

# VASECTOMY INTENTION AMONG MARRIED MALES IN INDONESIA

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## ABSTRACT:

**Background:** As the fourth most populous country in the world, Indonesia have never reached golden periods of vasectomy adoption in comparison to other populous countries, namely India and China, where vasectomy rates have exceeded 20%. Indonesia had less than 1 percent of vasectomy adoption from the 1970s until 2012. Thus, vasectomy did not have a positive effect on the contraception prevalence rate, and was outnumbered by tubal ligation during this period. Other factors are strong normative social beliefs which might affect men's decisions on family planning, as well as attitude towards vasectomy, source of planning information, and spousal communication which became major constraints to vasectomy adoption in Indonesia.

**Methods:** This study was conducted to determine vasectomy intention among married males in Indonesia aged 15-54 years, who had no intention to have more children at the time of the survey. This was a cross sectional study. The data were taken from Indonesia Demographic Health Survey (IDHS) of 2012. Data were collected from May to July 2012. Of 2,109 respondents with known vasectomy taken from married men questionnaire in IDHS 2012 was a sample size. Univariate and Multivariable logistic regression analysis was conducted to investigate the correlations between vasectomy intention with socio-economic and demographic factors, subjective norms, attitude towards vasectomy, source of family planning information, and spousal communication.

**Results:** The plurality of the study population (41.5%) was aged 35-44 and lived in urban areas (63.7%). Most (54%) attained secondary education. About 59.3% came from rich economic status, and 59.5% had 1 or 2 children. The respondents had varied types of occupation, mostly (24.7%) in skilled manual work and 48.4% expected to have fewer than 2 children. Multivariate analysis found that ideal number of children ( $OR=0.42$ ,  $p-value=0.000$ ), being castrated ( $OR=0.44$ ,  $p-value=0.001$ ), reaching ideal family size ( $OR=0.57$ ,  $p-value=0.035$ ), attitude towards vasectomy ( $OR=1.59$ ,  $p-value=0.014$ ), and obtaining family planning information from pamphlets ( $OR=1.55$ ,  $p-value=0.042$ ) were the statistically significant predictors of intention of adopting vasectomy in the study group.

**Conclusion:** Only 16.6% of male limiters intend to adopt vasectomy. Socio-economic and demographic factors are proved not fully the influential factors to the family planning program, especially vasectomy. It is noted that only ideal number of children as the only subset of socio-economic and demographic factors is predictor for the vasectomy intentions. Among three subsets of subjective norm factors, 2 of them, namely being castrated and reaching ideal family size become significant predictors toward vasectomy intention among male limiters in Indonesia. Pamphlets plays a major role to persuade married male to accept vasectomy by providing adequate and attractive information using public area, health providers and health center as the main focus.

**Keywords:** Vasectomy, Vasectomy intention, Male, Currently married male, Indonesia

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## INTRODUCTION

Indonesia was well-known as one of South East Asian countries with a success history of fertility decline for more than 40 years since 1970. Some unsolved problems associated to family planning program remain "haunting" the policy makers, since this remarkable provision applied in Indonesia in early 1968 in line

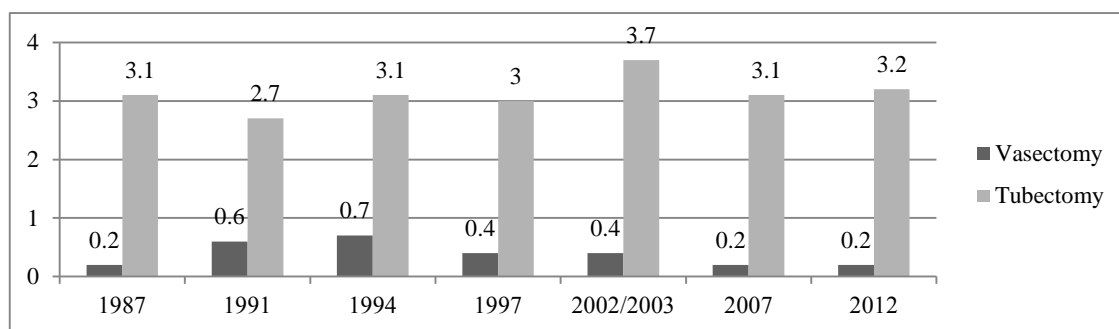
with the establishment of National Family Planning Board (NFPB).

