

# Emergency Contraception: Knowledge, Attitude and Practice among Women of Childbearing-age at a Teaching Hospital of Lahore

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## ABSTRACT

**Aim:** To assess the knowledge, attitude and practices of emergency contraception among women of child-bearing age at a teaching hospital of Lahore.

**Study design:** It was a cross-sectional observational study.

**Place and duration of study:** Our study was conducted in Sharif Medical City Hospital affiliated with Sharif Medical and Dental College, Lahore from July 2017 to December 2017.

**Methodology:** Married women of child-bearing age, visiting our out-patient department, who gave informed consent, were enrolled in the study. The questions were asked and collected data was analysed using SPSS version 23.0.

**Results:** A total of 160 women were included in the study, out of which 27(16.9%) were aware of emergency contraception (EC) and 133(83.1%) were not. Of those 27 who were aware of EC, 24(88.9%) knew only about emergency contraceptive pills (ECPs) and 3(11.1%) only about IUCD for emergency contraception. Among those who were aware of EC, 9 (33.3%) have used it themselves and 18 (66.6%) have not. Usage rate, out of total 160 participants, was found to be 5.6%. Among those who have not used it, 14(77.8%) showed willingness to use it if needed and 4(22.2%) did not intend to use EC even if needed. Previous use or willingness to use it if needed was taken as positive attitude. It was found in 23(85.2%) out of 27 participants having knowledge of EC.

**Conclusion:** The awareness about availability of EC was disappointingly low in our study. Practice and positive attitude after having its knowledge was relatively better but was not up to the mark.

**Keywords:** Emergency Contraception (EC); Knowledge; Attitude; Practice

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## INTRODUCTION

Of the world population, 83% live in the less developed world which has high fertility rates, high maternal and infant mortality and low life expectancy<sup>1</sup>. Population Reference bureau 2017 stated that Pakistan ranks the 6th largest nation of the world. Population of the world is 7.5 billion and that of Pakistan is 199 million. Population of Pakistan is expected to be 311 million in the year 2050. It is very difficult for a developing country like ours to keep pace between fast growing population and its limited resources<sup>2</sup>.

The total fertility rate of Pakistan is 3.8 that means women in Pakistan have an average of 3.8 children<sup>3</sup>. In Pakistan, contraceptive prevalence rate (CPR; the percentage of women aged 15 to 49, who are currently using, or whose sexual partner is currently using, at least one contraceptive method) is estimated to be only 35% for all methods and 26% for modern methods as compared to 65% & 59% CPR in Asia, 55% & 48% in India and 77% & 57% in Iran<sup>1</sup>.

Family planning has two main roles, one is appropriate inter-pregnancy interval and the other is desired family size<sup>4,5</sup>. Unwanted, unplanned or mistimed pregnancies are an important problem of public health all over the world and especially in developing or under-developed world<sup>6</sup>. These pregnancies may result from improper or ineffective use of contraceptives<sup>7</sup>. Such situations are stressful for the woman & her family. Some women may choose termination of pregnancy or abortion to get rid of this burden. Others who continue with the pregnancy may remain emotionally disturbed and face difficulties in coping with the pregnancy, delivery and upbringing of child.

Emergency contraception is any contraceptive method used to prevent pregnancy after unprotected sexual intercourse like failure to use any contraception before-hand, improper use of contraception or sexual assault<sup>8</sup>. It is also called post-coital contraception. Emergency contraceptive pills and Copper T intra-uterine device are two main methods available for emergency contraception.

