Original Article

Perception of family planning and reasons for low acceptance of NSV among married males of urban slums of Lucknow city - A community based study

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Abstract

Background and Aims: Population explosion has been India's major problem since independence. It is a major obstacle to the overall progress of the nation. Adoption of family planning methods is one of the best solutions to tackle this problem. The roots of the factors influencing family planning issues are entrenched in the socio-cultural milieu of Indian society. Uttar Pradesh is the most populated state of the country having population of 199.581 million and TFR of 3.3 (AHS 2012-2013) with high fertile trajectory. Among the family planning methods currently, male sterilization accounts for only 0.3% of all sterilizations in Uttar Pradesh (AHS 2012-2013). A strategy to promote men's involvement in effective birth control is needed to reduce the population growth. The aim of this study is: i) To access the perception of married males towards family planning. ii) To access knowledge about NSV iii) enumerate the causes for low acceptance of NSV. **Methods:** A cross-sectional study was carried out. Multi-stage random sampling technique was used. In the first stage, two urban slums from each Nagar-Nigam zone was selected randomly. In the second stage, from each selected slum, a sample of 24 eligible households was selected at random to achieve the desired sample size. **Results:** Female sterilization technique was considered as the most effective family planning method by the male respondents. Socio-cultural barriers were the most important reason for the low acceptance of NSV. Educational status was found to be the most important predictor for these socio-cultural barriers. **Conclusion:** Measures should be taken to remove misconceptions, to increase uptake of NSV.

Keywords: Family planning, NSV, perception

Introduction

The World Health Organization (WHO) predicted that roughly 303 000 maternal deaths occurred in 2015. More than half of these deaths occurred in the sub-Saharan Africa and almost one third occur in South Asia.[1] About 295 000 women died during and following pregnancy and childbirth in 2017. The vast majority of these deaths (94%) occurred in low-resource settings, and most could have been prevented.[2] It is well recognized that men's general knowledge and attitude have a bearing on the ideal family size, gender preference of children, ideal spacing between child births, and contraceptive methods used greatly influence women's preferences and opinions.[3-5] The family planning methods used ensure healthiest timing and spacing of pregnancy, hence, regulating fertility. As fertility falls, so do infant, child, and maternal mortality.[6]

Since the 1994 International Conference on Population and Development (ICPD), and the 1995 UN World Conference on Women, interest in men's involvement in reproductive health has increased.[5,7] There has also been a shift in objectives of male participation and concerns, from increasing contraceptive use

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Received: 15-09-2019 **Revised:** 04-12-2019
Accepted: 13-12-2019 **Published:** 28-01-2020

Access this article online

Quick Response Code:

Website: www.jfmpc.com

DOI: 10.4103/jfmpc.jfmpc_779_19

How to cite this article: Shafi S, Mohan U. Perception of family planning and reasons for low acceptance of NSV among married males of urban slums of Lucknow city - A community based study. J Family Med Prim Care 2020;9:303-9.

and achieving demographic goals to achieving gender equality and fulfilling various reproductive responsibilities.

India launched the National Family Welfare Programme in 1952 with the objective of reducing the birth rate to the extent necessary to stabilize the population at a level consistent with the requirement of the national economy. The Family Welfare Programme in India is recognized as a priority area, and is being implemented as a 100% centrally sponsored programme.[1] As per the projections by UN, India will become the most populous country by year 2045.[8]

Uttar Pradesh is the most populated state of the country with a population of about 199.581 million.[3] Having a total fertility rate of 3.3 (*AHS 2012-2013*) the state continues to be on a very high fertile trajectory. Whatever family planning services are being in effect are utilized by women and very little by men. According to *NFHS – 4,* female sterilization is utilized by about 35.7% of women while male sterilization is utilized by only 0.3% of males. Currently, female sterilization accounts for about 18.4% and male sterilization for 0.3% of all sterilizations in Uttar Pradesh (*AHS 2012-2013*). Current acceptance of NSV in India has declined from 1 percent (NFHS 3) to 0.3 percent (NFHS 4).[9]

NSV technique was introduced in India in 1992 to increase male participation in family planning.[4] This is an easier and faster procedure and causes minimal damage to tissues. This is a safe and simple procedure that can be performed in low resource settings.[5] Despite being a simple and safe method, NSV seems to have failed to achieve its goal.