It seemed that male sterilization (vasectomy) showed unpromising development over the last 4 decades. Vasectomy as one of the effective and reversible methods was less likely to become the ultimate option for family planning of the married couples in Indonesia. It was reported that only 0.2 percent of family planning acceptors used vasectomy as their main methods [1]. In contrast,

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**Figure 1** Trends of male and female sterilization in Indonesia [2,3]

Contraceptive Prevalence Rate (CPR) in Indonesia showed progress in the last 20 years by reaching almost 65 percent in 2012 [1].

Furthermore, starting from 1987 when first Indonesia Demographic and Health Survey (IDHS) was conducted till the most recently one in 2012; the total number of males involved in long term contraceptive method, especially vasectomy was the lowest among the other contraception methods. It was only less than 1 percent of males used this method. Moreover, in comparison to the previous IDHS 2002/2003 and 2007, there was a declining trend from 0.4 in 2002 percent to 0.2 percent in 2007 and 2012 (Figure 1).

The figure also shows an increase in 1991 (0.6) and 1994 (0.7), then it gradually decrease in 1997 (0.4) and 2002/2003 (0.4). It also shows a declining trend with just around 0.2% in 2012 compared to 0.4% the previous IDHS (2002/2003). Thus, male sterilization contraceptive method showed a slow pace of increase from 1987 to 1994 [1].

Ironically, it was found that the age group with the highest rate of sterilization was 45-49 years old with 0.5% for both males and females [1]. As the result, the promotion of permanent method as one of the supporting factors of long acting contraceptive methods was regarded to be unsuccessful. It is heavily influenced by many factors, for instance, the lack of male participation in the success of family planning programs, especially the use of contraceptive methods. It is assumed that this fact will affect the fertility rate in general. Moreover, National Population and Family Planning Board NFPPB of Indonesia regarded sterilization didn't give any support for the fertility decline in Indonesia [1].

A study conducted by Central Research and Development of Biomedical and Health Reproduction of NFPPB in Jakarta, DI Jogjakarta, West Java, and South Sumatra in 1999 found that insufficient availability of health services, wife disapproval, lack of knowledge on family planning

program methods, especially male sterilization, and fewer option for male contraception were the most influencing factors of male non-participation [1].

In addition, IDHS 2012 report [1] illustrated that males had tendencies to avoid family planning practice themselves, but rather leave their responsibility to their wives by letting them using contraception rather than taking the initiative to prevent birth and STD by themselves.

It was assumed that this condition was related to the strong value of manhood, which still exists as a part of patriarchal societies. In fact, men were less likely to have their interest on this permanent and effective method due to their perception and misinformation from their friends [1]. Probably, most males in Indonesia believe that being sterilized will reduce their sexual activities through erectile dysfunction, and are worried of side effects affecting their sexual desire, and other related reasons. Wahyuni and Oktriyo [2] argued that the low level of male sterilization was affected by the gender "bias" and the uncertainty of two majority religious leaders, namely Islam and Christian religions towards male sterilization.

