

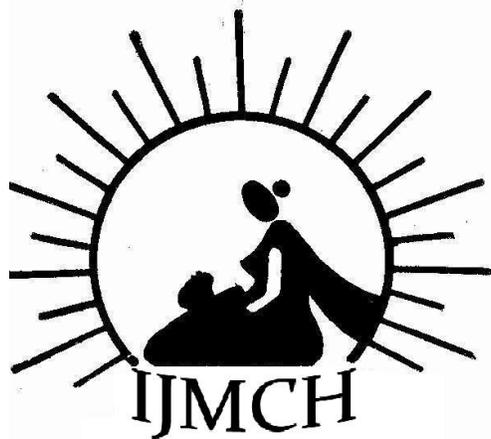
Determinants of Ever Use of Modern Contraceptives
among Married Women Attending Tertiary Health Care
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What are the determinants of ever use of modern contraceptive methods among married women of reproductive age.

Determinants of Ever Use of Modern Contraceptives among Married Women Attending Tertiary Health Care Hospital in Bhubaneswar City, India.

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Abstract:

Research question: What are the determinants of ever use of modern contraceptive methods among married women of reproductive age.

Methodology: A cross sectional study involving 230 eligible married women attending the out patient department of gynaecology in a tertiary health care hospital of Bhubaneswar was undertaken.

Results: About 170 (73.9%) married women ever used any of the modern contraceptive methods which was significantly affected by factors like “educational status of women and their husbands” and “spousal communication regarding contraception” revealed by binary logistic regression models.

Conclusion: Improving the educational status of women and their husbands and planning strategies to improve husband-wife communication at the family level on fertility related issues will likely raise the level of use of modern contraceptives among married women with the ultimate goal of helping women and their families to lead a healthy life.

Keywords: *Modern contraceptive methods; Married women; Reproductive age; Determinants; Spousal communication*

Introduction:

India is the second most populous country of the world, next only to china and with the current decadal growth rate (21.5% as per 2001 census) continuing, India’s population is projected to overtake china as the most populous country in the world by 2030. (1,2) Review of literature shows that high population growth rates are directly or indirectly associated with many social problems ranging from poverty, hunger, unemployment and environmental degradation to political instability. In order to arrest the dangers inherent in high population growth rates, many countries including India have adopted family planning as a strategy to curb this menace. (3)

Family planning also protects women from high risk pregnancies, unsafe abortions, reproductive tract infections (RTIs) and sexually transmitted infections (STIs) including HIV/AIDS. (4) The International Conference on Population and Development (ICPD) defined

voluntary family planning services as a fundamental human right as well as couple's right. (5) Gaps in reproductive health/ family planning and sexual health care account for nearly one-fifth of the worldwide burden of illness and premature death and one third of the illness and death among women of reproductive age. (6) Understanding the factors that determine the use of contraceptives is critical to the efforts of programmes to increase prevalence. Various studies have revealed that women shy away from using contraception especially modern contraceptive methods due to misperceptions and concerns about health related risks, illiteracy, lack of knowledge, lack of support from family members, inaccessibility etc. (4,5,7,8,9,10) In this context, the present study was designed to find out the determinants of ever use of modern contraceptives among married women of reproductive age as such type of studies are scarce in this region.

Materials and methods:

A cross sectional study was carried out in a tertiary health care hospital of Bhubaneswar, the capital city of Odisha during 5 months from August to December, 2010. Considering the prevalence of contraceptive use as 51% in Odisha as per the NFHS -3 data, (11) anticipated odds ratio as 1.5, power 90%, α error 10%, sample size was calculated as 223 based on regression methods using n-master software. All married women in the reproductive age group (15-45 years) who were currently living with their husband and attended the outpatient department (OPD) of Gynecology during the study period were considered for the study purpose. The study respondents were briefed about the purpose of the study and informed that they had a right to participate or withdraw from the study at any time. Permission of the hospital authority was sought prior to interviewing the study respondents. After obtaining the verbal informed consent of the study participants, a semi structured schedule was used to collect all relevant information. Finally, 230 eligible married women who were willing to participate were interviewed by trained nurses maintaining the privacy and confidentiality. Data regarding socio demographic characteristics including age, age at marriage, education, occupation, per capita monthly income, type of family etc., spousal communication regarding contraception, awareness and practice of ever using any of the modern methods of contraception was collected. Before the actual data collection, the schedule was pretested on 5% (12 women) attending the same hospital for validity and reliability. Socioeconomic status was determined based on modified Kuppusswamy scale considering 3 components i.e., education and occupation of head of family and per capita monthly income. (12) The data was then entered and analyzed by using SPSS software version 16.0. Percentage distribution, chi square test and binary logistic regression have been applied in the present paper. Variables which remain statistically significant in bivariate analysis were entered to multivariate logistic regression model for the final analysis. In this study, modern contraceptive methods refer to methods of child spacing or birth control other than natural methods which comprise oral pills, condoms, intra uterine contraceptive device, male sterilization, female sterilization and injectables. Ever users of modern contraceptive are those who used any of the modern contraceptive methods at least once in their lifetime.

Results:

Table 1 reveals that about half of the women were in the age group of 26-35 years. The mean age of the participating women was 28.9 years with a standard deviation (SD) of 6.02 years. Out of 230 women, 194(84.3%) of the respondents were housewives, only 24(10.4%) of their husbands were unemployed or unskilled whereas majority of husbands

were in semi-profession/clerk/shop-owner/farm-owner category. Half of the studied women and 149 (64.8%) husbands had attended college or higher education. Almost three fourth of the women belonged to nuclear family. It was observed that in 108 (47.0%) households, per capita monthly income was below Rupees 750. Taking socio economic status into consideration, only 33 (14.3%) respondents hailed from upper socioeconomic strata and rest were from lower/middle socioeconomic strata. Mean age at marriage for the women and their husbands was 22.7 ± 3.41 (SD) years and 28.4 ± 3.22 (SD) years respectively. When spousal communication regarding contraception was enquired, about 181 (78.7%) married women were found to have discussed with their husbands. The chi-square test results showed that there was a significant association between the independent variables such as “age, educational status of the women respondents and their husbands, occupation of husbands, per capita monthly income, socioeconomic status, respondent’s age at marriage, spousal communication about contraception” and the dependant variable “ever use of modern contraceptives”.

Table 2 shows the awareness and the practice of the study respondents regarding modern methods of contraception. Majority of the women (196, 85.2%) reported that they had ever heard about modern contraceptive methods and mentioned one or more. Female sterilization topped the list of methods known (94.4%) followed by condoms (92.8%) and oral pills (88.3%), whereas injectables were the least known method (49.0%). TV/radio/printed material (59.2%) followed by friends/relatives (38.8%) were the common source of information about contraception. Of the 230 married women, 170 (73.9%) had ever used any of the modern methods. Majority (84.7%) of women reported condom as the method ever used, while the least reported method ever used was male sterilization (1.2%).

The results of the binary logistic regression models was presented as relative odds in table 3. Applying chi square test, all the variables which were found to have significant association with the dependent variable i.e. ever use of modern contraceptives were tested by binary logistic regression analysis. Ever use of modern contraceptives takes a value of one if the respondents reported use and zero if otherwise. The reference category of each dichotomously measured independent variable has a value of zero and the values for the other categories are compared to that of the reference category. Among all the independent variables, educational status of women respondents, their husbands and spousal communication about contraception emerged as the key determinants having significant impact on ever use of modern methods of contraception by the married women in the study area.

Discussion:

Our study shows some of the important findings which merit attention. Most of the women (196, 85.2%) attending the tertiary care hospital had ever heard about modern contraceptive methods and knew one or more method; which is consistent with the findings of other studies from different parts of world. (7,13,14,15) It was observed in the present study that female sterilization, condom and oral pills were the methods mostly heard among the women. Narzary PK in his study reported a higher percentage (97.2%) of currently married adolescent women in India knew about female sterilization. (7) Also, condoms and pills were the most commonly known methods among women which is evident in other studies. (9,13,14,15,16) When practice of using contraceptive was concerned, it was found that condoms and oral pills were the most preferred contraceptive methods ever used by the married women as compared to other methods. This might be

due to the fact that majority of women were in their early reproductive age period for which less number of women went for terminal methods of contraception i.e. sterilization. This finding is in conformity with other studies. (13,16) Further, least preferable method of contraception to use was male sterilization which indicates hesitation of male partners for adoption of the terminal procedure.