Emergency contraceptive pills (ECPs) are also called morning-after pill but one does not have to wait till morning to take it. These pills may be taken immediately after having unprotected intercourse or

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within 120 hours of this act and work by impairing ovulatory process<sup>9</sup>. ECPs may be combined ECPs (100mcg ethinylestradiol and 0.5 mg levonorgestrel), progestin-only ECPs (1.5 mg Levonorgestrel) or second generation antiprogestinulipristal acetate (30 mg)<sup>10</sup>. Out of these progestin-only ECPs containing levonorgestrel is easily available in Pakistan. Its single dose of 1.5 mg is as effective as two doses each of 0.75 mg at interval of 12 hours<sup>9</sup>. The combined ECPs regimen is to be taken as single dose or in two divided doses. The antiprogestinulipristal acetate (single dose) is most effective (62-85%) followed by levonorgestrel ECPs (52-100%) and then combined ECPs (74%)<sup>9</sup>. ECPs do not damage an established pregnancy and are not abortifacient.

Copper T achieves its effect by inhibiting implantation of fertilised ovum, which occurs 6-12 days after ovulation<sup>9</sup>. Therefore it can be inserted up to 5 days after estimated day of ovulation. So if a woman had unprotected intercourse three days before ovulation, copper-bearing IUD can prevent pregnancy even if inserted up to 8 days after intercourse. It is most effective EC with pregnancy rate of only 0.1%<sup>11</sup> with an advantage of being used as effective ongoing contraception for the next 12 years.

No death or any serious complication has ever been attributed to emergency contraception. There are no conditions where the risk, of using ECPs (combined, progestin-only or ulipristal acetate), outweigh the benefits<sup>12</sup>. Even women with cardiovascular disease, liver disease, migraine, previous ectopic pregnancy or those who are breastfeeding may use ECPs as total hormone content is low and duration of exposure is short. It is preferable to avoid combined ECPs in women having history of thrombo-embolism or stroke. These women can use other types of ECPs and copper-bearing IUD.

Minor side effects like nausea, vomiting or disturbed bleeding pattern in current and after-coming menstrual cycle may occur<sup>13</sup>. ECPs are not associated with birth defects and do not increase the risk of ectopic pregnancy. Breastfeeding women should avoid breastfeeding and discard pumped milk for at least 8 hours and not more than 24 hours. Obesity or being overweight may decrease the efficacy of levonorgestrel containing ECPs<sup>14</sup>. Emergency contraception is not a substitute for regular contraception as it is associated with 0.2-3 % failure rate<sup>15</sup>.

Emergency contraceptive methods, including pills and IUCD, have been available since many years. But many women are still unaware about the availability and correct use of these methods. They have misconceptions about it. Those who wish to use

it may not be able to do so because decision power may not rest with them. Studies have always been needed to gather factors affecting fertility and family planning. This can be used to develop awareness programs for our people, particularly women<sup>5</sup>. Most of the previous studies have addressed contraception in general with relatively few studies conducted about emergency contraception. These studies have been conducted both in developed world<sup>16, 17</sup> as well as less developed countries<sup>18, 19, 20</sup>. Our neighbour countries have also conducted research on this topic<sup>21, 22</sup>, but in our country research on this topic is scanty. We were able to find only one study in Pakistan<sup>6</sup> assessing the knowledge of women about emergency contraception and that was also conducted many years back.

The objective of our study was to find out the current status of knowledge, attitude and practices of our women regarding emergency contraception. If our result will show deficiencies in these aspects, recommendations will be made for improvement.

## METHODS

This cross sectional observational study was conducted in Sharif Medical City Hospital affiliated with Sharif Medical and Dental College, Lahore from July 2017 to December 2017. Approval was taken from our ethical committee. Sample size was calculated as 160 (95% confidence interval with acceptable difference of 0.05 at assumed proportion of having the knowledge regarding emergency contraception mentioned by another study at 11.5%<sup>6</sup>. It was a non-probability convenient sampling technique. A Performa with inbuilt consent form was developed in Urdu and was pre-tested in a small group of women. Married women of childbearing age visiting our outpatient department were informed about this study. Those who agreed to participate were given "Performa with inbuilt consent form". If the patient was literate, she filled it herself but if she was uneducated, the attending doctor asked her questions, wrote her answers in the Performa and got her thumb impression for consent. Those married women who were not of childbearing age or who refused to participate in the study were excluded from this study.

