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## RESEARCH ARTICLE

# Nursing Staff's Views Regarding Barriers to Vasectomy: A Cross-Sectional Survey

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### Abstract:

#### **Background and Aims:**

Family planning has a controlling effect on the rate of population growth throughout the world in addition to preventing pregnancy-related health risks in women, reducing infant mortality, helping to prevent children's congenital diseases, and improving quality of life of the family. Despite, men's participation in family planning programs tends to promote life standards and help national development, but men do not very willing accept vasectomy. This study aimed to investigate the nursing personnel perspectives toward vasectomy barriers.

#### **Materials and Methods:**

This cross-sectional and micro-level study was performed on 66 eligible nursing personnel who were selected by convenience sampling. Data gathering instrument was a valid and reliable questionnaire. Data analysis carried out using statistical methods such as frequencies, One-way Analysis of Variance (ANOVA) and independent t- test in SPSS software with version 16.

#### **Results:**

According to the study findings, the mean age of the subjects was  $29.32 \pm 5.64$  and 60.6% of them were women with nursing bachelor and 48.5% participants were married for more than ten years and had 2 to 4 children of both sexes. According to the perspectives of nurses, the major barriers orderly included: irreversibility (62.1%), permanent infertility (56.1%), blaming by relatives and acquaintances (48.5%), and inconsistent with the existing culture in society (40.9%). Among demographic variables, there was a significant correlation only between education level with subjects' attitude ( $p < 0.05$ ).

#### **Discussion:**

According to study results, giving correct information about contraceptives and their health outcomes for target groups and changing their attitudes towards family planning barriers especially vasectomy are recommended and emphasized.

**Keywords:** Attitude, Vasectomy, Barriers, Nursing personnel.

## INTRODUCTION

Growing population resulting from nutritional, health, educational and environmental changes in societies, threatens human communities and also is one of the major obstacles of socioeconomic growth in countries [1]. Unfortunately, this concern mostly influences developing and low income nations and threatens the survival and health of future generations. Therefore considering the above documents and limited resources of the earth, it seems that control of rapid population growth through cooperating all stakeholders, politicians, scientists and other topic-related experts is a

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necessity [2]. The most important strategy for the control of increasing population is utilizing family planning methods. These methods were accepted by most countries in the world [2 - 4].

Family planning is a cost-effective way to save the lives of women and children, and it empowers families to determine the optimal timing and spacing of births. One of ways of controlling fertility is sterilization and it is the most widely used contraceptive method worldwide. According to the United Nations estimates, in 2005, 262 million women in reproductive age were using sterilization as a method of contraception. Of these, 225 million relied on tubectomy and 37 million on vasectomy, and those respectively included 34% and 5.6% of all contraceptives [5]. In the Islamic Republic of Iran, there was no demand for vasectomy prior to the introduction of no-scalpel vasectomy by Dr. Li Shunqiang in 1993. Between 1993 and 2004, 500 training courses were conducted in public sector institutions, which helped to train 460 medical doctors in the technique. During the same period, an estimated 375 000 Iranian underwent the procedure, raising the prevalence of vasectomy from 0% to 3.5% in the national contraceptive mix [6]. As it is mentioned in other reports, although the worldwide frequency of vasectomy is still much lower than tubectomy (3%-6% versus 28%), men are going to accept more responsibility for family planning [7].

The vasectomy procedure is a safe, simple and permanent method of contraception and has a failure rate of less than 1% [8]. It is a simple and highly effective method with a low morbidity rate and an extremely low mortality rate [9, 10]. Because this method does not create permanent changes in blood hormones and sexuality performance, even it has no risk for incidence of conditions such as cardiovascular diseases, prostate infections and cancers in comparison with other contraceptive methods [11].

Recently, vasectomy is performed by creating a minor incision on scrotum in a 20- minute period without using a surgical scalpel (NSV) and general anesthesia [12]. No-scalpel vasectomy is less invasive than the incision approach because tissue trauma or blood vessel injury caused by sharp or blind dissection is avoided. It is a breakthrough in vasectomy practice with the main clinical advantage being low surgical complication rate, especially of haematoma and infection. Even this convenient contraceptive (NSV) is practical using low medical facilities and devices at the lowest level of health services system. Despite this method is simple, permanent, safe and low cost, but it has been accepted less than other contraceptives in the world. It is believed that different barriers may influence the use of vasectomy among men, so knowing and identifying them help to improve the above problem [11, 13]. Hence we decided to survey nursing personnel attitude for determining probable barriers of vasectomy. Its results might contribute to existing knowledge and increase the awareness of researchers and practitioners about barriers to vasectomy.