Results of logistic regression models showed that the odds of ever using any of the modern contraceptive methods among the married women increases with the education status of their husbands i.e., women whose husbands had attended college and higher education were about 11 and 3.6 times more likely using modern contraceptive as compared to women whose husbands were illiterate/had primary education and middle/high school level education respectively. This is consistent with the findings of other studies. (3,7,13) Further, in case of women having attended college or higher education, the likelihood of ever use of modern contraceptive rises 6 fold as compared to those who were illiterate or had primary education. Many other studies also revealed that woman's education as one of the important determinants of contraceptive usage. (3,10,17,18,19,20) However, Rahayu et al found woman's education as a negative predictor of contraceptive use which is in contrast with the finding of present study. (8) Again husband-wife communication regarding contraception is found to be a strong determinant of ever use of modern contraception in this study. The married women who had communicated with their husbands about contraception were almost 16 times in favor of ever using any of the modern contraceptives as compared to the women who had not discussed with their husbands regarding contraception. This difference was found to be statistically highly significant. Arbab AA et al, Narzary PK, Laguna EP et al also observed in their study that education of women and spousal communication played a significant role in determining the use of modern contraceptive method. (5,7,21)

Conclusion and recommendation:

Our results show that education of both wife and husband and husband-wife communication regarding contraception are the key determinants of ever use of modern contraceptives among married women of reproductive age. Thus it is suggested that efforts must be made for improving the educational status of married couples through various existing programs or schemes and planning strategies that will improve the husband-wife communication at the family level on fertility related issues which will likely increase the level of use of modern contraceptives among married women with the ultimate goal of helping women and their families to lead a healthy life. Further, health care providers could play an important role in disseminating information regarding benefits of various modern contraceptive methods at family as well as community level through different information, education and communication (IEC) activities.

Conflict of interest: The authors declare that there is no conflict of interest regarding any matter related to this manuscript.

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Tables:

Table I: Sociodemographic variables and their association with ever use of modern contraceptives among married women respondents (n =230)

<u>Variables</u>	<u>Ever use of modern contraceptive</u>		<u>Total (%)</u>	<u>χ^2, DF, P</u>
	<u>No (%)</u>	<u>Yes (%)</u>		
Age group (In years)				
15-25	32 (42.1)	44 (57.9)	76 (33.0)	
26-35	22 (18.6)	96 (81.4)	118 (51.3)	15.16,2,
0.001				
36-45	06 (16.7)	30 (83.3)	36 (15.7)	
Education of respondent				
Illiterate/primary	25 (75.8)	08 (24.2)	33 (14.3)	57.0, 2,
0.000				
Middle/High school	23 (28.0)	59 (72.0)	82 (35.7)	
College and above	12 (10.4)	103 (89.6)	115 (50.0)	
Education of husband				
Illiterate/primary	16 (80.0)	04 (20.0)	20 (8.7)	
Middle/High school	24 (39.3)	37 (60.7)	61(26.5)	48.1, 2,
0.000				
College and above	20 (13.4)	129 (86.6)	149 (64.8)	
Occupation of respondent				
House Wife	53 (27.3)	141 (72.7)	194 (84.3)	0.977,1,
0.323				
Working outside	07 (19.4)	29 (80.6)	36 (15.7)	
Occupation of husband				
Unskilled/Unemployed	18 (75.0)	06 (25.0)	24 (10.4)	
Skilled/semiskilled	15 (36.6)	26 (63.4)	41 (17.8)	41.71,3,
0.000				
S.P./Clerk/S.O./F.O.*	23 (18.9)	99 (81.1)	122 (53.0)	
Professional	04 (9.3)	39 (90.7)	43 (18.7)	
Type of family				
Nuclear	47 (27.0)	127 (73.0)	174 (75.7)	0.317,1,
0.574				
Joint	13 (23.2)	43 (76.8)	56 (24.3)	
Per Capita Monthly Income				
< Rs. 565	10 (50.0)	10 (50.0)	20 (8.7)	
Rs.565 - 749	22 (25.0)	66 (75.0)	88 (38.3)	6.608,2,
0.037				
> Rs.749	28 (23.0)	94 (77.0)	122 (53.0)	
Socio economic status*				
L/UL/LM	26 (65.0)	14 (35.0)	40 (17.4)	
UM	31 (19.7)	126 (80.3)	157 (68.3)	39.631, 2,
0.000				

