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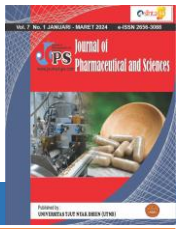

Determinants of Vasectomy Contraceptive Method Selection Among Men in the Working Area of Buhit Public Health Center, Pangururan District, Samosir Regency, 2024

Determinan Pemilihan Metode Kontrasepsi Vasektomi Pada Pria di Wilayah Kerja Puskesmas Buhit Kecamatan Pangururan Kabupaten Samosir 2024

Lasmauli Sihaloho [a]*, Kesaktian Manurung [a], Rosetty Sipayung [a], Taruli Rohana Sinaga [a], Johansen Hutajulu [a]

[a] *Master's Study Program in Public Health Sciences, Postgraduate Program, Sari Mutiara Indonesia University, North Sumatra, Indonesia.*

Corresponding Authors: lasmauli.sihaloho302@gmail.com

Abstract

Introduction: High population growth rates impact development, necessitating restrictive policies through Long-Term Contraceptive Method (LTCM) programs. Vasectomy, as one of the LTCMs, still has very low acceptance, as seen in Pangururan District, where participation is less than 1%. **Objective:** This study aimed to analyze the factors associated with the selection of vasectomy as a contraceptive method among men in the working area of Buhit Public Health Center, Pangururan District, Samosir Regency. **Methods:** This study used a cross-sectional design with a quantitative approach. The population consisted of men with fertile-age wives, with a sample of 73 individuals selected through simple random sampling. Data were collected using a validated and reliable questionnaire. Data analysis used the Chi-Square test and logistic regression. **Results:** Bivariate analysis results showed significant relationships between the husband's age (p = 0.039), number of children (p = 0.019), husband's knowledge level (p = 0.047), attitude (p = 0.029), social norms (p = 0.016), and wife's support (p = 0.001) with the decision to undergo vasectomy. Multivariate analysis proved that wife's support was the most dominant variable (p=0.003; OR=23.500), meaning that husbands who received wife's support were 23.5 times more likely to choose vasectomy. **Conclusion:** Wife's support is the most dominant factor influencing the selection of vasectomy. Therefore, healthcare workers are expected to enhance their role through health education about vasectomy to the community, especially wives, to provide good support for their husbands.

Keywords*: *Vasectomy, Husband's Age, Number of Children, Social Norms.

Abstrak

Pendahuluan: Tingginya laju pertumbuhan penduduk berdampak pada pembangunan, sehingga diperlukan kebijakan pembatasan melalui program Metode Kontrasepsi Jangka Panjang (MKJP). Vasektomi sebagai salah satu metode MKJP masih sangat rendah peminatannya, seperti di Kecamatan Pangururan yang partisipasinya kurang dari 1%. **Tujuan:** Penelitian ini bertujuan untuk menganalisis faktor-faktor yang berhubungan dengan pemilihan metode kontrasepsi vasektomi pada pria di Wilayah Kerja Puskesmas Buhit, Kecamatan Pangururan, Kabupaten Samosir. **Metode:** Penelitian ini menggunakan desain *cross-sectional* dengan pendekatan kuantitatif. Populasi adalah pria yang memiliki istri berusia subur dengan sampel sebanyak 73 orang yang diambil secara *simple random sampling*. Pengumpulan data menggunakan kuesioner yang telah teruji validitas dan reliabilitasnya. Analisis data menggunakan uji Chi-Square dan regresi logistik. **Hasil:** Hasil analisis bivariat menunjukkan adanya hubungan yang signifikan antara usia suami (p=0,039), jumlah anak (p=0,019), tingkat pengetahuan suami (p=0,047), sikap (p=0,029), norma sosial (p=0,016), dan dukungan istri (p=0,001) dengan pemilihan metode kontrasepsi vasektomi. Hasil analisis multivariat membuktikan bahwa

dukungan istri merupakan variabel yang paling dominan (p=0,003; OR=23,500), yang berarti suami yang mendapat dukungan istri memiliki kemungkinan 23,5 kali lebih besar untuk memilih vasektomi. **Kesimpulan:** Dukungan istri adalah faktor paling dominan yang memengaruhi pemilihan vasektomi. Oleh karena itu, tenaga kesehatan diharapkan dapat meningkatkan peran melalui pendidikan kesehatan tentang vasektomi kepada masyarakat, khusunya para istri, untuk memberikan dukungan yang baik bagi suami.

Kata Kunci: *Vasektomi, Usia Suami, Jumlah Anak, Norma Sosial.*

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Introduction

The continued increase in the world's population remains a serious problem because it can impact numerous aspects, including climate change, food availability, energy, clean water, and various other critical issues. Currently, the world's population has reached 7.888 billion in 2021, and one in eight people cannot afford to eat properly. The latest data from the United Nations (UN), in collaboration with the University of Washington, indicate that by 2050, the Earth will be inhabited by approximately 9.6 billion people. In fact, by 2100, the world population is projected to reach 11 billion by the end of this century if no action is taken to encourage smaller family sizes (Adinaya, 2018).

In 2023, the world population increased by 75 million people, reaching a total of more than 8 billion people by early 2024. The global population growth rate during this period was slightly below 1 percent, indicating a trend of slowing population growth globally (Kompas, 2023).

In Southeast Asia, population growth rates vary across countries. For example, Indonesia experienced a decline in population growth, from consistently above 1 percent between 2015 and 2020 to 0.8 percent in 2021. Other countries, such as the Philippines, Laos, Myanmar, Vietnam, and Malaysia, recorded growth rates of 1.4%, 1.1%, 0.9%, 0.9%, and 0.4%, respectively, in the same year (GoodStats, 2023).

Based on data obtained from the 2020-2023 interim population projection, Indonesia's population in 2023 is 278.696 million. This figure continues to increase compared to the 2020 population of 272,682 million and is expected to rise again in 2021 to 275.773 million (BPS, 2023). A total of 56.01 percent of Indonesia's population is still concentrated in Java. Another 21.67 percent live in Sumatra, 6.14 percent in Kalimantan, 7.42 percent in Sulawesi, 5.57 percent in Bali and Nusa Tenggara, 2.02 percent in Papua, and 1.17 percent in Maluku (Databoks, 2021). The population growth rate is 1.49 percent (BPS, 2023).

When viewed by province, North Sumatra is one of the provinces with a high Total Fertility Rate (TFR). North Sumatra's TFR (2.9) ranks fifth after East Nusa Tenggara (3.4), Maluku (3.3), West Papua (3.3), and Papua (3.2) (Central Statistics Agency, 2021). To maintain balanced population growth, it is necessary to reduce the average TFR to the level of the Net *Replacement Rate* (*NRR*) of 1. Based on the 2020 TFR situation, it can be observed that five provinces have a TFR below 2.1, three provinces have a TFR around 2.1, and 26 provinces have a TFR above 2.1. A total of 11 provinces have a TFR value above 2.4. North Sumatra Province is one of the provinces that has a TFR above 2.4, so various strategies are needed to accelerate the reduction of TFR according to the national target of 2.1 (Ministry of National Development Planning, 2023).

Based on TFR data from several regencies/cities in North Sumatra Province, Samosir Regency alone has a TFR of 3.2. This TFR figure remains higher than the average TFR for North Sumatra

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Province, which is 2.7% (BKKBN, 2018). This high growth rate will impact development, requiring policies to limit it. Therefore, the government is promoting the Long-Term Contraceptive Method (LMP) program. However, in reality, LMPs such as Male Medical Surgery (MOP), Female Medical Surgery (MOW), and Intrauterine Devices (IUDs) / spiral, Implants are still less popular among family planning (KB) acceptors. Currently, most KB acceptors prefer hormonal birth control methods such as injections and pills (Syukaisih, 2015).

