their young clients. In 1998, Ethiopian delegates attended an international conference in Malawi on EC where they developed a framework for introducing EC services in their country. This framework called for the establishment of a multi-sectoral advisory body and the integration of EC into ongoing training programs and national family planning guidelines (2). Shortly thereafter, the 1999 annual meeting of the Ethiopian Society of Obstetricians and Gynecologists (ESOG) endorsed EC's ability to "reduce dramatically the country's soaring levels of unsafe abortion" (3).

The Family Guidance Association of Ethiopia (FGAE) and the Population Council piloted EC introduction through the coital dependent methods (CDMs) study in 2001. The study was designed to increase young people's access to CDMs by improving supply at the facility level and generating demand within the community (4). Working within FGAE's national network of youth-friendly clinics, the project developed a "branded" range of post-coital methods and trained providers on their provision.

A single, youth-oriented graphic was included on repacked female condoms, male condoms and vaginal foaming tablets. FGAE employed the Yuzpe regimen of EC since no dedicated EC pill existed at that time in Ethiopia.

Each packet contained four tablets of high-dose, combined oral contraceptives, simple instructions (in Amharic) on correct use, and two male condoms to encourage dual protection. Peer service providers were trained to distribute these methods. By mid-2003, 5,000 units of EC had been distributed to selected FGAE youth centers nationwide.

The study demonstrated that untrained health care providers had limited familiarity with EC and held some misconceptions regarding its use. Most were aware that oral contraceptive pills could be used for emergency purposes, though knowledge of type, dosage and timing was low. The baseline study found that only 28% of the 1053 providers surveyed had ever administered EC and almost half believed its use would lead to increased promiscuity. Less than half (44%) were aware of EC's three-day efficacy period. While the CDMs study demonstrated that EC could be successfully provided through non-governmental organizations, the bulk of health care services in Ethiopia are delivered through the public sector.

To ensure broad accessibility, the Ministry of Federal Health (FMOH), ESOG and the Population Council (*EC Afrique)* conducted a pilot project between May 2005 and December 2006 to introduce EC into the country's public health system. This article provides an overview of the project's interventions and outcomes in order to inform scaling-up of EC services nationwide.

Interventions

As identified in the CDMs study, correct knowledge of EC among Ethiopian service providers was low. To ensure quality services, the project undertook efforts to train providers in each of the participating facilities. A total of 69 doctors and nurses were trained to provide EC during the first round of training in early 2004. In late 2006, 121 providers participated in a second round of training intended to promote the sustainability of EC services after the project's conclusion.

Trainings were conducted by members of ESOG, using a manual developed specifically for the project. This manual was drafted by a team of ten experts from partner organizations, and was adopted at a national expert review workshop. It was based on materials produced by the Population Council in Bangladesh, and modified to reflect the specific needs and knowledge of Ethiopian service providers (5). The manual was pre-tested in Addis Ababa before being endorsed by the FMOH.

In addition to conducting in-service training, the project worked to build interest among students by offering small grants for degree-related research on EC. A call for proposals was issued to all medical, nursing or community health students at the country's most prominent universities (Addis Ababa, Gondar and Jimma Universities) in early 2006. Study coordinators at each site mentored students in conducting the research and *EC Afrique* provided funding for the field work. A total of ten projects were selected through the national competition, which examined EC in the context of social and medical issues such as sexual assault, pharmacy provision and adolescent access. Many of these studies are published in this volume.

Under the direction of a professional journalist, a mass media campaign was conducted throughout 2006. The campaign targeted opinion leaders and potential urban middle and upper class clients, and included: a one-minute informational television commercial on EC featuring locally popular young adult actors; an interview with the project coordinator on the regular women's television talk show, *Kesetoch Admass*. The 60-minute interview, which aired in 20-minute installments for 3 consecutive weeks, focused on EC and its impact on the prevention of unsafe abortion as a way of reducing the country's high maternal mortality and morbidity rates; a series of short informational news spots in leading national media e.g. *Addis Admass* (weekly newspaper) and *Lanchi ina Lante* (radio program), which highlighted the importance of EC in a variety of situations. In addition, the project developed a youth-oriented poster that communicated key messages about EC use and timing in Amharic.

To ensure continued commodity supplies, a final component of the project was the introduction and registration of a dedicated EC pill in the country. Permission to import Postinor 2 was granted by the Ethiopian Drug Administration and Control Authority (DACA) in August 2004 and 40,000 units were procured using funds made available by *EC Afrique*. Working with the local pharmaceutical company Beker, ESOG and *EC Afrique* secured product registration based on the success of this project. In December 2006, DACA officially approved Postinor 2 for use in Ethiopia's public and private sectors.

Evaluation Design and Methodology

The study design involved two approaches namely: continuous monitoring of utilization data from service statistics and a post-test measurement at the end of the two year pilot phase of the project. Through the project, EC was provided in 33 facilities in the country's five major regions (Addis Ababa, Oromiya, Amhara, SNNPR, and Tigray) (Table 1).

