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An assessment of knowledge and attitude of vasectomy in adult males: a cross sectional study from Pokhara, Western Nepal.

Dayanand G[1], Singh S[2], Baruwal C[3]

Correspondence to:

dppjdpk@yahoo.com

[1]***Ms. Gnanakshi Dayanand,*** M.Sc, Lecturer & Head of the Department of Community Health Nursing, Manipal College of Medical Sciences (Nursing Programme), Phulbari, Pokhara, Nepal.

[2]***Mrs. Sakun Singh,*** MSc., Principal & Head of the Department of OBG(Nursing), Manipal College of Medical Sciences (Nursing Programme), Phulbari, Pokhara, Nepal.

[3]***Mrs. Chandani Baruwal,*** B.SC (N) student, Manipal College of Medical Sciences (Nursing Programme), Phulbari, Pokhara, Nepal.

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Abstract

Background

Vasectomy is a simple, reliable, safe, effective and permanent method of birth control for men. The failure rate is less than 1%. The objective of this study was to assess the knowledge and attitude of vasectomy in adult males residing in Pokhara, Nepal.

Methods

Descriptive cross-sectional survey approach was adopted for the present study. 100 adult males of 26-49 years of age were selected for this study. Data was collected from 31-03-2014 to 30-04-2014 by using structured questionnaire and finally analyzed by Statistical Package for the Social Sciences (SPPS) for Windows Version 16.0 (SPSS Inc.; Chicago, IL, USA).

Results

In the present study majority of the participants had average level of knowledge 69%; 26% had poor and remaining 5% had good level of knowledge regarding vasectomy. Most of the participants had good attitude 60%, 40% of them had average attitude and none of them had poor attitude regarding vasectomy.

Conclusion

Majority of adult males had average knowledge on vasectomy. So, adult males should be educated about the advantages of vasectomy. This may bring changes in controlling population explosion, sharing the decisions of contraception burden equally with their partners, more awareness of reproductive roles and closes the gap in male and female sterilization rates.

Key words

Attitude, knowledge, Nepal, vasectomy

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Background

Population explosion is a serious problem for any country and it impairs the growth of a nation. Implementation of proper family planning method is a well known solution for this problem [1]. Literatures well documented that sterilization is one of the most reliable and safest methods of family planning. Male sterilization is considered as the cheapest and least complicated clinical procedure [2]. Vasectomy is one of the most accepted sterilization method. Failure rate of vasectomy is less than 1% [3]. There is an Worldwide estimation of 33 million married women aged between 15 to 49 years (less than 3%) rely on their partner's vasectomy as a method of family planning [4].

Surgically vasectomy is performed in two separate steps: exposing some portions of the vas deferens out of the scrotum a step known as isolation, and in the next step, occluding the vas. Generally no-scalpel vasectomy (NSV) technique is used in the isolation of the vas [5] in the United States, an increasingly popular method among physicians [6] also a choice for the developing countries [5, 7-10]. Fewer hematomas, less bleeding and pain, less risk of infections, less operating times, increases the acceptance of vasectomy [5].

There are different methods for the evaluation of family planning programme. Knowledge and attitude about the contraception among males is one of them. This is also an important determinant for the different programmes of health care policies implemented by Governent. Sometimes males neglects in family planning programmes and health care surveys specifically designed to evaluate their knowledge and attitude. Men's attitude is also crucial factor for adoption of the sterilization procedure. In modern era, due to increase in population at an alarming rate, it is a big challenge for most countries policies, programmes and various methods for social, economical challenges [1].

It is also noticed that, majority of the family-planning services and campaigns were focused on women, where men plays peripheral role. A work in African continent pointed out involvement of men and obtaining support from them is a challenge for family planning because most of the decisions were made by them [11]. Poor knowledge of vasectomy and the lack of interest based on myths and misconceptions is still a big challenge. There are a number of literatures explaining this area, correlating with several other factors like marriage age, number of children and religious beliefs [12].