In addition, spousal communication towards vasectomy selection is believed to be a stimulus factor for men having been sterilized [4]. Over decades, men had an important role on influencing women decision-making on contraceptive methods. It is important to explore how joint responsibility among husbands and wives affects vasectomy decision in Indonesia. Previous studies in six different countries revealed that, for example in the US, women played as significant role on making their choices either for tubal ligation or vasectomy [5]. In the IDHS 2012 [2] the questions on vasectomy were included in order to explore married men's perception, knowledge and their intention to undergo vasectomy when considering their ideal family size. There were no questions to explore married women perception and their willingness to support their partners for vasectomy adoption. This study will provide

**Table 1** Personal profiles of male limiters (n=2,109)

Variables	Frequency	Percentage (%)
<b>10 year age group</b>		
15 - 24 years	56	2.7
25 - 34 years	574	27.2
35 - 44 years	875	41.5
45 - 54 years	604	28.6
<b>Place of residence</b>		
Urban	766	36.3
Rural	1,343	63.7
<b>Educational level</b>		
Lesser than or primary	319	15.1
Secondary	1,138	53.9
Higher	652	30.9
<b>Income status</b>		
Poor	479	22.7
Middle	380	18.0
Rich	1,250	59.3
<b>Occupation</b>		
Professional/Technical/Engineering	473	22.4
Clerical	259	12.3
Sales	268	12.7
Agricultural / Self employed	301	14.3
Services	175	8.3
Skilled manual	520	24.6
Other & Jobless	113	5.4
<b>Number of living children</b>		
No children	156	7.4
1 or 2 children	1,255	59.5
3 or 4 children	592	28.1
5 or more children	106	5.0
<b>Ideal number of children</b>		
Lesser than or 2 children	1,020	48.4
3 or 4 children	962	45.6
5 or more children	127	6
<b>Total</b>	<b>2,109</b>	<b>100</b>

**Table 2** Vasectomy intention among male limiters

Vasectomy intention	Frequency	Percentage
Yes	1,785	84.6
No	324	15.4
<b>Total</b>	<b>2,109</b>	<b>100.0</b>

beneficial and necessary information regarding vasectomy and determinants for its adoption among married males In Indonesia. Moreover, the results can be used as baseline data for analysis of future of IDHS and information for the authorities to support vasectomy adoption.

## METHODOLOGY

The study areas covered 33 provinces in Indonesia, 399 districts and 98 municipalities, scattered out from western to eastern region. A cross-sectional study was conducted on the male limiters in Indonesia. IDHS used multistage stratified random sampling techniques to select the

participants. The sample sizes were all 2,109 respondents who were currently married males, aged 15-54 years old and knew vasectomy no longer desired to have more children, and wives not sterilized.

## Data analysis

The statistical software was applied for analysis and clearance. To determine socio-economic & demographic background, subjective norm factors, attitude towards vasectomy, source of family planning information, and spousal communication towards vasectomy intention among married male limiters in Indonesia. Descriptive statistics in frequency, percentage crosstab, and tables were used for analysis to determine the relationship between vasectomy intentions among male limiters taking into account the confounding factors of determinants mentioned above. Binary logistic regression analysis was carried out to investigate predictors of vasectomy intention among male limiters in Indonesia.