NSV technique is related to family planning services and is an integral part of primary care and family medicine. Family physicians need to be competent in providing comprehensive family planning, it is a competent part of primary care and family medicine. NSV acceptance will lead to decrease in mortality of females and will increase the participation of males in family planning activities. Thus, its role in family medicine and primary care is of utmost importance

There are many barriers at the provider, facility and program levels for the adoption of NSV by people. A strategy to promote men's involvement in effective birth control is needed to reduce the population growth and to ameliorate the resultant health, social and economic challenges. The purpose of this research is to observe the perception of the married males towards family planning and to ascertain various factors of non-utilization of NSV.

Materials and Methods

Study design

Community-based cross-sectional study.

Study settings

The study was conducted in the urban slums of Lucknow city (Uttar Pradesh, India). The city is situated between 26.30 N and 27.10 N latitude and 80.10 E and 80.30 E longitudes.

Inclusion criteria

Married males living with their wife aged 15-45 years who had agreed for interview and had been living in the slums of Lucknow for at least 6 months were included in the study. Also, they should be having at least two children with the younger child being greater than one year of age.

Exclusion criteria

These included study participants who were non-responsive and those who were Divorced/Disserted/Separated from their spouse.

Sampling Frame

The sampling frame consisted of married males living with their wife within (15-45 years) age group residing in the urban slums of Lucknow district.

Sample size

The required sample size was calculated using following formula

$n = (z_{1-\alpha/2})^{2} * P * (1-P)/d^{2}$ (Daniel, 1999)

n = sample size

Z = value of Z statistic at α level of significance

P = proportion of people having knowledge about vasectomy

d = allowable error

Value of Z statistic for the level of significance 0.05 is 1.96

It is observed from the previous studies done that the proportion of people having knowledge about vasectomy is 50%. Henceforth

Taking d = 0.05

$n = (1.96)^{2} * 0.5 * 0.5/(0.05)^{2}$

$n = 384$

A total of 384 male respondents were interviewed

Data Collection Procedure

Out of the 8 Nagar-Nigam zones in Lucknow, 2 urban slums were selected randomly in the first stage. In the second stage, in each selected slum, all the households were visited until at least 24 married males were interviewed [Figure 1].

The married males were contacted in the urban slums and an attempt was made to convince all the married males fulfilling inclusion criteria to participate in the study after informing them about the aims, objectives and likely benefits which would accrue from the study. Data was collected using a pre-designed

and pre-tested interview schedule Information was collected regarding, perception of family planning and the barriers associated with low acceptance of NSV.

Ethical consideration

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Owing to ethical considerations, permission was obtained from the institutional Ethical Committee of the King George's Medical University UP, Lucknow, before commencing the study. Written informed consent was taken from each selected participant to confirm willingness. Honest explanation of the survey purpose, description of the benefits and an offer to answer all enquires was made to the respondents. Privacy and confidentiality of collected information was ensured throughout the process.

Statistical analysis

Data was analyzed using SPSS software version 23.0. Descriptive summary using frequencies, percentages, graphs and cross tabs were used to display results. Chi- square test was used to show the relation between independent and dependent variables. The level of significance was set at < 0.05. Multivariate logistic regression analysis was done for dependent variables namely Socio-cultural Barriers, and for the independent variables.

Results

Socio-demographic correlates of use of family planning methods

Table 1 shows that Majority (78.8% and 85.3%) of the married males in the age groups of 36-40 and 41-45 years, respectively, were currently not using any of the contraceptive methods. This association was not found to be statistically significant. Religion was not found to be significantly associated with non-use of contraceptive with similar percentage of non-users among the Hindu's as well as Muslim's (79.6% and 78.8% respectively).

