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Original Research Article

Perception towards No Scalpel Vasectomy (NSV): A Community Based Study among Married Males in a Rural Area of West Bengal

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ABSTRACT

Introduction: Though no scalpel vasectomy (NSV) technique was introduced in India in 1992 to increase male participation in family planning, it has failed to get adequate momentum to achieve its goal. The acceptance rate of male sterilization namely - No-Scalpel Vasectomy (NSV) is abnormally low in India in spite of best efforts made from time to time by the Government of India.
Methodology: We conducted a cross-sectional community based study to get insight into apathy of men towards NSV. The study included 100 respondents.
Results: Most of the respondents (88%) were aware of NSV as a method for permanent male sterilization. The majority (85%) knew that NSV is done without any charge and cash incentive (63%) is given to the NSV client after the procedure. Fear of surgical procedure (48%), Beliefs (family planning is not responsibility of males) (22%) were the common reasons for unwillingness to adopt NSV.
Conclusions: There is a need to design and develop need-based information, education and communication (IEC) strategy to fill in the existing information gap regarding NSV to improve its adoption. Involvement of community leaders, satisfied clients and utilization of television and radio to spread the correct message would enhance the uptake NSV as a popular family planning method.

Key words: NSV; Perception; Rural; Married Males.

INTRODUCTION

No scalpel vasectomy (NSV) is a new sterilization technique that is safe, convenient and acceptable to males. NSV is a simpler, faster, modified and sophisticated technique that requires no incision but only a small puncture and no stitches .NSV is less expensive operation than tubectomy in terms of instruments, hospitalization and doctor's training. Cost-wise, the ratio is about 5 vasectomies to one tubal ligation. [1]

NSV technique was introduced in India in 1992 to increase male participation in family planning. [2] 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. [3] Despite being a simple and safe method, NSV seems to have failed to achieve its goal. Addl. Chief Secretary and Mission Director, NHM, of GOI recently stated that" The acceptance rate of male sterilization namely - No-Scalpel

Vasectomy (NSV) is abnormally low in India in spite of best efforts made from time to time from the end of the Union Government." [4] According to the National Family Health Survey-3 (NFHS-3), the current acceptance of NSV in India has declined from 1.9% in NFHS-2 to 1% in NFHS-3 [rural (1%) less than urban (1.1%)]. [5]

There has been a general assumption that man, exercising dominations in gender relations, end up shunning off their responsibility of family planning. This study was conducted to get an insight into the apathy of men towards NSV in a rural area.

Objectives

- To study the socio-demographic characteristics of the ever-married adult males in 15 to 49 years age group of a rural areas.
- To study perception towards NSV among study population.
- To ascertain the covariates of the assessed perception towards NSV.

MATERIALS AND METHODS

Study Design - Cross-sectional community based.

Sample Size (N)- Considering 50% awareness about NSV of Married Adults Men aged 15 to 49 years (p = 0.5), sample size was calculated to be 100 with 95% Confidence level (Z_α) and 10% precision of estimate (d =0.10):

$N = Z_\alpha^2 (p) (1 - p)/d^2$.

(N=Sample Size, Z_α =95% Confidence level, p=Prevalence= precision of estimate)

Participants - This study was conducted in Singur, rural field practice areas of All India Institute of Hygiene and Public Health, Kolkata. Lines listing of all married males aged 15 to 49 years were made and 100 such men were chosen by simple random sampling from the rural community. Males were contacted from the sample list prepared as mentioned above. A question "Have you heard of NSV?" Was asked to the subjects. If the response to the question was 'no', then a male in the contiguous house was included in the study to reach the above sample size.

Interview Questionnaire – Before the start of the study, ethical approval was obtained from the Institute Ethics Committee. Informed consent was taken from the study population. They were given the freedom of refusal to give response to all or any particular question(s) at any stage of the study. Confidentiality and anonymity was ensured by not recording their names or any other information which would reveal their identity. It takes about 20 minutes to administer.

The schedule consisted of two parts prepared in the local language (Bengali), made simple, easily understandable and unambiguous. The instrument was established by literature review. Cronbach's α was 0.86, which indicate sufficient internal consistency. The content and face validity of the schedule was ensured by public health experts of All India Institute of Hygiene and Public Health, Kolkata.

First Part consisted of five questions about demographic data (e.g., age of the respondents, caste, religion, education, occupation) and 2 questions on source of information and reasons for nonacceptance of NSV. Second part consisted of 10 close-ended questions to assess the perception about NSV.