Seven of these facilities were NGO clinics, representing areas where these NGOs dominate RH service provision. Site selection was based on criteria that included monitoring capacity and overall functionality, and was made in collaboration with study coordinators based in each region's medical schools. After provider training, an initial allotment of 10,000 units of Postinor 2 was allocated among the facilities. Product usage was monitored at each of the 33 participating hospitals and health centers, and additional supplies were delivered as needed.

To evaluate the impact of the project, three sets of data were collected (Table 2). First, basic service statistics, including basic client profiles, were recorded for every client who received Postinor 2 in each of the 33 project sites between May 2005 and December 2006. A total of 3999 cases of EC use were reported during the 20 months of service provision. Second, toward the conclusion of the project period, providers were interviewed to assess their experiences with EC.

Knowledge, attitudes and practice (KAP) survey was conducted with 121 providers from the five regions participating in the project in October and November 2006. The survey was self-administered and was completed by all providers who attended the second training exercise, and was distributed immediately before the commencement of training. The bulk of these respondents were nurses (73%) followed by midwives (14%); only three doctors were included in the survey.

Table 1: Project sites, by region

Region	Health Facility	Region	Health Facility
Addis Ababa (16 facilities)	Tikur Anbessa Hospital	Amhara (5 facilities)	Gondar Hospital
	Zewditu Hospital		Gondar Health Center
	St. Paul's Hospital		Azezo Health Center
	Yekatit 12 Hospital		Teda Health Center
	Ghandi Hospital		FGAE Clinic
	Meshualekiya Health Center	Oromiya (4 facilities)	Jimma Hospital
	Kolfe Health Center		Jimma Health Center
	Gulele Health Center		FGAE Clinic
	Lideta Health Center		Marie Stopes Clinic
	Teklehaimanot Health Center		
	Woreda 23 Health Center	Tigray (4 facilities)	Mekele Hospital
	Woreda 19 Health Center		Mekele Health Center
	Yeka Health Center		Kasetch Health Center
	FGAE Main Clinic		Semen Health Center
	Marie Stopes Obstetric Center		
	Kirkos Health Center	SNNPR (4 facilities)	Yirgalem Hospital
			Awassa Health Center
			FGAE Clinic
			Marie Stopes Clinic

Table 2: Data Sources

Region	Number of Respondents/Cases		
	Service Stats	Provider KAP	Client KAP
Addis Ababa	2659	58	205
Oromiya	194	22	283
Amhara	271	16	n/a
SNNPR	478	14	280
Tigray	397	11	n/a
TOTAL	3999	121	768

Third, a client KAP survey was conducted in health facilities in Addis, Jimma and Awassa in the week following the provider survey. A total of 768 health center clients coming for all services were interviewed by nurses who completed the EC training. No nurses were assigned to collect data from the facilities they normally worked in. Respondents comprised all clients and companions, male and female, who presented at the clinic during the week-long data collection period.

Interviewers were stationed throughout the facility in order to capture a diverse sample of clients. They were instructed to approach clients only at the end of their visit, and to obtain written consent before commencing the interview. The survey sought general information on client contraceptive attitudes and practices as well as awareness and perceptions of EC. The sample was intended to serve as a proxy for awareness among the segment of the population that is most likely to seek institutionalized health care services.

The data were entered into Epi-Info by ESOG staff in Addis Ababa, with support from *EC Afrique*. Analysis was done using SPSS; a chi-square test was used to measure the strength of association in bivariate relationships.

It is also important to point out two major limitations of this project evaluation. First, the absence of baseline data rules out the possibility of making pre- and post-intervention comparisons. Secondly, lack of data for the control or non-intervention sites makes it difficult to directly attribute the outcomes noted at the end of project survey to the interventions. The service statistics provide the most comprehensive view of the project's impact over time, but cannot account for intervening factors.

The client and provider KAP surveys evaluate the impact of provider training and awareness-raising activities by examining exposure and reported behaviors, but the strength of this analysis is limited by the absence of baseline data.

Results

The client KAP survey found that overall knowledge and use of EC in Ethiopia remains low. Only 20% of those interviewed stated that they had ever heard of EC, and 20 (0.03%) of the 768 women and men interviewed reported that they or their partners had ever used EC. The majority of the clients (83%) also indicated that information on EC was not widely available to women in their communities.

Within project sites, however, utilization of EC steadily increased throughout the project period, with almost 600 units being distributed by the project's final month from initial non-available services (Figure 1).

Of the study sites were located. Overall, 67% of all EC units distributed by the project were through facilities in Addis Ababa.

Client characteristics

Service statistics indicated that most users (71%) were young adults aged between 20 and 29 years (Table 3). Almost half (47%) of the clients were aged between 20 and 24 years while younger adolescents (aged 19 years and below) comprised only 20%.

