

## SOCIAL MEDIA AND THE AVAILABILITY OF HEALTH SERVICES AS THE DOMINANT FACTOR ON THE USAGE OF VAGINAL DOUCHING BASED ON MARITAL STATUS

Zidni Hasbuna Shabran<sup>1</sup>, \*Bambang Purwanto<sup>1</sup>, Atika<sup>1</sup>

<sup>1</sup>Faculty of Medicine, Universitas Airlangga, 60132 Surabaya, East Java, Indonesia

\*Corresponding Author: Bambang Purwanto ; Email: [bambang-purwanto@fk.unair.ac.id](mailto:bambang-purwanto@fk.unair.ac.id)

Published by Fakultas Kesehatan Masyarakat Universitas Airlangga

### ABSTRACT

#### Keywords:

vaginal douching,  
marital status,  
social media,  
health services

The practice of vaginal douching remains as one of the most attentive topics in the public health domain. The prevalence of vaginal douching in Indonesia about 75% both married and unmarried, despite its risks towards health and well being. This practice can be prevented and avoided by managing the factors behind its practice, which were studied through consideration of the role of social media, health services, knowledge, attitude, culture, and experience. The purpose of this study is to identify the major factors behind the practice of vaginal douching among women according to their marital status. This research was designed as an observational analysis study with cross sectional survey and 152 samples were collected with simple random sampling. Bivariate analysis were done using Chi-square while multivariate analysis were done with logistic regression to determine the dominant factor behind the practice. Factors being considered in the analysis were social media, health services, knowledge, attitude, culture, and experience. The most significant factors according to marital status were social media (OR = 6,2; CI: 1,83 – 21,11; p value = 0,003) and health services (OR = 3,0; CI: 1,23 – 7,42; p value = 0,016).

### ABSTRAK

#### Kata kunci:

vaginal douching,  
status marital,  
media sosial,  
pelayanan kesehatan

Praktik douching masih menjadi perhatian khusus di bidang ilmu kesehatan masyarakat karena praktik atau penggunaannya yang mencapai 75% di Indonesia pada wanita berstatus sudah menikah ataupun belum menikah, dan bersamaan dengan dampak yang merugikan bagi kesehatan. Praktik vaginal douching dapat dicegah dan dihindari dengan mengendalikan faktor-faktor yang melatarbelakangi seorang wanita menggunakan vaginal douching, yang dinilai melalui peran media sosial, layanan kesehatan, pengetahuan, sikap, tradisi budaya, dan pengalaman. Penelitian ini bertujuan untuk menganalisis faktor dominan yang melatarbelakangi wanita dalam menggunakan praktik vaginal douching berdasarkan status marital. Penelitian ini menggunakan praktik observasional dengan pengumpulan data primer secara survei cross sectional dengan teknik simple random sampling pada 152 orang. Analisis yang digunakan adalah bivariat dan menggunakan uji Chi-square dan analisis multivariat menggunakan uji regresi logistik untuk menganalisis faktor penggunaan vaginal douching. Faktor-faktor yang diuji adalah media sosial, pelayanan kesehatan, pengetahuan, sikap, tradisi budaya, dan pengalaman. Faktor yang melatar belakangi penggunaan vaginal douching yang signifikan berdasarkan status marital adalah social media (OR= 6,2; CI: 1,83 – 21,11; p value = 0,003), dan pelayanan kesehatan (OR= 3,0; CI: 1,23 – 7,42; p value = 0,016).

## INTRODUCTION

The practice of douching has been the main concern in public health sector. World Health Organization (WHO) described that female reproductive health problems have reached 33% of all the reproductive diseases' branch faced by women worldwide globally (1). Especially in Indonesia, 70% of women are

having reproductive health problems which mostly caused by wrong ways in doing vaginal cleansing (2) and one of them is by using vaginal douching.