Statistical analyses- Data were entered into a spreadsheet and exported to Statistical Package for the Social Science® (SPSS) for Windows, version 16.0 software for analysis. Descriptive statistics were used to describe background characteristics and perception towards NSV. Numbers were used to present categorical data and median for non-normal continuous data. To evaluate perception of the respondents, responses were categorized into "agree", "Disagree" or

"do not know". A score of" 1" was assigned for a correct response (agree) and "0" for any other. The scores were then summed up to generate an overall score for each participant. Levels of knowledge were then categorized depending on their total and median score. Accordingly, level of perception was categorized as "unsatisfactory' for respondents who scored ≤ median and "satisfactory" for those who scored >median.

Ratios (ORs and AORs) and 95% confidence intervals (CIs) were calculated through logistic regression model to determine association levels of perception with socio-demographic variables. All tests were two-tailed, and $P<0.05$ was considered significant.

RESULTS

Table 1. Background characteristics of the study population (*N*=100)

VARIABLE		NO
Age (18-49) Median 34yrs	15-24	14
	25-29	18
	30-34	24
	35-39	24
	40-44	10
	45-49	10
Religion	Hindu	80
	Muslim	20
Caste/Tribe	SC	26
	OBC	22
	OTHER	52
Education Level	Illiterate	14
	Primary completed	26
	Secondary completed	18
	Higher Secondary completed	16
	Graduate and above	26
Occupation	Cultivation	30
	Daily Lab our	14
	Service	24
	Business	22
	Other.	10
Sources of information	Family Planning Clinic	12
	Radio	10
	Television	60
	Friends	10
	Other (printed advertisements)	08
Cause of non-acceptance vasectomy	Psychological fear of surgical procedure	48
	Beliefs (family planning is not responsibility of males)	22
	Decrease in sexual function	08
	Requirement of prolonged bed rest following procedure affecting daily earnings	10
	Social ostracism	12

Majority of subjects had education less than higher secondary level (58%), mostly were cultivators by occupation (30%).The reason for unwillingness was commonly psychological fear of surgical procedure (48%) and the major source of information was TV (60%).

Table 1- Background characteristics:

The study included 100 respondents who agreed to participate. Median age of the respondents was 34±7.9 years. Most of the respondents (88%) were aware of vasectomy as a method for permanent male sterilization Television was reported to be their main source of information (60% respondents) followed by Family Planning Clinic (12%) and radio and friends (10% each) and others (printed advertisements) (8%).

Reasons cited by the respondents for unwillingness to adopt NSV were Psychological fear of surgical procedure (48%), beliefs (family planning is not responsibility of males) (22%), decrease in

sexual function (08%), and requirement of prolonged bed rest following procedure affecting daily earnings (10%) Social ostracism (12%).

Table 2. Perception towards NSV of the study population (*N*=100)

NO	Perception	Disagree/ Do not know	agree
1	An option for permanent sterilization	12	88
2	Low failure rate	83	17
3	Done without any charge	15	85
4	Cash incentive is given after vasectomy	37	63
5	Provision for insurance if pregnancy or any Other complication occurs after vasectomy	88	12
6	Done in one OPD visit only	76	24
7	Does not require prolonged bed rest	36	64
8	Does not affect sexual performance	40	60
9	Does not affect manual work	38	62
10	Done without giving any incision	88	12
Score(0-10)		**Median 5.5**	

Table shows the difference in perception towards NSV as permanent sterilization (88%) but done without any incision (12%) amidst the rural subjects.

Table 2- Perception towards NSV:

The majority of them (85%) knew that NSV is done without any charge and cash incentive is given to the NSV client (63%) after the procedure. However, only a few of the respondents (12%) had knowledge that a monetary compensation is given to the NSV client in case a complication occurs following the procedure, or if the procedure fails. However, only a few of the respondents (24%) were sure that NSV usually requires one hospital visit only. The fact that NSV does not require prolonged bed rest and does not affect sexual performance was known to (64%) and (60%) respondents. Only (12%) respondents were sure that NSV is done without giving any incision.

Table 3- Association of covariates with satisfactory perception:

Univariate logistic regression covariates of satisfactory perception towards NSV like age <34yr (median)[O.R. (2.67), 95% C.I. (1.19-5.99)] education above Secondary level[O.R. (5.79), 95% C.I. (2.4-13.94)] and non-cultivator or non- labourer by occupation [O.R. (6.88), 95% C.I. (2.83-16.74)] had significantly satisfactory perception. Multivariate logistic regression showed that variables like age [A.O.R. (3.5), 95% C.I. (1.22-10.05)] and education [A.O.R. (4.74), 95% C.I. (1.07-20.94)] significantly contributed to satisfactory perception but occupation [A.O.R (1.97), 95% C.I (0.5-7.81)] loose the significance.

Table 3.Association of covariates with satisfactory (>median) perception:
A Bivariate and Multivariate analysis (N=100).