After the consent, patient's demographic information was recorded which included her age, education, monthly income of family and number of living children. Then these women were asked questions and collected data was analysed using SPSS 23. The results were interpreted and discussed in percentages for standardization.

**Knowledge:** Awareness of the availability of the EC is considered as positive response/ answer whereas

no knowledge about it was taken as negative response / answer.

**Practice:** Any previous history of EC usage.

**Attitude:** Intention of using EC when need arises is considered as positive attitude and no intention as a negative attitude.

**RESULTS**

A total of 160 women were included in the survey. Their ages ranged from 18 to 43 years with mean age of 27.96±5.45. The demographic characteristics of the participants are shown in Table 1.

Of the 160 participants, only 27 (16.9%) knew about emergency contraception and 133(83.1%) did not (Fig. 1). Out of these 27 positive respondents, majority 24(88.9%) knew about emergency contraception pills and only 3(11.1%) about IUCD as emergency contraception and none of them knew about both methods (Table 2).

Out of them who knew about it, 26(96.3%) had education of matric or above and only 3.7% had education less than matric or nil. When all participants having education of matric or above were analysed, 26(22.2%) had knowledge about these methods as compared to 91(77.7%) who did not know these methods. Participants having education of less than matric or no formal education, only 2.3% (1 respondent) had its knowledge and 97.7% (42 respondents) did not.

Majority of positive respondents were housewives (18) as compared to working women which were only 9. But when we analysed the response of all house-wives (140) who participated in this study, only 18(12.9%) knew about emergency contraception as compared to 122(87.1%) who did not know about it. On the contrast, among working women, 9(45%) had prior knowledge of emergency contraception as compared to 11(55%) who did not have such knowledge.

Majority of our participants, 116(72.5%) had one or more living children. Out of these, 20(17.2%) had knowledge about emergency contraception and 96(82.8%) did not. There were participant, 44(27.5%), who didn't have any living child. Out of these, 7(15.9%) knew about emergency contraception and 37(84.1%) did not.

Among total 160 participants, 68(42.5%) had monthly income of 20000 or less rupees. Out of these, positive respondents were 7(10.3%) and 61(89.7%) did not know. Another and almost equally large group, 67(41.9%) was with income more than 20000 and to 50000. Among these, 13(19.4%) knew about emergency contraceptive methods and 54(80.6%) did not. Group having monthly income of more than 50000, had 25(15.6%) participants. Out of

these 7(28%) were positive respondents and 18(72%) did not know.

Source of information was doctor in 14 (51.9%) cases, followed by family member or friend in 9(33.3%), family planning worker in 2(7.4%) and television or internet in another 2(7.4%).

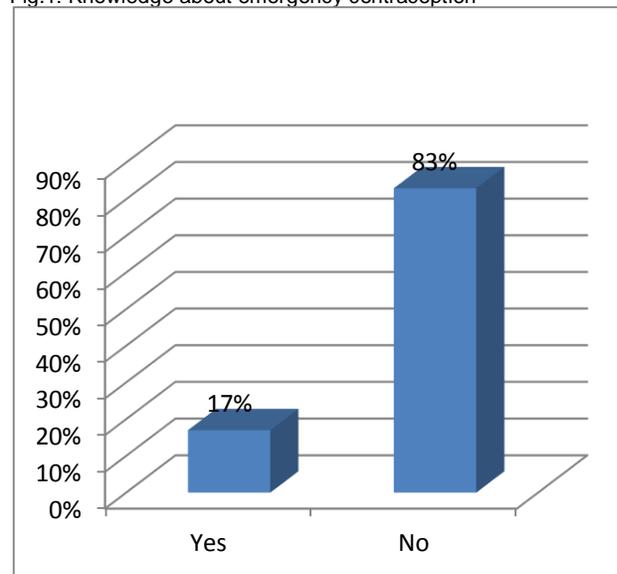
Out of 27 positive respondents, 21(77.8%) women stated that emergency contraception should be utilised as soon as possible and 5(18.5%) said that it can be utilised within next 72 hours and only 1(3.7%) thought that it can be utilised within 5 days of unprotected sex.