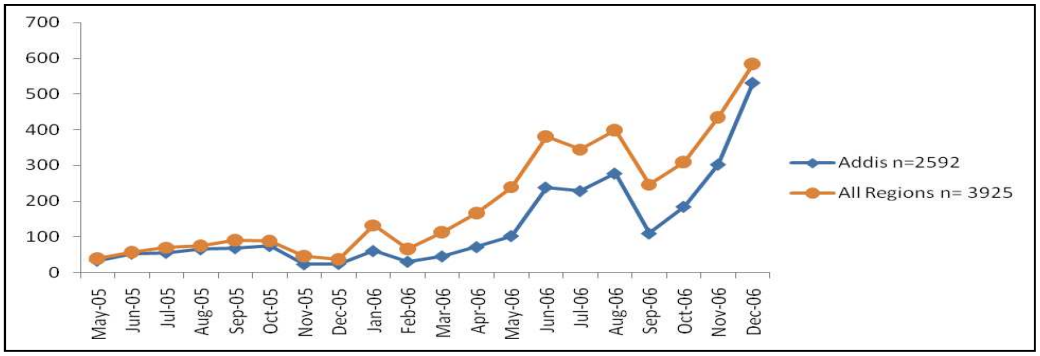
A similar age distribution is found in the client KAP survey: of the 20 clients who reported having ever used EC, 14 (70%) were between the ages of 20 and 29 years.

According to service statistics, a substantial proportion of users (41%) were married. This proportion was even higher when disaggregated by region; in Tigray for example, 55% of the clients reported that they were married. This is similar to the pattern observed in the client KAP survey in which 11 of the 20 of those who had ever used EC identified themselves as married (Table 3).

Whereas women constituted the majority of clients (96%), some men also obtained EC for their partners. A total of 173 men accessed EC during the study period, and in one region, Oromiya, nearly 22% of all EC clients were men. The client KAP survey provides further indication of male involvement in EC use.

According to the 20 women who identified themselves as EC users, nearly half (45%) had talked to their partners before making the decision to use the method.

Figure 1: Number of EC Units distributed in all Project Sites, May 2005- December 2006



Source: service statistics

Table 3: Characteristics of EC Clients

		Service Statistics n=3996 (%)	Client KAP N=20 (%)	Provider KAP n=66 (%)
Age category of EC clients				
	10-14	1	0	n/a
	15-19	19	0	n/a
	20-24	47	40	n/a
	25-29	24	30	n/a
	30-34	7	15	n/a
	35-39	2	15	n/a
	40-50+	1	0	n/a
Gender of EC clients				
	female	96	85	n/a
	male	4	15	n/a
Marital status of EC clients				
	Married	41	55	n/a
	Not currently married	59	45	n/a
Reason for EC use				
	Unprotected sex	81.4	84.6	80.3*
	Contraceptive failure	14.2	15.4	42.4*†
	Sexual assault	4.4	0.0	37.9*

**reasons for use among last 3 EC clients, multiple responses allowed*
†condom breakage

Furthermore, almost two-thirds (61%) informed their partners before using the method, and in all cases it was reported that their partners supported their decision.

The provider KAP survey, however, also shows an unwillingness to deliver EC services to male clients.

In this case, providers were asked how they would respond to an unmarried adolescent girl who claimed to have engaged in unprotected sex two days prior and was seeking advice on how to avoid a pregnancy and that of an unmarried adolescent boy in a similar situation who wanted to obtain EC pills for his girlfriend.

The findings indicated that providers were significantly more likely to report a preference to deliver EC services to adolescent girls than to adolescent boys (Table 4).

Table 4: Provider attitudes toward EC and other reproductive health services to adolescents girls v. boys (n=68*†)

	Girl scenario %	Boy scenario %	p-value
Provide EC	91.5	41.2	0.019
Provide FP advice	63.6	47.1	0.000
Provide STI/HIV counseling	38.1	50.0	0.000
Provide condoms	23.7	32.4	0.000
Advise against adolescent sex	11.0	13.2	0.000
Do nothing/ Refuse EC	0.0	7.4	n/a

**multiple responses allowed*
† Only providers who had dispensed EC at least once were asked this question
Source: provider KAP

All three data sources indicate that clients most frequently sought EC after engaging in "unprotected sex". Although the provider KAP allowed multiple responses, the trend across all the data sources demonstrates that contraceptive failure is the second most frequent reason for use, followed by sexual assault.

Clinic records indicate that only 172 of the 3999 doses of EC were administered to survivors of sexual assault, while providers reported that more than one in every three clients experienced sexual assault. Reflecting patterns across the continent, the survivors recorded in the service statistics were young, with 52% of all cases being between the ages of 10 and 19 (6). Among the very young adolescents (those between 10 and 14 years old), sexual assault comprised nearly 70% of the cases.

Provider Capacity

The provider KAP survey was conducted immediately before one-day training on EC conducted by ESOG. At that point, only one-third (33%) of all providers had received prior instruction on EC. Of these, most (85%) reported that they were trained by ESOG under the current project. The remaining providers had been trained under the FGAE project; none indicated that they learned of EC during their professional training.

The majority of providers surveyed (81%) had discussed EC with their clients, and those who received training on EC were more likely to provide it.

In addition, the majority of trained providers shared information on EC to all likely users even if they did not request it. This is confirmed in client reports, which listed provider interaction as the second most frequent source of information on EC.

Repeat use and "bridging"

Data from the client KAP survey indicate that repeat use is not currently a problem in Ethiopia. Of the 17 clients who reported on frequency of use, the bulk (15) noted that they had only taken EC once in the past year (Table 5). Nearly half of all EC clients adopted a different or new contraceptive method following EC use, most likely because providers routinely counseled them on more reliable methods.