Research shows that males, who preferred vasectomy, had positive attitude, and those who were not desired, mainly due to negative or neutral feelings towards this procedure. Interestingly knowledge plays a vital role in this context [2]. This has also been observed that, vasectomy is lower in developing countries. Among the Asian countries, in Bhutan, Iran, and the Republic of Korea, there is a gradual reduction in the rate of vasectomy in the period of last 15 years 15 years [13].

In Nepal family planning programmers were started long back. UNFPA, the United Nations Populations Fund is working in Nepal for the family planning programmes [14]. Family Planning Association of Nepal working since 1959. Who are taking part in different awareness programmes [15]. From the year 2010, Nepal government implemented and strengthens reproductive health policy to provide five different family planning methods at all levels of health facility for the citizens of Nepal [16]. There is several positive aids form the Govt., NGO, WHO to control the growth of population in Nepal. Earlier studies in Nepal show that, there are a number of populations who had chosen vasectomy [17-20].

The current study was designed to determine the knowledge and attitudes about vasectomy of adult males (26-49) years in Simalchaur, Pokhara, Nepal. As there are very few reports [20] available regarding the influential factors like race, age, religion, education, income, and sex of respondents, so this questionnaire based study was undertaken to find out this relationship.

Material and Methods

Study Period

This study was conducted between 31-03-2014 to 30-04-2014 by using structured questionnaire.

Study design, participants and the collection of data

The present study was conducted in Simalchaur- 8, Pokhara, Kaski, Nepal. Non-randomized convenient sampling technique was used to select the samples. The sample size was 100 adult males of 26-49 years of age.

Data collection

One of the study investigator collected data personally by distributing the questionnaires to the adult males of (26-49) years of age. The participants were asked to tick one response for each item. The identity of the subjects was kept confidential to avoid bias in this study.

Questionnaire design

A standard questionnaire was constructed on different factors based on knowledge and attitudes on vasectomy and distributed to seven experts of various departments in Manipal College of Medical Sciences. Two experts from Community Medicine, two from Obstetrics and Gynecology, two from Surgery and one from Medicine department. The experts critically evaluated and remarked the same based on their experience and clinical expertise. The experts were also

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requested to judge the questionnaire items in terms of agree or disagree related to relevance, clarity, accuracy, appropriateness and usefulness. As per the remarks, suggestions and recommendation of the subject experts, necessary modifications and changes incorporated to make the final questionnaire. Questionnaire contains socio-demographic proforma, knowledge and attitude assessment in Likert scale. In the sociodemographic proforma, different items, namely age, caste, religion, education, occupation, type of family, monthly income, number of children, age of last born child, age of marriage, etc. were considered. Assessment of knowledge about vasectomy was based on 24 multiple choice questions. The scoring was graded as – poor, average and good knowledge.

Inclusion criteria

All the adult males residing in Simalchaur-8, Pokhara, willing to participate in this study were included.

Exclusion criteria

Persons, those who were not willing to participate in the study, beyond the age of 26-49 years or questionnaires filled incompletely and incorrectly, were excluded.

Ethical committee approval

Ethical committee approval was taken from college authorities before the study. Approval was also obtained from the chairperson of the Pokhara sub metropolitan.

Table – 1 Sociodemographic variables, knowledge and attitude score among the participants