Out of those having knowledge of emergency contraception, 9(33.3%) had used it in the past and 18 (66.6%) had not. Use of emergency contraception among all 160 of our participants, was found to be 5.6%.

Table 1: Socio-demographic characteristics of the study participants (n=160)

Demographic Character	Frequency	%age
<b>Education</b>		
Less than matric	43	26.9
Matric or above	117	73.1
<b>Occupation</b>		
Housewife	140	87.5
Working Women	20	12.5
<b>Alive Children</b>		
No Child	44	27.5
One child or more	116	72.5
<b>Monthly Income of family</b>		
20000 or less	68	42.5
More than 20000 to 50000	67	41.9
More than 50000	25	15.6

Fig.1: Knowledge about emergency contraception



When these women who knew about emergency contraception but had not used it, were asked, will

they use it if needed, 14(77.8%) said that they will use it and only 4(22.2%) did not show intention to use it. When combined together, those who have used it and those who were willing to use it made 85.2% of respondents having knowledge of EC. Out of the remaining 4 women who have neither used EC nor showed willingness to use it when needed, all 4 (100%) mentioned religious or moral grounds for it.

Majority 21(91.3%) of those who had used it or were willing to use it said that they do discuss/ will discuss it with the husband before using it with only 2(8.7%) saying that it will be their own decision.

Table 2: Method of Emergency Contraception Known to Women Having Knowledge of EC (n=27)

Method Known	Frequency	%age
EC Pills	24	88.9
IUCD	3	11.1
Both EC Pills & IUCD	0	0

## DISCUSSION

One of the major determinants of fertility levels is contraception. Worldwide only 62% of married women aged 15-49 are using contraception<sup>1</sup>. This is a big challenge for agencies and governments to ensure access to appropriate contraceptives. Unmet needs and ineffective use of contraception may result in unintended pregnancies and may end up in abortions. Abortions are carried out both in developing and developed countries, but unsafe abortions are dominating in later. One woman dies every eight minutes due to unsafe abortions in the developing countries according to World Health Organisation<sup>36</sup>. Emergency contraception is considered the last chance to prevent unplanned or mistimed pregnancies. EC can be used to prevent conception after an unprotected or inadequately protected intercourse. It is commonly used in sex without contraception or for contraceptive failure like breakage of condom or missing a dose of contraceptive pills. It may be used multiple times and even in the same menstrual cycle.

This study confirmed the results of many previous studies, showing not only clear gaps in knowledge but also the presence of negative attitudes and obstacles in practices of emergency contraception. This study demonstrated that awareness about emergency contraception in women of child-bearing age is low, only 16.9%. It is slightly better than 11.5% awareness reported by Farhana Irfan in 2009 from Karachi<sup>6</sup>.

This awareness is almost comparable to what has been reported by Pui S<sup>21</sup> and Takkar N<sup>22</sup> from our neighbour country India which may be because of similarities in education level and lifestyle. But Reva Tripathi<sup>24</sup> from North India has reported that

awareness was non-existent in women of his study group and was only partial in their healthcare providers. On the contrary, Hafizur Rahman<sup>23</sup> from Sikkim, India has reported 40.6% awareness among his participants. This wide difference in result is probably due to great difference in the demographic characteristics of the study group, in particular their education level.

When we compare awareness level with other Muslim countries, awareness found in our study is comparable to 17% reported by M Simbar<sup>25</sup> from Iran but is higher than 8% reported by another author<sup>26</sup> from Iran and 6.1% reported in Kuwaiti women<sup>27</sup>.

Disappointingly, awareness level found here is much lower than reported from other less developed world, 51.4% in Ghana university students<sup>20</sup>, 84.2% in Ethiopian undergraduate students<sup>18</sup> and 63% in university students of Cameroon<sup>19</sup>. This awareness appears to be more disappointing when we compare it with developed countries<sup>28, 29</sup>. It was found to be 98% in female college student of New York<sup>17</sup>.