Vaginal douching is an activity that includes cleaning or sterilizing part of vagina by rinsing it with water or any other liquids. Vaginal douching is divided into two, namely external vaginal douching and internal vaginal douching.

External vaginal douching is an action of rinsing labia mayor and the outer part of vagina using ingredients or certain liquid. On the other hand, internal vaginal douching is a process of vaginal rinsing by inserting liquid with certain chemical combinations which is done either by fingers or using special equipment directly towards the inner part of vagina (3).

Practice of douching has been existed since a long time ago; passed from generation-to-generation dan usually started to be done during the beginning of adolescence. In Indonesia, around 75% women are using vaginal cleansing soap as part of personal hygiene routine which is done simultaneously (4). The use of vaginal douching routinely is contributed to the numbers of reproductive health problems in women significantly. Women who do regular vaginal douching tend to have more reproductive problems compared to those who less often do (3); therefore, the public health workers must educate women to stop the practice of vaginal douching and introduced them to the danger of the activity (5).

The use of vaginal douching especially in Indonesia showed a quite significant number. As many as 75% women have been using vaginal cleansing soap (4). Several reasons and goals of those who did vaginal douching practice are including avoiding the growth of bacteria, keeping the hygiene in their private area, decreasing the odor, and keeping it dry, cleansing the vagina post intercourse, rinsing period blood, and preventing white discharge (6). A study mentioned that the reasons women do vaginal douching are including keeping the hygiene from outside, cleansing the vagina post intercourse, preventing sexually transmitted diseases (STDs) and preventing vaginal odor (7).

Another study was also administered towards 99 midwifery students in Airlangga University and a quite significant result was obtained, namely as many as many as 52.5% of the students were the active users of vaginal douching practice (8). This showed discrepancy between the recommendation to avoid vaginal douching practice and the high number of vaginal douching active users. In other words, there is a need of attempt of reviewing the dominant factors that encourage someone to practice vaginal douching.

Research done in Semarang stated that there are correlated factors which related to douching use and the risk of sexually

transmitted diseases' infection amongst commercial sex workers. It was found that the factors are including level of knowledge, attitude, support from the fellow sex workers, support from the pimps, the availability of health services, stigma towards sexually transmitted diseases and vaginal douching, someone's gestures that affect vaginal douching practice, and the practice itself that increase the risk of sexually transmitted diseases' spread (7). Those matters are reviewed from various aspects which can affect someone in taking actions.

A theory proposed that someone's behavior is shaped based on three factors, namely predisposition, possibility, and strengthen factors. Predisposition is the factor that covers people's knowledge and attitude towards health, traditions and beliefs about health, value system of people's orientation, level of education, socio-economic level, etc. Possibility factor is an aspect that covers physical environment, availability of work-safety facilities, availability of trainings, etc. Strengthen factor is character and attitude owned by the people and religious leaders, and character and attitude of health workers (9).

These factors will definitely influence someone's behavior, especially health behavior. The more positive exposures received, the better the behavior will be. In other words, positive exposures lead to good and fair behavior, while negative exposures will lead to negative behavior (10).

Moreover, there are supporting factors in the practice of vaginal douching, one of them is marital status. Vaginal douching practice is also measured through maturity whether it is biologically, psychologically, and socially. Another research administered in Dr. Moewardi Hospital of Surakarta mentioned about the use of internal vaginal hygiene products, physical activity, age when getting married, body mass index, and female infertility (11). From 'age when getting married' variable, it is obtained that married women (>29 years old) are as many as 3.66 times more possible to have infertility problems compared to single women (18-29 years old). Furthermore, there is strong positive effect between age when getting married and infertility in women who use vaginal hygiene products. The research explained that the use of vaginal hygiene products is influenced by marital status factor which

affects towards female reproductive health problems.

Consequently, further investigation is required to reveal what are the exact factors behind the practice of vaginal douching. This is essential because reproductive health problems in teenagers are mainly based on factors influencing people in doing vaginal douching. This can be seen from much research that showed factors or reasons behind someone's use of douching are surely affecting the practice itself. This study aims to analyze dominant factors which encourage a woman in practicing vaginal douching based on marital status.