Of the various contraceptive methods available, vasectomy is one of the least popular. According to data from the World Health Organization (WHO), in 2022, approximately 7% of men worldwide chose vasectomy as a contraceptive method, with the highest adoption rates in developed countries such as Canada (20%) and New Zealand (25%). In developing countries, vasectomy adoption rates remain relatively low, averaging below 5%. Data from the United Nations Population Fund (UNFPA) shows that in some African countries, vasectomy adoption rates are even less than 1%.

In Indonesia, the use of vasectomy contraception remains very low. In 2023, the number of vasectomy participants was relatively low compared to other contraceptive methods, at only around 1-2 percent. According to data from the National Population and Family Planning Agency (BKKBN), in 2023, approximately 25,000 participants underwent vasectomy procedures across Indonesia. This figure represents a small fraction of the total number of contraceptive users, with the primary focus still on methods such as birth control pills and condoms.

In 2022, the number of vasectomy participants in North Sumatra Province was 1,816, and it decreased to 1,718 in 2023. This figure is very low when compared to other male contraceptive methods, such as condoms, let alone when compared to contraceptive methods for women, such as implants, pills, injections, IUDs, and even the Female Operation Method/MOW (tubectomy). Likewise, in Samosir Regency, the number of vasectomy participants in 2022 was 53 people, and it decreased to 40 people in 2023 (BPS, 2024). Based on data from the Population and Family Information System (SIDUGA) of Samosir Regency, the number of vasectomy participants in Panguruan District was only 25 people or less than 1 percent. This achievement figure is still far below the target of 5 percent.

Several factors are associated with low utilization of vasectomy contraception. Factors such as age, education, marital status, and number of children influence the decision to undergo a vasectomy. Research in the United States shows that older men and those with higher education are more likely to choose a vasectomy than younger men with lower education (Smith & Jones, 2021).

Lack of knowledge about vasectomy can influence a man's decision to undergo the procedure. Many men may not fully understand the procedure, risks, or benefits of vasectomy, which can lead to uncertainty or an inability to make an informed decision. Research shows that a lack of knowledge or misinformation about vasectomy is often a significant barrier to adoption (Smith & Jones, 2021). Attitudes about masculinity can influence the decision to undergo a vasectomy. Some men may feel that a vasectomy threatens their identity or role as men. Programs that address these concerns and provide emotional support can help change negative attitudes and facilitate more informed decisions (Knaus, 2022). Data from global studies indicate that low knowledge and negative attitudes are often associated with low vasectomy adoption rates. For example, the United Nations Population Fund (2021) reported that in some countries, a lack of knowledge about vasectomy and negative attitudes toward the procedure are key factors hindering adoption.

Economic status also significantly influences the decision to undergo a vasectomy. In countries with more developed healthcare systems, such as the United States and some European countries, vasectomy is often more accessible due to health insurance coverage (United Nations Population Fund, 2022). However, in developing countries, limited access to healthcare and resources impacts vasectomy adoption rates (World Health Organization, 2020).

Culture and religious beliefs often play a role in the decision to undergo a vasectomy. Many countries with predominantly Muslim or Catholic populations show resistance to vasectomy due to conservative religious views (Miller & Anderson, 2020). Conversely, countries like India, where government policies support birth control, show higher vasectomy adoption (Government of India, 2021).

Spouse support is also a crucial factor. Emotional support from a wife often influences a man's decision to undergo a vasectomy. Men who feel supported by their partners are more likely to choose a vasectomy as a permanent contraceptive method. Research indicates that men who perceive their partners as actively involved and agree with the decision are more likely to proceed with the procedure

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(Choe, 2021). According to a study conducted by the United Nations Population Fund (2021), spouse support is a key factor in vasectomy adoption. In countries with high vasectomy adoption rates, male partners often have greater support for the decision. Conversely, in countries with low vasectomy adoption, a lack of spouse support can be a significant barrier.

Based on the above background, it is necessary to research factors related to male participation in choosing the contraceptive method of vasectomy in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency in 2024.

Experimental Section

Research Design

This study used a quantitative research method with a cross-sectional research design where the measurement of independent variables (age, number of children, education level, knowledge, attitudes, social norms and wife's support) with the dependent variable (selection of vasectomy contraceptive method) in the working area of the Buhit Health Center, Pangururan District, Samosir Regency in 2024 was carried out at relatively the same time.

Population and Sample.

This research was conducted in the Buhit Community Health Center (Puskesmas) area in Pangururan District, Samosir Regency, due to low utilization of vasectomy as a contraceptive method. The study ran from August 2024 to February 2025. The study population consisted of 3,775 men with wives of childbearing age in the Buhit Community Health Center's work area. The sample size was determined using the Raosoft formula using a 95% confidence level, a 5% margin of error, and a respondent proportion of 0.05, resulting in 73 respondents. The sample was then determined proportionally based on the number of childbearing age couples in each village within the Buhit Community Health Center's work area.

Data Collection.

Data collection in this study consisted of primary and secondary data. Primary data were obtained directly from respondents through a questionnaire covering variables such as husband's age, number of children, education level, knowledge, attitudes, social norms, wife's support, and choice of vasectomy as a contraceptive method. Meanwhile, secondary data were obtained from official institutions that provide information on the number of fertile couples, the types of contraceptives used, and other relevant supporting data for the research discussion.

Validity and Reliability Test

Validity testing is conducted to ensure that the questionnaire is truly capable of measuring the variables being studied. A questionnaire is considered valid if each question accurately reveals the aspect being measured. Meanwhile, reliability testing aims to determine the consistency of measurement results when repeated. In this study, validity testing was conducted at a significance level of 0.05, while reliability testing was assessed based on a Cronbach's Alpha value of greater than 0.6, indicating good instrument reliability.

The validity and reliability testing process was conducted on 30 male respondents from fertile age couples (PUS) in the working area of the Harian Community Health Center, Harian District, Samosir Regency, as they have similar characteristics to those of the central research location. The test results showed that all questionnaire items had a correlation value greater than 0.361, indicating that all questions were deemed valid. In addition, the results of the reliability test showed that each dimension — namely, knowledge (α = 0.91), attitude (α = 0.89), social norms (α = 0.85), and wife's support (α = 0.92) — had a Cronbach's Alpha value above 0.6. Thus, all instruments used in this study were proven valid and reliable for use as data collection tools.

Data Management and Measurement Aspects

Data management in this study was conducted through several systematic stages. The first stage was editing, which involved reviewing the entire questionnaire to ensure each question item was completed thoroughly. The next stage was coding, which involved assigning a numeric code to each respondent's answer to facilitate data processing into the main table. Data entry was then performed, which involved transferring

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the respondent's answers or observation codes into the computerized system. Afterward, tabulation was performed to present the data in tabular form according to the analysis requirements. The final stage involved data cleaning, which entailed re-examining the processed data to ensure that there were no errors in each variable before conducting statistical analysis.

The measurement aspect encompasses various research variables measured using a structured approach. The husband's age was measured using a single question and categorized into two groups: old (age ≥ the group average) and young (age < the group average). The number of children is classified into Lots if the number of children ≥ the group average and A little if < group average. Education level is categorized into low (did not finish elementary school, finished elementary school, or finished junior high school) and high (finished high school or college).

Knowledge was measured using 10 ordinal scale questions, with a score of 1 for correct answers and 0 for incorrect answers; the results were categorized into good (scores 6–10) and not good (scores 0–5). Attitudes were measured through 10 questions on a Likert scale: *strongly agree (3)*, *agree (2)*, *disagree (1)*, and strongly disagree (0), categorized into good (score 16–30) and not *good*(score 0–15). Social norms are assessed using 10 questions, with a score of "yes" = 1 and "no" = 0. The classification is based on the score, with support (score 6–10) or less supportive (score 0–5). Wife support was measured using a similar method and in the same categories. Finally, the choice of vasectomy contraception was measured using two questions: whether the husband was a family planning user and the type of contraception used, with the results grouped into vasectomy participants and non-vasectomy participants.