Public Awareness

Although only 20% of respondents to the client KAP survey knew of EC, those who did were remarkably well-informed. As indicated in Table 5, clients who were aware of the method demonstrated levels of knowledge that rivaled, and in some cases exceeded, trained providers.

All but one client correctly identified EC as a method for preventing pregnancy, and nearly 90% knew that EC should be taken within 72 hours of unprotected sex to be effective. While overall knowledge was high, some clients expressed concerns about the potential side-effects of using EC.

Table 5: Percent distribution of EC users by frequency of use and indicators of 'bridging'

	Client KAP n=17 (%)	Provider KAP* n=65 (%)
Used EC only once in the past year	88.2	n/a
Began using a new or different contraceptive method after EC	55.5	56.1
Were provided any of the following services alongside EC†		
Provided with family planning advice	92.3	69.2
Referred to HIV/VCT services	15.4	56.9
Referred sexual assault survivor to police	0.0	15.4

** services provided to the last 3 clients*

† multiple responses were allowed in both surveys

Of those who feared health problems, the largest proportion (41%) believed that it could cause difficulties conceiving in the future. Social problems, such as increased HIV cases (61%) and adolescent sexual activity (59%) were the most widely cited concerns associated with increased EC access (Table 6).

Nearly three-quarters of the clients who knew of EC learned of the method within the past year, which corresponds to the project's media outreach phase. Both clients and providers demonstrated similar exposure to the media campaign, suggesting that it reached a broad segment of the targeted urban populations.

The ESOG television advertisement, which was aired during popular television dramas during the weeks prior to the survey, appears to have reached the widest audience. Although less effective, print media was most likely to reach providers, as was the topical *Kesetoch Admas* television feature. More conventional channels of health communication remained key in creating awareness about EC. Nearly 80% of all providers indicated that they included EC messages in their facility's regular health education sessions.

These efforts may account for the fact that nearly one-quarter of those who knew of EC reported that they had first heard of it from their health provider.

Expanding access

To inform future scaling-up efforts, clients and providers were asked to identify the types of clients who could most benefit from increased access to EC. Clients were much less conservative in their perceptions of acceptable EC users than were providers; most clients believed that access should be extended to a wide range of women, whereas providers saw the need for greater restrictions. While no significant differences existed among trained and untrained providers, training did appear to improve perceptions of the types of clients who should receive EC (Table 7).

Clients and providers were also asked to identify the locations where they felt EC should be made available and the types of providers who should dispense it. Again, clients were more liberal in their perceptions of acceptable access than were providers.

Clients, on the other hand, supported expanded access for sexual assault survivors with over 80% mentioning emergency rooms and nearly 40% indicating police stations. They also supported community access through the new cadre of community-based health providers, health extension workers, as well as expanded adolescent access through secondary schools (Table 8).

Table 6: Perceived Social and Health Problems Associated with Using EC

	# of clients	%
Can EC cause health problems? n= 761	73	9.6
What type of health problems?* n=73		
difficulty conceiving	30	41.1
causes indigestion	21	28.8
menstrual irregularities	14	19.2
nausea or vomiting	13	17.8
may not work	12	16.4
Can easy access to EC cause social problems? n=768	**88**	**11.5**
What type of social problems?* n=88		
increases HIV cases	54	61.4
encourages adolescent sex	52	59.1
encourages promiscuity	45	51.1
problems with family or husband	10	11.4

**Multiple responses allowed*
Source: client KAP survey

Providers tended to overwhelmingly identify conventional sources such as health centers, family planning clinics, and pharmacies.

By the end of the project, Postinor 2 was approved for sale at private pharmacies. Previously, EC had only been provided at no cost in the project sites and at minimal cost in FGAE clinics.

To assist pharmacists in pricing the new product, the survey also asked respondents to identify the amount of money (in Ethiopian Birr) that they would be willing to pay for EC in private pharmacies. The most commonly cited price was 1 Birr.

Discussion

The available data indicates that EC can be successfully provided in Ethiopia's public sector family planning facilities. It demonstrates that a latent demand for the product exists and that such demand can be met within the context of current RH programs. With the registration of Postinor 2 in late 2006, the product is now positioned to become a core element of the country's family planning method mix and, once adequate stocks are procured, can be offered nationwide.

Table 7: Percent distribution of clients and providers by perceived appropriateness of EC*

	Client n=762 (%)	Provider	
		Trained n=36 (%)	Untrained n=75 (%)
Indications			
Rape survivors	96.3	97.2	92.0
Women experiencing contraceptive failure	80.3	89.9	69.3
Contraindications			
Pregnant women	1.7	8.3	13.3
Post-menopausal women	2.5	36.1	28.0
Appropriate Users			
Adolescents	76.0	63.9	53.3
Married women	77.9	72.2	42.7
Unmarried women	71.7	61.1	49.3
Women who have sex infrequently	72.0	50.0	49.3

*Multiple responses allowed
Source: Client and provider KAP surveys.