## METHOD

This research used observational analysis with Cross-Sectional method. The data source was obtained from the prior questionnaire answers which have fulfilled the validity and reliability requirements with as many as 50 items in the form of questions and statements. The questionnaire then was distributed online via Google Form. The sample collection was using simple random sampling towards 152 respondents who met the inclusive criteria. The number of samples was calculated using two-proportion sample size test formula. The research populations are students of the sixth and eight semester, regular midwife profession or any other part of Midwifery Department of Medical Faculty, Airlangga University who have deeper knowledge of health reproduction according to the subjects taught and the duration of study in Midwifery department. The data collection was administered during February 2021 to March 2021.

Independent variables in this study consisted of knowledge, tradition or culture, attitude, social media, environment, experience, the availability of accurate information and service, premarital and marital factors. Knowledge variable is the whole matters familiar for the respondents about vaginal douching, including the definition, variety of vaginal douching, physiology of normal vaginal flora, indications for using vaginal douching, risks, and complications of using vaginal douching. 'Knowledge' variable is categorized as adequate and inadequate knowledge. 'Attitude' variable is respondents' appraisal towards vaginal douching practice

and categorized as good and not good. 'Tradition' variable is an action taken by surrounding people which became part of the culture and traditions passed from generation to generation and encouraged respondents to do vaginal douching; it is categorized as more supportive and less supportive. 'Environment' variable is action taken by surrounding people which will encourage respondents to practice vaginal douching and categorized as more supportive and less supportive. 'Experience' variable is certain experiences which drive respondents to do vaginal douching and categorized as more supportive and less supportive. 'The availability of accurate information service' variable is the existence of accurate information provider services (e.g., health service, counseling from health workers, etc.) around in order to reintroduce and make impacts towards respondents' positive behavior; it is categorized as more accessible and less accessible. 'Marital status' variable is divided to married (divorced is included) and single (never been married is included).

Dependent variable in this study is the use of vaginal douching: respondents' action or activity in using liquids that contain ingredients or chemicals to rinse or cleanse vagina individually. Categorized as user of vaginal douching means has used vaginal douching (whether using plain water or the mixture of water with herbal or chemical compound) for the last year with frequency less often and more often and the volume of usage is <1 month per bottle or per bar. Moreover, respondents categorized as not the users are the ones who do not practice vaginal douching for the last one year.

The data analysis in this study used the type of bivariate analysis and multivariate analysis using SPSS type 16.0 to make it easier to digest and interpret the data obtained. Bivariate analysis using Chi-square test. It is called significant because it is a variable with a p value of less than 0.05 and can be continued in multivariate analysis. Multivariate analysis was performed using logistic regression test.

## RESULTS

The following are the results of the presentation of the respondents' analysis table based on the characteristics of the respondents' background.

**Table 1.** Respondents' Characteristics in Vaginal Douching

Characteristics of	F	%
<b>VD Users</b>		
VD Users	65	42.8
Non-VD Users	87	57.2
<b>Marital Status</b>		
Married	30	19.7
Single	122	80.3
<b>Knowledge</b>		
Adequate	101	66.4
Inadequate	51	33.6
<b>Attitude</b>		
Good	99	65.1
Not good	53	34.9
<b>Cultural Tradition</b>		
Supportive	71	46.7
Less supportive	81	53.3
<b>Social media</b>		
Supportive	121	79.6
Less supportive	31	20.4
<b>Environment</b>		
Supportive	34	22.4
Less supportive	118	77.6
<b>Experience</b>		
Supportive	41	27.0
Less supportive	111	73.0
<b>Health Service</b>		
More accessible	48	31.6
Less accessible	104	68.4

Based on the results of the study, there were 152 respondents who met the research inclusion criteria and had complete variables to analyze. Of these, 65 (42.8%) respondents were vaginal douching users, and 87 (57.2%) respondents were not vaginal douching users. This study showed that the proportion of respondents is more in the age range of 20-21 years old with the marital status of respondents who are married to 30 (19.2%) and 122 (80.8%) are single.