Data Analysis.

Data analysis in this study included univariate, bivariate, and multivariate analyses. Univariate analysis was used to describe the characteristics of each variable, including age, number of children, education level, knowledge, attitudes, social norms, wife's support, and use of vasectomy as a contraceptive method.

Bivariate analysis aimed to determine the relationship between the independent variables (age, number of children, education, knowledge, attitudes, social norms, and wife's support) and the dependent variable (vasectomy contraceptive method choice) using the Chi-Square test. The relationship was considered significant if the p-value <0.05.

Multivariate analysis was performed using logistic regression to examine the simultaneous influence of several independent variables on the dependent variable. Only variables with a significant relationship in the bivariate test were included in the regression model with a 95% confidence level.

Results and Discussion

Description of Research Location

This research was conducted in the working area of the Buhit Community Health Center, Pangururan District. Administratively, Pangururan District is located in the Samosir Regency government area of North Sumatra Province. In 2003, the Toba Samosir Regency was divided into two regencies, namely Toba Samosir Regency and Samosir Regency, through Law No. 36/2003. Samosir Regency includes sub-districts on Samosir Island and part of the mainland of Sumatra Island. Pangururan District is one of the sub-districts in Samosir Regency, which also serves as the center of government (capital city) of Samosir Regency. Its strategic position on Samosir Island makes this area a central point for government, economic, and tourism activities in the Lake Toba area. Pangururan District is located at around 2°54′ – 2°55′ N and 99°01′ – 99°02′ E. These coordinates indicate the location of the sub-district in the central part of Samosir Island.

Located in the center of Lake Toba, this area boasts a distinctive topography, characterized by highlands and numerous hills. The altitude of the area around Pangururan ranges from 900 to 1,000 meters above sea level. This provides a relatively cool climate compared to the surrounding lowlands. The presence of Lake Toba, which surrounds Samosir Island, influences the climate and environment in Pangururan District. This area tends to experience relatively high rainfall and cool air, making it one of the attractive natural tourist destinations in the Lake Toba region.

The use of male contraception as a population control measure remains a significant issue in Pangururan District. This is particularly relevant to the use of permanent male contraception, namely, vasectomy. According to data from the Samosir Regency Population and Family Information System

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(SIDUGA), the number of vasectomy participants in Pangururan District is only 25, or less than 1 percent. This figure remains significantly below the target of 5 percent.

The Samosir Regency PPPAPPKB Office has implemented various strategies and programs. According to the Secretary of the Samosir Regency PPPAPPKB Office, these strategies include family planning (FP) education, reproductive health education, increased access to health services, family empowerment, social and local media campaigns, and partnerships with non-governmental organizations.

Univariate Analysis

Univariate analysis presents the results of descriptive analysis of research variables regarding independent variables (age, number of children, level of education, knowledge, attitudes, social norms, wife's support) and dependent variables (selection of vasectomy contraceptive method).

Frequency Distribution of Male Age

The distribution of the frequency of men's age in choosing vasectomy contraception in the working area of the Buhit Health Center, Pangururan District, Samosir Regency will be presented in Table 1 below.

Table 1. Distribution of Male Age Frequency in Choosing Vasectomy Contraception in the Working Area of Buhit Health Center, Pangururan District, Samosir Regency

No	Age	n	%
1	Old	44	60,3
2	Time	29	39,7
	Amount	73	**100,0**

Based on Table 1 above, it can be seen that the distribution of men's age frequency in choosing vasectomy contraception in the Buhit Community Health Center, Pangururan District, Samosir Regency, is highest in the elderly category, at 44 people (60.3%), and lowest in the young category, at 29 people (39.7%). The average age of respondents was 42.5 years. This value serves as the basis for dividing men's ages into two categories: elderly, if their age is above the average, and young, if their age is below the average.

Frequency Distribution of Number of Children

The frequency distribution of the number of children owned by respondents in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, will be presented in Table 2 below.

Table 2. Frequency Distribution of the Number of Children Owned by Respondents in the Working Area of Buhit Health Center, Pangururan District, Samosir Regency

No	Number of children	n	%
1	Lots	41	56,2
2	A little	32	43,8
	Amount	**73**	**100,0**

Based on Table 2 above, it can be seen that the frequency distribution of the number of children owned by respondents in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the many category, namely 41 people (56.2%), and the lowest in the few category, namely 32 people (43.8%). The average number of children is 3.2 (rounded to 3). This value is the basis for dividing the number of children into two categories: many, if having more than three children, and few, if having fewer than three children.

Frequency Distribution of Education Level

The frequency distribution of respondents' education levels in the working area of Buhit Health Center, Pangururan District, Samosir Regency, will be presented in Table 3 below.

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Table 3. Distribution of Respondents' Education Level Frequency in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency

No	Level of education	n	%
1	High	62	84,9
2	Low	11	15,1
	Amount	**73**	**100,0**

Based on Table 3 above, it can be seen that the frequency distribution of education levels held by respondents in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the higher education category, namely 62 people (84.9%) and lowest in the lower education category, namely 11 people (15.1%).

Frequency Distribution of Knowledge Level

The frequency distribution of respondents' knowledge levels regarding the vasectomy contraceptive method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, will be presented in Table 4 below.

Table 4. Frequency Distribution of Respondents' Knowledge Levels in the Work Area of Buhit Health Center, Pangururan District, Samosir Regency

No	Level of Knowledge	n	%
1	Good	17	23,3
2	Not Good	56	76,7
	Amount	**73**	**100,0**

Based on Table 4 above, it can be seen that the frequency distribution of respondents' knowledge levels regarding the vasectomy contraceptive method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the poor category, namely 56 people (76.7%) and lowest in the good category, namely 17 people (23.3%).

Frequency Distribution of Attitudes

The frequency distribution of respondents' attitudes regarding the vasectomy contraceptive method in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency, will be presented in Table 5 below.

Table 5. Distribution of Respondents' Attitude Frequency in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency

No	Attitude	n	%
1	Good	23	31,5
2	Not Good	50	68,5
	Amount	**73**	**100,0**

Based on Table 5 above, it can be seen that the frequency distribution of respondents' attitudes regarding the vasectomy contraceptive method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the less good category, namely 50 people (68.5%) and lowest in the good category, namely 23 people (31.5%).

Frequency Distribution of Social Norms

The frequency distribution of social norms regarding the vasectomy contraceptive method in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency, will be presented in Table 6 below.

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Table 6. Distribution of Social Norms Frequency Regarding Vasectomy Contraceptive Methods in the Working Area of Buhit Health Center, Pangururan District, Samosir Regency

No	Social Norms	n	%
1	Support	13	17,8
2	Does not support	60	82,2
	Amount	**73**	**100,0**

Based on Table 6 above, it can be seen that the frequency distribution of social norms regarding the vasectomy contraceptive method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the non-supportive category, namely 60 people (82.2%) and lowest in the supportive category, namely 13 people (17.8%).

Frequency Distribution of Wife's Support

The distribution of the frequency of wives' support for their husbands in choosing the vasectomy method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, will be presented in Table 7 below.

Table 7. Frequency Distribution of Wives' Support for Husbands in Choosing the Vasectomy Contraceptive Method in the Working Area of Buhit Health Center, Pangururan District, Samosir Regency

No	Wife's Support	n	%
1	Support	18	24,7
2	Does not support	55	75,3
	Amount	**73**	**100,0**

Based on Table 7 above, it can be seen that the distribution of the frequency of wives' support for their husbands in choosing the vasectomy contraceptive method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the non-supportive category, namely 55 people (75.3%) and lowest in the supportive category, namely 18 people (24.7%).

Frequency Distribution of Contraceptive Method Selection

The distribution of the frequency of choosing the vasectomy method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, will be presented in Table 8 below.