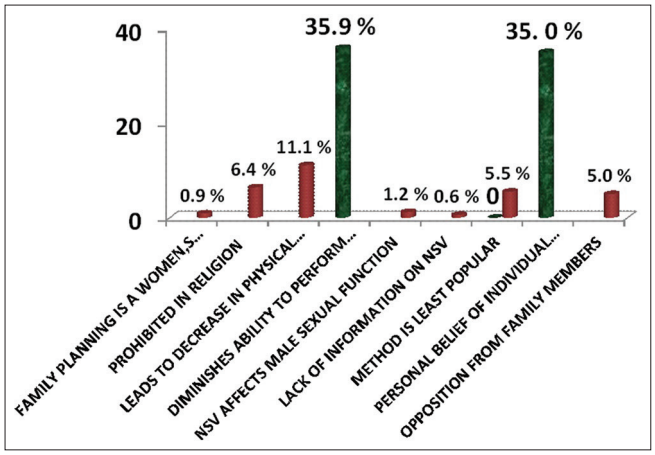

Figure 1: Socio cultural factors

Perception of most effective family planning method with current utilization

Table 2 shows the perception of the study participants towards most effective family planning method. Maximum 52.9% of the participants told that female sterilization technique was the most effective family method technique and minimum 1.6% of the participants had the opinion that No Scalpel vasectomy technique (NSV) was the most effective family planning method. Maximum 30.46% of the study participants were currently utilizing any family planning method while 69.5% of the participants were not utilizing any family planning method. Within the terminal methods 27.4% families were utilizing female sterilization technique and 5.1% of the study participants were utilizing No Scalpel Vasectomy Technique.

Obstacles faced by the people for acceptance of NSV

It was observed that among the study participants maximum 89.2% mentioned the Socio cultural factors as the most important cause for low acceptance for No Scalpel Vasectomy, while the rest perceived service delivery and procedure related barriers as the cause for low acceptance of NSV.

Within the socio-cultural factors, maximum 35.9% participants believed that No Scalpel Vasectomy leads to decrease in manual work. About 35% of the participants also stated that it is their personal belief that No Scalpel Vasectomy is less needed because there are other methods available for family planning [Figure 2].

Knowledge about NSV

Figure 3 shows that majority (67.2%) of the respondents were having unsatisfactory knowledge regarding NSV. Knowledge scoring was done. Eight questions related To NSV was included. Correct answer was given a score of 1 and wrong answer was given a score of 0. Those respondents scoring 50% and below were classified as unsatisfactory knowledge, while those scoring above 50% were classified as having satisfactory knowledge.

Predictors of Socio cultural barriers for low acceptance of NSV

Table 3 shows the predictors for socio-cultural barriers. Multiple Regression analysis was done and Educational status of the respondent and knowledge regarding OPD visits was found to be predictors for socio-cultural barriers. The most important predictor that influenced socio-cultural factors was found to be educational status of the respondent. The better the educational status of the respondent, lesser will be the chances of developing socio-cultural barrier.

Discussion

Female sterilization technique (27.4%) was considered as the most effective family planning method among the current

Table 1: Socio-demographic correlates of use of family planning methods

Bio-social Characteristics	Current user (%) (*n*=79)	Non users (%) (*n*=305)	Total (%) (*n*=384)	*P*
Age group (years)				
20-25	0 (0.0) [0.0]	3 (100.0) [1.0]	03 [0.8]	0.785
26-30	7 (23.3) [8.9]	23 (76.7) [7.6]	30 [7.9]	
31-35	26 (21.5) [32.9]	95 (78.5) [31.5]	121 [31.8]	
36-40	41 (21.2) [51.9]	152 (78.8) [50.3]	193 [50.7]	
41-45	05 (14.7) [6.3]	29 (85.3) [9.6]	34 [8.9]	
Religion				
Hindu	65 (20.4) [82.3]	253 (79.6) [83.0]	318 [82.8]	0.888
Muslim	14 (21.2) [17.7]	52 (78.8) [17.0]	66 [17.2]	
Social group				
OBC	43 (20.1) [54.4]	171 (79.9) [56.1]	214 [55.7]	0.893
SC/ST	21 (20.2) [26.6]	83 (79.8) [27.2]	104 [27.1]	
Unreserved	15 (22.7) [19.0]	51 (77.3) [16.7]	66 [17.2]	
Educational status				
Above middle school	45 (25.0) [57.0]	135 (75.0) [44.3]	180 [46.9]	**0.044**
Below middle school	34 (16.7) [43.0]	170 (83.3) [55.7]	204 [53.1]	
Respondent's occupation				
Above clerk	31 (23.7) [39.2]	100 (76.3) [32.8]	131 [34.1]	0.082
Skilled/semi skilled	33 (23.4) [41.8]	108 (76.6) [35.4]	141 [36.7]	
Unemployed	15 (13.4) [19.0]	97 (86.6) [31.8]	112 [29.2]	
Socio-economic status *				
Upper	42 (17.0) [53.2]	205 (83.0) [67.2]	247 [64.3]	**0.020**
Lower	37 (27.0) [46.8]	100 (73.0) [32.8]	137 [35.7]	