Table 1 showed that respondents with adequate knowledge of vaginal douching (66.4%), good attitude towards vaginal douching (65.1%), cultural traditions are less supportive of vaginal douching (53.3%), social media supports on the use of vaginal douching (79.6%), the environment is less supportive of

the use of vaginal douching (77.6%), the experience is less supportive of the use of vaginal douching (73.0%), the lack of accurate information services about vaginal douching (68.4%) (Table 1).

The bivariate analysis showed that the factors of knowledge, attitudes, social media, environment, experience on the use of vaginal douching were significant ( $p$  value  $< 0.05$ ). The results of the multivariate analysis using the candidate selection method produced two significant independent variables, namely social media and the availability of health services which were included in the multivariate test analysis, because the  $p$  value  $< 0.05$  (Table 2).

The results of the logistic regression analysis in Table 2 showed that the role of social media and the availability of health services have a significant effect on the use of vaginal douches ( $p$  value  $< 0.05$ ). Personal social media users who are unmarried (pre-marital) have a 6.2 times greater risk of doing vaginal douching than those who do not do vaginal douching (OR= 6.2; CI: 1.83 – 21.11;  $p$  value = 0.003). While individual social media users who are married have a negative relationship with the use of vaginal douching. Therefore, individuals with married status who use social media have a 0.2-time chance of not using vaginal douching (OR= 0.2; CI: 0.05 – 0.76;  $p$  value = 0.018).

Individuals who did not receive accurate information services (sourced from health services, health worker counseling, etc.) in individuals with pre-marital status have a 3-time greater risk of carrying out vaginal douching than those who do not do vaginal douching (OR= 3.0; CI: 1.23 – 7.42;  $p$  value = 0.016). Meanwhile, individuals who received accurate information services with married status have a negative relationship with the use of vaginal douching. Therefore, individuals with married status have a 0.2-time chance of not using vaginal douching (OR= 0.2; CI: 0.08 – 0.53;  $p$  value = 0.001).

Based on Table 2, the odd ratio (OR) of social media variables is 6.2 which is the highest value among other variables. This means that social media variables have the greatest influence among other variables.

**Table 2.** Analysis of Bivariate Test and Multivariate Test of Vaginal Douching Factors

Variables	Bivariate Analysis	Multivariate Analysis					
	<i>p</i> value	OR	Marital CI	<i>p</i> value	OR	Pre-marital CI	<i>p</i> value
<b>Knowledge</b>							
Adequate	0,021	0,4	0,14 - 1,20	0,106	2,1	0,77 – 5,84	0,145
Inadequate							
<b>Attitude</b>							
Good	0,019	1,6	0,66 – 4,30	0,272	0,4	0,20 – 1,23	0,133
Not good							
<b>Cultural Tradition</b>							
Supportive	0,345	0,8	0,34 – 2,13	0,735	1,2	0,52 – 3,15	0,576
Less supportive							
<b>Social media</b>							
Supportive	0,001	0,2	0,05 – 0,76	0,018	6,2	1,83 – 21,1	0,003
Less supportive							
<b>Environment</b>							
Supportive	0,008	0,4	0,17 – 1,26	0,132	1,4	0,53 – 4,04	0,449
Less supportive							
<b>Experience</b>							
Supportive	0,001	1,3	0,40 – 4,84	0,598	1,0	0,32 – 3,17	0,989
Less supportive							
<b>Health Service</b>							
More accessible	0,207	0,2	0,08 – 0,53	0,001	3,0	1,23 – 7,42	0,016
Less accessible							

\*significant in  $\alpha$  5%

## DISCUSSION

The results showed that the proportion of vaginal douching users was 42.8%, this proportion was slightly lower than the preliminary study data in other studies as much as 52.5% (8). This study found that the dominant factor influencing a person's decision to use vaginal douching based on marital status was the role of social media and the availability of accurate information services (sourced from health services, counseling by health workers, etc.)