Table 8. Distribution of Frequency of Vasectomy Contraceptive Method Selection in the Working Area of Buhit Community Health Center, Pangururan District, Samosir Regency

No	Contraceptive Methods	n	%
1	Vasectomy	7	9,6
2	No Vasectomy	66	90,4
	Amount	**73**	**100,0**

Based on Table 8 above, it can be seen that the distribution of the frequency of choosing the vasectomy contraceptive method in the working area of the Buhit Health Center, Pangururan District, Samosir Regency, is highest in the category of not choosing vasectomy, namely 66 people (90.4%) and the lowest in the vasectomy category, namely seven people (9.6%).

Bivariate Analysis

Bivariate analysis presents the results of statistical analysis of the relationship between independent variables (age, number of children, education level, knowledge, attitude, social norms, wife's support) and the dependent variable (selection of vasectomy contraceptive method) in the working area of Buhit Health Center, Pangururan District, Samosir Regency.

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The Relationship Between Husband's Age and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between husband's age and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency are presented in Table 9 below.

Table 9. The Relationship Between Husband's Age and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

Husband's Age	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
Old	6	13,6	38	86,4	44	100,0	0,039
Time	1	3,4	28	96,6	29	100,0	
Total	7		66		73		

Based on Table 9 above, it can be seen that of the 44 older husbands, 6 (13.6%) chose vasectomy contraception, and 38 (86.4%) did not choose vasectomy contraception. Of the 29 younger husbands, 1 (3.4%) chose vasectomy contraception, and 28 (96.6%) did not choose vasectomy contraception. The results of the statistical test using the chi-square test showed a significance value (sig.) of 0.039. This value is smaller than the degree of error (α = 0.05), so it can be concluded that there is a relationship between the husband's age and the choice of vasectomy contraception in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency.

The Relationship Between the Number of Children and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of the Buhit Community Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between the number of children and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Working Area, Pangururan District, Samosir Regency, are presented in Table 10 below.

Table 10. The Relationship Between the Number of Children and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of the Buhit Community Health Center, Pangururan District, Samosir Regency

Number of children	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
Lots		14,6	35	85,4	41	100,0	0,019
A little		3,1	31	96,9	32	100,0	
Total			66		73		

Based on Table 10 above, it can be seen that of the 41 husbands who have a large number of children, six people (14.6%) chose vasectomy contraception, and 35 people (85.4%) did not choose vasectomy contraception. Of the 32 husbands who have few children, one person (3.1%) chose vasectomy contraception, and 31 people (96.9%) did not choose vasectomy contraception. The results of the statistical tests, using the chi-square test, showed a significance value (sig.) of 0.019. This value is smaller than the degree of error (α = 0.05), so it can be concluded that there is a relationship between the number of children owned and the choice of vasectomy contraception in the Working Area of the Buhit Health Center, Pangururan District, Samosir Regency.

The Relationship Between Education Level and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between education level and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Working Area, Pangururan District, Samosir Regency, are presented in Table 11 below.

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Table 11. The Relationship Between Education Level and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

Level of education	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
High	4	6,5	58	93,5	62	100,0	0,065
Low	3	27,3	8	72,7	11	100,0	
Total	7		66		73		

Based on Table 11 above, it can be seen that of the 62 husbands with a high level of education, 4 (6.5%) chose vasectomy contraception, and 58 (93.5%) did not choose vasectomy contraception. Of the 11 husbands with a low level of education, 3 (27.3%) chose vasectomy contraception, and 8 (72.7%) did not choose vasectomy contraception. The results of the statistical test using the chi-square test showed a significance value (sig.) of 0.065. This value is greater than the degree of error ($\alpha = 0.05$), so it can be concluded that there is no relationship between the level of education owned and the choice of vasectomy contraception in the Working Area of the Buhit Health Center, Pangururan District, Samosir Regency.

The Relationship Between Knowledge Level and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between the level of knowledge and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Working Area, Pangururan District, Samosir Regency, are presented in Table 12 below.

Table 12. The Relationship Between Knowledge Level and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

Level of Knowledge	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
Good	4	23,5	13	76,5	17	100,0	0,047
Not Good	3	5,4	53	94,6	56	100,0	
Total	7		66		73		

Based on Table 12 above, it can be seen that of the 13 husbands who had a good level of knowledge about the vasectomy contraceptive method, four people (23.5%) chose vasectomy contraception, and 13 people (76.5%) did not choose vasectomy contraception. Of the 56 husbands who had a poor level of knowledge, three people (5.4%) chose vasectomy contraception, and 53 people (94.6%) did not choose vasectomy contraception. The results of the statistical tests, using the chi-square test, showed a significance value (sig.) of 0.047. This value is smaller than the degree of error ($\alpha = 0.05$), so it can be concluded that there is a relationship between the level of knowledge about the vasectomy contraception method and the choice of vasectomy contraception in the Working Area of the Buhit Community Health Center, Pangururan District, Samosir Regency.

The Relationship Between Attitudes and the Choice of Vasectomy Contraceptive Methods in Men in the Work Area of Buhit Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between attitudes and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Working Area, Pangururan District, Samosir Regency, are presented in Table 13 below.

Based on Table 13 above, it can be seen that of the 23 husbands who had a positive attitude towards vasectomy contraception, 5 (21.7%) chose vasectomy contraception, and 18 (78.3%) did not choose vasectomy contraception. Of the 50 husbands who had a negative attitude, 2 (4.0%) chose vasectomy contraception, and 48 (96.0%) did not choose vasectomy contraception. The results of the statistical test using the chi-square test showed a significance value (sig.) of 0.029. This value is smaller

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than the degree of error (α = 0.05), so it can be concluded that there is a relationship between attitudes about vasectomy contraception and the choice of vasectomy contraception in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency.

Table 13. The Relationship Between Attitudes and the Choice of Vasectomy Contraceptive Methods in Men in the Work Area of Buhit Health Center, Pangururan District, Samosir Regency

Attitude	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
Good	5	21,7	18	78,3	23	100,0	0,029
Not Good	2	4,0	48	96,0	50	100,0	
Total	7		66		73		

The Relationship between Social Norms and the Choice of Vasectomy Contraceptive Methods in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between social norms and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency, are presented in Table 14 below.

Table 14. The Relationship between Social Norms and the Choice of Vasectomy Contraceptive Methods in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

Social Norms	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
Support	4	30,8	9	69,2	13	100,0	
NoSupport	3	5,0	57	95,0	60	100,0	0,016
Total	7		66		73		

Based on Table 14 above, it can be seen that of the 13 husbands who had supportive social norms regarding the vasectomy contraceptive method, 4 (30.8%) chose vasectomy contraception, and 9 (69.2%) did not choose vasectomy contraception. Of the 60 husbands who had unsupportive social norms, 3 (5.0%) chose vasectomy contraception, and 57 (95.0%) did not choose vasectomy contraception. The results of the statistical tests, using the chi-square test, showed a significance value (sig.) of 0.016. This value is smaller than the degree of error (α = 0.05), so it can be concluded that there is a relationship between social norms regarding the vasectomy contraception method and the choice of vasectomy contraception in the Working Area of the Buhit Community Health Center, Pangururan District, Samosir Regency.

The Relationship Between Wife's Support and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of the study on the relationship between wives' support and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency are presented in Table 15 below.