Table 8: Percent distribution of clients and providers by where they felt EC should be made available, Client and Provider KAP Surveys*

	Client n=764 (%)	Provider n=113 (%)
Health center	98.0	96.5
FP clinics	84.6	92.0
Emergency Rooms (ERs)	83.9	28.3
Pharmacies	72.3	49.6
Community level (CBRHAs)	51.1	30.1
Police stations	38.1	17.0
Secondary schools	37.2	17.9

**Multiple responses allowed*

Access for sexual assault survivors

While the program successfully increased access to EC in the context of family planning efforts, it was not as effective in making it available to sexual assault survivors. Both clients and providers overwhelmingly identified sexual assault survivors as appropriate clients for EC, but service statistics show that this population did not fully benefit from the program. Greater access can be created by expanding the provision channels, training and equipping health care workers in a variety of locations to deliver EC as a routine element of post-rape care. A study conducted by *EC Afrique* in Zambia, for example, found that trained police officers could effectively provide EC to survivors who presented first to a police station (6). This project found that there is public support for such an approach.

In Ethiopia, ESOG has developed a model of comprehensive care that delivers EC as part of a one-stop shop for post-rape care in a health facility setting.

These models, along with other innovative approaches implemented across Africa, indicate that repositioning of EC can dramatically expand sexual assault survivors' access to the method.

The new cadre of CBRHAs is uniquely positioned to deliver EC services to the broader population including sexual assault survivors. Located close to the community, they can be called upon to provide EC services within the 120-hour window of opportunity, without requiring a costly and time-consuming trip to a health facility. This proximity to the community is especially valuable for sexual assault survivors who may be reluctant to seek formal health care immediately after the assault.

Provider training

An important contribution of this project has been the development of an EC training manual specifically tailored to the needs of Ethiopia. The training program itself has successfully contributed toward increased access to EC in the project sites, most likely by improving provider's confidence in delivering the method. While the training offered by the project was strong on technical aspects, future training would benefit from an expanded emphasis on the social context of EC provision.

EC as a back up method

In countries such as Kenya and Botswana, where EC is more widely available, concerns have emerged over its use as a regular family planning method (7).

In addition, because it is less effective than other modern methods of contraception and does not offer protection against HIV and other sexually transmitted infections (STIs), the World Health Organization recommends EC only for use as a back-up method (8).

In this study, while both clients and providers indicated that family planning advice was often part of EC services, only about half of all EC users actually adopted a new method. Providers inconsistently encouraged EC users to seek HIV/ STI counseling and testing services, and referred sexual assault survivors for appropriate care. Although the ESOG training curriculum did not explicitly address such "bridging" to other services, the client and provider KAP surveys suggest that it did take place within study sites. To ensure that EC serves as a gateway to more comprehensive RH care, it is critical to stress "bridging" as a key element of the services.

An interesting outcome of the project has been the high level of male involvement in EC. Over half of all women reported consulting their partners before using EC while a surprisingly large number of men obtained it for their partners. However, providers appeared reluctant to offer EC services to this group, potentially limiting their partners' access to the method. Specific training is needed to address gender issues in EC provision (and in family planning in general) to encourage greater male involvement.

Public awareness

Only 20% of the men and women interviewed at health facilities had ever heard of EC, and it is likely this proportion is lower among those who do not routinely seek health care. This indicates a clear need for increased awareness-raising activities in the country. While clinic-level outreach will always remain an important source of health information, ESOG's television adverts proved to be the single most effective media tool.

As the government works to increase EC knowledge among the general population, such adverts strategically aired during popular programming are most likely to increase the visibility of the method. Young women between the ages of 20-29, who were found to be the most frequent users of EC, should be the target of more intensive media outreach efforts. Campaigns should also stress the importance of EC as a back-up method both in and outside of marriage, and should include messages on 'bridging'.

Conclusions and Recommendations

The study results showed that the three most important reasons for EC use by clients in Ethiopia are: unprotected sex, contraceptive failure, and sexual assault. Scaling up EC mainstreaming activities in Ethiopia will effectively position EC as a core component in the national family planning programme and post-rape care services.

Evidence from the study showed that the majority of providers inconsistently encouraged EC users to seek HIV/STI counseling and testing services.

There is need to strengthen the capacity of providers so as to encourage EC users to seek HIV/STI counseling and testing services. To ensure that EC serves as a gateway to more comprehensive reproductive healthcare, it is critical to stress "bridging" as a key element of the services.

As a next step, it is necessary for the FMOH to build upon these successes by continuing to expand access to EC across the country. The findings of this project are intended to inform and guide this scaling-up process.