Covariates		OR (C.I.)	AOR (C.I)
Age	<34(48%) (median)	2.67 (1.19-5.99)	3.5 (1.22-10.05)
	≥34 (52%)	Ref	Ref
Education	Above Secondary (42%)	5.79 (2.4-13.94)	4.74 (1.07-20.94)
	Upto Secondary (58%)	Ref	Ref
Occupation	Others (56%)	6.88 (2.83-16.74)	1.97 (0.5-7.81)
	Cultivator& Labour (44%)	Ref	Ref

Bivariate regression shows significant association of education, age and occupation but mulvariate regression provides significant association of education and age with the level of perception.

DISCUSSION

In the study almost all the respondents (88%) were aware of the NSV as a family planning method. Their source of information was mainly television (60%) and while printed advertisements (8%) (magazines, pamphlets, and posters) hardly contributed anything in spreading knowledge. It seems that circulation of information about family planning by word of mouth is very important. There has been a general assumption that man, exercising dominations in gender relations, end up shunning of their responsibility to family planning. Supporting the fact in our study

provides 22% of the respondents believed that family planning was not the responsibility of males. It is further important to highlight the fact that none of the male respondents approve male sterilization as a possible option of family planning for them. Reports supportive of no NSV done the study area for last two consecutive years. This highlights the fact that there is large gap in their knowledge about advantages of vasectomy which contribute to their reluctance to undergo vasectomy. Fear of surgical procedure was cited as the most frequent cause (48%) for unwillingness to accept NSV. Many advantages of NSV including no incision, no stitches, and minimal pain were known to only 12% of the respondents. It becomes imperative that the procedure should be promoted as simple and painless, and campaign materials should refrain from using the word "operation" in conjunction with NSV. Furthermore, it also merits to be highlighted that a monetary compensation would be given to the client if any complication occurs due to the procedure or in case of failure of the procedure; this fact is known to only 12% of the respondents. This may be related to the uncertainty about the future.

In other similar studies said reason for nonacceptance of NSV was difficulty in getting bride for the man who wishes to remarry after death or divorce from his present marriage. [6-8] Social ostracism (12%) in our study supports this fact. These worries may be overcome by propagating advantages of permanent family planning method, in case family is complete. NSV needs to be propagated as one time simple and safe approach to the family planning. Awareness of advantages of NSV over other family planning methods may prove a trigger for promoting a person to take a final decision about NSV. [9]

Requirement of prolonged bed rest after vasectomy was another important reason cited by the respondents for their reluctance to adopt NSV. This is highlighted by the fact that only 10% respondents opined that NSV does not require prolonged bed rest. This poor perception affects NSV use among those men working as a daily labour in Indian scenario. Promotional activities should specifically highlight this issue that the clients may join their work the day following NSV important for the people who work on the basis of daily wages.

Apprehension about the negative impact on sexual life following NSV was another barrier to NSV uptake. A large number of respondents (40%) were not sure whether sexual performance would be affected following NSV. This aspect was also highlighted in another survey where it was noted that "men would not tell other people if they had been sterilized, fearing being shamed and taunted by community members, who might refer to them using such words as *namard* (meaning impotent)". [9] In a survey conducted to study the factors affecting vasectomy acceptability in the Kigoma region of Tanzania, it was pointed out rumors that vasectomy results in decreased sexual desire or performance or that the procedure is equivalent to castration were prevalent and were mentioned by respondents. [10]

CONCLUSION

The NSV promotional activities should focus on bridging the prevailing information gap regarding NSV among the potential clients. A client satisfied with NSV may prove instrumental in convincing other persons to opt for NSV. This has been very aptly narrated by Dr. R.C.M. Kaza, NSV Master Trainer to the Government of India as follows: "NSV is as much an IEC operation as a surgical operation". [11] Airing positive stories and examples of successful

NSV cases through the powerful media of television is likely to improve the acceptability of NSV among the masses.

There is a need to design and develop a need-based IEC strategy to bridge the existing information gap among the eligible couples regarding NSV to improve its adoption. Involvement of community leaders and satisfied clients in the promotional activities and utilization of television and radio would enhance the uptake NSV as a popular family planning method. To revitalize the programme, all States / UTs may observe WORLD VASECTOMY DAY on 7thNovember 2014.Accordingly , wide publicity, whereby ,male sterilization services would be provided to clients in a dedicated manner through camp mode or through regular service, may please be ensured in the block, sub-division and at district level.

Strength:

- ❖ Community based study was the main strength.
- ❖ Privacy maintained so less chances of biasness expected during response.

Limitations:

- ❖ The main limitation of this study was small sample size
- ❖ Most of the questions were close ended. So many other items to elicit the perception and the reasons for non-acceptance might have been missed.

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