The results of the analysis of the bivariate test or multivariate test explain that the role of social media on decision making in the use of vaginal douching has a significant relationship. This relationship is positive and shows that individuals with pre-marital status are 6.2 times more likely to practice vaginal douching than individuals with married status.

This is in line with research on the Health Belief Model factors on the use of vaginal douching in the *Gelangan* village which states that the driving factor for a person's actions to use vaginal douching is due

to the large number of advertisements about vaginal cleansers published through social and electronic media that do not make women of childbearing age in the Braceletan village perform this practice. Therefore, social support plays an important role in changing one's behavior (12). The ability of women of childbearing age in Braceletan village to do vaginal douching correctly does not make fertile women in *Gelangan* village practice vaginal douching (6).

The results in this study are in accordance with a study which stated that the mass media variable had the greatest value on women's decisions to use *gurah vagina* services with the *ratus vagina* technique and obtained OR = 8.47 (95% CI:1.21-59.42) (13). Likewise, as in a study which showed that there was a significant relationship between the practice of advertising action and the practice of vulvovaginal douche,  $p$  value = 0.007 ( $p < 0.05$ ) (14). The results showed that external behavioral triggers strongly influenced the vulvovaginal douches, including TV, closest friends, magazines or newspapers, radio, and pamphlets. The internal trigger was from the

pattern of use experienced by women in the practice of vulvovaginal cleansing, the results of this study stated that it was not significantly related to the practice of vulvovaginal cleansing with  $p$  value = 0.087.

This research is contrary to research on behavioral cues in acting which states that there are two types of behavioral cues, namely cues that can be internal or external (7). Internal clues come from within each individual. External clues are from social interactions, such as social media, information, advice, suggestions, or consultation with health workers. The results showed that there was no correlation between performance cues and douching practice which could be explained by  $p$  value = 0.151 ( $p > 0.05$ ).

Based on the analysis of this study, it is explained that in pre-marital respondents, the more they use social media or information media, the more they are encouraged to use vaginal douching. Information is the basis of knowledge and educated and knowledgeable people are those who are empowered and therefore able to participate in issues of population, development, and social progress (15). This shows that pre-marital respondents tend to get information about vaginal douching not based on books, journals, studies, or sources of information that are evidence-based, valid, reliable, recognized, and trusted, but tend to get more information from the media. which cannot necessarily be justified. Therefore, the opportunity to get wrong or inaccurate information is certainly very large. In contrast, individuals with marital status have a lower chance of using vaginal douching because the information obtained about vaginal douching is good. This is indicated by the results of knowledge about vaginal douching which is quite significant.

The availability of health services means that a person can obtain or reach health services properly. If health services are not available, a person cannot obtain health services in the best way, thus affecting a person's health status (7). The lack of access to complete information about the importance of maintaining the cleanliness of the genital organs also affects the behavior of genital hygiene (16). Access to health services is often only seen from the perspective of service providers, but access from the community side as users is still less attention (17). The results of

this study indicate that in individuals who are unmarried (pre-marital) there is a significant positive correlation between the availability of accurate information services and the incidence of vaginal douching. Individuals with unmarried status (pre-marital) who lack the availability of health services around, have a 3 times chance of being at risk of using vaginal douching.

The distribution regarding the availability of health services did not meet the  $p$  value (0.207). This explained that the availability of accurate information services or sourced from the role of health workers, and others are still lacking. Moreover, it can be proven by the distribution results regarding the lack of accurate health service availability that reached 68.4%.

