Medico Research Chronicles

ISSN No. 2394-3971

Original Research Article

EFFECTIVENESS OF A TRAINING PROGRAMME ON EMERGENCY CONTRACEPTIVES: A STUDY AMONG GRASS ROOT LEVEL HEALTH WORKERS

Aparajita Dasgupta[1], Amitava Kumar[2*], Sanjaya kumar Sahoo[3], P S Preeti[4], Dhiraj Biswas[5], Sudipta Das[6]

Professor & Head of Department[1], Junior Resident[2,3,4,5,6]

Department of Preventive and Social Medicine, All India Institute of Hygiene and Public Health, Kolkata,110, C. R. Avenue, Kolkata-700073, West Bengal

Submitted on: December 2014
Accepted on: December 2014
For Correspondence
Email ID:
dramitavakumar@gmail.com

Abstract

Introduction: Accurate knowledge of Emergency Contraceptive procedure among the peripheral health workers is absolutely essential so that they percolate the correct knowledge and also ensure adequate practice in the community they serve especially among women of reproductive age group which will ultimately lead to reduction of unwanted pregnancies and unsafe abortions. **Objectives**: To find out the knowledge on Emergency Contraception among health workers prior to and after health education regarding EC and to assess the impact of the training in the form of improvement of knowledge on the subject **Method**: Institution based cross –sectional study among health workers. At the beginning the health workers were asked to fill a self-administered questionnaire following which training was given on emergency contraceptives. All efforts were made to make the training contents appropriate, adequate, simple, and concise and at the same time very informative. The session was very interactive, lively and enjoyable. 2 weeks after the training programme a posttest schedule was again filled up by the participants in order to assess the improvement of their knowledge. The health workers' knowledge (preand post-intervention) was measured with the help of scores. **Result**: Mean (SD) pre-intervention knowledge score was 14.37±6.698 while Mean (SD) post intervention score was 29.52±6.057. There was statistically significant difference between pre intervention and post intervention scores. **Conclusion**: A well-organized training programme on EC will enhance the knowledge of the health workers and this on turn will be very beneficial for the community especially for women of reproductive age group.

Keywords: Emergency Contraceptive, Health worker, Intervention, knowledge, unprotected intercourse, unwanted pregnancy.

Introduction

Emergency contraception (EC) refers to contraceptive methods used by women in the first days following unprotected intercourse. Use of emergency contraception can reduce the risk of pregnancy if used up to 120 hours after unprotected intercourse or contraceptive failure and is most effective if used in the first 24 hours.

Indications for the use of emergency contraception include sexual assault, unprotected intercourse, condom breakage or slippage, and missed or late doses of hormonal contraceptives, including the oral contraceptive pill, contraceptive patch, contraceptive ring (i.e., improper placement or loss/expulsion), and inject able contraception. Though a battery of contraceptive methods are available and there has been an increase in their use, a large number of unwanted pregnancies are due to the failure or incorrect use of conventional contraceptives and often women are at a loss as to what measures to take to overcome the immediate problems of an unprotected sex. Emergency contraception could be answer tothese problems.

The results of NFHS show that in India a sizeable population of pregnancies are either unplanned or unwanted and these pregnancies add to the population burden or the woman resort to pregnancy termination by traditional or harmful methods leading to serious health consequences. Annually 11 million abortions occur in India, majority being illegal and unsafe, killing about 20,000 women.

The Drug Controller General of INDIA has approved levonorgestrel, a POP as the dedicated product of EC and it has been introduced in Family Welfare Programme since 2003 and is available as over the counter product. The peripheral health workers can play a pivotal role in disseminating correct knowledge about the use of Emergency contraceptives. However various studies suggest that most of these providers were familiar with the concept of emergency contraception and endorsed its practice, but lacked accurate and detailed information about method use. They also overestimated contraindications and potential side effects. Hence there is a gross underutilisation of emergency contraceptive among the general mass.

With this backdrop a study was conducted to assess the impact of health education on EC among some grass root level health workers from 2 districts of West Bengal.