## **METHODS AND MATERIALS**

The current study is a cross-sectional survey designed to examine the attitude of a sample of Iranian nurses regarding barriers of vasectomy acceptance, in Khoy city, Northwest of Iran.

Seventy-four eligible subjects from 120 nursing staff employed in hospitals of Khoy, were selected by convenience sampling and recruited for the present research. Inclusion criteria for the study participants including nursing staff: 1) were resident in Khoy city 2) were married. Single participants were excluded from the study. After deleting cases with incomplete or missing data (n=8), 66 participants retained in the study and statistical analyses were carried out on them (response rate was 89.19%).

To collect data, we prepared a self-administered questionnaire using the scales of previous studies. This measurement instrument included two subscales: demographic characteristics (8 items), attitude toward the barriers of vasectomy (20 items). Response categories for each item relating to the attitude's questionnaire include a 3-point likert scale ranging from 1 (disagree) to 3 (agree).

To test clarity and content validity, the self-administered questionnaire was shown to a panel of experts consisting of five professors of health education, two reproductive health professors, one nursing professor, one surgery professor, and one instrument maker. They evaluated each item for its distinctiveness, understandability, and appropriateness for the purpose of the study, and final revisions were made based on their comments.

To evaluate reliability, instrument was completed by subjects and Cronbach's alpha for the study questionnaire was calculated. Internal consistency of the attitude questionnaire including items related to barriers to vasectomy adoption was assessed and its Cronbach's alpha was 0.76. After assessing the psychometric characteristics of the instruments, the questionnaire was completed by study respondents. After collecting, organizing and classifying data with SPSS software version 16.0 (SPSS Inc, Chicago, II, USA), statistical analysis was performed using descriptive and inferential statistical methods (frequency, ANOVA, independent t-test). In this study, a P value of less than 0.05 was considered

significant. Before the study, an informed consent form was obtained from all of the participants and all ethical principles were considered in all phases of the research.

## RESULTS

Nearly 60.6% of participants of the present study were female. The mean age of subjects was  $29.32 \pm 5.64$ . Approximately more than half of the research subjects were bachelors, the remaining participants have placed in other education levels (Table 2).

Overall, all of the nurses (100%) were living in Khoy, Iran, and all were employed as formal nursing personnel in hospitals of the mentioned city. About 48.5% of participants were married for more than 10 years, and 50% of them had 2 to 4 children of both sexes.

According to study findings, nursing personnel found that factors such as irreversibility of vasectomy, permanent infertility, blamed by relatives and acquaintances, and inconsistent with the culture of society were the main barriers of vasectomy adoption (Table 1). Among sociodemographic variables (age, sex, duration of marriage, education level, number of children, sex of children, organizational position, and living place), there was a statistically significant correlation only between education level with subjects attitude ( $DF=4$ ,  $p$  value= 0.03) (Table 2). Meanwhile there is no significant association between the mean scores of the attitude of both sexes regarding obstacles of vasectomy (Table 3).

**Table 1. Frequency distribution of subjects based on the most common barriers of vasectomy.**

Attitude	Disagree		Neutral		Agree		Sum	
	N	(%)	N	(%)	N	(%)	N	(%)
1.irreversibility	7	10.6	18	27.3	41	62.1	66	100
2 permanent infertility	15	22.7	14	21.2	37	56.1	66	100
3.blame by relatives and acquaintances	19	28.8	15	22.7	32	48.5	66	100
4. inconsistent with the culture	29	43.9	10	15.2	27	40.9	66	100
5. willingness to other contraceptives	20	30.3	24	36.4	22	33.3	66	100
6. fear of future marital relations	27	40.9	18	27.3	21	31.8	66	100
7. feeling superior to wife	29	43.9	18	27.3	19	28.8	66	100

**Table 2. Frequency distribution of subjects based on education level.**

Education level	Number	Percentage
Under high school	6	9.1
High school	11	16.6
Technician	5	7.6
Bachelor	40	60.6
Master of science and upper	4	6.1
Sum	66	100
Results of one way ANOVA test		$df=4$ , $p$ value= 0.03

**Table 3. Comparison of the mean score of attitude of nursing personnel regarding barriers of vasectomy in two sexes.**

Sex	Mean	Standard deviation	Levene's Test for Equality of Variances	t-test for Equality of Means		
				t-value	df	p-value
Male	37.1	12.9	p-value 0.61	t-value 0.151	df 64	p-value 0.88
Female	36.6	12.7				

## DISCUSSION

One of the main obstacles of economic, social, cultural and health progress in nations especially in developing countries is the population growth. To achieve sustainable development, today the need to change policies and

strategies to deal with this problem is felt more than the past times. The policies including change of attitudes and beliefs of people in relation to contraceptive methods, provision of maternal health, considered women's rights regarding their reproductive abilities, and increased the understanding of men about the importance of women in the community and the promotion of their participation in family planning programs. Therefore, the above policies and strategies improve the living standards and help in national development. Despite ample benefits of family planning, unfortunately men give less importance to family planning especially in adopting vasectomy as a helpful contraceptive.

