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Path Analysis on Factors Affecting the Willingness to Accept Vasectomy among Men in Sanden Community Health Center, Bantul, Yogyakarta, Indonesia

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ABSTRACT

Background: Family Planning Program or Program Keluarga Berencana (KB) is a program initiated by the government to improve the quality of life in Indonesia. One of contraception methods for men is MOP (Operation Method Man) or a vasectomy. Most of society norms regard that family planning is the area of women and men do not need to be involved is also one reason for the lack of participation of men in family planning. This study aimed to investigate of *path analysis* affecting the willingness of husband as vasectomy acceptors.
Subjects and Method: This was observational analytic study with case control design. This was conducted in Puskesmas Sanden Bantul, Indonesia. A total sample of 90 respondents was selected by Fixed Disease Sampling. Data analysis used Path Analysis.
Results: There is no direct correlation between attitude and willingness of husband as an acceptor of vasectomy (b= 3.21; 95% CI= 1.74 to 4.69; p<0.001), an indirect correlation between subjective norms and husband's willingness as vasectomy acceptors (b= 2.08; 95% CI=0.44 to 3.72; p= 0.013), perceived behavioral (b=1.73; 95% CI= 0.25 to 3.20; p= 0.021), a direct correlation between the perception of behavioral control and a husband's willingness as an acceptor of vasectomy (b= 1.49; 95 % CI=0.36 to 3.62; p=0.010) intention and willingness husband's vasectomy using (the value of coefficient b= 2.13; 95 % CI=1.00 to 3.27; p<0.001).
Conclusion: There is an indirect and direct correlation of husband's willingness as an acceptor of vasectomy by Theory of Planned Behaviour.

Keywords: attitude, subjective norms, perceived behavioral, intention, willingness

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BACKGROUND

Family Planning Program or *Program Keluarga Berencana* (KB) is a program initiated by the government to improve the quality of life in Indonesia. It is enacted in The Law of the Republic of Indonesia No. 52/2009.

The Law of the Republic of Indonesia No. 52/2009 about Demographic Growth and Family Development states that KB is the effort to control child birth, ideal space and age to give birth, control pregnancy, through promotion, protection, and aids in accordance with the reproductive rights to establish quality family. The Law supports KB program as one of the efforts to create healthy and quality family. Pregnancy control in KB program is conducted by sing contraceptives. There are various kinds of contraceptives, among others are Intra Uterine Device (IUD), Surgical procedure for

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women (tubectomy), Surgical procedure for men (vasectomy), implant, injection, pill, and condom.

Based on Indonesia Demographic and Health Survey (SDKI, 2013) which is listed in Data and Information Center Health Ministry of the Republic of Indonesia, in 1991 the number of KB participants is 49.7%, in 1994 increases into 54.7%, in 1997 is 57,4%, 2002 is 60.3%, in 2007 is 61.4%, and in 2012 is 61.9%. However the the number of male KB participants is still low that is 21.374 participants with percentage as much as 0.25% for vasectomy (BKKBN, 2013).

The study aimed to investigate the factors affecting husband willingness as acceptors of vasectomy in the working area of Sanden Puskesmas. Planned Behavior Theory is a behavioral theory which is designed to predict and explain human behavior in individual certain context

Planned Behavior Theory which planned based on the assumption that human is rational being and tends to utilize obtained information systematically. People think about the implication of their action before deciding to do certain behavior. There are three main predictors which affect individual intention to do a certain behavior, namely attitude, norm, and perception toward behavioral control (Ajzen, 2005).

Male sterilization or vasectomy is a minor operative contraceptive method on male which is safe, simple and effective, it take only short time of surgery and does not need any general anesthesia (Hartanto, 2010).

SUBJECT AND METHOD

The study was conducted in the working area of Sanden Community Health Center in months of April up to June 2016. It was an observational analytic by using cross sectionnal; approach. The sampling technique used in the study was fixed-disease sampling.

Total number of comparison estimation between case group and control group might used 1:1. Total respondents were 90 husbands, consists of 45 respondents who were willing to be vasectomy acceptor and 45 respondents who were not willing to be vasectomy acceptors.

The endogenous variables of the study were husbands' willingness as vasectomy acceptors and intention, whereas the exogenous variables were attitude toward the behavior, subjective norm, perceived behavioral control. The instrument used in the study was questionnaire technique. Data analysis used in the study was path analysis.

RESULT

Most of the respondents were between 41 up to 50 years old, who were working as labors and whose income was less than regional minimum wage. The characteristics are presented in Table 1.

In Table 2 it obtained the result that 47.8% of the study subjects had weak intention, and 52.2% had strong intention. 47.8% had negative attitude and 52.2% had positive attitude, 36.7% had low subjective norm, and 63.3% had high subjective norm, 48.9% had low perceived behavioral control and 51.1% had high perceived behavioral control.

