A PROFILE OF KNOWLEDGE, ATTITUDE AND PRACTICE OF CONTRACEPTION AMONG EDUCATED WORKING WOMEN OF SOUTH INDIA

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ABSTRACT: BACKGROUND: Family planning is the key that help the individuals or couples to avoid unwanted births, to regulate the interval between pregnancies, control the time at which birth occurs in relation to the age of parents and determines the number of children in the family. **OBJECTIVES:** 1) To investigate the knowledge and practice of contraceptive methods among the educated working women. 2) To assess women's knowledge, attitude and practice in relation to emergency contraception. MATERIAL AND METHODS: A cross sectional study was conducted in 122 respondents among the educated working women in Guntur. Women in the reproductive age group (18-49 years) were interviewed by administering a pretested mixed questionnaire containing open and closed ended questions after taking an informed consent. The collected data was compiled, processed and analyzed. RESULTS: Out of 122 women, 115(94.26%) were aware of contraceptive methods. Of 103 married women 82 women (79.61%) practiced contraception. A total of 33.98% (35) and 57.28% (59) of the women practiced temporary and permanent methods respectively. The major source of information is electronic and print media 55.65% followed by medical literature 31.30%. Out of 122 women, 38 women (31.14%) were aware of emergency contraception and only 3 women (2.45%) practiced emergency contraception. CONCLUSIONS: Awareness and usage of contraception was high in this educated working-women population. Permanent method was more preferred than temporary methods. However, a low percentage of women were aware of emergency contraception. Hence, programs must be implemented to create more awareness on Emergency contraception.

KEYWORDS: Contraception, emergency contraception, working women.

INTRODUCTION: India is the second most populous country in the world next to China. If the current trend of increase in population continues, by 2045 India may become the leading country in the world overtaking China in terms of population¹. Revised National population policy 2000 reaffirms the delivery of Family Planning (F. P.) services with the target free approach and gives informed choice to the people to voluntarily avail the reproductive health services.^[1]

The "cafeteria choice" – offering all available methods of contraception to people from which they get to choose any method of their choice to promote family planning is the current approach being followed in all F.P. programs. An ICMR study by Baveja R et al. revealed that the acceptance of any type of spacing method by women could override provider's bias, by encouraging them to make an informed choice.^[2] Therefore, appropriate education plays a key role in the use of contraception. Regular contraceptive use and emergency contraceptive practices are major tools to prevent pregnancies.

The international conference on population and development in 1994 at Cairo formulated a holistic reproductive health that helped to develop the present RCH program in India.^[3] The program's principle aim is to reduce unwanted fertility safely and to provide high quality health service thereby responding to the needs of individuals as well as to concerns regarding population stabilization. The key role of F.P. in the development and global health was recognized in the summit on F.P. that took place on 11 July, 2012 in London.^[4]

In the year 2002-2003, National Family Welfare Program introduced Emergency Contraception. [5] to achieve the National Population Policy goals. The emergency contraceptive pills have been introduced in the Family Welfare Program by the department of Family Welfare, Ministry of Health and Family Welfare. [6] The term emergency contraception refers to methods that can prevent pregnancy when used after unprotected intercourse. Post coital contraception is undertaken to avoid an undesirable pregnancy resulting from failure of contraception as can occur due to rupture of condom, defect or displacement of diaphragm, premature ejaculation as can happen in coitus interruptus, unprotected isolated intercourse or sexual offence rape or incest. [7] Post coital contraception saves an individual from anxiety of waiting for next menstrual cycle or suffering from agony of unwanted pregnancy perhaps an undesirable pregnancy too, necessitating termination. The present study is done to assess the Knowledge, Attitude and Practice (KAP) among the educated working women in Guntur, Andhra Pradesh, India.

OBJECTIVES:

- 1. To investigate the knowledge and practice of contraceptive methods among the educated working women in Guntur.
- 2. To assess women's knowledge, attitudes and practice in relation to emergency contraception.

MATERIAL AND METHODS:

Study Design: A Cross sectional study.

Study Area: Educated working women in Medical College and Hospital. **Subjects:** The study was carried out among 122 women employees.

All women in the reproductive age group, married and unmarried in the study area were selected for the study. Out of 150 working women in the study area, 122 women gave consent for the interview and the remaining 28 refused to participate. All the female employees were approached in their respective areas of work between 9am to 2pm. Informed consent was taken. Study was approved by the ethical committee department.