Objectives

1. To assess the knowledge of health workers on emergency contraception.
2. To give health education to the health workers about the currently existing emergency contraceptive procedures.
3. To evaluate the impact of intervention in the form of improvement of knowledge about the emergency contraceptive procedures.

Materials and Methods:

Study settings:

The study was conducted at West Bengal Voluntary Health Association (WBVHA).The WBVHA is a NGO which conducts the training of health workers operating in the adjoining districts of Kolkata. The researchers took the responsibility of providing high quality training on Emergency Contraceptives to grass root level nongovernment health workers hailing from 2 districts of West Bengal (North 24 parganas and South 24 Parganas).Total number of participants was 92

Study tools:

1. **A pre-designed pre-tested Questionnaire** for assessing pre and post intervention knowledge level among health workers regarding emergency contraception. The questionnaire had two parts –

   The **first part** contained queries regarding relevant socio demographic characteristics and other relevant information of the study population like

   1. Age
   2. Educational qualification
   3. Training received
   4. Years of service

The **second part** contained MCQs on various aspects of Emergency Contraceptive practices like knowledge

on where to practice, the difference between Emergency Contraceptive practices and abortions, the methods available, the optimum time for use of each method and their side effects.

A score of 2 was allotted for correct answer and zero for wrong or no answer. Altogether there were 19 questions.

2. **Slides, printouts and other study materials** for CME session arranged for health worker for filling up of their gaps regarding knowledge onemergency contraception. Face validation and content validation of the schedule and adequacy and appropriateness of the teaching contents were confirmed and cross checked by the experts of the Dept. of Preventive and Social Medicine, All India Institute of Hygiene and Public Health, Kolkata.

Method of data collection:

The study was approved by the Institution Ethics Committee ofAll India Institute of Hygiene and Public Health. Before starting the studypermission was obtained from the WBVHA authority.

Activities on Day 1

- All participants were explained about the purpose of the study and that the knowledge that they would accrue would benefit the community they serve. They were also assured that all data provided by the participants would be kept confidential. After getting their approval regarding participation in this study the informed consent was collected from all participants.
- The schedule was used to collect the baseline data regarding

✓ The socio demographic characteristics and training experience of the participants

✓ Their knowledge regarding the important issues of EC

- Educational intervention programme was conducted by the researchers amongst the health workers through audio visual aid and lecture focussed on the different aspects of emergency contraception. All efforts were made to make the education session ample, adequate and appropriate and at the same time concise and clear.It was specifically designed to impart a comprehensive knowledge, on all aspects of Emergency Contraceptive service. The participants were apparently were very active listeners. This was followed by an interactive session which turned out to be very interesting and participatory. It was ensured that the queries of all the participants were clarified and as a result the involvements of the study subjects were full of enthusiasm and fervour.

Activities on Day 2

The post intervention assessment was conducted after 2 weeks amongst the study participants using the same questionnaire used for pre intervention assessment of knowledge.

It was felt by the researchers that the post intervention assessment immediately after the education session would not reflect the true impact of intervention because it would involve only the recent memory of the participants and that a gap of minimum period of two weeks is necessary to accurately assess the effect of intervention and also the amount of retention and the sustenance of the knowledge acquired following the health education session on Emergency Contraception.

Statistical Analysis Plan

Data was analyzed using appropriate statistical methods by SPSS (version 20). Paired sample t-test test was used for assessing the impact of educational intervention on the knowledge of Emergency Contraception.