In our study, knowledge was found to be incomplete, with 88.9% having information about ECPs only, 11.1% knowing that copper-bearing IUCD can be used as emergency contraceptive method and none knowing about both methods. It is comparable with findings of Farhan Irfan (6) which reported that all those who knew about EC, knew about ECPs and none about IUCD for emergency contraception.

Knowledge of positive respondents was also deficient regarding correct timings of emergency contraception, with only 3.7% knowing that it can be utilised within next 5 days (120 hours), 18.5% stating that it could be used within 72 hours and 77.8% stating that it has to be used immediately after unprotected sex. In another study from Karachi<sup>6</sup>, where correct timing was defined as within 72 hours, 40% positive respondents gave correct answer.

For the majority (51.9%) of positive respondents in our study, source of information was doctor and for another 33.3% it was a family member or friend. Whereas in the other study by Farhana Irfan<sup>6</sup> doctor or family planning provider combined together was source of information in 50% cases and friend and family member in 32.5%.

Out of those who had information about EC, 33.3% had used it personally which is comparable to 32.5% reported from Karachi<sup>6</sup>. In our study, 85.2% of women who were aware of EC showed positive attitude towards it which is slightly better than 77.5% reported by Farhana Irfan<sup>6</sup>. In our study, remaining 14.8% of women who were aware of EC, showed unwillingness to use it even if needed. Reason for this unwillingness to use was religious / moral in all of these, and this finding was same as reported by

Farhana Irfan<sup>6</sup>. Positive attitude in our study is much better than 32.3% reported from Ethiopia<sup>18</sup>.

Among those who showed positive attitude towards EC in our study, 8.7% participants said that they would use their right to decide themselves about the use of EC. It was reported to be 23% from Karachi<sup>6</sup>.

The overall use of emergency contraception in our study population was 5.6% which is slightly better than 3.25% reported by Farhana Irfan<sup>6</sup>. It is much better than 0.2%, which was reported in other studies conducted in Kohat<sup>2</sup> and 0.6% in Lady Aitchison Hospital, Lahore<sup>5</sup>. But this usage rate is much lower than 35% & 37.6% reported from Ethiopia<sup>18, 30</sup>.

Emergency contraception is safe and effective. But like other contraceptives, negative beliefs, attitudes and myths surround it. There is a misconception that it is abortifacient<sup>31</sup>. Even doctors in unrelated specialities do not have adequate and up to date knowledge with current recommendations<sup>31, 32</sup>. Lack of spousal communication (partners not sharing information with each other openly) also has negative impact on reproductive health behaviour. Husband and mother in law may impose social constraints. Fear of side effects and health concerns are found in general public. Negative attitudes of service providers are another limiting factor. Many women do not have access to service providers. Low literacy rate and poor socio-economic status are significant factors and these are most difficult to overcome.

Our study has its limitations. It was conducted in a small group of women and in only one hospital of Lahore. Further studies at both national and regional levels, on a larger scale, in different hospitals and in different social and economic groups of our society are needed to draw more reliable results. Our result of awareness may be higher because in our participants 96.3% had education of matric or above. Overall situation in our country is very different, with only 18% female having received 10 years of schooling or more<sup>33</sup>, 21.8% females participating in labour force<sup>34</sup> and average monthly family income of 35662 PKR<sup>35</sup>.

Another limiting factor of our study is use of Performa with limited options of answers. Use of this tool may not allow respondent to express their ideas and thoughts truly and in full depth.

## CONCLUSION

To conclude, our results show that utilisation of emergency contraceptive methods is not up to the mark. This is mainly because of lack of knowledge about these, doubts & misconceptions regarding its permissiveness in religion / on moral grounds and

low level of decision making given to woman, not only in our country but almost in all less developed world. We have to do efforts to overcome obstacles like illiteracy, poverty and negative attitudes towards woman empowerment. Our people and specially women need to be provided with information about health in general and reproductive health & family planning (including emergency contraception) in particular. This has to be done while taking care of our cultural & religious norms. These efforts will help us in building healthy and satisfied families & proud nation.