Table 15. The Relationship Between Wife's Support and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

Wife's Support	Contraceptive Methods				Total		Sig.
	Vasectomy	%	No Vasectomy	%	n	%	
Support	6	33,3	12	66,7	18	100,0	
NoSupport	1	1,8	54	98,2	55	100,0	0,001
Total	7		66		73		

Based on Table 15 above, it can be seen that of the 18 husbands who had wives' support regarding the vasectomy contraceptive method, six people (33.3%) chose vasectomy contraception, and 12 people (66.7%) did not choose vasectomy contraception. Of the 55 husbands whose wives supported them, one

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person (1.8%) chose vasectomy contraception, and 54 people (98.2%) did not choose vasectomy contraception. The results of the statistical tests, using the chi-square test, showed a significance value (sig.) of 0.001. This value is smaller than the degree of error ($\alpha = 0.05$), so it can be concluded that there is a relationship between the wife's support and the choice of vasectomy contraception in the Buhit Community Health Center Working Area, Pangururan District, Samosir Regency.

Multivariate Analysis

Bivariate Selection

After bivariate analysis is conducted, a multivariate analysis is then conducted to determine the most dominant relationship between the independent variables and the dependent variable. The initial stage of multivariate analysis is determining the potential independent variables (multivariate candidate variables) that will be included in the multivariate analysis, namely, variables from the bivariate analysis results that have a p-value <0.25 (Lemeshow, 1990). The multivariate analysis used in this study is the t-test. *Logistic Regression is simple.* For more details, see Table 16

Table 16. Candidate Variables for Multivariate (Binary Logistic Regression)

No	Variables	*p-value* (<0,25)	Information
1.	Husband's age	0,039	Candidate
2.	Number of children	0,019	Candidate
3.	Husband's education level	0,065	Candidate
4.	Husband's level of knowledge	0,047	Candidate
5	Attitude	0,029	Candidate
6	Social norms	0,016	Candidate
7	Wife's support	0,001	Candidate

From Table 16 above, the results of the analysis between the independent variables and the variables they depend on can be seen, showing that all independent variables have a P value <0.25. All of these variables include the husband's age, number of children, education level, knowledge level, attitude, social norms, and wife's support. Hence, they meet the requirements to be included in the final modeling through binary logistic regression testing.

Final Modeling

The second stage in the multivariate analysis involves constructing a comprehensive model by including all candidate variables for analysis. The purpose of the multivariate analysis is to identify the best model for determining the factors influencing the choice of vasectomy contraceptive method in the Buhit Community Health Center Work Area, Pangururan District, Samosir Regency. In this case, all candidate variables were tested together to form the final Equation model. For more details, see Table 17.

Table 17. Final Model of Multivariate Analysis of Multiple Logistic Regression on the Variables of Husband's Age, Number of Children, Husband's Education Level, Husband's Knowledge Level, Attitude, Social Norms, and Wife's Support

	Variables	B	*Say*	*Exp*	*95% C.I for EXP (B)*	
					Lower	*Upper*
Final Stage	Wife's Support	3.877	0.003	23.500	3.879	237.505

From Table 17, it is known that the final results of modeling using the regression test binary *logistic* show that only the wife's support variable has a significant value of p <0.005, so it can be concluded that the results of the variable analysis with the binary regression test (logistic).) it is known that the most dominant variable is wife's support with a significant value of 0.003 with an Exp B value of 23,500. It is concluded that husbands who have a supportive wife will have a 23.5 times greater chance of choosing vasectomy contraception compared to those who do not receive wife support in the Buhit Community Health Center Working Area, Pangururan District, Samosir Regency.

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Discussion

The Relationship Between Husband's Age and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate a relationship between the husband's age and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value (sig.) of 0.039. This value is smaller than the error rate (α = 0.05), so it can be concluded that there is a relationship between husband's age and the choice of vasectomy contraceptive method in the Buhit Community Health Center, Pangururan District, Samosir Regency.

The influence of a husband's age on vasectomy can be seen from several aspects, ranging from readiness to make contraceptive decisions, level of knowledge and attitudes towards the vasectomy method, to its impact on sexual function. Vasectomy is a permanent contraceptive method generally recommended for men who no longer want children. Men who have reached a mature age (for example, over 30 years old) tend to have completed their family planning, so they are more likely to accept the procedure as a solution to avoid unwanted pregnancies. According to Alodokter (2023), doctors usually do not recommend vasectomy for men under 30 years old or who have not yet had children, considering that at that age, there is still the possibility of having more children.

Several studies in Indonesia have shown that with age, men tend to have better knowledge about vasectomy contraception. This is related to life experience and increased exposure to information. For example, men aged 40–45 years show more positive attitudes toward vasectomy. Age also influences attitudes; older men tend to be more mature in their decision-making and have a more rational perception of the benefits and safety of vasectomy. On the other hand, younger men may still be hesitant due to their desire to have children in the future and their lack of experience in family planning.

One common concern is the impact of vasectomy on sexual performance. However, recent research suggests that vasectomy not only does not decrease sexual function but, in some cases, may be associated with increased sexual satisfaction. For example, a study involving 5,425 men in Germany (Jahnen, 2024) found that men in their 50s who had undergone vasectomy reported higher levels of sexual activity, reduced erectile dysfunction, and greater sexual satisfaction compared to men who had not undergone the procedure. These findings suggest that concerns about the negative impact of vasectomy on sexual function are unfounded, even in older adults.

As couples age, they tend to be more prepared to discuss and decide on permanent contraception. Husbands' participation in family planning programs, including vasectomy, is increasingly seen in men who are more psychologically and financially mature. Besides age, support from their wives also plays a crucial role. Older men often receive greater support from their partners in choosing a vasectomy, as both partners have gained sufficient understanding and experience in managing a family (see also research on family support in vasectomy decision-making).

The husband's age influences vasectomy in several ways. Older men—who have generally completed family planning—are more likely to have better knowledge and positive attitudes toward vasectomy. Furthermore, research shows that vasectomy does not negatively impact sexual function, even in older men, and can contribute to increased sexual satisfaction.

The Relationship Between the Number of Children and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of the Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate that there is a relationship between the number of children and the choice of vasectomy contraceptive method in men in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value (sig.) of 0.018. This value is smaller than the degree of error (α = 0.05), so it can be concluded that there is a relationship between the number of children and the choice of vasectomy contraceptive method in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency.

In general, the decision to undergo a vasectomy as a permanent method of contraception for men is often influenced by several factors, one of which is the number of children a couple has had. The number of children can be considered an indicator of whether a couple has "fulfilled" their desire for

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children, making them more likely to consider permanent contraception. However, research findings on the influence of the number of children on vasectomy acceptance have been mixed.

For some couples, having a large number of children (for example, three or more) is often seen as a compelling reason to avoid further pregnancies. In this context, vasectomy is chosen because it is considered an effective and permanent solution to limit the number of children and reduce the family's economic burden. Several studies have shown that couples with a large number of children tend to be more open to choosing vasectomy as a birth control option (Nuraini, Prasetyo, & Nufus, 2024).

In a qualitative study examining men's decision-making process to adopt family planning, economic factors and the number of children were often the primary factors behind the decision. For example, Regyta Nuraini, Prasetyo, and Nufus (2024) reported that men began considering vasectomy when they perceived an increasing economic burden on their family as their number of children increased. Similarly, in a literature review of the determinants of vasectomy acceptance, Saputri et al. (2024) noted that while factors such as wife support and knowledge were key determinants, consideration of the number of children also influenced the decision.

On the other hand, not all studies have found a significant relationship between the number of children and vasectomy use. For example, a study conducted in Bandar Lampung City showed that the number of children variable did not significantly influence vasectomy use ($p = 0.129$); therefore, statistically, it cannot be concluded that having more children increases the likelihood of vasectomy (Utami, 2014). Similarly, a study by Amanati et al. (2021) in Karanganyar Village found that although the number of children was frequently mentioned as a consideration, this factor did not emerge as a significant variable in the bivariate analysis.

These differences in results suggest that while the number of children is a factor in the vasectomy decision-making process, its role may be contextual and influenced by interactions with other variables, such as spouse support. Numerous studies have shown that spouse support is a significant factor in determining vasectomy decisions (Amanati et al., 2021; Utami, 2014). Another factor is knowledge level. A good understanding of vasectomy and its benefits tends to increase acceptance, while inadequate information can decrease interest (Saputri et al., 2024).