This study is in accordance with a study on factors related to vaginal hygiene that can be transmitted to sex workers and the results of bivariate tests related to the availability of medical services and vaginal cleaning practices that are at risk for sex workers with  $p$  value = 0.242 (7). This is supported by the lack of health services that play an active role in providing counseling on reproductive health. That is, it is very important to convey knowledge about reproductive health to adolescents. This can be achieved through health education, counseling, and counseling on reproductive health (18).

Marital status is closely related to a person's health status. Decision-making in action has a close relationship with a person's maturity which is influenced by behavior and thinking, both biologically, psychologically, and socially, as well as the maturity of one's mindset, and others. According to the theory, with age, a person's mastery and mentality will also develop, so that the knowledge gained will increase and they tend to think twice before engaging in risky behavior (19). This explains that the knowledge of married respondents about vaginal douching is good enough, so that it will be more considered to act using vaginal douching based on the knowledge that has been obtained previously of course this is also related to the information available through health services. So that the more information that can be obtained from various sources by the married respondents, the more they will stay away from the practice of vaginal douching itself. The existence of higher knowledge can

result in a person being able to behave in accordance with the knowledge they acquired (20).

The results of this study help provide basic information to develop knowledge about the dominant factors behind a woman using vaginal douching. Multivariate analysis showed that social media factors and the availability of accurate information services are the most dominant factors. Certainly, both are based on knowledge that can support someone in taking action. Receiving information regarding vaginal douching should be given more attention based on appropriate evidence based to avoid misinformation.

The weakness of this research comes from the number of samples of respondents obtained between marital and pre-marital which was quite drastic so that it was not able to describe the real situation in the field which resulted in a possibility of bias in the results of data analysis. In addition, the selected sample may not represent all women because the selected are health students who incidentally have been exposed to information about reproductive health.

The information provided from respondents through filling out online field information sometimes reflects the actual status and opinions of respondents, this is caused by the disparity in ideas, estimates and understanding of each respondent in answering, as well as whether or not respondents are honest in having different opinions when filling out the online questionnaire.

One of the strengths of this study is that it can be used as an illustration of women's reproductive health and the background of someone using vaginal douching, especially for health workers in the Midwifery Department, Airlangga University to pay more attention to their reproductive health. Being wise in social media by looking for accurate information based on reliable, valid, and appropriate sources is very important in determining a person's decision to use vaginal douching, because it was proven in this study one of the dominant factors that made a person finally decide to use vaginal douching. is information from social media.

## CONCLUSIONS AND SUGGESTIONS

### Conclusions

The prevalence of vaginal douching users in Indonesia is quite high. Especially in the Midwifery Department, Airlangga University, as many as 42.8% are vaginal douching users. The conclusion of this study is that there is a relationship between knowledge, attitudes, social media and information media, environment, and experience in vaginal douching practice

The results of this study indicated that the significant dominant variables in the incidence of vaginal douching are social media and the availability of accurate information through health services. Individuals who are unmarried (pre-marital) are 6.2 times more likely to practice vaginal douching than women with married status and individuals with unmarried status (pre-marital) who lack the availability of health services around, 3 times the risk of using vaginal douching than women with married status. Therefore, it can be concluded that the most dominant factor behind women in using vaginal douching based on marital status, is also determined from the role of social media. Based on this study, it also showed that there are factors that influence a woman to use vaginal douching, namely knowledge, attitudes, the role of social media, environment, and experience.

### Suggestions

This research is expected to be useful for health workers, of course, in providing counseling or information services to the community. More attention should be paid to the characteristics of the participants first. This is due to the results of this study which showed that marital status contributed to the use of vaginal douching itself. In addition, each individual is expected to be able to choose information correctly based on reliable, valid, and appropriate sources so that the information obtained produces the right output for each individual. In addition, it is hoped that later it can reduce the incidence of women's reproductive health problems. Suggestions for further researchers are expected to be the basis for increasing the scope of research on vaginal

douching and can develop other and more in-depth variables so that the results and quality of the research obtained are more complex.

