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Original Article

Contraceptive use and its determinants amongst armed forces personnel

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ABSTRACT

Background: Nearly 1.5 billion adolescent girls are entering into child bearing age groups without effective knowledge regarding family planning practices which are essential to maintain their reproductive health. Timely and effective knowledge regarding family planning norms and practices among the young women during their initial married days are vital. Therefore the study was carried out with the aim to find out the factors associated with use of contraceptive among Armed Forces Personnel.

Methods: A cross sectional survey was carried out among Armed Forces personnel living in a Military station with pre-validated and pre-tested questionnaire. Data was collected from 221 eligible couples. Univariate and logistic regression were done to find out the variables determining family planning.

Results: Out of 221 couples, 65.2% (144) of couples were practicing some or the other methods of family planning while 34.8% (77) didn't practice any methods. Age, age at marriage, sex of first child, type of family, empowerment and parity of women were significantly associated with contraceptive acceptance in univariate model. However in logistic regression analysis age at marriage, empowerment and parity were significant predictors of family planning. Major reason for not adopting any contraception was want of another child (20, 26%), girl child (18, 23%), male child (18, 23%) and worry about side effects (11, 14.3%).

Conclusion: The study highlights the gap in preferences and practices of contraceptive and emphasized the need to highlight safety of contraceptive during Information, Education and Communication (IEC) campaign.

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Introduction

One of the most important cause of morbidity and mortality among women of child bearing age is reproductive health problem. Nearly 1.5 billion adolescent girls are entering into child bearing age groups without sufficient knowledge regarding family planning practices which are essential to maintain their reproductive health.[1]

A rapid population growth is a burden on the resources of many developing countries including India. Currently, India is the second most populous country in the world, contributing about 20% of births worldwide. National Family Health Surveys and studies from the individual authors to find out the prevalence of contraceptive use and their determinants have been conducted in various parts of India.[2–6] Contraceptive prevalence rate of India was 56.3% as per the NFHS-3 data. However the contraceptive prevalence is not uniform across India. Evidence from a number of individual studies in various parts of the country indicates that inadequate knowledge of contraceptive methods is a reason for not accepting family planning.[7,8] These studies have brought out the timely and effective knowledge regarding family planning norms and practices among the young women during their initial married days are vital.

One of the most vital things for increased acceptance of family planning methods is the increased accessibility. In fact the theme for World Population Day for the year 2012 was ''Universal Access to Reproductive Health Services''.[1] The National Population Policy 2000 envisages universal access to various methods of contraception and fertility regulation.[9]

On literature search in Pubmed, MJAFI, Embase we could not find any study on contraceptive use and its determinant among Armed Forces personnel. However a recent article published has studied the use of postpartum contraceptive among wives of Armed Forces personnel admitted in Hospital.[10] Hence we decided to study the prevalence of contraceptive use and its determinants amongst Armed Forces personnel.

Material and Methods

The study was a cross-sectional study. All the couples of military station residing in particular station were invited to attend lecture cum interactive session on the occasion of World Population Day on 11 and 12 July 2014. The opportunity was taken to interview the couples regarding their family planning practices by means of pre-tested and pre-validated questionnaire. At the end of the survey, intensive Information, Education and Communication (IEC) activities were conducted for all the participants with practical demonstration of contraceptive methods and distribution of IEC materials.

Sample size

Sample size was calculated using the following assumption, alpha error = 0.05, confidence level = 95%, assuming proportion of couples using contraceptives = 0.6 and applying finite correction. Sample size as calculated from above parameter, is 218. A total of 230 subjects attended the session and were enrolled in our study. Respondents were interviewed about their socioeconomic background, family size, practice of contraception etc. However nine respondents gave incomplete information and hence were deleted in final analysis.

Analysis

Data was collected in excel format and analyzed with SPSS ver 17.

Results

The mean age of female participants in our study was 28.19 (Standard Deviation = 4.2) (Range: 21–36). For univariate analysis age was categorized in four groups as shown in Table 1. The mean age of marriage (females) is 21.17 (Standard Deviation = 3.6) (Range: 15–30). The age at marriage was also categorized in four groups. Education of wives was categorized into three groups; studied up to high school, studied up to senior secondary and graduates and higher. Those participants who had appeared for high school exam and could not pass were classified in up to high school category, similarly those participants who had passed 10th class but could not clear senior secondary school were classified in senior secondary and rest, who passed senior secondary or were further educated were classified into graduates and above. In decision regarding child birth four categories were made to depict who had more say in the decision. The result is as shown in Fig. 1.

In our study we found that 65.2% (144) of couples were practicing some or the other methods of family planning while 34.8% (77) didn't practice any methods. Fig. 2 depicts the mode of contraceptive use among users. Only 29 (13.1%) participants were using any permanent form of contraceptive and out of them majority (26, 11.7%) were tubectomy. Univariate and multivariate (logistic regression) analysis were done to find out statistical significant association among use of contraceptive and other variable. Multicollinearity amongst the independent variables was checked before doing multivariate logistic regression with predefined criteria. However we could not find any collinearity among variables in data.

