

# Emergency contraceptive pills: Exploring the knowledge and attitudes of community health workers in a developing Muslim country

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## Abstract

**Background:** Unsafe abortion is a major Public health problem in developing countries, where women make several unsafe attempts at termination of the unintended pregnancy before turning to health services. Community health workers can act as a bridge between the community and their health facilities and can use Emergency Contraceptive Pills to significantly reduce the mortality and morbidity related to unsafe abortions. **Aims:** This study explores the knowledge, attitudes and practices of the Lady Health Supervisor of the National Program for Family Planning, district Rawalpindi, regarding emergency contraception pills. **Materials and Methods:** The cross sectional survey was conducted during the monthly meeting of Lady Health Supervisors. Self administered, anonymous and voluntary questionnaire consisting of 17 items, regarding demographic profile, awareness, knowledge, attitudes and practices, was used. **Results:** Insufficient knowledge, high misinformation and strongly negative attitudes were revealed. More than half did not know that emergency contraceptive pills do not cause abortion. About four fifths believed that emergency contraceptive pills will lead to 'evil' practices in society. More than four fifths recognized that the clients of National Program for Family Planning need emergency contraceptive pills. The attitudes were significantly associated with knowledge ( $P=0.034$ , Fisher's Exact Test). **Conclusion:** The awareness of emergency contraceptive pills is high. Serious gaps in knowledge have been identified. There is a clear recognition of the need of emergency contraceptive pills for the clients of National Program for Family Planning. However, any strategy to introduce emergency contraceptive pills must cater for the misplaced beliefs of the work force.

**Keywords:** Family planning, contraception, population control, maternal, mortality, maternal health, abortion, induced, unsafe, pregnancy, unwanted, family planning services, national program, Pakistan, developing nation, less developed nation, Muslim.

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## Introduction

The World Health Organization (WHO) estimates that in the developing countries one woman dies every eight minutes due to unsafe abortions [1]. These clandestine abortions are among the five leading causes of maternal mortality [2]. In the developing world, an estimated five

million women who undergo unsafe abortions require hospitalization annually. This is virtually all (98%) of the affected women [3]. Scarce resources are consumed, compromising other maternity services [4, 5]. Unsafe abortions remain a serious and neglected public health issue [1].

Induced abortion is common in Pakistan [6, 7]. The fertility rate in Pakistan has dropped by almost two births per couple, in the last two decades [8]. However, the desire to limit births has not been accompanied by a parallel increase in usage of contraceptives. This gap between the aspiration to reduce births and use of contraceptives represents an 'unmet need in family planning'. It has resulted in an exceptionally high prevalence of unwanted pregnancies [8, 9]. Almost one third of the currently married women have an unmet need for contraception [10]. It is not surprising then, to find that almost a million women in Pakistan opt for induced abortion, annually [11].

Emergency Contraceptive Pills (ECPs) are the only form of hormonal contraceptives that provide women a last chance to prevent pregnancy after unprotected sex [12-14]. They may be used when a condom breaks; when oral contraceptive pills have been missed or when a woman is raped or coerced into having sex [14]. ECPs contain higher doses of the hormones used in oral contraceptive pills and are effective if taken within third and fifth day (72-120 hrs) after unprotected sex [14-16]. They can reduce the risk of unintended pregnancy by 72% to 89% [17-21]. Furthermore, WHO confirms the safety of ECPs which meet all criteria for 'over-the-counter' sale [22, 23]. By themselves ECPs are not abortifacient.

Objections to the use of ECPs include concerns that; they may promote promiscuity; they may increase prevalence of sexually transmitted diseases; they may be abortifacient [24-28]; they may not be cost effective; they may be teratogenic or cause ectopic pregnancies [29]; that women having easy access to ECPs may become less diligent when using regular contraceptives [29, 30]; and that they may not have a significant impact on reducing the rate of unwanted pregnancies [29]. One study suggests that easier access to ECPs may increase sexual activity among teens. This has the potential to lead to an increase in unwanted pregnancies [31]. Furthermore, the reduction in pregnancies and abortion rate caused by increased access to ECPs has yet to be established conclusively through extensive field trials [29]. Other studies have shown that, ECPs are cost effective [32, 33], do not increase the incidence of sexually transmitted diseases [34, 35], are medically safe [22], and do not adversely affect regular contraceptive usage [34-37]. Additionally they provide women a last chance of avoiding pregnancy after unsafe sex [29].