*upper socioeconomic status includes (upper lower + upper middle) (Row%) [Column%]. Lower socioeconomic status includes (lower + lower middle)

users. This is similar to the study conducted by Sharma, N., *et al.*, (2016),[10] where, (31.4%) of current users considered Female sterilization technique as the most effective method to be practiced.

It was observed that there was paucity of knowledge regarding NSV within the community. In the present study majority 67.2 percent of the respondents were having unsatisfactory knowledge regarding NSV. Similar findings were observed in the study done by Padmadas, *et al.*, (2006),[11] which showed that, majority 54.0 percent of the respondents had low level of knowledge on vasectomy.

In the present study, about 83.6% were aware that it is a permanent technique, only 32% had the knowledge that one OPD visit is required, About 45.1% had the perception that NSV does not require prolonged bed rest, around half of the respondent believed that No Scalpel Vasectomy does not affect the health of an individual. Majority 80% of the participants had no knowledge regarding time taken to resume work. Similar findings were observed in the study conducted by Perry, B., *et al.*, (2016)[12] in India, which showed that only 25% knew that NSV usually requires one hospital visit, and about a 66.7% of the respondent thought that NSV does not requires prolonged bed rest and affects sexual performance Mahapatra, *et al.*, (2014),[13] in their study showed that majority 77.0% of the respondents did not have any idea about the time required to resume normal work and sex after the procedure. Garg K P. *et al.* (2013),[14] in their study showed that majority 62.9% of the respondents knew that No Scalpel Vasectomy does not require prolonged bed rest.

The knowledge of the respondents (about NSV) in other studies was found to be almost similar to that of the present study. This shows that over the years the myths and misconceptions about male sterilization has persisted and it is still deep-rooted in the minds of the community

Table 2: Perception of Most Effective Family Planning Method with Current Utilization

Most effective Family planning method	Number (*n*=384)	Percentage (%)
Spacing methods		
Condom	37	9.6
Oral Contraceptive pills	55	14.3
Copper T (Intrauterine device)	37	9.6
Injectable	12	3.1
Terminal methods		
No Scalpel Vasectomy	06	1.6
Female Sterilization Technique	203	52.9
Traditional methods		
Self-control	19	4.9
None	15	3.9
Current users		
Yes	117	30.46
No	267	69.5
Method currently used (*n*=117) Spacing methods		
Condom	23	19.7
Intra uterine devices	32	27.4
Contraceptive pill	13	11.1
Injectables	11	9.4
Terminal methods		
Female Sterilization Technique	32	27.4
No Scalpel Vasectomy	06	5.1
Source of Motivation (*n*=117)		
Husband/wife	19	16.2
Drugstore/Chemist	02	1.7
Relative/friends	30	25.6
Government hospital	11	9.4
Community Mobilizer	24	20.5
Media (Radio/TV/Newspaper)	04	3.4
Private Hospital/Doctor	27	23.1

In the present study majority 89.2% of respondents had stated socio-cultural barrier as one of the major cause for low acceptance of No Scalpel Vasectomy. Among these barriers majority 35.9% of the respondents stated that No Scalpel Vasectomy leads to decrease in physical strength, followed by 35.0% respondents having personal beliefs that NSV is not needed because of the availability of other family planning methods. About 11.1% of the respondents also stated that NSV leads to decrease in physical strength. 6.4% of the respondents had also stated that prohibition in religion was also one of the factors associated with low acceptance of NSV. 5.5% of the respondents also stated that NSV is least popular and there is lack of publicity and awareness. There were few (1.2%) respondents who also believed that NSV