**Table 3** Logistic regression for vasectomy intention with independent variables

Vasectomy intention	OR	Robust Std. Err.	z	P>z	95% Conf. Interval	
A. Socio-economic & demographic factors						
Age (10 years age group) 15-24 (Reference group)						
25-34	1.99	1.08	1.27	0.205	0.69	5.74
35-44	2.34	1.29	1.54	0.123	0.80	6.87
45-54	1.35	0.82	0.50	0.615	0.42	4.41
Type place of residence rural (Reference group)						
Urban	1.00	0.22	-0.02	0.983	0.65	1.54
Educational level lesser than or primary (Reference group)						
Secondary	0.91	0.26	-0.31	0.755	0.52	1.60
Higher	0.74	0.26	-0.85	0.397	0.37	1.48
Income status poor (Reference group)						
Middle	1.72	0.50	1.87	0.062	0.97	3.05
Rich	1.17	0.34	0.53	0.596	0.66	2.05
Number of living children no children (Reference group)						
1 or 2 children	0.79	0.28	-0.66	0.511	0.40	1.58
3 or 4 children	2.09	0.91	1.71	0.088	0.90	4.89
5 or more children	2.16	1.36	1.23	0.220	0.63	7.42
Ideal number of children 2 children or fewer (Reference group)						
3 or 4 children	0.42	0.09	-4.05	0.000	0.28	0.64
5 or more children	0.59	0.27	-1.16	0.248	0.24	1.45
Type of occupation Prof./Managerial/Technical (Reference group)						
Clerical	0.87	0.28	-0.44	0.661	0.45	1.65
Sales	0.88	0.30	-0.38	0.707	0.45	1.71
Agricultural / Self employed	0.62	0.23	-1.30	0.195	0.30	1.27
Services	0.92	0.34	-0.23	0.820	0.44	1.90
Skilled manual	0.98	0.29	-0.08	0.935	0.54	1.76
Jobless and other	1.37	0.57	0.77	0.441	0.61	3.09
B. Subjective norms						
Vasectomy similar of being castrated disagree (Reference group)						
Agree	0.44	0.11	-3.29	0.001	0.27	0.72
Regarding contraception as female concern's disagree (Reference group)						
Agree	0.94	0.20	-0.27	0.786	0.63	1.42
Reaching ideal family size no (Reference group)						
Yes	0.57	0.15	-2.11	0.035	0.33	0.96
C. Attitude towards vasectomy disadvantages (Reference group)						
Advantages	1.59	0.30	2.47	0.014	1.10	2.29
D. Source of family planning information						
Obtaining family information from television no (Reference group)						
Yes	1.23	0.26	1.01	0.313	0.82	1.85
Obtaining family information from radio no (Reference group)						
Yes	1.29	0.30	1.09	0.277	0.82	2.02
Obtaining family information from newspaper no (Reference group)						
Yes	1.03	0.21	0.13	0.897	0.69	1.52
Obtaining family information from poster no (Reference group)						
Yes	1.14	0.25	0.59	0.557	0.74	1.75
Obtaining family information from pamphlet no (Reference group)						
Yes	1.55	0.34	2.03	0.042	1.02	2.38
Obtaining family information from peer educator no (Reference group)						
Yes	1.42	0.26	1.88	0.060	0.99	2.04
Constanta	0.099411	0.06557	-3.5	0	0.02729	0.3621

### Ethical consideration

To meet the ethical requirement, the author has been granted the official permission from the National Population and Family Planning (NFPBP) of Indonesia for data use. In addition, this study has received the official approval from the Board of IRB Committee, Institute for Population and Social Research (IPSR) Mahidol University: COA.2014/1-1: COA.2014/1-1-31.

### RESULTS

Table 1 shows that out of a total of 2,109 *male limiters* in Indonesia (100%) admitted to be familiar with vasectomy. About 35.2% were rural residents and 64.8% were urban. More than a half of the male limiters (51.3%) had secondary level of education. More than 60% were categorized having rich economic status. Regarding to the number of living children, 62.6% of the male limiters got 1 or 2 children. As for ideal number of children, it also found that 50.3% chose lesser than or 2 children in their family as the appropriate one. From type of occupation, almost 30% of male limiters worked in skilled manual work field. Table 2 shows that 83.4% male limiters had intention to adopt vasectomy.

As shown in Table 3, there are 5 sub-categories in this category, namely ideal number of children, being castrated, reaching ideal family size, attitude towards vasectomy, and obtaining family planning information from pamphlets are associated with vasectomy intention among male limiters in Indonesia. In socio-economic and demographic characteristics, only one of the categories showed a positive association with the dependent variable in multivariate analysis which is ideal number of children ( $p\text{-value}=0.000$ ). Male limiters who had 3 or 4 children are 0.42 times less likely to have vasectomy intention than those who had 2 children or less. In subjective norm, being castrated and reaching ideal family size are highly associated with vasectomy intentions. Male limiters who perceive vasectomy similar to castration are 0.44 times less likely to have vasectomy intention ( $p\text{-value}=0.001$ ). Furthermore, those who reached ideal family size are 0.57 times less likely to have vasectomy intention compared to those who did not ( $p\text{-value}=0.035$ ). In attitude towards vasectomy factors, male limiters who regard vasectomy as advantages are 1.59 times more likely to have vasectomy intention ( $p\text{-value}=0.014$ ) than those who did not. Lastly, male limiters who receive family planning information from pamphlets are 1.55 times more likely to have vasectomy intention ( $p\text{-value}=0.042$ ) compared to those who did not.