Results and Analysis

Table 1: Socio-Demographic characteristics of the study population. (n=92)

Variable	Frequency (%)
Age groups 20-30 31-40 41-50 51-60	 23(25) 40(43.48) 23(25) 6 (6.52)
Sex Male Female	 26(28.3) 66(71.7)
Education Below secondary Secondary HS Graduate and PG	 6 (6.5) 30 (32.6) 24 (26.1) 32 (34.8)
Training received Yes No	 25 (27.2) 67 (72.8)
Experience in service (years) ≤ 5 >5	 61(66.3) 31(33.7)

Table 1 show that about **71.7%** health workers were females. **34.8%** completed education upto graduate or post- graduate level. But only **27.2%** had any prior training regarding Emergency Contraceptive procedures. Most of the workers had an experience of less than five years. **(66.3%).**

Table 2: Comparison between pre- intervention knowledge score of participants with post-intervention knowledge score by paired-sample t-test

Sample T-test Knowledge	Pre Score (Mean ±SD)	Post Score (Mean±SD)	Mean Difference	Significance
Total score	14.57 ±6.69	29.52 ±6.05	14.957	**.000**
Knowledge of indications of EC use	2.8±2.11	4.98 ± 1.58	2.174	**.000**
Knowledge of difference between abortions and EC	1.74±0.67	1.67 ±0.74	0.065	.470
Knowledge about types of EC	0.02±0.2	0.96±1.00	0.935	**.000**
Knowledge about E.C.P.	5.61± 3.70	13.83±3.06	8.217	**.000**
Knowledge about Emergency I.U.D.	4.35±2.95	8.11±2.41	3.761	**.000**

Table 2 shows that the mean post test score was **29.52** while mean pre-test score was **14.57** and this difference is statistically significant. **(p=0.000)**. Also difference of mean post test scores of knowledge of EC regarding indication of EC, types of EC, ECP and IUD and their respective pre-test scores were statistically significant. **(p=0.000)**. However the difference of mean pre and post test scores regarding knowledge of difference between abortions and EC was not found to be significant**. (p=.470)**

Table 3 : Impact of Educational intervention on knowledge of the respondents by Mc Nemar's chi square test

Questions	Correct response in pre test (%)	Correct response in post test (%)	Exact sig. (2 sided)
Knowledge on indication of use			
Unprotected sex	59.78	92.39	**.000**
Sexual assault	44.56	86.95	**.000**
Failure of contraception	33.69	69.56	**.000**
Knowledge on the difference of EC & Abortion			
Any difference between EC & Abortion	85.86	84.78	1.000
Knowledge regarding types of EC			
How many types of EC methods are available	2.17	44.56	**.000**
Knowledge regarding ECP			
How many types of ECPs are available	8.69	89.13	**.000**
How long ECPs can be used	33.69	91.30	**.000**
How many ECPs are required	10.86	77.17	**.000**
Side effects of ECPs			
Nausea / Vomiting	52.17	90.21	**.000**
Irregular Bleeding	18.47	80.43	**.000**
Breast tenderness	30.43	69.56	**.000**
Knowledge on whether regular contraception to be used along with EC	47.82	53.26	1.000
Knowledge on whether EC interferes with Breast feeding	34.78	79.34	**.000**
Knowledge on whether EC interferes with treatment of STIs	41.30	72.82	**.000**
Knowledge on the use of IUD as emergency contraceptive			
How long IUDs can be used	17.39	69.56	**.000**
Knowledge on the Contraindications for the use of IUD			
Whether IUDs can be used in pregnancy	65.21	84.78	**.003**
Whether IUDs can be used in presence of RTI	41.30	76.08	**.000**
Whether IUDs interfere with Breast feeding	54.34	80.34	**.000**
What is the periodicity of replacing the IUDs	43.47	95.65	**.000**

Table 3 shows that there was improvement in the post intervention score on 17 of the total 19 questions compared with their pre intervention scores and this difference was statistically significant as assessed by Mc Nemar's matched chi square test .However regarding the

difference between the Emergency Contraception and abortion and whether to continue with regular contraceptives along with EC there was no change in their knowledge status.

Discussion

Various studies from different parts of the world have shown that there is a dearth of knowledge among health – workers about Emergency Contraceptive practices.

In a study in Mexico City by Ana Langer et al they have detected limited knowledge but cautious approach among health care providers who greatly over estimated the negative health effects of EC.[9]The present study also suggest the lack of knowledge among the health workers regarding the types of Emergency Contraceptive measures available, what is the best time to use them, their potential side effects and their remedies. This has been demonstrated in their poor mean pre-test score. (**14.57± 6.69**).