Both married as well as unmarried women in the reproductive age group (18-49 years) were included in the study. Data was collected in pre-tested questionnaire from the study subjects by personal interview which included different variables of interest like age, marital status, educational status, occupation, type of family (Nuclear or joint), number of children and per capita income after an informed consent. We considered "nuclear family" as a couple and their dependent children living together and "joint family", an extended family when people of many generations living together.

The women were asked questions regarding knowledge and use of contraceptive methods and awareness and use of emergency or post coital contraception. The collected data was compiled, processed and analyzed.

RESULTS: Of 122 women 115(94.26%) were aware of contraceptive methods. 103 were married (84.42%) and 19 women were unmarried (15.58%). Of 103 married women 82 women (79.61%) practiced contraception.

Socio-demographic characteristics	N	Users (%)	Non-users (%)	Chi square (df)*	p value
Age	N=122				
18-25	24	3(12.5)	21(87.5)		
26-35	62	47(75.81)	15(24.19)	26 (12(4f-2)	<0.0001
36-49	36	32(88.89)	4(11.11)	36.613(df=2)	<0.0001
Education	N=122				
Intermediate	25	14(56)	11(44)		
Graduates	80	25(31.25)	55(68.75)	24 2(46-2)	<0.0001
Post graduates	17	4(23.53)	13(76.47)	34.2(df=2)	<0.0001
Type of family	N=122				
Nuclear	106	71(66.98)	35(33.02)	42.46(46-1)	<0.0001
Joint	16	11(68.75))	5(31.25)	42.46(df=1)	<0.0001
No. of children	N=103(married)				
None	2	2(100)	0(0)		
One	21	15(71.43)	6(28.57)		
Two	65	54(83.08)	11(16.92)	79.25(df=3)	< 0.0001
Three or more	15	10(66.67)	5(33.33)		
Socio economic status	N=122				
<5000 Rupees 5001-10000 Rupees 10001-20000 Rupees >20001Rupees	30 41 36 15	16(53.33) 31(75.61) 25(69.44) 10(66.67)	14(46.67) 10(24.39) 11(30.56) 5(33.33)	12.73(df=3)	0.0053

Table 1: Socio - Demographic characteristics of study population in relation to contraceptive use

Table1 shows the demographic profile and contraceptive usage of the 122 women who were included in the study. A total of 122 women in the age group of 18-49 years were included in the study. Null hypothesis is a statement specifying that there is no association between two measured phenomena.

Age group and contraceptive practices: In our study group, majority 62(50.82%) of the women were in the 26-35 years age group, out of which 47(75.81%) followed contraception. 36(29.51%) were in 36-49 years age group, of which 32(88.89%) followed contraception and 24(19.67%) were in 18-25 years age group, of which 3(12.5%) followed contraception, the reason being most of the people were unmarried in this group and were not sexually active.

A statistically significant (p value <0.001) increase in use of contraception with increase in age with degree of freedom 2 was observed in our study, hence null hypothesis rejected.

^{*}df= degree of freedom.

Education Status and Contraceptive Practices: In our study, 25(20.49%) women were intermediate qualified, of which 14(56%) practiced contraception. 80 (65.57%) were graduates, of which 25(31.25%) practiced contraception. 17(13.93%) were postgraduates, of which all 4(23.53%) practiced contraception. A statistically significant (p value <0.001) increase in use of contraception with increase in educational status with degree of freedom 2 was observed in our study, hence null hypothesis rejected.

Marital Status and Usage of Contraceptive Practices: In this study, 103 women were married of which 81(78.64%) practiced contraception.

Type of Family and Contraceptive Practices: In our study, 106(86.89%) women belonged to nuclear family, of which 71(66.98%) practiced contraception and 16(13.11%) women belonged to joint family, of which 11(68.75%) practiced contraception. A statistically significant (p value <0.001) association with type of family and use of contraception with degree of freedom 1 was observed in our study, hence null hypothesis rejected.

Number of Children and Contraceptive Practices: In our study, only married women 103(84.43%) were sexually active. Only 2(1.94%) women had no children and 2(100%) practiced contraception. 21(20.39%) women had one child, of which 15(71.43%) practiced contraception. 65(63.11%) women had 2 children, of which 54(83.08) practiced contraception. 15(14.56%) women had 3 children, of which 10(66.67%) practiced contraception. In our study we found that the women with 2 children practiced contraception the most. A statistically significant (p value <0.001) association with number of children and use of contraception with degree of freedom 3 was observed in our study, hence null hypothesis rejected.

