

Intentions to Use Vasectomy Contraception: Application of Theory Planned Behavior

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Abstract

In Indonesia, 8% of married men use a FP method, 3% use a modern FP method and 4% use a traditional FP method/method. The percentage of married men who use condoms (3%) is higher than the percentage who choose vasectomy (less than 1%). The study was conducted in the Madiun town administration using a community-based cross-sectional study design. The town is found in East Java Province, Indonesia. The total sample of this study is 323 married man with fixed disease sampling. The results showed that “attitude” ($p=0.04$) and “perceived behavioral control” ($p<0.01$) are positive predictive factors of intention married man to chose vasectomy for contraception. This research has found the intention to limit the number of children affected by attitudes. Married men who participated in this study had negative attitudes towards vasectomy. In general, vasectomy is seen as one of the least preferred method of family planning and is associated with fear and weakness.

Keywords: Family planning, structural equation model, theory planned behavior, vasectomy.

Introduction

Unwanted pregnancy is an important public health problem because it deals with social and health conditions that are detrimental to mothers, children, and society as a whole. Pregnancy includes a higher incidence of abortion, late initiation and under-utilization of prenatal care and low birth weight⁽¹⁾. Men’s involvement in contraception is considered a fact that determines men’s lives. Effective participation in contraception can trigger significant individual, family, social and cultural changes⁽²⁾. In various communities, family planning and reproductive health issues are still seen as the responsibility of women. Knowledge and awareness of men and families about family planning are still relatively low. Besides, there are limitations to

the acceptance and accessibility of male contraceptive services. The knowledge of urban and rural communities towards family planning programs has not yet developed optimally, although in terms of education the urban community is generally more advanced than rural communities⁽³⁾.

Over the past decade, to increase men’s involvement in reproductive health and family planning issues. Government and non-government agencies⁽⁴⁾ and international health organizations^(5,6) all acknowledged the need to involve men in reproductive health services and decision making and made convincing arguments that this would benefit both men and women. One way to encourage men’s involvement in family planning is to give couples more contraceptive choices through the promotion of male-oriented method such as vasectomy. Vasectomy is a safe, simple and effective method⁽⁷⁾ which is relatively unknown and not used in most parts of the world. Although sterilization is the most widely used method of contraception worldwide, tubal ligation accounts for more than five times more procedures than vasectomy⁽⁸⁾.

The choice method and the use of effective contraceptive method is a complex problem that is

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influenced by various factors^(9,10). In this study, the research approach is based on the Theory of Reasoned Action (TRA), added by Theory of Planned Behavior (TPB)⁽¹¹⁾, both of which require an examination of personal and contextual influence⁽¹²⁾. In the case of TRA, intentions are considered to have 2 components: subjective attitudes and norms. Attitudes are beliefs that are involved in behavior that will be associated with positive outcomes (behavioral beliefs), as well as an assessment of how much a person evaluates these results (evaluation). Subjective norms consist of both beliefs about whether other individuals approve or disapprove behavior (normative beliefs), as well as a person's motivation to obey that individual (motivation to obey). TPB contains the same components as TRA and adds perceived control behavior as the third major construct in the prediction of intention and behavior⁽¹³⁾. Researchers have used TPB to predict intentions for physical activity⁽¹⁴⁾, safer sex behavior⁽¹⁵⁾ and the intention of Muslim women to use oral contraceptives^(1,16). Both TRA and TPB have demonstrated predictive capabilities^(17,18).

Method

The study was conducted in the Madiun town administration using a community-based cross-sectional study design. The town is found in East Java Province, Indonesia. The sampling method used for the case group and the control group is fixed disease sampling, which is a sampling scheme based on the disease status of the subject, which is diseased or has no disease studied, while the subject's exposure status varies according to the subject's disease status⁽¹⁹⁾. The estimated number of cases and control groups uses a ratio of 1: 3 in each case. The case group in this study was the husband who was willing to be a vasectomy acceptor with a total of 85 married men while the control group was taken from a husband who did not use a vasectomy with a total of 248 married men. The total sample of this study was 323 married men. All of the questionnaires were prepared in Indonesian. A value of 1 to 4 was given for each strongly disagrees and strongly agrees with the answer for the questionnaire attitude, Subjective Norm and Perceived Behavioral Control. A value of 0 and 1 was given for each No and Yes answer for the Choice of contraception questionnaire. The attitude questionnaire consisted of 8 items. The Subjective Norm questionnaire consisted of 10 items. The Perceived Behavioral Control Questionnaire consisted of 10 items. Behavioral Intention Questionnaire consists of 5 items. All questionnaires used in this study were valid for use⁽²⁰⁾. Data were collected from January

to February 2020. Data were entered and analyzed using STATA. Tables, frequencies, and proportions are used to present the data. The association between dependent and independent variables was determined using the structural equation model. Logistic regression analysis was performed to control for potential confounders. Model fit was assessed by examining Chi-square (X2) statistic (P-value >0.05 is considered an acceptable fit), root mean square error of approximation (RMSEA; <0.08 is acceptable fit), comparative fit index (CFI; values close to 1 indicates good fit), standardized root mean squared residual (SRMR; <0.08 is good fit) and coefficient of determination (CD, overall R; values close to 1 indicate good fit)⁽²¹⁾.

Results

Characteristics of married men following the study are addressed in Table 1. Overall 323 married men were 45.5 years of age, where the average age of marriage was 26.5 years. The average age of a married man's wife is 40.5 years. 65.63% of married men have a high school education level and 0.62% are out of school. 33.44% of married men's jobs are entrepreneurs and 2.48% are farmers. 98.45% of married men show a positive attitude towards vasectomy. 58.82% of married men have sufficient Perceived Behavioral Control and 73.37% have sufficient intention for a vasectomy. 76.78% of married men choose the vasectomy contraceptive method.