Path Analysis was used to know the influence magnitude of a variable toward other variables, both direct and indirect influence. The influence magnitude of the exogenous variables is called path coefficient. Meanwhile path coefficient itself did not have any units, so that it can be concluded that the bigger the path coefficient is, the bigger also the influence given from the variable.

Table 1. Study subjects characteristics

Characteristics	Criteria	n	%
Age	21 - 30 years old	17	18.9
	31 - 40 years old	25	27.8
	41 – 50 years old	48	53.3
Occupation	Civil Servant/Armed Force/ Police	13	14.4
	Labor	24	26.7
	Self employed	17	18.9
	Private employee	15	16.7
	Farmer	21	23.3
Income	< Regional Minimum Wage	57	63.3
	≥ Regional Minimum Wage	33	26.7

Table 2. Intention, attitude, perceived behavioral control

Variables	Categories	n	%
Intention	Weak	43	47.8
	Strong	47	52.2
Attitude	Negative	43	47.8
	Positive	47	52.2
Subjective Norm	Low	33	36.7
	High	57	63.3
Perceived Behavioral Control	Low	44	48.9
	High	46	51.1

Table 3. The result of path analysis with STATA 13 program

Association of variables			b	95 %CI		p
				Lower Limit	Upper Limit	
Direct Effect						
Willingness	←	Intention	2.13	1.00	3.27	<0.001
	←	Perceive Behavioral Control	1.49	0.36	3.62	0.010
Indirect Effect						
Intention	←	Attitude	3.21	1.74	4.69	<0.001
	←	Subjective Norm	2.08	0.44	3.72	0.013
	←	Perceived Behavioral Control	1.73	0.25	3.20	0.021

Table 3 shows the result of calculation using SPSS STATA 13 program software. It obtained the magnitude of path coefficient of husbands' attitude on vasectomy toward intention in using vasectomy is 3.21, with lower limit is 1.74 and upper limit is 4.69. The result is significant, shown by p<0.001. Subjective norm on vasectomy toward intention in using vasectomy is 2.08, lower limit is 0.44 and upper limit is 3.72. The result is significant, shown by p=0.013. Perceived control on vasectomy toward the intention in using vasectomy is 1.73, with lower limit is 0.25 and upper limit is 3.0. The result is significant, shown by p=0.021. Intention in using vasectomy toward husbands' wiliness as the acceptor is 2.13, with lower limit is 1.04 and upper limit is 3.27. The result is significant, shown by p<0.001. Perceived behavioral control on vasectomy toward husbands' willingness as the acceptor is 1.49, with lower limit is 0.36 and upper limit is 2.62. The result is significant, shown by p= 0.010.

The effect of husbands' attitude toward husbands' willingness as acceptor of vasectomy through the intention in using vasectomy. Husbands' attitude on vasectomy is proven to be significantly affecting toward husbands' willingness as vasectomy acceptor through the intention in using vasectomy. The result is significant, shown by p<0.001.

The effect of subjective norm toward husbands' willingness as acceptor of vasectomy through the intention in using vasectomy. Subjective norm on vasectomy is proven to be significantly affecting toward husbands' willingness as vasectomy acceptor through the intention in using vasectomy. The result is significant, shown by p=0.013.

The effect of perceived behavioral control toward husbands' willingness as acceptor of vasectomy both directly and indirectly through the intention in using vasectomy. Perceived behavioral control on vasectomy is proven to be significantly affecting toward husbands' willingness as vasectomy acceptor both directly and indirectly through the intention in using vasectomy. The result is significant, shown by p=0.021.

The effect of intention in using vasectomy toward husbands' willingness as acceptor of vasectomy. Intention in using vasectomy is proven to be significantly affecting toward husbands' willingness as vasectomy acceptor. The result is significant, shown by p<0.001.

The conclusion of the study were both direct and indirect association of factors affecting husbands as vasectomy acceptors. There was a direct association between attitude with husbands' willingness as vasectomy acceptors (b=3.21; p<0.001), an indirect association between subjective norm with husbands' willingness as vasectomy acceptor (b=2.08; p=0.013), an indirect association between perceived behavioral control with husbands' willingness as vasectomy acceptor (b=1.73; p=0.021), a direct association between perceived behavioral control with husbands' willingness as vasectomy acceptor (b=1.49; p=0.010), a direct association between intention in using vasectomy with husbands' willingness in using vasectomy (b=2.13; p<0.001),

The implication in the study was the result of the analysis showed that *Theory of Plannned Behavior* used in the study was in accordance with hypothesis made by the researcher. The result of the study is expected to be able to improve knowledge for the society and related institutions about vasectomy contraception so that society's understanding on vasectomy is improved, and husbands' willingness as acceptor is also improved.

Suggestion for the next researcher is to study the vasectomy topic but with different variables, theory as well as methodology.

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