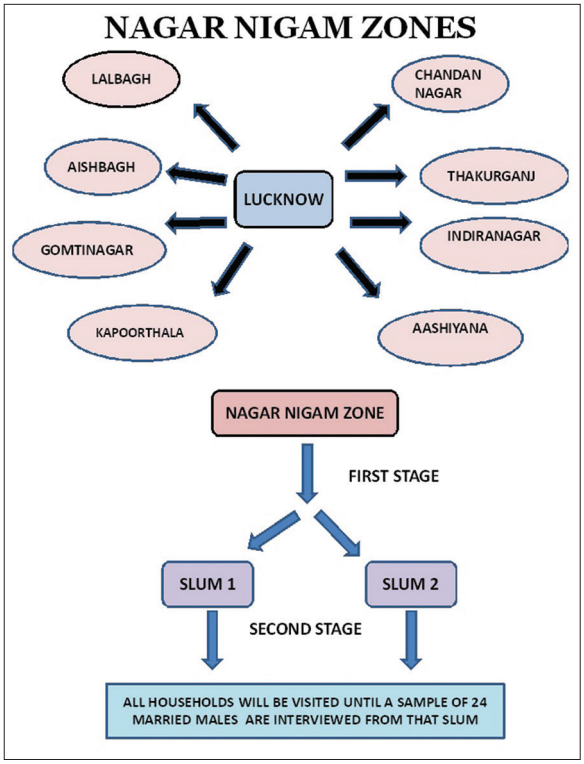

Figure 2: Distribution of Nagar Nigam zones

Table 3: Multivariate regression analysis showing predictors of Socio cultural causes

Variables	Univariate analysis		Multivariate analysis		Confidence interval (95%)	
	Unstandardized Coefficients		Standardized Coefficients			
	Unadjusted Odds Ratio	*P*	Adjusted Odds Ratio	*P*	Lower	Upper
Educational status						
Above middle school	0.405	0.044	0.300	**0.011**	0.118	0.763
Up to middle school	0.336	0.020	0.302	**0.014**	0.116	0.788
Illiterate			Reference			
Knew the term Nasbandi						
Yes	2.690	0.023	-	-	-	-
No			Reference			
OPD visits						
One	4.937	0.001	-	-	-	-
More than one	2.304	0.122	-	-	-	-
Don't know			Reference			

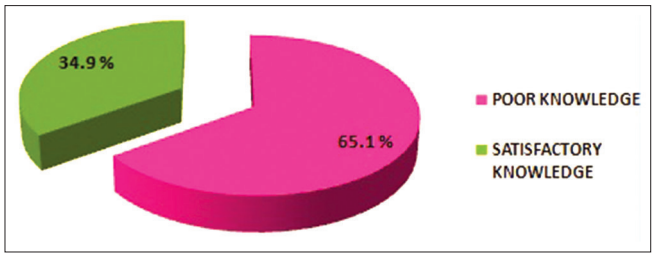

Figure 3: Knowledge of NSV

affects the male sexual function. Similar findings were observed in a study done by Dasgupta, A. *et al.*, (2016),[10] which showed that 22.0% of the participants believed on 'personal beliefs' of the individual as an important factor for low utilization of NSV. Similarly in a study done in Uttar Pradesh by 'State Innovation in Family Planning Services Project Agency' (SIFPSA), (2014), showed that 6% of the respondents had stated prohibition in religion as one of the barrier for not accepting No Scalpel Vasectomy. About 14% also believed that NSV leads to decrease in physical strength and causes weakness.

Conclusion

The study was conducted in the urban slums of luck now. The perception of married males regarding family planning was accessed. It was observed that female sterilization technique was considered as the most effective terminal method of family planning by the respondents. Only 30.46% of the respondents (or their spouses) were currently utilizing any family planning method. The reason of low utilization could be due to low knowledge about different methods of birth control especially NSV. Majority of the respondents perceived socio-cultural barriers as the most important cause for low acceptance of NSV. Majority (35.9%) of the respondents had the perception that NSV leads to decrease in physical strength while 35% stated that due to the availability of other family planning methods NSV is less needed. Educational status of the respondent was found to be the most important predictor for perceiving the socio-cultural barriers. These myths and misconceptions could be removed only by educating the community regarding family planning methods especially NSV. The findings of this study will help the policy makers to formulate the plan and policies to increase the use of family planning methods especially NSV, which will ultimately help to reduce the problem of population growth.[15-21]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Acknowledgements

We would like to thank SIFPSA (State Innovation in Family Planning Services Project Agency) for their guidance, and all the male participants who were interviewed for their patience and cooperation.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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