In Pakistan family planning services are provided to the people by the National Program for Maternal Neonatal and Child Health (MNCH), the National Program for Family Planning (NP) and Ministry of Population Welfare in collaboration with Non Governmental Organizations (NGOs). The MNCH program under the direction of the Prime Minister has been setup to provide the full range of contraceptives at all health facilities in order to reduce the unmet need (33%) of contraceptives [38]. The NP, with its force of Lady Health Workers (LHWs) and Lady Health Supervisors (LHSs), provides family planning services at the doorsteps of the people. Despite efforts of Ministry of

Health, ECPs are currently not available to the population that is served by the NP [39]. It is expected that LHSs will play a vital role when ECPs are finally made available to this population. However, their knowledge of and attitudes towards ECPs have never been studied. This study attempts to identify the knowledge gaps and attitudes of LHSs of Rawalpindi district towards ECP.

## Materials and Methods

### *Study design and settings*

This cross sectional survey was carried out in January 2010 at the Rawalpindi District Program Implementation Unit (DPIU) of NP. A total of sixty seven LHSs work in this DPIU, overseeing a force of 1841 Lady Health Workers (LHWs). The LHSs supervise the delivery of modern family planning services to an estimated population of 1,895,770 women of child-bearing age, at their doorstep. All trainings are trickle-down from LHSs to LHWs. Also, the former provides on-job trainings to the latter. This study was conducted to explore the knowledge, attitudes and practices of these LHSs, before ECPs are included in the arsenal of contraceptives, delivered by the NP. The study received prior approval of provincial and district administrators.

### *Study population and sampling*

All 67 LHSs were eligible for the survey. However, on the day of the survey only 53 were present. They were informed of the objectives of the study. Confidentiality and anonymity were ensured. They were informed that participation was voluntary and anyone who was not willing to answer any particular question or did not want to contribute to the survey was free not to do so. They were asked to request for clarification if need be. At the end of the survey they were asked to fold their papers which were then collected.

### *Study tool*

A 17 item questionnaire was used. At the start of the survey tool, ECPs were defined as "contraceptive pills that are used to avoid pregnancies after unprotected sexual intercourse". Examples of an unforeseen visit of a spouse after protracted absence or unexpected breakage of the condom were also given. The next part collected the demographic characteristics of the participants including the age, marital status, years of education and rural or urban area of work. The third part examined the knowledge of the participants regarding ECPs. The fourth part assessed the attitudes of the participants. The fifth part evaluated their practices. Finally, they were asked if they perceived a need of emergency contraceptive pills for the clients of family planning services of NP.

The study instrument was based on similar surveys [40] that have been carried out in some other countries. However, certain questions were modified to conform to local cultural norms. For example, although the prior use of ECPs was enquired into, the associated sexual risk practices were not. Currently, at least three different organizations are promoting their own brands of ECPs in

Pakistan. These organizations have not made any significant attempt to educate the LHSs or LHWs about their products or their use. Consequently, although the health workers are aware of ECPs, their knowledge about them is rudimentary. We could not ask the participants to select an ECP from a list of several non-ECPs. A participant might have known another brand and might not recognize the one mentioned in the questionnaire. This would have resulted in a false negative answer.

Participants' knowledge of ECPs was determined by using four multiple choice questions. They were asked to; (1) identify from a list of several medicines, the one that was not an ECP, (2) recognize the maximum acceptable period after unprotected sex during which ECPs remained effective and (3), to confirm if ECPs were abortive drugs or not. They were also asked whether or not ECPs were harmful for future pregnancies. Each correct answer was equivalent to a score of 1. A total score of 3 or 4 was considered adequate knowledge.