## REFERENCES

1. Population Reference Bureau 2017, World Population Data Sheet. [www.prb.org/pdf17/2017\\_World\\_Population.pdf](http://www.prb.org/pdf17/2017_World_Population.pdf).
2. MusarratJabeen, FouziaGul, FarmanullahWazir, NargisJaved. Knowledge, attitude and practices of contraception in women of reproductive age. *Gomal Journal of Medical Sciences* July-December 2011, Vol. 9 (2): 223-229.
3. National Institute of Population Studies (NIPS) Pakistan 2013. Women Wellbeing and Child Health, An In-depth Analysis of PDHS Data 2012-2013.
4. Dabral S, Malik SL. Demographic study of gujjars of Delhi: UV. Knowledge attitude and practice of family planning. *J Hum Ecol* 2004; 16: 231-237.
5. Sajid A, Malik S. Knowledge, attitude and practice of contraception among multiparous women at Lady Aitchison Hospital, Lahore. *Annals* 2010; Vol 16 No 4: 266-269.
6. Farhana Irfan, Syed Irfan Karim, Saman Hashmi, Sajid Ali, Syed Arif Ali. Knowledge of emergency contraception among women of childbearing age at a teaching hospital of Karachi. *JPMA*. 2009, 59(4), 235-240.
7. Saleem S, Fikhree FF. The quest for small family size among Pakistani women is voluntary termination of pregnancy a matter of choice or necessity. *Journal of the Pakistan Medical Association*. 2005, 55, 288-291.
8. Neinstein LS, Gordon MC, Katzman KD, Rosen SD, Woods RE: *Adolescent Health Care: a practical guide*. Edited by: Lippincott Williams and Wilkins. Philadelphia, 5, 2008: 533-649.
9. James Trussel, Elizabeth G Raymond, Kelly Cleland. Emergency contraception: A last chance to prevent unintended pregnancy. . Office of the Population Research: November 2017. [ec.princeton.edu](http://ec.princeton.edu).
10. Li HWR, Lo SST, Ng EHY, Ho PC. Efficacy of ulipristal acetate for emergency contraception and its effects on subsequent bleeding pattern when administered before or after ovulation. *Hum Reprod*. 2016; 31: 1200-1207.
11. Cleland K, Zhu H, Goldstruck N, Cheng L, Trussel J. The efficacy of IUDs for emergency contraception: a systematic review of 35 years of experience. *Hum Reprod*. 2012; 27: 1994-2000.
12. Centres for Disease Control and Prevention. U S. Medical Eligibility Criteria for Contraceptive Use. *MMWR* 2016; 65: 1-108.
13. Shen J, Che Y, Showell E, Chen K, Cheng L. Interventions for emergency contraception. *Cochrane Database Sys Rev*. 2017, Issue 7.
14. [http://www.ema.europa.eu/doc/en\\_GB/document\\_library/Referrals\\_document/Emergency\\_contraceptives\\_31/WC500176384.pdf](http://www.ema.europa.eu/doc/en_GB/document_library/Referrals_document/Emergency_contraceptives_31/WC500176384.pdf). Accessed 9 February 2017.
15. Van Look PFA, Von Hertzen H: *Emergency Contraception*. *British Medical Bulletin* 1993, 49: 158-170.