### DISCUSSION

Investigating the relationship between several independent variables and dependent variable, it is found that some independent variables such as; ideal number of children, being castrated, reaching ideal family size, regarding vasectomy as advantageous, and obtaining family planning information from pamphlet are statistically significant predictors of vasectomy intention among male limiters in Indonesia.

All significant and insignificant variables as the result of multivariate analysis are described below;

#### Socio-economic & demographic factors

Ideal number of children is highly related to vasectomy intention. It can be explained because these respondents feel that they already passed their ideal number of children where two children. This study reveals that 48% of participants choose one or two children (Table 1). In the last few decades in Indonesia, two children has been the favorite choice among couples as shown in the latest government surveys such as IDHS. In the IDHS2002/2003 and 2007 [5, 6] it was found that almost half of the respondents (45.5%) thought that two children were the ideal number [6]. Indirectly, it also reflects the fact that the government has succeeded in promoting the family planning program with the main theme 'birth control' and the ideal number of children into the public mindset.

In the era of President Suharto who ruled Indonesia for 32 years, family planning was very popular among Indonesians. The regime introduced famous jargon "two kids are enough" which became a common word for everyone to speak. So not surprisingly, male limiters who already had 3 or 4 children are less likely to adopt chose another type of contraception to prevent pregnancy.

#### Subjective norm factors

Regarding subjective norm factor, being castrated and reaching ideal family size revealed to be significant predictors to vasectomy intention among male limiters. The previous studies showed that male limiters who felt vasectomy to be similar to being castrated are less likely to go for vasectomy than who did not feel so. This is a common perception in the society haunts men and more likely become one of the major barriers against vasectomy as found on 47 percent of men in West Java and South Sumatra who admitted fear of this rumor [2]. Another research conducted in Central Java Province revealed that 37.5% of vasectomy acceptors still consider vasectomy to affect their sexual desire, make them be overweight, and not

able to ejaculate [6]. The finding is also consistent with IDHS 2007 survey [6], which revealed that 4 percent of male respondents fear the loss of their masculinity.

In Indonesia, family planning, especially sterilization has negative connotations among the majority of Muslim religious leaders. Even in the past, the words “vasectomy” or “tubal ligation” should only be used in the context of medical indication due to strong stigmatization among societies [7]. Currently, most married men in Indonesia still hold tight this normative rules since the religious fatwa still give a conflicting decision whether they allowed sterilization or not. It was half-heartedly provision of Majelis Ulama Indonesia (MUI) or Indonesia Clerical Association. However, actually, the government has terrific opportunities to deliver messages about vasectomy for men during marriage advices counselling. Normally, this occasion is conducted at sub-district level for each pre-married couples. Marriage advices is normally delivered to the couples before they make the holy “vow” in front of “penghulu”<sup>1</sup> as a collaborative program between Ministry of Religion and the National Population and Family Planning Board (NPFPPB) of Indonesia did not specifically talk about vasectomy.

Reaching ideal family size is a significant predictor for vasectomy intention among male limiters in Indonesia with  $p\text{-value}=0.035$ . It can be explained as follow; whenever current married men complete their ideal number of family size, which varies among them, they will not want to use any permanent methods. The IDHS 2007 [5] found that 43.9% of current married men in Indonesia argued that they could rely on other types of contraceptive methods rather than vasectomy. They believed that vasectomy would decrease their sexual desire (4.7%), manhood (4.2%), as well as still desire to marry someday.