			Knowledge Score			P Value	Attitude Score			P Value
		n	Poor	Average	Good		Poor	Average	Good	
Age	26-30 years	16	7	9	0	0.894[x]	0	9	7	0.413[x]
	31-35 years	17	6	9	2		0	4	13	
	36-40 years	22	6	15	1		0	10	12	
	41-49 years	45	7	36	2		0	17	28	
Caste	Brahmin	69	18	47	4	0.466[x]	0	31	38	0.266[x]
	Chhetri	18	3	14	1		0	5	13	
	Gurung	5	3	2	0		0	2	3	
	Others	8	2	6	0		0	2	6	
Religion	Hindu	92	24	63	5	0.314[x]	0	37	55	0.387[x]
	Buddhist	5	2	3	0		0	8	2	
	Christian	2	0	2	0		0	2	2	
	Others	1	0	1	0		0	1	1	
Education	Intermediate	34	8	25	1	0.796[x]	0	12	22	0.143[x]
	High school	22	7	15	0		0	10	12	
	graduation	39	8	27	4		0	15	24	
	Post graduation	5	3	2	0		0	3	2	
Occupation	Government employee	25	3	20	2	0.428[x]	0	4	21	0.135[x]
	Farmer	21	7	13	1		0	10	11	
	Business	31	9	21	1		0	11	20	
	Others	23	7	15	1		0	15	8	
Type of family	Nuclear	29	7	21	1	0.426[x]	0	13	16	0.131[x]
	Joint	57	17	36	4		0	22	35	
	Extended	9	1	8	0		0	4	5	
	Single parent	5	1	4	0		0	1	4	
Monthly income	NPR<10000	25	8	16	1	0.447[x]	0	12	13	0.186[x]
	NPR 10001-15000	21	4	17	0		0	6	15	
	NPR15001- 20000	20	6	13	1		0	8	12	
	NPR>20001	34	8	23	3		0	14	20	
Number of children	1	15	9	6	0	0.121[x]	0	11	4	0.115[x]
	2-3	67	14	49	4		0	25	42	
	4-5	10	1	8	1		0	1	9	
	>5	8	2	6	0		0	3	5	
Age of last born child	< 3 years	22	11	11	0	0.159[x]	0	11	11	0.017[8]
	3-5 years	8	0	7	1		0	3	5	
	6-8 years	11	4	7	0		0	3	8	
	> 8 years	59	11	44	4		0	23	36	

[x]P>0.05 statistically not significant
[8]P<0.05 statistically significant

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According to the declaration of Helsinki (Latest version) the research was conducted. Individual consent was taken from the participant after explaining the study objectives. Participants were clearly instructed not to mention their name or any identification marks in the questionnaire.

Outcome variable

Knowledge score, attitude score, awareness were set up as outcome variable.

Explanatory variables

The demographic factors age, caste, religion, education, occupation, family type, income, number of children, age of last born child *etc.* were considered as explanatory variables.

Data management and statistical analysis

Data analysis and interpretation was done by descriptive statistics with the use of Statistical Package for Social Science (SPSS) software, version 16.

Results

Table - 1 explains most of the participants were of age group 41-49 (45%). Brahmin 69% was the majority followed by Chhetri community. Predominance of Hindu (92%) was also observed. The level of education was graduation (39%) followed by intermediate, high school were more. A relatively less population had postgraduate degree. Business was their major occupation (31%) followed by government job, other occupations and farming. Living in joint family (57%) was the most common one (57%). 34% the respondent's monthly income was above NPR 20,000, followed by <10,000 and 10,000 – 15,000. Most of the study population had two to three children (67%). Majority of the adult males had last born child above eight years of age (59%). Majority of the respondents reported that ideal age of marriage for adult males is above 24 years (45%).

Among the 41-49 years age group, average knowledge score and good attitude score was observed. Majority of the respondents of 26-30 years and 31-35 years had average and poor knowledge but attitude score was average and good. Amongst the Brahmins and Chhetri average knowledge score and good attitude score was more. Considering the educational level, most of the participants had average knowledge and good attitude, only among the graduates, few scored for good knowledge. Amongst govt. employees average knowledge and good attitude score was seen. Among the farmers poor knowledge population was more than others. Nuclear family members showed relatively more knowledge comparing with joint families. More than 50% of them also had a good attitude towards vasectomy. Around 33% of the participants had monthly income of 10001-15000 and 15001-20000 NPR showed average knowledge, where as earning NPR 10001-15000 showed a relatively poor knowledge comparing with others. Considering the NPR<10000 earning population, attitude score was average and good for equal number of subjects. Participants who had 2-3 children, most of them had average quality of knowledge and good attitude towards this surgical procedure. Significant association of attitude was found with age of last born child and attitude.