16. Danielle N Atkins, W David Bradford. The effects of changes in state and federal policy for nonprescription access to emergency contraception on youth contraceptive use: a difference-in-difference analysis across New England States. *Contemporary Economic Policy* 2015; Vol 33(3), 405-417.
17. Mary T Hickey. Female college students' knowledge, perception, and use of emergency contraception. *Journal of Obstetrics & Neonatal Nursing* 2009, 38(4), 399-405.
18. Fatuma A Ahmed, Kontie M Moussa and Karen O Petterson, Benedict O Asamoah. Assessing knowledge, attitude and practice of emergency contraception: a cross-sectional study among Ethiopian undergraduate female students. *BMC Public Health* 2012, 12, 110.
19. Eugene J Kongnyuy, Pius Ngassa, Nelson Fomulu, Charles SheyWiysonge, Luc Kouam and Anderson S Doh. A survey of knowledge, attitudes and practice of emergency contraception among university students in Cameroon. *BMC Emergency Medicine* 2007, 7(7), 1.
20. Victor N Addo, Eva DedeTagoe-Darko. Knowledge, practices and attitudes regarding emergency contraception among students at a university in Ghana. *International Journal of Gynaecology & Obstetrics* 2009, 105(3), 206-209.
21. Puri S, Bhatia V, Swami HM, Singh A, Sehgal A, Kaur AP. Awareness of emergency contraception among female college students in Chandigarh, India. *Indian J Med Sci* 2007, 61, 338-346.
22. Takkar N, Goel P, Saha PK, Dua D. Contraceptive practices and awareness of emergency contraception in educated working women. *Indian J Med Sci* 2005, 59, 143-149.
23. HafizurRahman, EzzatKhalda, SumitKar, LathaKharka, Golay Paden Bhutia. Knowledge of, attitudes toward, and barriers to the practice of emergency contraception among women in Sikkim, India. *International Journal of Gynaecology & Obstetrics* 2013, 122(2), 99-103.
24. RevaTripathi, AsmitaMuthalRathore, JyotiSachdeva. Emergency contraception: knowledge, attitude and practices among health care providers in North India. *The Journal of Obstetrics and Gynaecology Research* 2003, 29(3), 142-146.
25. M Simbar, F R Tehrani, Z Hashemi. Reproductive health knowledge, attitudes and practices of Iranian college students. *La Revue de Sante de la Mediterraneeorientale* 2005, 11 (5/6), 888-897.
26. Babae G, Jamali B, Ali M M. Investigating the knowledge, attitude and its relationship with the mean of using emergency contraception. *J Sex Marital Ther* 2003, 29, 269-275.
27. Marafie N, Ball D, Abahussain E. Awareness of hormonal emergency contraception among married women in a Kuwaiti family social network. *European J of ObstetGynecolReprodBiol* 2007, 130, 216-222.
28. Fitter M, Urquhart R. Awareness of emergency contraception: a follow up report. *J FamPlannReprod Health care* 2008, 34, 111-113.
29. Abbott J, Feldhaus KM, Houry D, Lowenstein S R. Emergency contraception: what do our patients know? *Ann Emerg Med* 2004, 43, 376-381.
30. Etalemahu D. Assessment of barriers of emergency contraception use among antenatal care clients of Addis Ababa health centers. Addis Ababa University Libraries Electronic Thesis and Dissertations: AAU-ETD, Faculty of medicine: Thesis-public health 2007([http://etd.aa.edu\\_et/dspace/handle/123456789/817](http://etd.aa.edu.et/dspace/handle/123456789/817)).
31. Hamza M, Abdulghani, Syed I karim, Farhanalrfan. Emergency contraception: Knowledge and Attitudes of Family Physicians of a Teaching Hospital, Karachi, Pakistan. *Journal of Health PopulNutr* 2009, 27(3), 339-344.
32. Sue S T Lo, Wai-mingKok, Susan Y S Fan. Emergency contraception: Knowledge, attitude and prescription practice among doctors in different specialities in Hong Kong. *The Journal of Obstetrics and Gynaecology Research* 2009, 35(4), 767-774.
33. Youth and skills: putting education to work, EFA global monitoring report, 2012; 2013". Retrieved 2014-08-03.
34. Hayat, Malik. Pakistan Employment Trends for Women. Labour market Information and Analysis Unit. Ministry of Labour and Manpower. 5(2): 13-17. Retrieved 2010-01-13.
35. Ceicdata.com/en/indicator/Pakistan/data/average-monthly-income-household
36. World Health Organisation: Unsafe Abortions; Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2003. 5<sup>th</sup> edition.