Table 1 Sample characteristics for this study

Characteristics of Respondents (n=323)	Frequency (%)
Age (mean)	45.5 year
Husband married age (mean)	26.5 year
Wife's age (mean)	40.5 year
Education level	
No school	2 (0.62%)
Elementary school	19 (5.88%)
Middle School	57 (17.65%)
High school	212 (65.63%)
Higher education	33 (10.22%)
Employment	
Government employees	21 (6.50%)
Private employees	96 (29.72%)
Labor	77 (23.84%)
Farmers	8 (2.48%)
Driver	13 (4.02%)
Entrepreneur	108 (33.44%)

Characteristics of Respondents (n=323)	Frequency (%)
Attitude	
Positive	5 (1.55%)
Negative	318 (98.45%)
Subjective Norm	
Less	82 (25.39%)
Enough	214 (66.25%)
Good	27 (8.36%)
Perceived Behavioural Control	
Less	86 (26.63%)
Enough	190 (58.82%)
Good	48 (14.86%)
Intention	
Less	7 (2.17%)
Enough	237 (73.37%)
Good	79 (24.46%)
Choice of contraception	
Vasectomy	85 (26.32%)
Non vasectomy	248 (76.78%)

Figure 1 presents the standardized coefficients and significance levels obtained in the structural equation model using the maximum likelihood method as a parameter estimation procedure, as well as to determine the values of the explained variance (R) for the variable empowerment and satisfaction at work. The path analysis showed an adequate adjustment of the final model, with $X^2 = .052$. Root mean square error of approximation was 0.00, CFI = 1.00, SRMR 0.01 and CD = 0.67. Based on the data the model is valid. The results showed that “attitude” ($p = 0.04$) and “perceived behavioral control” ($p = <0.01$) were positive predictive factors of intention married man to choose vasectomy for contraception (Table 2).

Table 2 Correlations among attitude, subjective norm, perceived behavioral control, intention and choice of contraception

Variable	Std. Err.	p	[95% Conf. Interval]
Subjective norm → Intention	.05	0.72	-.11 to .08
Attitude → Intention	.05	0.04	.00 to .23
Perceived behavioural control → Intention	.41	0.00	.75 to .91
Intention → Choice of contraception	.00	0.00	.05 to .07
X^2		0.52	
RMSEA		0.00	
CFI		1.00	
SRMR		0.01	
CD		0.67	

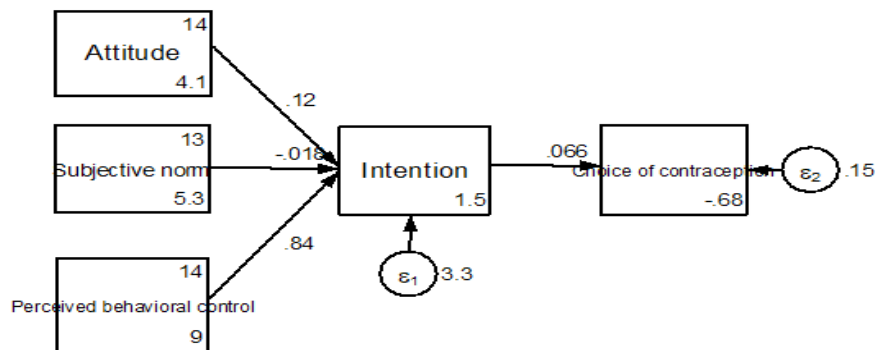


Figure 1: Association between attitude, subjective norm, perceived behavioral control, intention, and choice of contraception using a structural equation model.

Discussion

This study applies the theory of planned behavior to the intention of married men to choose vasectomy as contraception to limit the number of children. This study found that low married men choose vasectomy. The low prevalence of vasectomy has also been shown by other studies^(22,23). This research has found the intention to limit the number of children affected by attitudes. Married men who participated in this study had negative attitudes towards vasectomy. In general, vasectomy is seen as one of the least preferred method of family planning and is associated with fear and weakness. Previous research found that there was a tendency to describe men who had been sterilized in negative terms, were often insulted, and even men who had positive experiences with vasectomy procedures chose not to disclose them to others in the community⁽²⁴⁾. A recent study reports a list of factors that contribute to negative attitudes towards vasectomy, including the perceived negative impact on physical strength, ability to work and sexual performance, along with loss of masculinity, social status⁽²⁵⁾. The findings from other studies on vasectomy are that the fear of decreasing libido in men will cause them to be unable to fulfill sexual needs adequately^(26–28).

Researchers have found 14.86% of perceived behavioral control of married men in either category. Poor understanding of the vasectomy procedure causes men to assume that vasectomy will pose certain health risks. For example, they equate vasectomy with castration and believe that the vasectomy procedure will have the same effect as castration in cattle. Shelton and Jacobson⁽²⁹⁾ argue that myth and misunderstanding play an important role in accepting vasectomy as a method of birth control. They argue that even when men and women know this method, their knowledge is filled with misunderstandings; especially that vasectomy is castration or weakening men. This finding is the following research^(30–33) the participants expressed concern that vasectomy would weaken their sexual ability. Social norms about family planning receive general attention, requiring an enabling environment to create comprehensive awareness and provision of information to increase knowledge and understanding of the various types of reproductive services available.

Conclusion

The theory of planned behavior can be used as a prediction for married men to choose vasectomy

as contraception. The low of married men to choose vasectomy is positively influenced by attitude and perceived behavior control. The negative attitude of married men is closely related to physical strength, ability to work and sexual performance, along with loss of masculinity and social status.

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