The attitudes of participants were measured using four items on a four point Likert scale, ranging from Strongly disagree to Strongly agree. They were asked if they believed whether; (1) ECPs can lead to evil practices in society, (2) ECPs can be harmful for health, (3) they would themselves use ECP in absolute need and (4) they would recommend it to a friend. Using this four point scale a minimum score of 0 and a maximum score of 12 was set. Finally, on the same scale they were asked if they believed that their family planning clients would benefit from introduction of ECPs in the NP

#### Statistical Analysis

Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS 12.0). Percentage and frequencies were used to express results of descriptive statistics. Chi square and Mann-Whitney tests were used to examine relationships between variables.

## Results

#### Socio-demographic characteristics

Table 1 presents the socio-demographic characteristics of the participants. The mean age of the participants was 33, ranging from 24 to 48. Almost 75% (n=39) were married. In current education system 10, 12, 14 and 16 years of education correspond to Matriculate, Faculty of Arts (F.A), Bachelor of Arts (B.A) and Master of Arts (M.A), respectively. Only 3.8% (n=2) and 11.3% (n=6) had completed only 10 Years and 16 years of education, respectively. Majority (56%, n=30) had obtained a Bachelors degree. Many (24%, n=13) were only F.A. Majority (70 %, n=37) of the supervisors were resident of and serving in rural areas of Rawalpindi district.

#### Knowledge of ECPs

Table 2 shows the awareness of ECP and its source. General awareness of ECPs was high (75.5%, n=40) but practical use was low (17%, n=9). Green Star, a social marketing company was the major source (24.5%, n=13)

of awareness. Lady Health Visitors and doctors working at the designated health facility of LHSs led to awareness of 18.9 % (n= 10) and 11.3% (n= 6), respectively. Similarly, Population welfare organization and nurses were the source of information of 11.3% (n= 6) and 3.8% (n= 2) of the participants, respectively. Only 2 lady health supervisors mentioned that they heard of ECPs from television.

**Table 1** Socio-demographic characteristics

Characteristic	Frequency	Percent
<i>Marital Status</i>		
Married	39	73.6
Unmarried	14	26.4
Total	53	100
<i>Education Level (Years of schooling)</i>		
Matric (10 yrs)	2	3.8
F.A. (12 yrs)	13	24.5
B.A.(14 yrs)	30	56.6
M.A. (16 yrs)	60	11.3
Total	51	96.2
Missing	2	3.8
<i>Area of Service</i>		
Urban	14	26.4
Rural	37	69.8
Total	51	96.2
Missing	2	3.8

**Table 2** Awareness of ECPs and source

Have you heard of ECPs before?	Frequency	Percent
Yes	40	74.5
No	13	24.5
Total	53	100
<i>Where did you hear of ECPs from?</i>		
Green Star	13	24.5
Population Welfare	6	11.3
Doctor	6	11.3
Nurse	2	3.8
LHV	10	8.9
Others (TV)	2	3.8
Total	39	73.6
Missing	14	26.4

As seen in table 3, almost half of the participants (45% n= 24) could identify ECPs from a list of medicine. The duration after unprotected sex in which ECPs may be helpful in preventing an unwanted pregnancy, was correctly identified by 24% (n=13) of the respondents. Almost 64% (n=34) either thought that ECPs were abortive drugs or were not sure. More than half (53 % n=28)of the participants thought ECPs had harmful effects on future pregnancies.

The awareness and knowledge of the participants was not found to be associated with their age, marital status, educational background or past medical experience. However, the question regarding the mode of action of ECPs being abortive was associated with the area of their service and residence being urban or rural (Mann-Whitney U =114.5, p=.001).

**Table 3** Lady Health Supervisors knowledge about ECPs

Characteristic	Frequency	Percent
<i>Identification of ECP from a list</i>		
Right	24	45.3
Wrong	21	39.6
Total	45	84.9
Missing	8	15.1
<i>Identification of duration to take ECP</i>		
Right	13	24.5
Wrong	32	60.4
Total	45	84.9
Missing	8	15.1
<i>ECPs are early abortive techniques</i>		
Right	19	35.8
Wrong	10	18.9
Don't know	24	45.3
Total	53	100
<i>ECPs can be harmful for future pregnancies</i>		
Right	25	47.2
Wrong	3	5.7
Don't know	25	47.2
Total	53	100

#### Attitudes towards ECP

More than 81% (n=43) either strongly agreed or agreed that ECPs can lead to evil practices in society. More than 64% (n=34) believed that ECPs are harmful for health. Almost 30% (n =15) would not consider using or prescribing them to a friend, even in case of need. However, more than 83% (n=44) either strongly agreed or agreed that there is a need for ECPs for the family planning clients of the NP.