Thus, while couples with a large number of children may theoretically be more likely to choose a vasectomy to prevent further pregnancies, the number of children does not always appear to be a statistically dominant factor. The final decision appears to be more influenced by a combination of factors, particularly the wife's support and level of knowledge about the vasectomy method.

The Relationship Between Husband's Education Level and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate that there is no relationship between the husband's education level and the choice of vasectomy contraceptive method in men in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value (sig.) of 0.065. This value is greater than the degree of error ($\alpha = 0.05$), so it can be concluded that there is no relationship between the husband's education level and the choice of vasectomy contraceptive method in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency.

The influence of a husband's education level on vasectomy use (as a male contraceptive method) is a complex and frequently debated issue in the reproductive health literature. Theoretically, higher education levels are expected to increase knowledge, awareness, and rational attitudes regarding reproductive health. This allows husbands to understand better the benefits and risks of various contraceptive methods, including vasectomy, making them more likely to consider this permanent method as a family planning option.

Husbands with higher education generally have better access to health information and are more likely to be able to filter and understand information related to family planning programs. This increased health literacy can result in more open and rational attitudes toward contraceptive options, including vasectomy (Widoyo & Markolinda, 2011).

Education also plays a role in shaping attitudes and values that support active participation in reproductive health decision-making. Highly educated husbands are more likely to respond critically

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to health issues and reduce the stigma surrounding vasectomy, which is often associated with concerns about loss of virility or long-term negative consequences.

Although educational attainment can theoretically influence vasectomy choice through increased knowledge and changes in attitudes, several studies suggest that this relationship is not direct. Other factors, such as wife support, economic status, and the availability and quality of information, also play a significant role. In other words, while a husband's education may contribute indirectly through its influence on knowledge and attitudes, the outcome is also highly dependent on the social and cultural context of each individual's environment.

Several studies have examined the relationship between husbands' education levels and participation in vasectomy, although the results are inconsistent. In a study conducted in Luhak Nan Duo District, West Pasaman Regency, Widoyo and Markolinda (2011) found that variables such as knowledge, economic status, the role of family planning workers, and wife support significantly influenced the decision to undergo vasectomy. However, they reported that husbands' education levels did not significantly influence the choice of vasectomy method. These findings suggest that while education plays a role in increasing knowledge, other supporting factors, such as environmental support and a supportive partner, are also crucial.

On the other hand, some studies (for example, those reported in works linking education to increased health literacy) suggest that husbands with higher levels of education tend to have better knowledge of the benefits and risks of vasectomy, which in turn may increase their participation as adopters of this contraceptive method. Although not all studies find a significant direct relationship, conceptually, education is considered an important supporting factor in shaping attitudes and decisions regarding reproductive health (Widoyo & Markolinda, 2011).

Overall, husbands' education levels have the potential to influence their participation in vasectomy programs through increased knowledge and changes in more rational attitudes toward reproductive health. However, empirical results indicate that the influence of education is not always direct and is often influenced by other contributing factors such as wife support, economic status, and access to quality information. Therefore, to increase men's participation in vasectomy, a holistic approach is needed, improving health literacy and creating a supportive environment, both in terms of information and socio-cultural support.

The Relationship Between Husband's Knowledge Level and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate a relationship between the husband's knowledge level and the choice of vasectomy contraceptive method in men in the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value (sig.) of 0.047. This value is smaller than the error rate ($\alpha = 0.05$), indicating a significant relationship between the husband's knowledge level and the choice of vasectomy contraceptive method in the Buhit Community Health Center, Pangururan District, Samosir Regency.

Level of knowledge is a key factor influencing a man's decision to undergo a vasectomy. Specifically, a good understanding of the procedure, benefits, and risks of vasectomy can help reduce fears and myths surrounding this contraceptive method. Here are some key points related to the influence of knowledge. Men who have a good understanding of vasectomy tend to understand that the procedure is permanent yet safe, does not significantly affect hormone production or sexual performance, and is an effective alternative for controlling the number of children. With accurate information, they are less likely to fall prey to myths such as those that a vasectomy is the same as castration or that it can cause impotence.

A high level of knowledge contributes to the formation of positive attitudes toward vasectomy. This makes men more open to considering this method as a contraceptive option, especially if they have support from their partners. Conversely, a lack of information or inaccurate knowledge can lead to negative perceptions that hinder their interest in vasectomy (Saputri et al., 2024).

Effective education and counseling from healthcare professionals is crucial for increasing knowledge about vasectomy. Comprehensive educational programs—through seminars, printed materials, and digital media—can provide accurate information and help clarify misconceptions.

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Studies show that when men receive comprehensive and accurate information, they are more likely to support and ultimately choose vasectomy as a birth control solution (Nuraini, Prasetyo, & Nufus, 2024).

Although knowledge is a crucial factor, the decision is also influenced by interactions with other variables such as spouse support, economic conditions, and sociocultural values. Adequate knowledge will be more influential if combined with support from the community and family. Conversely, even with sufficient knowledge, without adequate support from a partner or consistent information from health sources, interest in vasectomy may remain low (Amanati, Musthofa, & Kusumawati, 2021).

Overall, increasing knowledge about vasectomy, through outreach, education, and accessible information, plays a vital role in changing perceptions and increasing acceptance of this permanent contraceptive method among men.

The Relationship Between Husband's Attitude and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate that there is a relationship between husbands' attitudes and the choice of vasectomy contraceptive methods in men in the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value (sig.) of 0.029. This value is smaller than the degree of error (α = 0.05), so it can be concluded that there is a relationship between husbands' attitudes and the choice of vasectomy contraceptive methods in the Buhit Community Health Center, Pangururan District, Samosir Regency.

Attitude is a crucial component that reflects a person's emotional and cognitive evaluation of an action or method. In the context of vasectomy, attitude plays a crucial role in determining whether a man will accept or reject the procedure.

Men who have a positive attitude toward vasectomy have generally received accurate information about the procedure, its benefits, and its risks. Clear and precise information, whether obtained through counseling, counseling by healthcare professionals, or from the experiences of others, can help reduce anxiety and dispel common myths, such as the belief that a vasectomy reduces virility or causes sexual problems. Thus, a positive attitude develops when men feel confident and believe that vasectomy is a safe and effective contraceptive method.

Research shows a significant relationship between attitudes toward vasectomy and the decision to undergo this procedure. Men with supportive attitudes tend to be more open to the idea and ultimately choose vasectomy as a way to control the number of children and reduce the family's economic burden. Conversely, negative attitudes—often influenced by cultural norms and inaccurate information—can be a significant barrier to vasectomy acceptance. In several studies, supportive attitudes have been associated with a significantly greater likelihood of undergoing a vasectomy compared to those with unsupportive attitudes (Amanati, Musthofa, & Kusumawati, 2021).

Attitudes do not stand alone, but often interact with other factors such as partner support and knowledge level. For example, even if information about vasectomy is readily available, without a positive attitude, men may remain hesitant to choose this method. Likewise, a positive attitude is more effective when supported by a conducive social environment, such as support from a wife who encourages the decision to undergo a vasectomy (Nuraini, Prasetyo, & Nufus, 2024).

Therefore, building positive attitudes through comprehensive outreach, accessible education, and environmental support is crucial to increasing vasectomy acceptance among men. This change in attitudes can ultimately increase male participation in family planning programs, thereby easing the burden on women and helping control population growth.

The Relationship between Social Norms and the Choice of Vasectomy Contraceptive Methods in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate a relationship between social norms and the choice of vasectomy contraceptive methods in men in the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value (sig.) of 0.016. This value is smaller than the error rate (α = 0.05), indicating a significant relationship between social norms and the choice of vasectomy contraceptive methods in the Buhit Community Health Center, Pangururan District, Samosir Regency.