Univariate analysis of variable is shown in Table 1. In univariate analysis, Age, Age at marriage, number of children, gender preference, sex of the first child, type of family, decision making regarding the child birth, joint family and first female child were found to be significantly associated with the use of contraceptive among women. We also did a multivariate logistic analysis of variables with use of contraceptive as dichotomous dependent variable and all other variables as independent variable. On multivariate logistic regression only age at marriage, number of children and decision regarding child birth were found to be significantly associated. The findings of multivariate logistic regression are shown in Table 2. Logistic regression coefficient is positive for statistically important variables i.e. age at marriage (OR = 9; 95% CI, 2.8–28.8), decision maker (OR = 2.7; 95% CI, 1.6–4.6) and number of children (OR = 15; 95% CI, 3.4–67.3). It is interpreted as

Table 1 – Univariate analysis of variables for contraceptive use.

Attributes	Contraceptive use *n* (contraceptive user), % (total in the row)	Chi square and *p* value	Odds ratio along with 95% CI
Age			
<22 years	19, 86.4% (22)	16.9, 0.001	1
23–26 years	32, 51.6% (62)		0.2 (0.02–0.7)
27–30 years	59, 77.6% (76)		0.5 (0.1–2.2)
>31 years	34, 55.7% (61)		0.2 (0.03–0.8)
Age at marriage			
<18 years	30, 53.6% (56)	8.6, 0.03	1
19–22 years	57, 67.9% (84)		1.8 (0.9–3.8)
23–26 years	41, 66.1% (62)		1.7 (0.8–3.8)
>27 years	16, 84.2% (19)		4.6 (1.1–27)
Education			
Up to high school	30, 60% (50)	0.7, 0.6	1
Senior secondary	64, 66.7% (96)		1.3 (0.6–2.8)
Graduates and above	50, 66.7% (75)		1.3 (0.6–2.9)
Number of children			
Nil	20, 37.7% (53)		1
One	47, 68.1% (69)	26.4, 0.000	3.5 (1.6–8)
Two	70, 76.1% (92)		5.3 (2.4–11.7)
Three	7, 100% (7)		–
Gender preference			
Male	46, 58.2% (79)	2.8, 0.23	1
Female	12, 75% (16)		2.2 (0.6–9.9)
Any	86, 68.3% (126)		1.5 (0.8–2.9)
Sex of first child			
Male	49, 62.8% (78)	9.1, 0.003	0.75 (0.62–0.92)
Female	75, 83.3% (90)		
Type of family			
Nuclear	41, 53.2% (77)	7.4, 0.007	0.74 (0.59–0.94)
Joint	103, 71.5% (144)		
Decision maker			
Husband	58, 56.3% (103)	13.65, 0.003	1
Wife	23, 60.5% (38)		1.5 (0.6–3.3)
Both	59, 81.9% (72)		4.3 (2–9.5)
In laws & others	4, 50% (8)		0.9 (0.2–5.4)

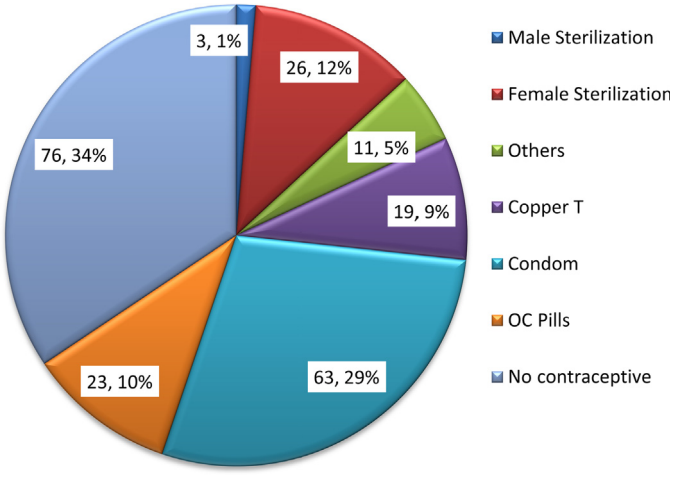

Fig. 1 – Use of contraceptive among participant.

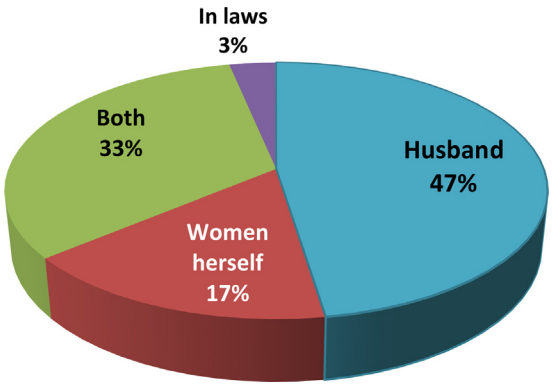

Fig. 2 – Decision making for contraception use.