Table – 2 Awareness and source of information

Are you aware about vasectomy?	Yes	75
	No	25
If yes what is the sources of information?	Family members	10
	Relatives/neighbors	12
	Health professional	26
	Mass media	52
Have you performed vasectomy?	Yes	28
	No	72

Table - 2 explains that majority of the participants were aware about the procedure of vasectomy (75%) and the source of information was mass media (52%), followed by health professionals, relatives/neighbors and family members. 72% of the participants reported that they had not undergone vasectomy.

Discussion

Influence of sociodemographic characteristics on knowledge and attitude

Influence of age

It is evident from the study; males of 26 to 30 years of age had poor knowledge about the vasectomy. Almost same pattern was observed in the age group of 31-35years. Interestingly improvement of knowledge score is overshoots among the 41-49years followed by 36-40 years. This pattern of changes may be observed due to the increased experience among the males. It could be also possible that aged males went through this surgical intervention, so their knowledge score is relatively more comparing with others. More positivity in the attitude also follows the same pattern. Increasing with age and experiences there is a sharp change in the attitude, well evident from this study. Our results corroborates with the findings of Valsangkar S *et al*. He had shown a significant association between increasing age and more choice of NSV as a contraceptive method [21].

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Influence of religion and caste

Most of the Hindu males had average knowledge and few of them showed good knowledge score. Brahmins and Chhetri populations had average knowledge about this surgical procedure. A very interesting research conducted by Subba N regarding the demographic status of vasectomy clients in Sankhuwasabha district in Eastern Nepal shows that 55% of the clients were Brahmin and Chhetri with a literacy rate of 83%. So in our case, the higher rate of average knowledge amongst them may be due to higher literacy rate and more consciousness about family planning [18].

Level of education

Education helps to improve knowledge. In the present research we observed majority of participants had average knowledge. Keramat A *et al*. reported in the year 2011, that in the vasectomy group, education level was significantly higher [22]. Another finding by Valsangkar S *et al.* also shows the positive correlation between NSV acceptance and the rate of literacy [21]. Findings by Khokhar *et al*., states that completion of higher secondary education increases the rate of acceptance of NSV among the study population [23]. All of these researches corroborates with the current study, which may be explained by a increased health awareness and better understanding about the family planning methods also adoption of advice from health workers in a positive way.

Role of occupation

In our study we observed that business as their occupation (31%) was more, followed by government job, other occupations and farming. In some other research there was predominance of agriculture as a profession (73.7%). [18]. There is also a report from Unite States, where vasectomy preferred by higher socioeconomic group [24].

Monthly income as an influential factor

There are several researches, where strong relation was found with the unemployment rate. This point should be considered as an important factor, because financial pressures not only influence the level of education but on family planning decisions [25]. Some researches contradictory of these results, where no significant association found between total family monthly income and acceptance of NSV [21].

Number of children and age of last born child

In our study we found, most of the subjects with 2-3 children had average knowledge and good attitude towards vasectomy. Significant association of attitude was found with age of last born child and attitude. In a study by Subba N among Nepalese population shows that average number of children of a client was 3.2. 4.7 years was the age of youngest male child, and 3.9 years for female child [18]. Padmadas SS also stated same [26]. A very interesting study by Valsangkar S *et al.* explains that a significant association persists between number of children and acceptance of vasectomy, especially among those who had more than one child. This finding may also be correlated with a longer duration of married life, because research shows close association with NSV acceptance [21].