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ORIGINAL ARTICLE

Seeking ways in improving promotion and provision of emergency contraception in Addis Ababa Hospitals

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Abstract

Objective: *To assess attitudes of physicians working in Addis Ababa government hospitals towards routine counseling and advance prescription of emergency contraception (EC).*

Methods: *A cross sectional descriptive study on attitudes of physicians towards routine counseling and advance prescription of EC was performed on 445 physicians working in Addis Ababa public hospitals. A standardized questionnaire which assessed knowledge, attitudes and practices (KAP) on EC provision and routine counseling and advance prescription of EC were administered among participants.*

Results: *Out of the total 445 physicians, there was an overall response rate of 86.1%. Only 55.3% participants received a very good and good knowledge score. Physicians of gynecological and obstetrics department were more knowledgeable than others (p< .0001.). Attitudes of physicians were favorable (64%) towards EC. Being a member of gynecological and obstetrics department showed a very good knowledge score, and past counseling and prescribing EC had favorable attitudes. The majority 72.4% (240) have never prescribed EC. Physicians who ever counseled and prescribed EC before the survey were more likely to have a very good knowledge score (181 p < 0.0001), favorable attitudes (176 p< .001) and past prescribing (124 p < 0.15) than others. The majority of the respondents 316 (83.6%) agreed on the role of routine counseling and advance prescription supply of EC, in provision, promotion and information dissemination, and among them 68.8%, were willing to prescribe EC in the future. More than 90% had some concerns like it might encourage repeated use. Eighty four percent mentioned mass media, printed materials, women organization and telephone including text messages and involvement of male partners as better options for EC advocacy, information dissemination, and provision.*

Conclusion: *Attitudes of physicians on EC was favorable but knowledge and practices of EC were very low. Strategy to increase its access through routine counseling and advance prescription supply to all women is taken not only positively but also majority of them are willing to offer EC in advance by prescription and addressed the need of information on EC for providers and clients. Improving KAP on EC is crucial and physicians need to be provided with accurate and up to date information through comprehensive training and updates on EC.*

Keywords: *Emergency contraception, KAP, physicians, contraception.*

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Introduction

The World Health Organization (WHO) estimates that in developing countries, 10-40% of young women reported unwanted pregnancy (1). Globally, unintended pregnancy is a common public health problem. Each day about 910,000 conceptions occur; more than half are unintended and a quarter definitely unwanted. In Ethiopia, the rate of unwanted pregnancy is estimated to be 40-41% of all pregnancies (2). Emergency contraception (EC), being a safe and effective means of post coital contraception following sexual assault or consensual sex, worldwide, are underutilized. Since the inception of EC in the1960s, so far, its journey had faced enormous barriers i.e. issues surrounding EC services provision, including wide varieties of social, programmatic and or technical aspects with the introduction of the methods (3).

Worldwide a number of knowledge, attitude and practice (KAP) studies were conducted to explore the reasons for its underutilization. A KAP study from South Africa and another study conducted in Ethiopia on knowledge of EC among victims of abortions found that knowledge of EC was 47.1% and 57%, respectively (4,5). It is not only lack of knowledge of clients that brought underutilization of EC, but also the attitudes of parents and religion towards EC provision. In Spain and USA, EC is made available only to those with medical prescriptions (6). Women at risk for unintended pregnancy strongly need positive and supportive attitudes from health professionals so that they get adequate information and services. However, many studies demonstrated that there was not only little knowledge but also misinformation on the part of the health providers that attributed to an access barrier to EC provision and promotion (7).

Studies on the provision of EC and subsequent condom use among African American adolescents and Hispanic women in the USA found that, 60% of youngsters reported that EC had changed the way they used birth control without affecting condom use, 33% reported EC had resulted in more responsible use of contraceptives and only 6.7% indicated that EC resulted in less responsible use of contraceptives (8).

If EC was started within 72 hours of sexual act, it has the potential to prevent 75% of unintended pregnancies and reduce abortion by 50%. Hence effective use of EC requires easily availability and accessibility 24 hours of a day and seven days of a week (9). Moreover, women do not get appropriate support and counseling from the health providers and are not offered the options of EC use, for instance advance provision of EC i.e. a supply at hand before the act of the emergency (10).

Ethiopia is one of the poorest countries with a high maternal mortality rates and a low contraceptive prevalence rate. Much hasn't been done on provision and promotion of regular contraception in general and specifically on EC access. Hence, it a high time to explore the role of service providers on the provision, promotion, advocacy and information dissemination of EC.

This study therefore focuses on the attitudes and willingness of physicians (general practitioners, residents and specialists) currently working in Addis Ababa government hospitals on routine counseling and advance supply of EC to all clients in the reproductive age group when they visited the hospital for one or another reasons. At the same time, it tries to seek ways or options to improve advocacy, promotion and provision of EC.

Subjects and Methods

This is a cross sectional descriptive study, which was conducted on the attitudes and willingness of physicians (i.e. general medical practitioners (GMPs), residents and specialists) currently working in Addis Ababa government hospitals on routine counseling and advance supply of EC. All doctors working in twelve government hospitals in Addis Ababa were included. As there was no similar study done in Ethiopia previously a sample size of 384 was taken assuming a positive attitude of 50% among the studied physicians.

A structured, pre tested, self-administered questionnaire was used to collect information on the KAP of service providers. Data was coded, entered , cleaned and analyzed using SPSS 13 statistical software.

Mean, standard deviation and frequency were used for numerical variables and for categorical variables the chi square and p-value were applied for analysis of statistical significances.

Knowledge of EC was scored out of 5 as very good (5 or 4 out of 5), good (3 out of 5) and poor (0, 1, 2 out of 5). Likert's attitude scaling was used in the measurement of attitude. A score of 75% was taken as a favorable attitude.