In the present study, 62.1% of nursing personnel found irreversibility of vasectomy as the first barrier of vasectomy. Whereas, some studies highlighted that there exists vasectomy reversal after vasectomy by new surgical techniques, as fertility rates range widely in the published series, anywhere from 30-76%, and depend on many factors [14]. It seems that low awareness of subjects toward vasectomy reversal surgery (VRS) and gain of fertility ability after VRS lead to make the participants introduce irreversibility of vasectomy as the first barrier. One study by Jamaati (Iran, 2002) showed that vasectomy irreversibility and fear of impotence after vasectomy were the most important obstacle among men [15], which is consistent with our findings.

Wilkinson (1998) in African countries indicated that the most common barrier in using contraceptive methods was a lack of complete and accurate information about contraceptives and negative attitude toward them [16]. This can be due to low health education or public training about family planning in that country. The second obstacle in the current research was infertility (56.1%) due to vasectomy that subjects declared, and this finding was fully consistent with findings of a study by Nemati [2]. But, the results of some researches such as the study of Khosroabadi in Iran were not concordant with our findings [17]. These dramatic differences in various places of the country can be due to lack of complete and accurate information concerning vasectomy.

Despite the efforts of health custodians in our country, vasectomy has not still been accepted as a safe contraceptive in society, and prevalence of its use in Iran like Egypt and Indonesia, as the Islamic countries, is about 0 to 5% at the national level that could possibly be due to religious and cultural prejudices. The study of Jamaati in Yazd, Iran showed that 5.6% of subjects believed vasectomy has religious problems. Therefore, it is essential that public misunderstandings about vasectomy have been removed by religious leaders [15].

In this survey, blaming by relatives and acquaintances was the third barrier of vasectomy acceptance, and it reported 48.4% of cases. As the results of Hajivand's study highlighted that 19.3% of participants refused vasectomy for fear of blame by others [18] and this finding was concordant with our results. It seems that vasectomy has probably damaged social pride, a sense of seeking dominance, aggression and masculinity of men [19]. Therefore, the effective training programs are necessary to correct men's misconceptions regarding reproductive health particularly vasectomy. Family planning programs must be meaningful socioculturally and the inclusion of men in these programs is recommended [20].

In this study, there was a significant association between subject's education level and their attitude. It means that when education level of participant increases, their positive attitude also increased toward vasectomy, and vice versa. This finding was supported by the results of studies by Safavi and Motamadi [4, 21]. Also in present research, there was no significant association observed between the attitude of men and women with the barriers of vasectomy, and this lack of association may be due to homogeneity of samples and the same information of participants regarding vasectomy barriers. Ultimately, this project like other surveys has limitations.

First, the results cannot be generalized beyond the study sample and, therefore, can be generalized only to populations with similar features. Second, the data for this study were collected using a self-reported questionnaire. Participants may underestimate or overestimate barriers of vasectomy, which may affect the study findings. Third, the sample size of the current project was low; the researchers should cautiously consider its results. Hence more investigations with a larger sample size regarding the above topic were recommended for future research.

In the end, according to the above documents and the key role of family planning in maintaining health of mothers and children, researchers of the current study recommend the following suggestions:

1. Public welfare and improved life standards are major prerequisites of modern humans. To achieve this goal, family planning should mainly be considered with increased men's participation in decisions about reproductive issues.
2. It is believed that women guarantee the health of the community, and therefore policy makers and decision makers of society should consider their legal and social rights.

3. The role of nurses in health centers as the interface between family planning goals and potential recipients of services is considered valuable, and it is suggested that they are better educated in order to gain a positive attitude to family planning programs especially vasectomy.
4. Extensive media activities for raising awareness and changing people's attitudes toward family planning actions especially vasectomy are mandatory.
5. To recognize more effective and important barriers of vasectomy, it is proposed that extensive researches with larger sample size should be performed in Iran and other countries particularly in Islamic nations.
6. Adopting vasectomy in community can also be increased by health care professionals at the health centers. They can effectively communicate and consult with men about vasectomy to obtain a correct decision.

#### **ETHICS APPROVAL AND CONSENT TO PARTICIPATE**

Not applicable.