Awareness and source of information

Awareness was 75% for our study population. Mutihir *et al*. reported that poor awareness and education, several sociodemographic factors like religion, culture, poor economic conditions and insufficiency of skilled health professionals were major drawbacks. Another vital factor was fear of decreased sexual performance, which makes this procedure not acceptable, socially [27]. A study from Nepal shows the odds of vasectomy use in mobile clinics were significantly higher among couples residing in hill and mountain regions [26]. Most of the regions in Nepal are hilly so this is important in this context and more focused efforts required to increase family planning uptake especially in rural areas [28]. Scientific publications also states assistance from health personnel significantly linked with the intention to accept vasectomy [20].

Conclusion

Majority of adult males had average knowledge on vasectomy. So, adult males should be educated about the advantages of vasectomy. This may bring changes in controlling population explosion, sharing the decisions of contraception burden equally with their partners, more awareness of reproductive roles and closes the gap in male and female sterilization rates.

Limitations & future scope of the study

This is a cross-sectional study with limited study population. So, it strongly recommended, conducting broad spectrum multi-centric studies in future including other districts of Nepal, to obtain a clear scenario. We considered only males for this research, so females opinion and knowledge should also be considered in the future studies, which may help in better family planning.

Abbreviations

Nongovernmental Organization (NGO), no-scalpel vasectomy (NSV), United Nations Population Fund (UNFPA), World Health Organization (WHO)

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Competing interests

Authors declare that they do not have any competing interest.

Authors' contribution

Ms. Gnanakshi. Dayanand and Mrs. Sakun Singh designed the study, constructed the questionnaire, interpreted the data, drafted the manuscript, and revised it. Ms. Gnanakshi. Dayanand and Ms. Chandani Baruwal conducted the research formulated and analyzed the data. All authors took part in critical revision and finally approved the manuscript.

Authors' information

Ms. Gnanakshi Dayanand. M.Sc., Lecturer & Head of the Department of Community Health Nursing, Manipal College of Medical Sciences (Nursing Programme), Phulbari, Pokhara, Nepal.

Mrs. Sakun Singh, M.Sc., Principal & Head of the Department of OBG(Nursing), Manipal College of Medical Sciences (Nursing Programme), Phulbari, Pokhara, Nepal.

Mrs. Chandani Baruwal, B.Sc. (N) student, Manipal College of Medical Sciences (Nursing Programme), Phulbari, Pokhara, Nepal.

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References

1. Moszynski P. Family planning needed to offset population growth.BMJ. 24, 2007; 334(7594):606.
2. Ozgoli G, Ahmadi M, Goli Sh, Akbarzadeh Baghban A. Comparison of knowledge, attitude and other related factors to sterilization between sterilization method users and contraceptive methods users in Hamedan city in 2003. Journal of Reproduction and Infertility. 2004;5(3):259-67.
3. Dhar NB, Jones JS. Vasectomy: A simple snip? Indian J Urol. 2007;23(1):6-8.
4. Pile JM, Barone MA: Demographics of vasectomy–USA and international. Urol Clin North Am 2009;36(3):295-305.
5. Li SQ, Goldstein M, Zhu J, Huber D: The no-scalpel vasectomy. J Urol 1991;145:341-4.
6. Haws JM, Morgan GT, Pollack AE, Koonin LM, Magnani RJ, Gargiullo PM.Clinical aspects of vasectomies performed in the United States in 1995. Urology 1998;52(4):685-91.
7. Black T, Francome C: Comparison of Marie Stopes scalpel and electrocautery no-scalpel vasectomy techniques. J Fam Plann Reprod Health Care 2003, 29(2):32-4.
8. Kumar V, Kaza RM, Singh I, Singhal S, Kumaran V. An evaluation of the no-scalpel vasectomy technique. BJU Int 1999, 83(3):283-4.
9. Nirapathpongporn A, Huber DH, Krieger JN. No-scalpel vasectomy at the King's birthday vasectomy festival. Lancet 1990; 335(8694):894-5.
10. Xu B, Feng H, Liu XZ. No-scalpel vasectomy training in China. Adv Contracept Deliv Syst 1993, 9(1):1-8.
11. Odimegwu CO. Family planning attitudes and use in Nigeria: A factor analysis International Family Planning Perspectives, 2009;25(2): 86-91.
12. Bunce A, Guest G, Searing H, Frajzyngier V, Riwa P, Kanama J *et al.* Factors affecting vasectomy acceptability in Tanzania. Int Fam Plan Perspect. 2007;33(1):13-21.
13. Corey L: Vasectomy use worldwide as of 2009 review. Rollins School of Public Health at Emory 2009.
14. United Nations Population Fund (UNFPA): Increasing family planning availability. Accessed on 30-12-2014 from URL:http://countryoffice.unfpa.org/nepal/2014/07/23/10193/increasing_family_planning_availability/
15. Family Planning Association of Nepal. Accessed on 30-12-2014 from URL: http://www.fpan.org/intro.html
16. MOHP. Nepal Health Sector Programme-2 IMPLEMENTATION PLAN, 2010–2015. Kathmandu, Nepal: Ministry of Health and Population; 2010. Accessed on 30-12-2014 from URL: http://www.nhssp.org.np/health_policy/Consolidated%20NHSP-2%20IP%20092812%20QA.pdf
17. Nazerali H, Thapa S, Hays M, Pathak LR, Pandey KR, Sokal DC. Vasectomy effectiveness in Nepal: a retrospective study. Contraception. 2003;67(5):397-401.
18. Subba N. Demographic assessment on vasectomy clients of Sankhuwasabha Nepal. Nepal Med Coll J. 2003;5(2):98-9.