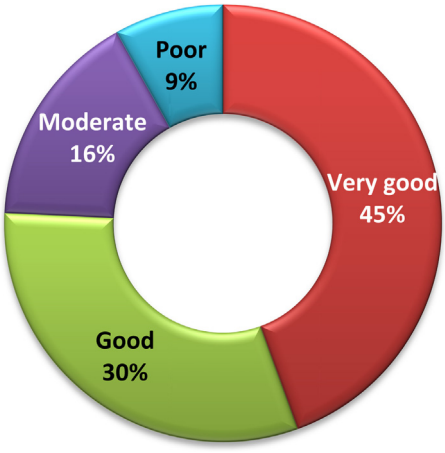

Fig. 3 – Accessibility to contraceptive services.

change in dependent variable per unit change in independent variable. Hence it shows that most important variable is number of children, followed by age at marriage and decision making regarding childbirth.

The data was also collected to know the reasons for not using contraceptive. Among 76 people not using contraceptive 31 (40.8%) said that they desired another child. 18 (23.7%) participants said that they desired a son and equal number of participants said they desired a daughter. 11 (14.5%) participants were worried about side effects of the contraceptive. More than three fourth (75.2%) participants felt that they have either good or very good access to contraceptives (Fig. 3) and 100% could tell about at least one method of modern contraceptive. Only 19 (8.6%) felt that they had less or no access to contraceptives. 60 (27.1%) preferred female sterilization as their choice of contraceptive as against 49 (22.2%) who preferred male sterilization. 23 (10.4%) and 26 (11.8%) preferred IUD and OC pills as their choice of contraceptive. Use of condoms was preferred by 37 (16.7%) of participants.

Discussion

We found the prevalence of contraceptive in our study population to be 65.2% which is higher than national average of 56.3% (NFHS-3). There is a time gap of nearly a decade between these two studies. However, recent studies show higher prevalence among eligible couple of urban slum in Bankura district, west Bengal (67.5%),[5] rural population in a village of Maharashtra (70.7%)[8] and from rural areas of Punjab (75.3% and 78.1%).[11,12] In our study we found that only 29% were using permanent form of contraceptive and majority of them (89.6%) were tubectomy. The permanent method of contraceptive use in our study is less than that reported in other studies (33%, 42.3%).[11,12] This may be explained in part by younger age of participants in our study.

The statistical significant association in univariate analysis can be due to confounding effect of other variables as in univariate analysis the same is not taken into consideration. This is adjusted for in ''multivariate logistic analysis''. After multivariate logistic analysis only, age at marriage, number of children and decision regarding child birth was found to be important in our population. Hence in our study population these three were the most important independent predictors of the use of contraceptive. This is in consistent with the finding elsewhere.[4] We did not find any significant association between either education or gender preference of the child and contraceptive use. This can be attributed to the uniqueness of our population such as easy accessibility and knowledge of participant about contraceptive.

This study highlights that there is a discrepancy in preference and practice of contraceptive use. While 22% preferred male sterilization yet it was practiced by only 0.01% of participants. Hence there is a need for giving wide

Table 2 – Multivariate analysis for contraceptive use.

Variable	Estimate	Standard error	Odds ratio	95% CI for odds ratio		*p* value
				Lower	Upper	
Age	−.21	.23	.81	.50	1.2	.37
Education	−.87	.40	.41	.32	1.1	.10
Age at marriage	2.2	.59	9.0	2.8	28.8	.00
Type of family	.32	.51	1.3	.50	3.7	.52
Sex of first child	−.67	.63	.50	.14	1.7	.28
Decision maker	1.0	.26	2.7	1.6	4.6	.00
Sex preference	.19	.23	1.2	.77	1.9	.39
Number of children	2.7	.76	15	3.4	67.3	.00

publication to the newer and safer modality of male sterilization and stake holders should work towards increasing its acceptance. The study also affirmed that empowerment of women as reflected by decision regarding childbirth is an important contributor to use of contraceptive.

Another important finding of this study is that among nonusers 14% of participants were not using it due to fear of side effects of contraceptives and hence there is a need to allay the fears and also provide them with wider choice of contraceptives. Hence there is a need to highlight safety of contraceptives during IEC campaign.

Our study has few limitations. Firstly this study is a cross-sectional study done on convenience sampling of participants. It limits the external validity of the study as firstly random sampling of the population in station was not taken and secondly it may be argued that women attending the lecture may differ from those who have not attended. Nevertheless this study provides an insight into a prevailing situation of contraceptive use amongst Armed Forces personnel. A multicentric study is recommended to find out the use of contraceptive and its determinants among Armed Forces personnel.

Conclusion

Our study highlighted the age at marriage of women, number of children and decision regarding child birth as important factors determining the use of contraceptives. The study also highlights the gap in preferences and practices of contraceptive use. The study emphasized the need to highlight safety of contraceptive use during IEC campaign. The study can be used as a template for starting large multicentric study to confirm or refute the findings of the study.

Conflicts of interest

The authors have none to declare.

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