#### **HUMAN AND ANIMAL RIGHTS**

No Animals/Humans were used for studies that are base of this research.

#### **CONSENT FOR PUBLICATION**

Not applicable.

#### **CONFLICT OF INTEREST**

The authors confirm that this article content has no conflict of interest.

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#### **REFERENCES**

- [1] Razzaghi M. History of vasectomy and factors influence it, Presented paper in Seminar entitled "survey of the ways that increase men's participation in family planning programs. Iran: Tehran University of Medical Sciences, Ministry of Health and Medical Education 2000; p. 6.
- [2] Nemati AC, Pourmahmoudi A, Gaffarianshirazi HR. Assessment of knowledge and attitude of married men regarding vasectomy in Dehdasht Iran. Yasuj University of Medical Sciences. *J Armagan Danesh* 2005; 8: 69. [Persian].
- [3] Barone MA, Johnson CH, Luick MA, Teutonico DL, Magnani RJ. Characteristics of men receiving vasectomies in the United States, 1998-1999. *Perspect Sex Reprod Health* 2004; 36(1): 27-33. [<http://dx.doi.org/10.1363/3602704>] [PMID: 14982674]
- [4] Safavi S. Comparison men's reasons in selecting vasectomy or selecting tubectomy by their wife among couple referring to hapitals related to Tehran University of Medical Sciences. MS Thesis in midwifery field. 1998; 10-20.
- [5] World contraceptive use. New York: United Nations, Department of Economic and Social Affairs 2005.
- [6] Country report on the population and family planning program in the Islamic Republic of Iran. Tehran: Ministry of Health and Medical Education 2003.
- [7] Comparing Muslim Countries' Policies on Contraception and Abortion: Global Public Health through a Feminist Lens [online]. 2010, [cited 2010 Dec 30] Available at: <http://www.earth-policy.org/Updates/Update4ss.htm> website2010.
- [8] Dhar NB, Jones JS. Vasectomy: A simple snip? *Indian J Urol* 2007; 23(1): 6-8. [<http://dx.doi.org/10.4103/0970-1591.30254>] [PMID: 19675750]
- [9] Hatcher RA, Trussell J, Stewart F, Stewart GK, Kowal D, Guest F. Voluntary surgical contraception. 2007; pp. 379-414.
- [10] Michielsen D, Beerthuisen R. State-of-the art of non-hormonal methods of contraception: VI. Male sterilization. *Eur J Contracept Reprod Health Care* 2010; 136-49. [<http://dx.doi.org/10.3109/13625181003682714>] [PMID: 20230339]
- [11] Phips W, Monahan F, Sands J, Marek J, Neighbors M. Male contraception. 2004; pp. 1853-4.
- [12] Vahid Dastjerdi M. Vasectomy or Tubectomy? presented in Seminar entitled: Survey of the ways that increase men's participation in family planning programs.1997, p.22.
- [13] Sahli S. Paramedics attitude towards family planning. *Rev Tunis Sci Soc* 2004; 5: 283-91.

- [14] Belker AM, Thomas AJ Jr, Fuchs EF, Konnak JW, Sharlip ID. Results of 1,469 microsurgical vasectomy reversals by the Vasovasostomy Study Group. *J Urol* 1991; 145(3): 505-11. [PMID: 1997700]
- [15] Jamaati MH. Causes of lack of vasectomy acceptance among partners of tubectomized women in Yazd, Iran. *Esfahan J Med Sci* 2000; 6: 83-8.
- [16] Wilkinson DDJ, Lynam P. Vasectomy in Kenia AVSC Working Paper 4. 1998; pp. 58-69.
- [17] Khosroabadi A. Survey of attitude of married men regarding contraceptives. MS[thesis]. Sabzevar, Iran. 1995; p. 49.
- [18] Hajivand A. Assessment of physical –mental dimensions of vasectomy among vasectomized men in Boshehr, Iran. *J Fam Health, Iran Fam Plann Association* 1998; 1: 27.
- [19] Bayu S. Barriers to male participation in family planning in West Timor. *Asia Pac Popul J* 2004; 19: 55-72.
- [20] Manhso FR. Men experiences of vasectomy in the Bralozation. *Int J Nursing Review* 2005; 52: 101. [<http://dx.doi.org/10.1111/j.1466-2435.2005.00247.x>]
- [21] Motamad IBMV, Eflatonian MR, Salari S. Assessment of knowledge, attitude of married workers referring to Clinic of Kerman coal Company regarding vasectomy. *J Urmia Univ Med Sci* 2000; 8: 214-22.

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