Socio economic status and contraceptive practices: In our study 30(24.59%) were in Rupees < 5000 per capita income (PCI) study group, of which 16(53.33) followed contraception. The majority 41(33.61%) were in Rupees 5001-10,000 PCI study group, of which 31(75.61%) practiced contraception. 36(29.51%) were in Rupees 10,000-20,000 PCI study group, of which 25(69.44%) practiced contraception. 15(12.30%) were in Rupees >20,000 PCI study group of which 10 (66.67%) practiced contraception. There was statistically significant (p value: 0.0053) association between socio economic status and use of contraception was observed, with degree of freedom 3 hence rejecting null hypothesis.

In our study only married women were sexually active:

	Temporary methods of contraception				Permanent method of contraception				
Age group	Total no. of married women (n=103)	Total number of temporary method users	Condom	IUCD	OC PILLS	Total no. of married women N=103	Total no. of Permanent method users	Tubec tomy	Vasectomy
18-25	6	2	1	1	0	6	2	2	0
26-35	61	26*	19	6	4	61	29	27	2
36-49	36	7*	4	5	1	36	28	23	5
Total	N=103	35(33.98%)	24(23.30%)	12(11.65%)	5(4.85%)	103	59(57.28%)	52(50.4 8%)	7(6.79%)

Table 2: Study subjects by age and practice of different methods of contraception

^{*-} Women in these age groups practiced more than 1 method of temporary contraception.

In Table 2, a total of 35(33.98%) women practiced temporary method of contraception and 59(57.28%) women practiced permanent method. Among the women who practiced temporary method of contraception, the most commonly practiced method is condom 24(23.30%) followed by IUD 12(11.65%), followed by OC pills 5(4.85%). Among those who practiced permanent method of contraception (59), the most preferred method was tubectomy 52(50.48%) followed by vasectomy 7(6.79%). In our study, the women practiced more than one method of contraception.

Temporary methods of contraception							
Socio-demographic	N	Users (%)	Non-users	Degree of	Chi	p	
characteristics		` ´	(%)	freedom	square	value	
Age	N=122						
18-25	24	2(8.33)	22(91.67)	2	27.488	0.000	
26-35	62	26(41.94)	36(58.06)		27.400	1	
36-49	36	7(19.44)	29(80.56)				
Education	N=122						
Intermediate	25	5(20)	20(80)	_		0.000	
Graduates	80	23(28.75)	57(71.25)	2	16.687	2	
Post graduates	17	7(41.18)	10(58.82)			_	
			10(00.02)				
Type of family	N=122					0.000	
Nuclear	106	28(26.42)	78(73.58)	1	12.6	4	
Joint	16	7(43.75)	9(56.25)			7	
No. of children	N=103(married)						
None	2	2(100)	0(0)			0.000	
One	21	11(52.38)	10(47.62)	3	21.571	0.000	
Two	65	19(29.23)	46(70.77)			1	
Three or more	15	3(20)	12(80)				
Socio economic status	N=122				_		
<5000 Rupees	30	7(23.33)	23(76.67)			0.015	
5001-10000 Rupees	41	14(34.15)	27(65.85)	3	10.444	1	
10001-20000 Rupees	36	13(36.11)	23(63.89)			1	
>20001Rupees	15	2(13.33)	13(86.67)				

Table 3: Socio-Demographic characteristics of study population in relation to Temporary methods of contraceptive use.

Table 3 and 4 showed the usage of temporary and permanent methods of contraception in relation to various demographic characteristics.

	Permanent methods of contraception							
Socio-demographic characteristics	N	Users (%)	Non-users (%)	Degree of freedom	Chi square	p value		
Age	N=122							
18-25	24	2(8.33)	22(91.67)	2		0.0001		
26-35	62	29(46.77)	33(53.23)	2	23.833	0.0001		
36-49	36	28(77.78)	8(22.22)					
Education status	N=122							
Intermediate	25	9(36)	16(64)	2	34.715	0.0001		
Graduates	80	41(51.25)	39(48.75)	2	34./15	0.0001		
Post graduates	17	9(52.94)	8(47.06)					
Type of family	N=122							
Nuclear	106	55(51.87)	51(48.11)	1	44.085	0.0001		
Joint	16	4(25)	12(75)					

No. of children	N=103(married)					
None	2	1(50)	1(50)			
One	21	5(23.81)	16(76.19)	3	89.542	0.0001
Two	65	46(70.78)	19(29.23)			
Three or more	15	7(46.67)	8(53.33)			
Socio economic status	N=122					
<5000 Rupees	30	11(36.66)	19(63.33)			
5001-10000 Rupees	41	22(53.66)	19(46.34)	3	7.102	0.0687
10001-20000 Rupees	36	17(47.22)	19(52.78)			
>20001Rupees	15	9(60)	6(40)			