U	03 (9.1)	30 (90.9)	33 (14.3)	
Respondent's age at marriage				
15-25	57 (30.5)	130 (69.5)	187 (81.3)	10.017,1,
0.002				
26-45	03 (7.0)	40 (93.0)	43 (18.7)	
Husband's age at marriage				
15-25	16 (34.8)	30 (65.2)	46 (20.0)	2.25, 1,
0.133				
26-45	44 (23.9)	140 (76.1)	184 (80.0)	
Spousal communication about contraception				
No	32 (65.3)	17 (34.7)	49 (21.3)	49.67, 1,
0.000				
Yes	28 (15.5)	153 (84.5)	181 (78.7)	

* L = Lower, UL =Upper Lower, LM = Lower Middle, UM = Upper Middle, U = Upper

Table II. Awareness and practice regarding modern methods of contraception (n= 230)

<u>Variables</u>	<u>No</u>	<u>%</u>
Ever heard about modern contraceptive method		
Yes	196	85.2
No	34	14.8
Methods heard about*		
Oral pills	173	88.3
Condoms	182	92.8
IUCD	128	65.3
Female sterilization	185	94.4
Male sterilization	117	59.7
Injectables	96	49.0
Sources of information*		
TV/radio/printed material	116	59.2
Friends/Relatives	76	38.8
Health care providers	67	34.2
Ever used any of the methods		
Yes	170	73.9
No	60	26.1
Modern method ever used*		
Oral pills	108	63.5
Condoms	144	84.7
IUCD	33	19.4
Female sterilization	22	12.9
Male sterilization	02	1.2
Injectables	16	9.4

* Multiple responses

Table III. Binary logistic regression models predicting the odds of contraceptive usage among respondents.

Independent Variable	Dependant Variable		Significance
	Ever use of modern contraceptives (Using = 1, Not using = 0)		
	(β)	Exp (β)	
Age group			0.235
15-25	-0.988	0.372	0.146
26-35	-0.352	0.703	0.618
36-45 ^R			
Education of respondent			0.061
Illiterate/primary	-1.736	0.176	0.031
Middle/High school	-0.383	0.682	0.521
College and above ^R			
Education of husband			0.042
Illiterate/primary	-2.431	0.088	0.025
Middle/High school	-1.270	0.281	0.048
College and above ^R			
Occupation of husband			0.695
Unskilled/Unemployed	-1.743	0.175	0.284
Skilled/semiskilled	-0.897	0.408	0.542
S.P./Clerk/S.O./F.O.* Professional ^R	-0.804	0.448	0.544
Per capita monthly income			0.237
<Rs. 565	0.210	1.233	0.854
Rs.565-749	0.819	0.441	0.207
>Rs.749 ^R			
Socio economic status			0.694
L/UL/LM	1.413	4.110	0.480
UM	1.321	3.749	0.397
U ^R			
Respondent's age at marriage			
15-25	-1.028	0.358	0.196
26-45 ^R			
Spousal communication about contraception			
No	-2.727	0.065	0.000
Yes ^R			

Note: R= Reference category, β = regression coefficient (log odds ratio). Exp (β) = odds ratio. The model fit statistics were as follows. Omnibus tests of model coefficients: χ^2 value of 111.672 with a 'p' value of 0.000 tells that the final model as a whole fits significantly better than an empty model (model with no predictors). Hosmer and Lemeshow test: χ^2 value of

6.152 with a 'p' value of 0.630 indicates that there is no significant difference between observed and predicted probabilities and thus the model fits.