Ethical clearance was obtained from the Research and Publication Committee of the Department of Gynecology and Obstetrics, Faculty of Medicine, Addis Ababa University. Study hospitals were notified with official letters before the research was conducted. Written consent was obtained from each respondent and confidentiality was assured and maintained.

Results

Out of the total 445 physicians the proportions of various categories were: general practitioners (50), residents (280) and specialists (115). Questionnaires were completed by 60% of general practitioners 98% of residents and 67.8% of oby/gyn specialists yielding an overall response rate of 86.1%.

Some participants completed the demographic responses fully, but did not complete all the responses, therefore denominators for response may vary in the data analysis.

Three hundred and eight (80.2%) participants were male, with a mean age of 32 years (range 27-60years). Most participants were married 201 (52.3%) and the dominant religious affiliation was Orthodox Christian 285 (74.8%). The detailed socio demographic characteristics of participants are presented in Table 1.

The majority of physicians, 234 (60.9%) are concentrated in the main teaching hospital and nearly half of them 211 (55%) had work experience of at least 5-10 years (Table 2).

In general, when knowledge about EC was scored, 93 (24.2%) of the participants received a very good score; 120(31.1%) a good score and 171 (44.4%) received a poor score, among whom three were ob/gyn specialists (Table 3).

Table 1: Socio-demographic characteristics of respondents in Addis Ababa, public hospitals, Addis Ababa, Ethiopia, 2006 (n=384).

Characteristics		Frequency	Percent
Age (years)			
25-30		104	27.08
31-35		146	38.08
36-40		76	19.79
>40		58	15.10
mean	32		
median	34		
mode	32		
Sex			
Male	308		80.2
Female	76		19.1
Marital status			
single		183	47.7
married		201	52.3
Religion			
orthodox		285	74.79
muslin		39	10.15
protestant		38	10.00
catholic		10	3.12
others		12	2.60

Table 2: Distribution of physicians by departments in Addis Ababa public hospitals, 2006, Addis Ababa, Ethiopia.

Department	Frequency	Percent
Internal medicine	115	29.9
Ob/Gyn	93	24.2
Surgery	79	20.4
Pediatrics	46	12.
Radiology	37	9.6
Orthopedics	15	3.9

Table 3: Knowledge about emergency contraception among physicians in public hospitals in Addis Ababa, Ethiopia, 2006.

		GMPs		Residents		Specialists		Total	
Questions about EC	Response	n= 30	%	n=276	%	n =79	%	n	%
-EC by type	(c)	29	(96.7)	276	(100)	79	(100)	383	99.7
-methods of EC	(c)	20	(66.7)	109	(39.5)	33	(41.8)	162	42.2
-timing of EC	(c)	16	(53.3)	122	(44.3)	35	(44.3)	173	45.2
-no prerequisites	(c)	14	(46.7)	101	(36.6)	10	(12.7)	125	32.6
-effectiveness	(c)	12	(40.6)	82	(29.6)	6	(7.6)	100	26.3
Knowledge scores									
-very good (4 or 5 /5)		5	(16.7)	72	(18.5)	16	(20.3)	93	24.2
-good (3 out of 5)		7	(23.3)	93	(33.7)	20	(25.4)	120	31.3
-poor (0 or 1 or 2 out of 5)		18	(60.0)	111	(40.8)	42	(53.9)	171	44.5

-All percentage are calculated on valid response only
-GPs: general practitioners (c)- brackets are number of respondents

Almost all participants 382 (99%) agreed on the role of EC on preventing unplanned and unwanted pregnancies and additionally the majority of respondents 298 (77.9%) supported promotion and provision EC. But only 134 (34.9%) of the physicians agreed on provision of EC by non medical professionals and similarly less than half 47.9% (188) physicians had approval for easy availability and accessibility of EC out side the areas of health delivery services like in hotels, schools, police stations etc. In general, when attitudes of physicians were assessed using Likert's test, the majority of physicians, 245 (64%) had favorable attitudes (Table 4).

Only less than half of the physicians 144 (37.6%) had ever counseled their clients or patients on EC and the majority of them accounting for 240 (72.4%) had never prescribed ECs in their past clinical practices.

Among those who counseled and prescribed EC, the majority of them 100 (70%) had never practiced it within the last one year. Similarly more than two third (101) counseling and provision of EC were done by physicians: GPs residents and specialists working in gynecological and obstetrics department (Table 5).

Table 4 Attitudes and past practices of respondents on EC in Addis Ababa public hospitals, Addis Ababa, Ethiopia, 2006.