Social norms play a crucial role in shaping men's perceptions and decisions about vasectomy. Broadly speaking, social support comes not only from wives but also from family, peers, communities,

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and community leaders, who can influence prevailing norms and values within those communities. When social environments, such as family, communities, or peer groups, demonstrate support for the use of male contraceptive methods, including vasectomy, this can reduce the stigma and damaging myths surrounding the method. Social support helps establish the norm that vasectomy is a legitimate and safe option for controlling childbearing and helps manage the family's economic burden (Nuraini, Prasetyo, and Nufus, 2024).

In a supportive environment, accurate information and positive testimonials from individuals who have undergone vasectomy can be disseminated effectively. Support groups or vasectomy family planning associations, for example, serve as forums for sharing experiences and providing education to potential participants, helping to clarify doubts and dispel misinformation (Amanati, Musthofa, and Kusumawati, 2021).

The presence of community leaders, religious leaders, and health professionals who openly support vasectomy can provide legitimacy and a sense of security for men considering this method. Peer support from peers or individuals who have undergone vasectomy also has a significant impact on boosting the confidence of potential vasectomy recipients. With real-life examples and positive experiences, potential vasectomy users will be more motivated to make the same decision.

Social norms often work synergistically with other factors, such as a wife's level of knowledge and support. For example, even if information about vasectomy is readily available, if the surrounding social environment tends to be skeptical or even rejecting, these negative perceptions can hinder acceptance. Conversely, when social support is strong, the information received is more readily accepted and has a positive influence on attitudes and decisions.

Overall, the existence of strong social norms within the local community, whether through family, community, or community leaders, can increase interest in and acceptance of vasectomy. Outreach efforts and educational programs involving various community elements are expected to create a conducive environment for behavioral change and increase male participation in family planning programs.

The Relationship Between Wife's Support and the Choice of Vasectomy Contraceptive Method in Men in the Work Area of Buhit Community Health Center, Pangururan District, Samosir Regency

The results of statistical tests indicate that there is a relationship between wife support and the choice of vasectomy contraceptive method in men in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency. This has been statistically proven with a significance value ($p < 0.001$). This value is smaller than the degree of error ($\alpha = 0.05$), so it can be concluded that there is a relationship between wife support and the choice of vasectomy contraceptive method in the working area of the Buhit Community Health Center, Pangururan District, Samosir Regency.

Wives' support is a crucial determinant of a man's decision to use a vasectomy as a contraceptive method. A wife's support provides a substantial emotional boost to her husband, thereby reducing fear, doubt, and the negative stigma surrounding vasectomy. When a wife supports the decision, the husband tends to feel more confident and less burdened by fears that may arise related to the procedure's potential side effects, such as concerns about decreased virility or changes in sexual life (Amanati, N. M., Musthofa, S. B., & Kusumawati, A., 2021).

The decision-making process regarding vasectomy often involves intense discussion between husband and wife. The wife's active support—by providing information, sharing concerns, and helping to weigh the benefits and risks—encourages a shared decision. Thus, the decision to undergo a vasectomy is not based solely on individual considerations but rather the result of deliberation and consensus within the family.

In many communities, vasectomy remains fraught with myths and negative perceptions, such as the belief that the procedure is equivalent to castration or that it can reduce sexual performance. A wife's support plays a crucial role in helping husbands overcome this stigma. A supportive wife can provide reassurance and validation that a vasectomy is a safe and effective contraceptive option and will not interfere with a husband's sex life or virility (Nuraini, R., Prasetyo, F. A., & Nufus, B. H., 2024).

Several studies have shown that a wife's support has a significant influence on a man's decision to undergo a vasectomy. For example, a study conducted in Bandar Lampung City found that men who lacked the support of their wives were up to 20 times more likely to forgo a vasectomy than those who

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did (Utami, 2014). This confirms that the role of a wife's support is often the differentiating factor between men who choose a vasectomy and those who do not.

Because wife support is a key factor, family planning education and counseling programs should involve both partners. Improving communication and providing comprehensive information to both husband and wife can help optimize vasectomy acceptance. This approach is expected not only to increase male participation in family planning but also to foster harmonious decisions that positively impact overall family well-being (Nuraini, R., Prasetyo, F. A., & Nufus, B. H., 2024).

Overall, wives' support plays a significant role in shaping men's attitudes and beliefs about vasectomy. Therefore, strategies to increase men's participation in family planning should not only focus on providing individual information but also prioritize wives' involvement and support to ensure optimal and sustainable decisions..

Conclusion

Based on the results of statistical analysis, it can be concluded that there is a significant relationship between husband's age, number of children, education level, knowledge, attitude, social norms, and wife's support with the choice of vasectomy contraceptive method in men in the working area of Buhit Health Center, Pangururan District, Samosir Regency. Of all the variables tested, the wife's support is the most dominant factor, with an Exp B value of 23.500, indicating that husbands who receive support from their wives have a 23.5 times greater chance of choosing the vasectomy contraceptive method compared to husbands who do not receive their wives' support.

Conflict of Interest

The author declares no competing interests and asserts that the research was conducted autonomously, safeguarding the impartiality and validity of the results.

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Supplementary Materials

Reference

[1] Adinaya GB. Ledakan Penduduk Dunia dan Efek Domino yang Mengancam Kehidupan. *National Geographic Indonesia*, 2018. Available from: https://nationalgeographic.grid.id/read/13711340/ledakan-penduduk-dunia-dan-efek-domino-yang-mengancam-kehidupan?page=all

[2] Alodokter. Vasektomi, ini yang harus Anda ketahui. *Alodokter*; 2023 Apr 12. Available from: https://www.alodokter.com/vasektomi-ini-yang-harus-anda-ketahui

[3] Amelia R, Sari D. Stigma sosial dan keputusan vasektomi di masyarakat: Studi kasus di Jakarta. *Jurnal Ilmu Kesehatan*. 2019;7(3):45–52.

[4] Anderson R, Patel V. Emotional and financial stability as factors in male sterilization decisions. *J Fam Psychol*. 2020;24(2):98–107.

[5] Ane LH. Faktor-Faktor Yang Mempengaruhi Rendahnya Pengguna Metode Kontrasepsi Jangka Panjang (MKJP) Di Kecamatan Batauga Kabupaten Buton Selatan. *Jurnal Studi Kepemerintahan*. 2020;3(2).

[6] Anita L. Faktor-Faktor Yang Berhubungan Dengan Pemilihan Kontrasepsi Pasangan Usia Subur Di Puskesmas Damau Kabupaten Talaud. *Jurnal Ilmiah Bidan*. 2014;2(1):27–32.

[7] Bertelson S. The Role of Healthcare Providers in Promoting Male Sterilization. *Int J Reprod Health*. 2021;13(2):45–56.