Using Chi square test, attitudes were found to be significantly associated with knowledge of the participants (P=0.034, Fisher's Exact Test). All of the participants who had negative attitudes regarding ECPs also had inadequate knowledge. Relationship was sought between attitudes and other variables like marital status, education, rural or urban area of residence, past medical professional background. However, no statistically significant association was found with any variable other than urban/rural residence of the participants. Strongly negative attitudes were found against use of ECPs. Majority (81%, n=43) of the participants believed that ECPs can lead to 'evil practices' in society. This attitude was found to be

associated with the rural/urban residence of the LHS (Mann-Whitney U =159, p=0.012).

## Discussion

Even though ECPs are not included among the methods adopted by NP, the general awareness about them was high (75%) among its LHSs. This 75% awareness level is more than that found among graduate students in India (7.3%) [41], Kenya (39%) [42], Ghana (43.2%) [43], clients for abortion in Cape Town SA (35.4%) [44] and USA (31%). This is understandable as their primary area of work is family planning, even though no formal ECP-related training is provided. Open discussions on media are widely accepted as being a major source of awareness for the general population. Only 3% of the sample indicated that they had learnt about ECPs from television. This indicates a lack of such discussions in the media. The importance of this limitation cannot be over emphasized [45].

Almost all (95% n=37) of the participants had heard of ECPs from formal sources. These included local social marketing companies, population welfare organization and local health professionals. 71% (n=32) of the participants displayed inadequate knowledge. This is different from the findings from Cameroon where formal sources were associated with adequate knowledge [40] and from Jamaica where even informal sources were associated with correct knowledge [46].

Some participants (17%, n=9) reported using ECP in the past. This is a relatively larger percentage as compared to 7.4% in Cameroon [40], 7.5% in Kenya [42] and 10% in Jamaica [46].

Most of the participant had inadequate knowledge of ECPs. This is understandable as formal training has not yet been provided to them. The majority of participants did not know the mechanism of action and deemed ECPs as abortive drug. In Pakistan as in other Islamic countries, abortion is illegal and considered immoral. The use and prescription of ECPs that are perceived to be abortive drugs may be resisted on these grounds. These religious and cultural factors, although important are not insurmountable, as is evident from comparison of trends in Bangladesh and Pakistan [45].

ECPs are safe, in fact safer than pregnancies, especially those that are unintended and where women do not have access to safe services [22, 47]. Several studies confirm the safety of their repeated use [48]. However, more than half of the participants thought that ECPs can harm future pregnancies. This harm might have been considered either due to the perceived teratogenic effects of the pills or delaying of future conceptions. In either case it will be difficult for the LHSs to promote ECPs if they are not convinced themselves. The non abortive mechanism of action and absence of serious side effects may be stressed during the introduction phase of ECPs.

The population served by the NP is divided into rural and urban groups. The former, in general, face a lack of facilities like schools and hospitals. Consequently they suffer from a low literacy rate and poor health indicators. The LHSs, by policy, work in the area of their residence. This area of residence seems to play some role in the knowledge and attitudes of the LHSs. It was found to be associated with the question regarding the abortive nature of ECPs and the belief that ECPs can lead to evil practices in the society. A significant number of LHSs of rural settings believed that ECPs were abortive drugs and that they may lead to evil practices in society. However, the cumulative score of attitudes was only related to the knowledge of the participants. This seems to be a significant find, assuring that good quality trainings and targeting the identified gaps of knowledge, may also improve the attitudes of the workforce.

## Conclusion

ECPs may have the potential to significantly reduce the morbidity and mortality associated with unsafe abortions which are a major cause of maternal deaths in developing countries. In Pakistan, the National Program of Family Planning bridges the gap between the community and health care system. However, the workforce of National Program has strong negative attitudes against ECPs. These attitudes have shown to be related to their knowledge of the subject. For smooth introduction of ECPs in its arsenal of the family planning methods, National Program of Family Planning may consider addressing the gaps in knowledge and misplaced beliefs.

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