In a study among health –workers in Ho-Chi Minh city in Vietnam it was found that the providers were familiar with the concept of EC and followed them in practice but lacked detailed information about the method of use overestimated contraindications and potential side effects.[2]

In a study in Nairobi conducted among Kenyan nurses and nursing students Peter B Ginchangi et al. found that only **48%** of the respondents had heard about EC**. 77%** of them approved their use in rape victims and **21%** for adolescents and school girls.[3]

A cross-sectional study using self-administered questionnaire was conducted by Najafi -Sharjabad F et al. on knowledge, attitude, and practice about **Emergency Contraception** among health staff in Bushehr state, south of Iran. A sample of 170 health staff was surveyed. The mean age of respondents was 30.6±5.1. Overall 6.5% of participants had poor EC knowledge, 25.2% moderate knowledge, 68.3% good knowledge about EC. Half of participants had positive and half had negative attitude towards the EC method. Midwives and family health workers were more knowledgeable ($p<0.05$) and more frequently counseled women about EC than general practitioners (GPs) ($p<0.001$). The findings showed despite of majority of health staff had good knowledge about EC, their knowledge about the indications for prescription of EC and its side effects was inadequate. [19]

The present study highlights the fact that **72.8%** did not receive any sort of training regarding EC. The Mean pretest knowledge score was poor.(**14.57±6.69**).However there was great improvement in the posttest score (**29.52±6.05**) emphasizing the need of more such interventions in this sphere. This will enhance the provider's knowledge which would enable them to educate the women of reproductive age group about the Emergency contraceptive procedures as well as clear any doubts in their minds regarding their use.

The considerable escalation in the post test score bears testimony to the fact that high quality training to the field workers on this issue is absolutely the need of the hour.

The educational intervention programme though largely successful had its grey area as well. There was no significant change in the knowledge on the difference of and abortions. (**p=1.000**) and also on the fact whether to continue the use of regular contraceptives along with Emergency contraceptive pills (**p=1.000**).This indicates that health education has failed to make necessary inroads in this area suggesting that future interventions should focus more on this area. The interventions should be such that it should reach the core of the heart and should be free from medical jargons. In the present case when we realized that our training had failed to make substantial impact on these two key issues we went

back to them and provided the necessary inputs.

Although 27.2% did receive some sort of training in the past, the training failed to have any major impact on their existing knowledge on Emergency Contraception. .This points to the need for regular periodic interventions in the form of health education to constantly improve their knowledge in this field. The quality of training is also very important. It should be comprehensive and should encompass every relevant aspect of Emergency Contraceptive practice.

Conclusion

The present study highlights that in spite of the fact that Emergency Contraception has been incorporated in the National Family Planning programme for quite some time the health providers at the ground level lacked the detailed knowledge on the composition of Emergency Contraceptives, their side effects and how the regimen works. This in many cases leads to ambivalent attitude on the part of the health workers towards Emergency Contraceptive practices. Therefore high quality training on the basics of emergency contraceptives should be imparted to all health personnel belonging to both government and non-government organization especially those who are working at the grass root level. They on their part will disseminate the knowledge acquired to all women of reproductive age group and help the latter in taking up their contraceptive decision making. This in the long run will prevent unwanted pregnancies and unsafe abortions and thus reduce maternal morbidity and mortality making this nation healthier and happier.

Acknowledgements

All members of West Bengal Voluntary Health Association and all participants without whom the study would not be a success. There was no external funding source.