Electronic ISSN : 2656-3088
Homepage: https://www.journal-jps.com

[8] BKKBN. Kualitas Sumber Daya Manusia Dalam Menggapai Bonus Demografi. *Jurnal Populasi*. 2015;2(1):102–114.
[9] BKKBN. *Program Kependudukan, Keluarga Berencana dan Pembangunan Keluarga Provinsi Sumatera Utara Tahun 2018*.
[10] Badan Pusat Statistik (BPS). Jumlah Penduduk Pertengahan Tahun (Ribu Jiwa), 2021–2023. 2023. Available from: https://www.bps.go.id/indicator/12/1975/1/jumlah-penduduk-pertengahan-tahun.html
[11] Buchanan M, Kroll R, Morrow M. Men's awareness and attitudes towards vasectomy: A cross-sectional study. *J Mens Health*. 2016;13(1):40–47.
[12] Databoks. Dukcapil: Jumlah Penduduk Indonesia 272,23 Juta Jiwa pada 30 Juni 2021. 2021. Available from: https://databoks.katadata.co.id/datapublish/2021/09/07/dukcapil-jumlah-penduduk-indonesia-27223-juta-jiwa-pada-30-juni-2021
[13] Dhillon P, Mathur N. Male sterilization and its correlates: A study of rural India. *J Fam Plann Reprod Health Care*. 2018;44(2):120–126.
[14] Figueiredo MS, Nascimento AP, Nascimento AM. The role of health professionals in providing information and support for vasectomy: a qualitative study. *Reprod Health*. 2019;16(1):1–10.
[15] GoodStats.id. Pertumbuhan Penduduk Negara ASEAN: Kini Indonesia Tak Sampai 1 Persen. 2023. Available from: https://data.goodstats.id/statistic/pertumbuhan-penduduk-negara-asean-kini-indonesia-tak-sampai-1-persen-XeAxj
[16] Gottfried JR, Galvan DR, Jones AR. Barriers to vasectomy: The role of misinformation and lack of awareness. *Urol Clin North Am*. 2020;47(4):601–610.
[17] Hussain R, Raza H, Khan MS. The role of male sterilization in family planning: A qualitative study. *J Fam Plann Reprod Health Care*. 2020;46(2):105–112.
[18] Jahnen M. Getting the snip can boost a man's sex life and help with erection troubles, study finds. *The Sun*; 2024 Nov 29. Available from: https://www.the-sun.com/health/12995681/getting-snip-boosts-mans-sex-life/
[19] Kementerian Perencanaan Pembangunan Nasional/Bappenas. *Penduduk Berkualitas Menuju Indonesia Emas: Kebijakan Kependudukan Indonesia 2020–2050.* 2023.
[20] Kahn JR, Pugh D, Smith C. Men's knowledge and attitudes about vasectomy: Implications for counseling and education. *J Urol*. 2018;199(2):501–507.
[21] Kiser A, Hines E. Men's attitudes towards vasectomy: A systematic review of the literature. *J Urol*. 2018;200(3):598–604.
[22] Kompas.com. Populasi Dunia Meningkat 75 Juta pada Tahun 2023. 2023 Dec 30. Available from: https://www.kompas.com/global/read/2023/12/30/133000670/populasi-dunia-meningkat-75-juta-pada-tahun-2023
[23] Krisdayanti B, Datjing T, Misdayanti. Faktor-Faktor yang Mempengaruhi Pemilihan Kontrasepsi Metode Operasi Wanita (Vasektomi) pada Pasangan Usia Subur di Rumah Sakit Umum Dewi Sartika Kota Kendari Tahun 2021. *Sains dan Kesehatan*. 2022;1(1):9–18.
[24] Kumar A, Singh R. Economic determinants of family planning choices: Insights from rural India. *Asian J Fam Stud*. 2022;3(2):86–99.
[25] Labrecque M, Dossa S. No-scalpel vasectomy for male sterilization: A systematic review of randomized controlled trials. *BMC Med*. 2016;14(1):1–8.
[26] Lestari LA, Raharjo S. Hubungan pengetahuan suami tentang kontrasepsi vasektomi dengan sikapnya terhadap vasektomi di Puskesmas X, Yogyakarta. *J Kesehatan Reproduksi*. 2020;11(1):25–34.
[27] Maula et al. Faktor-Faktor yang Berhubungan dengan Pemilihan Alat Kontrasepsi pada Akseptor KB Wanita di Tuwel. *Siklus J Res Midwifery Politeknik Tegal*. 2014;2(2):1–10.
[28] Nair P. Knowledge and attitude towards vasectomy among married men: A cross-sectional study in Kerala. *Int J Community Med Public Health*. 2020;7(4):1492–1497.
[29] Notoatmodjo S. *Promosi Kesehatan dan Perilaku Kesehatan.* Jakarta: Rineka Cipta; 2018.
[30] Purwanti E, Santosa B. Pengaruh komunikasi antara pasangan terhadap keputusan vasektomi. *J Kesehatan Masyarakat*. 2021;16(2):113–120.
[31] Rahmawati AY. Tingkat Pengetahuan Akseptor Keluarga Berencana Tentang Metode Operasi Wanita (Vasektomi) di Puskesmas Hilisalawa'ahe Kabupaten Nias Selatan Tahun 2020. 2020 Jul;1–23.
[32] Rao RS. Male involvement in family planning: A study from India. *Demogr Res*. 2016;15(14):337–364.

Electronic ISSN : 2656-3088
Homepage: https://www.journal-jps.com

[33] Ross CE, Mirowsky J. Gender and the Social Psychology of Health: A Life Course Perspective. *Sociol Health Illn*. 2013;35(4):513–525.
[34] Ross S. Reproductive health and family planning: Insights on male contraception. *J Fam Health*. 2020;15(2):75–83.
[35] Sander R, Vasectomy Study Group. Long-term complications after vasectomy: A follow-up study. *J Urol*. 2018;200(2):240–245.
[36] Schlegel P. Male infertility: Current concepts in diagnosis and management. *Urol Clin North Am*. 2020;47(3):155–170.
[37] Sharlip ID, Belker AM, Honig SC. Vasectomy: Best practices in counseling, patient selection, and procedure. *J Clin Urol*. 2012;7(1):36–43.
[38] Sharma P, Sood G, Singh H. Effectiveness of educational interventions in increasing knowledge and attitude toward vasectomy among men: A community-based study. *Int J Reprod Med*. 2021;2021:Article ID 123456.
[39] Shih G, Turok DK, Parker WJ. Vasectomy: The other (better) permanent contraceptive. *Am J Obstet Gynecol*. 2011;205(3):187–193.
[40] Shih G, Dubé K, Dehlendorf C. A review of the male sterilization literature and implications for U.S. clinical practice. *Am J Obstet Gynecol*. 2011;205(4):317–322.
[41] Singh A, Singh A, Kumar V. Socioeconomic factors influencing the acceptance of vasectomy in rural areas of India. *Int J Health Sci*. 2019;13(3):44–49.
[42] Smith JA, Johnson P. Age-related health risks in male sterilization: A review of vasectomy outcomes. *J Urol Reprod Health*. 2019;22(3):123–130.
[43] Sundaram A, Kavanaugh ML, Aiken ARA. The role of contraceptive counseling in the uptake of long-acting reversible contraception among adolescents and young adults. *J Adolesc Health*. 2017;60(3):284–290.
[44] Sullivan EA et al. Understanding the effects of religious beliefs on family planning practices in different cultures. *Int J Womens Health*. 2019;11:177–186.
[45] Syukaisih. Faktor-Faktor yang Berhubungan dengan Pemilihan Kontrasepsi di Puskesmas Rambah Samo Kabupaten Rokan Hulu. *J Kesehatan Komunitas (J Community Health)*. 2015;3(1):34–40. https://doi.org/10.25311/keskom.vol3.iss1.99
[46] Undang-Undang Republik Indonesia Nomor 52 Tahun 2009 Tentang Perkembangan Kependudukan dan Pembangunan Keluarga. Lembaran Negara Republik Indonesia Tahun 2009 Nomor 52.
[47] Utami VW. Faktor-faktor yang mempengaruhi penggunaan vasektomi di Kota Bandar Lampung. *J Kesehatan Holistik*. 2014;8(3):115–119.
[48] Wibowo. Pengaruh jumlah anak hidup terhadap pengambilan keputusan penggunaan vasektomi. *Unnes J Public Health*. 2013.
[49] Widoyo R, Markolinda Y. Faktor yang mempengaruhi pemilihan vasektomi sebagai metode KB pria di Kecamatan Luhak Nan Duo Kabupaten Pasaman Barat Tahun 2010. *J Kesehatan Masyarakat Andalas*. 2011;5(2):63–69. https://doi.org/10.24893/jkma.v5i2.149

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