### Attitude towards Vasectomy

Male limiters who perceived vasectomy as “advantageous” are more likely to adopt vasectomy than those who do not. Surprisingly, as mentioned earlier, both male limiters with intention and without intention to adopt vasectomy have the same attitude towards vasectomy. In univariate analysis 27% of male limiters without intention regards vasectomy see it as “advantageous”.

This may be due to a change in the behavior of the Indonesian toward modern contraceptive methods that lead to more positive behaviors

nowadays than married men had in the past. They are more familiar with the positive benefits that can be gained from using this reversible contraception such as cheaper, more efficient, harmless operation, and it's time for male to have role in family planning. Mass media informant in Indonesia provided by different institutions is also assumed to play a major role in changing men's mindset. This is supported by research [8], which shows that half of men reported choosing vasectomy over a reversible method because it was the most secure in terms of preventing pregnancy, and 62% couples relied on vasectomy over female sterilization because it was considered simpler and safer.

### Source of family planning information

Obtaining family planning information via pamphlets is statistically significant of the intention to use male vasectomy. This may happen because the majority of male limiters read pamphlets taped in public open spaces, such as maternity clinics, hospitals, and get them from field personnel, or at certain events related to vasectomy. Besides that, pamphlet is usually “armed” by very attractive visualizations which attract men to read the information provided. This might be one reason of why male limiters acknowledge the role of pamphlets as an influential media and give different impact on their decision-making towards vasectomy. The other reason is NPFPPB of Indonesia regularly provide many kinds of printed media, especially pamphlets as source of family planning information's. Financial budget for advocating and counseling is mainly used to promote family planning.

NPFPPB of Indonesia already spreads out in all provinces with the support of local authorities to encourage and promote the community to use any modern male methods, particularly vasectomy. This fact is supported by the official statement of NPFPPB Head Chief, Fasli Jalal [1, 9] who emphasized that 98% of Indonesian are already familiar with family planning. However, there is no impact to male limiters to use this method. Furthermore, government has set up some monetary incentives for each adopter which is also well-known in the society as time goes by since NPFB introduced vasectomy in early 1970s.

This study indicates uniformity of understanding about vasectomy acceptance in all the provinces. Although the provinces which are located in Java Island shows a much larger number of vasectomy intention than the other provinces which located in another big islands namely, Sumatera, Kalimantan, Sulawesi, Papua, and Nusa Tenggara [1].

<sup>1</sup> Penghulu : a person who lead marriage ceremony in Islam

However this finding is different from that of a 2013 study, in North India where among 47.7% males aware of Non Scalpel Vasectomy, television has being reported as the main source of information [10]. While other source of information were radio (16.7%), magazines (4.5%), poster (3.5%), newspaper (2.3%), and pamphlet (0.7%) [10]. The difference might be explained because NPFPPB still seems half-heartedly to promote sterilization publicly and openly. Eventhough NPFPPB has set specific annual budgets and instituted particular divisions to promote family planning, called; Advocacy, Data, and Information (abbreviated Adpin in Indonesian) sub-division in each provinces. There is no specific budget provided to promote vasectomy. It can be seen on NPFPPB official advertisements, talk show, soap opera, and even comedy show in television, newspaper, as well as radio that they do not discuss vasectomy. They usually provide general information on family planning.

## CONCLUSION

This study revealed many factors constraining vasectomy intention as one of the family planning method when males no longer need more children. Less than 16% of male limiters intend to adopt vasectomy. Most of socio-economic and demographic factors were not significantly associated with family planning, especially vasectomy except for the ideal number of children. Among three subsets of subjective norm factors, being castrated and reaching ideal size of children were significantly associated of vasectomy intention among male limiters in Indonesia suggesting that normative norms are very influential to the vasectomy decision-making of current married male.

Pamphlet plays a major role on persuading married males to accept vasectomy by providing adequate and attractive information using public area and health provider centres as the main distribution channel. Meanwhile, spousal communication seems unable to support male limiters decision to have intention on sterilization. This is related to the subjective norm and attitude towards vasectomy which is common in predominantly male-centered (patriarchal) societies, such as in Indonesia.

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