Table 4: Socio-Demographic characteristics of study population in relation to permanent methods of contraceptive use

Age group and use of contraception: In our study of 122 women, in 18-25 years age group only 2(8.33%) practiced temporary methods because majority of the women were unmarried and not sexually active and 2(8.33%) practiced permanent methods. In 26-35 years age group, 26(41.94%) practiced temporary methods and 29(46.77%) practiced permanent methods. In 36-49 years age group, 7(19.44%) practiced temporary methods and 28(77.78%) practiced permanent methods.

In our study, older the patient higher was the usage of permanent contraception (Table 3). A statistically significant association with degree of freedom 2 was observed in this study for both temporary and permanent methods of contraception (p value: 0.0001 and 0.0001). Hence, null hypothesis is rejected

Women's education status and use of contraception: In the study group of intermediate education, 5(20%) practiced temporary contraception, and 9 (36%) practiced permanent methods. In graduates, 23(28.75%) practiced temporary methods and 41(51.25%) practiced permanent methods. In post-graduates, 7(41.18%) practiced temporary methods and 9(52.94%) practiced permanent methods. In our study, a statistically significant increase in the usage of temporary methods and permanent contraception with the increase in the women's education status was observed. A statistically significant association with degree of freedom 2 was observed in this study for both temporary and permanent methods of contraception (p value: 0.0002 and 0.0001). Hence, null hypothesis is rejected.

Type of Family and use of Contraception: In our study, 106(86.89%) women were a part of nuclear family, of which 28(26.42%) practiced temporary contraception and 55(51.87%) practiced permanent contraception. 16(13.11%) women were part of joint family, of which 7(43.75%) practiced temporary contraception and 4(25%) practiced permanent contraception. In our study, temporary contraception was more practiced by women in joint family and permanent method was more practiced by women in nuclear family. A statistically significant association with degree of freedom 1 was observed in this study for both temporary and permanent methods of contraception (p value: 0.0004 and 0.0001). Hence, null hypothesis is rejected.

Number of Children and use of Contraception: In our study 2(1.94%) married women had no children, of which 2(100%) practiced temporary contraception and 1(50%) practiced permanent contraception. 21(20.39%) married women had only one child, of which 11(52.38%) women practiced temporary contraception and 5(23.81%) women practiced permanent contraception.

65(63.11%) married women had 2 children, of which 19(29.23%) women practiced temporary contraception and 46(70.78%) women practiced permanent contraception. 15(14.56%) married women had 3 children, of which 3(20%) practiced temporary contraception and 7(46.67%) women practiced permanent contraception. In our study permanent method of contraception was more used in women with 2 children because they have achieved the target family size.

A statistically significant association with degree of freedom 3 was observed in this study for both temporary and permanent methods of contraception (p value: 0.0001 and 0.0001). Hence, null hypothesis is rejected.

Socioeconomic Status and use of Contraception: In our study, in the study group of <5000 Rupees Per capita income (PCI), 7(23.33%) practiced temporary and 11(36.66%) practiced permanent methods. In study group of Rupees 5001-10,000 PCI, 14(34.15%) practiced temporary and 22(53.66%) practiced permanent, in study group of Rupees 10,001-20,000 PCI, 13(36.11%) practiced temporary and 17(47.22%) practiced permanent methods. In study group of Rupees >20,000 PCI, 2(13.33%) practiced temporary and 9(60%) practiced permanent methods. In our study, as the income increased the usage of temporary contraception increased except for women in >20000 group but no change is seen in the usage of permanent methods. A statistically significant association (p value <0.05) with degree of freedom 3 was observed in this study for temporary methods of contraception (p value: 0.0151), rejecting null hypothesis. But there was no statistically significant association observed with permanent methods of contraception (p value: 0.0687), accepting null hypothesis.

A total of 115 women were aware of contraceptive practices. The major source of information is electronic and print media 55.65% followed by medical literature 31.30% (Table: 5).

Source	No. of people	%(N=115)
Electronic and Print Media	64	55.65%
Medical literature	36	31.30%
Physician	12	10.43%
Peer group	3	2.61%

Table 5: Sources of information on Contraception

Emergency Contraception: Out of 122 women, 38 women (31.14%) were aware of emergency contraception and only 3 women (2.45%) have practiced emergency contraception (Table: 6).