ISSN 2321-5291
Medical Science 2014;2(4):164-170

19. Labrecque M, Pile J, Sokal D, Kaza RC, Rahman M, Bodh SS, Bhattarai J, Bhatt GD, Vaidya TM. Vasectomy surgical techniques in South and South East Asia. BMC Urol. 2005;25;5:10.
20. Mahat K, Pacheun O, Taechaboonsermsak P. Intention to Accept Vasectomy among Married Men in Kathmandu, Nepal. Asia Journal of Public Health. 2010;1(1):8-14.
21. Valsangkar S, Sai SK, Bele SD, Bodhare TN. Predictors of no-scalpel vasectomy acceptance in Karimnagar district, Andhra Pradesh. Indian J Urol. 2012;28(3): 292–6.
22. Keramat A, Zarei A, Arabi M. Barriers and facilitators affecting vasectomy acceptability (a multi stages study in a sample from north eastern of Iran), 2005-2007. Asia Pac Fam Med. 2011; 10(1): 5.
23. Khokhar A, Sachdeva TR, Talwar R, Singh S, Rasania SK. Determinants of acceptance of No-scalpel vasectomy among men attending the NSV clinic in a public sector hospital of Delhi. Health Popul Perspect Issues. 2005; 28(4):197–204.
24. Eisenberg ML, Henderson JT, Amory JK, Smith JF, Walsh TJ. Racial differences in vasectomy utilization in the United States: data from the national survey of family growth. Urology. 2009;74(5):1020-4.
25. Sharma V, Zargaroff S, Sheth KR, Le BV, Dupree JM, Sandlow JI, *et al*. Relating economic conditions to vasectomy and vasectomy reversal frequencies: a multi-institutional study.J Urol. 2014;191(6):1835-40.
26. Padmadas SS, Amoako Johnson F, Leone T, Dahal GP. Do mobile family planning clinics facilitate vasectomy use in Nepal? Contraception.2014;89(6):557-63.
27. Mutihir JT Innocent AO, Ujah (2004). Acceptability of Vasectomy in Jos, Northern Nigeria. Trop. J. Obstetr. Gynaecol 21(1):56-7.
28. Mehata S, Paudel YR, Dotel BR, Singh DR, Poudel P, Barnett S. Inequalities in the Use of Family Planning in Rural Nepal. Biomed Res Int. 2014; 2014: 636439.