References

1. International Institute for Population Sciences (IIPS) and Macro International. 2007. National Family Health Survey (NFHS-3).2005-06: India: vol.1. Mumbai: IIPS: 2007
2. Ngoc NTN, Ellertson C, Surasrang Y, Loc LT .Knowledge and Attitudes about Emergency contraception among health workers in Ho Chi Minh City,Vietnam. International Family planning perspective1997; 23:68-72.
3. Gichangi P B, Karanja JG, Kigondu C S, Fonck K, Temmerman M. Knowledge, attitude and practices regarding emergency contraception among nurses and nursing students in two hospitals in Nairobi , Kenya. Contraception 1999; 59: 253-6.
4. Mondal A, Ghosh D, Seal S L ,Bose C, Chakraborty A K. Knowledge, attitude and practices of emergency contraception among beneficiaries and providers. J Indian Med Assoc 2006: 104:551-3.
5. Efetie ER, Umezulike AC, Agboghoroma CO, Ewuze-Wokocha MN. Emergency Contraception. Awareness and knowledge among Hospital workers in Abuja, Nigeria. Nigerian Journal of Clinical Practice 2002:5(2):99-102.
6. Tripathi R, Rathore A M, Sachdeva J. Emergency Contraception: Knowledge, attitude and practices among health care providers in North India . J Obstet Gynaecol Res 2003; 29:142-6.
7. Sevil U, Yanikkerem E, Hatipoglu S. A survey of knowledge, attitudes and practices relating to emergency contraception among health care workers in Manisa, Turkey.Midwifery2006; 22: 66-77.
8. Kishore V, Misro MM, Nandan D. Provider's knowledge, attitude and dispensing practices of E-pills in government dispensaries of south district

in Delhi, India. Ind J Com Med; 35:1:46-51.
9. Ana Langer, Cynthia Harper, Cecilla Garcia- Barrios, Ralfael Schiavon, Angela Heimburger, Batya Elul, Sofia Reynoso Delgado, Charlotte Ellertson. Emergency Contraception in Mexico City! What do health care providers and potential users know and think about it? 1999. Contraception 1999; 60 (4) : 233-41.
10. Schrager SM, Olson J, Beharry M, Belzer M, Goldsich K, Desai M, Clark LF Young men and the morning after: a missed opportunity for emergency contraception provision? J Fam Plann Reprod Health Care. 2014 Jan 24.
11. Morgan G, Keesbury J, Speizer I. Emergency contraceptive knowledge an d use among urban women in Nigeria and Kenya. Stud Fam Plann. 2014 Mar; 45(1):59-72.
12. Mazza D, Harrison C M, Taft A J, Britt H C, Hobbs M, Stewart K, Hussainy S, Brijnath B R Emergency contraception in Australia: the desired source of information versus the actual source of information. Med J Aust. 2014 Apr 21; 200 (7): 414-5.
13. Schwarz EB, Papic M, Parisi SM, Baldauf E, Rapkin R, Updike G. contraception. Contraception. 2014 Jul; 90(1):66-71.
14. Downing A. University students' knowledge and attitudes toward emergency contraception pills. J Community Health Nurs. 2014; 31(2):75-89.
15. Palermo T, Bleck J, Westley E. Knowledge and use of emergency contraception: a multi country analysis. Int Perspect Sex Reprod Health. 2014 Jun; 40(2):79-86.
16. Veloso D L, Peres V C, Lopes J da S, Salge A K, Guimarães J V. Emergency contraception: knowledge and attitudes of nursing students. Rev Gaucha Enferm. 2014 Jun; 35 (2):33-9.
17. Kumar MM, Lim R, Langford C, Seabrook JA, Speechley KN, Lynch T. Sexual knowledge of Canadian adolescents after completion of high school sexual education requirements. Paediatr Child Health. 2013 Feb; 18 (2):74-80.
18. Bibi S, Mustafa Abbasi R, Awan S, AraQazi R, Ashfaque S. Impact of Training on General Practitioner's Knowledge, Attitude and Practices Regarding Emergency Contraception in Hyderabad. Pak J Med Sci. 2013 Sep; 29(5):1212-5.
19. Najafi-Sharjabad F, Hajivandi A, Rayani M. Knowledge, attitude, and practice about Emergency Contraception among health staff in Bushehr state, south of Iran. Glob J Health Sci. 2013 Oct 12; 6(1):52-60.
20. Chofakian C B, Borges A L, Fujimori E, Hoga L A. Knowledge of emergency contraception among adolescents in public and private Brazilian high schools Cad Saude Publica. 2014 Jul; 30 (7):1525-36