	Awareness on EC* - yes	Awareness on EC* - no	Total
Use of EC - yes	3	0	3(2.45%)
Use of EC - no	35	68	119
Total	38(31.14%)	68	

Table 6: Relation between awareness and use of emergency contraception (EC)

^{*}EC- Emergency Contraception

Chi squared equals 3.027 with 1 degrees of freedom. The one-tailed P value equals 0.0409. All these women were aware of Yuzpe's regimen. After educating about the emergency contraception to the study population, 98 (80.32%) of the women agreed on the importance of the usage of emergency contraception (Table: 7).

Age group	N	Agreed on importance of usage of EC (%)	Disagreed on the importance of usage of EC (%)	Chi Square	p Value
18-25	24	20	4		0.0021
26 - 36	62	48	14	12.328	
36-49	36	30	6	12.320	0.0021
Total	122	98(80.32%)	24(19.68%)		

Table 7: Perception of study subjects after communicating on importance of Emergency contraception

*EC- Emergency Contraception

DISCUSSION: Family planning is defined by WHO as, "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of family groups and thus contribute effectively to the social development of a country". Family planning refers to the practices that help the individuals or couples to avoid unwanted births, to regulate the interval between pregnancies, control the time at which birth occurs in relation to the age of parents and determines the number of children in the family.^[8] In the present study, 94.26% were aware of contraception, which is less compared to 97.7% awareness reported by National family health survey (NFHS)-3,^[9] also less than Takkar et al.^[10] and Lakshmi MM et al.^[11] who reported 100% and 95.2% respectively in their study, more than the study by Sajid A et al.^[12] done in Pakistan where awareness was 60%. The study showed that 78.2% of educated married women practiced contraception, which is very high when compared to 48.2% indicated in the National Family Health Survey 1998-1999.^[13] Oral pills are the most popular temporary method of contraception in United States,^[14] in contrast oral contraceptive pills were used by 4.85% women only in our study whereas 6% of women opted for oral contraceptive use in ICMR task force study on contraceptive choice evaluation.^[15]

In our study, it was observed that majority of the women 57.28% followed permanent methods and 33.98% followed temporary methods which correlates to the study done by Neelu Saluja et al., [16] Kumari C, [17] the majority of them 46.0% and 20.6% respectively followed permanent methods which is comparatively less to our study. Vasectomy was practiced by husbands of 6.79% of married women in our study, in contrast to the study conducted by Reddy S et al. [18] where nobody practiced vasectomy. In a study done by Shah et al., the educational status of the couple was associated with the use of contraception, and it was statistically significant. [19] Our study also had a statistically significant association between educational status of the women and the use of contraception which was in consistence with a study in Ludhiana conducted by Girdhar et al. [20]

Therefore, educational status does have influence on the use of contraception.

In our study, occupation had no influence on permanent method of contraceptive use. Permanent method is usually practiced by women who achieved their targeted family size. In our study also, women with 2 or 3 children resorted to permanent contraception after completing their target family size. Similar to study conducted by S Giridhar et al, $^{[20]}$ our study revealed that women with 2 and 3 children opted for permanent methods and women with 1 child opted temporary methods and was found to be statistically significant (p<0.001).

In our study higher the socio economic status, higher was the usage of temporary methods which was statistically significant (p<0.001) but no significant change was observed in the usage of permanent methods whereas, a study by Bhattacharya $M^{[21]}$ revealed that higher income women were more likely to use permanent methods.

Practically, there is no awareness among the general population and paramedical workers about emergency contraception in India.^[22] whereas 36% of the study subjects were of the opinion that anything could be done to prevent pregnancy after an unprotected intercourse in a survey in United States.^[23] A Swedish study by Aneblom et al.^[24] and a survey in Melbourne Health Clinic^[25] showed that awareness about emergency contraception was 83 and 80%, respectively.

In the present study the awareness about emergency contraception was 31.14%, which was higher than that reported by Tripathi et al.^[22] probably due to the study population which included only educated and working women in a hospital. Another observation of the study was that after providing appropriate knowledge about emergency contraception, 80.32% of women were willing to use it. Awareness on EC increased from 13 to 25% significantly in Mexico city after a 3 years of continued introductory efforts from 1997-2000 about emergency contraception.^[26]

CONCLUSION: Awareness and usage of contraception was high in this literate working-women population. Permanent method was more preferred than temporary methods. Among the temporary methods of contraception, condom was the most popular method. Electronic and print media were important sources of public awareness.

However, a low percentage of women were aware of emergency contraception. Hence, programs must be implemented to create more awareness on Emergency contraception.

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