Attitudes and practices	GPs		Residents		Specialists		Cumulative	
	freq	%	freq	%	freq	%	freq	%
Promotion								
agree	24	80	218	79	56	70.9	298	77.6
disagree	6	20	59	21	23	29.1	86	22.4
Provision including on medical professionals								
agree	2	6.7	110	38.9	22	27.8	134	34.9
disagree	28	92.3	165	61.1	57	72.2	250	65.1
Accessibility outside health services								
agree	24	80	125	46.7	39	49.4	188	47.9
disagree	6	20	150	54.3	40	50.6	196	52.1
Past practices								
Counseling								
yes	12	40	81	29.3	37	46.8	144	37.6
no	18	60	195	70.7	42	53.2	240	72.4
Prescribe								
yes	12	40	81	29.3	37	46.8	144	37.6
no	18	60	195	70.7	42	53.2	240	72.4

Physicians who ever counseled and prescribed EC before the survey were more likely to have a very good knowledge score ($p<0.0001$) and positive attitudes ($p<.001$) and history of past practices ($p<$ 015) than those who had never counseled or prescribed EC. When physicians were asked about their attitudes on promotion and provision of EC, the majority 316 (83.6%) agreed on the role of routine counseling and prophylactic provision of EC, for all women in the reproductive age groups, helps in provision, promotion and information dissemination of EC.

Similarly, when they were asked about their willingness on participation in promotion and provision of EC, 68.8% (220) were ready to give routine advice, counseling and advance prescription supply of EC, while they are in day-to- day hospital activities to all women in the reproductive age group when they visit the hospital for one or another reason. Only 122 (31.8%) of the respondents had disapproval, however the majority 198 (90%) had concerns on routine counseling and advance prescription supply of EC.

Some believe it may encourage repeated and improper use and others mentioned contraceptive and sexual risk takings among users (Table 6).

Similarly among those who agreed to offer routine counseling and an advance provision of prophylactic EC, 176 (80%) emphasized the need for comprehensive EC training for the service providers, and increased access to IEC materials for both the providers and clients.

Eighty four percent (322) physicians commented that better options of EC, advocacy, information dissemination, provision and promotion that can most effectively reach women other than routine counseling should be promoted. This is necessary in addition to an advance prophylactic provision of EC to clients. And among these, almost all (99%) mentioned mass media, printed materials, women organization and telephone including text massages and involvement of male partners in the advocacy effort.

Table 5 Attitudes and willingness on routine counseling and advance prescription supply among physicians, Addis Ababa, Ethiopia, 2006.

Attitudes	GPs		Residents		Specialists		Cumulative	
	Freq	%	Freq	%	Freq	%	Freq	%
Routine counseling helps in promotion, advocacy EC								
agree	18	60	240	87	59	74.7	316	83.6
disagree	12	40	36	13	20	25.3	68	16.4
Prophylactic provision prevents unintended pregnancy								
agree	18	60	240	87	59	74.7	316	83.6
disagree	12	40	36	13	20	25.3	68	16.4
Willingness routine counseling								
agree	17	56.7	160	76.2	43	56.7	220	68.6
disagree	13	43.3	50	23.8	33	43.3	96	12.1
Prophylactic provision								
agree	15	50	160	76.2	40	52.6	215	68.1
disagree	15	50	50	23.8	36	47.4	101	31.9

Table 6: Concerns of respondents on routine counseling and advance prescription provision of EC, Addis Ababa, Ethiopia, 2006.

Physicians Concern	F Frequency	percent
Moral and religious objection	8	6.6
Women rely on EC as regular contraception	22	18
Encourages irresponsible sexual behavior	32	26.1
Ineffective in preventing pregnancy	20	16.4
Fear of side effects	-	-
All	8	6.6
Any three reasons	23	18.9
Any two reasons	9	7.4
Total	122	100

Discussion

The higher response rate among residents (95%), compared to specialists (69%) and GPs (60%) was likely to be due to the different method of recruitment. The researcher visited residents' workplaces and shared information about the objective the study, while specialists and GPs received the questionnaire through the secretaries of medical organizations, without any contact with the researchers. This survey revealed that there was low knowledge level and also limited and wrong practices of EC even among gynecological and obstetrical specialists.

This survey also revealed that physicians working in gyn/obs department were more likely to be involved in EC care, a better knowledge and to be more familiar with the concept of EC than the other medical practitioners. This finding is similar to the survey done on KAP of EC among physicians and family planning providers in both developing and developed countries(7,8). Although there are number of factors sited for limited access and use of EC, partly it is attributed to limited knowledge which in turn brought limited practices among the providers.

Whether EC can fulfill its potential for decreasing unintended pregnancies depends on women's ability to easily obtain and use it and one of the strategies to increase access is the provision of an advance supply of EC.

In our survey, the attitudes of physicians on routine counseling and advance prescription supply of EC was favorable (83.6%) and among this 68.6% (220) were willing to practice the option. However, the majority 198 (90%) had concerns on routine counseling and advance prescription supply of EC. Some believe it may encourage repeated and improper use and others mentioned contraceptive and sexual risk takings among users.

This finding is similar to the studies done elsewhere (9, 10) but all studies which examined the impact of prophylactic supply showed increased use of EC without adversely affecting use of regular contraception including condom use. In fact, to the contrary, it helps women to be more responsible and improve to get STI/HIV/AIDS health education and prevention options.

In conclusion, the attitudes of physicians in Addis Ababa public hospitals on EC were favorable whereas knowledge and practices on EC is very low even among physicians working in gynecological and obstetrics departments. Therefore, appropriate training to all physicians should be organized on EC counseling and timely services.

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