### ACKNOWLEDGMENT

The researcher expresses gratitude to God, parents, siblings, and all partners involved in making this work. The authors also thank the Midwifery Study Program, Faculty of Medicine of Universitas Airlangga, and JBK of Faculty of Public Health, Universitas Airlangga for giving assignments, permission, and guidance to the authors to conduct this research and write this paper.

### REFERENCES

1. Lia W, Ulfah M, Febrina AS. Gambaran Tingkat Kecemasan Wanita Usia Subur 20-45 Tahun yang Mengalami Keputihan di RW 01 Kelurahan Setiajaya Kecamatan Cibeureum Kota Tasikmalaya. *J Kesehat Bakti Tunas Husada* [Internet]. 2017;17(1):166–175. Available from: [https://ejurnal.universitasth.ac.id/index.php/P3M\\_JKBTH/article/view/203](https://ejurnal.universitasth.ac.id/index.php/P3M_JKBTH/article/view/203)
2. Mayaningstiyas, Annisa Suryani S. Hubungan Penggunaan Cairan Pembersih Organ Kewanitaan dengan Kejadian Keputihan pada Remaja Putri di SMA Negeri 2 Sleman [Internet]. Universitas 'Aisyiyah Yogyakarta; 2011. Available from: <http://digilib.unisayogya.ac.id/983/>
3. Christopher EE, Nyebuk ED, E. EA. Vaginal Douching Behavior among Young Adult Women and the Perceived Adverse Health Effects. *J Public Heal Epidemiol* [Internet]. 2014;6(5):182–191. Available from: <https://doi.org/10.5897/jphe2014.0622>
4. Shanti EFA, Desy D. Pengetahuan Remaja Putri tentang Pemakaian Sabun Pembersih Kewanitaan. *J Kesehat Karya Husada* [Internet]. 2018;6(1):28–35. Available from: <https://garuda.kemdikbud.go.id/documents/detail/1090485>
5. Yanikkerem E, Yasayan A. Vaginal Douching Practice: Frequency, Associated Factors and Relationship with Vulvovaginal Symptoms. *J Pak Med Assoc* [Internet]. 2016;66(4):387–392. Available from: <https://www.jpma.org.pk/article-details/7687>
6. Mutdinia GS, Pradanie R, Kusumaningrum T. Faktor yang Berhubungan dengan Praktik Vaginal Douching pada Wanita Usia Subur dengan Pendekatan Teori Health Belief Model. *Pedimaternal Nurs J* [Internet]. 2019;5(1):69–76. Available from: <https://doi.org/10.20473/pmnpj.v5i1.12372>
7. Widyasari DN. Faktor- Faktor yang Berhubungan dengan Praktik Vaginal Douching yang Berisiko Menularkan IMS pada WPS di Resosialisasi Argorejo Semarang [Internet]. Universitas Negeri Semarang; 2016. Available from: <http://lib.unnes.ac.id/26211/>
8. Malena R. Hubungan Vaginal Douching dengan Kejadian Keputihan pada Wanita Usia Muda [Internet]. Universitas Airlangga; 2016. Available from: <https://repository.unair.ac.id/55040/>
9. Notoatmodjo S 2014. *IPKJRC. Ilmu Perilaku Kesehatan*. Jakarta: Rineka Cipta. Biomass Chem Eng. 2015.
10. Efendi F, Makhfudli. *Keperawatan Kesehatan Komunitas: Teori dan Praktik dalam Keperawatan* [Internet]. Jakarta: Salemba Medika; 2009. 1-378 p. Available from: <https://books.google.co.id/books?id=LKpz4vwQyT8C&printsec=frontcover&hl=id#v=onepage&q&f=false>
11. Arifin AKP, Murti B, Budihastuti UR. Use of Vaginal Hygiene Product, Physical Activity, Age at Marriage, Body Mass Index, and Female Infertility. *J Matern Child Heal* [Internet]. 2016;1(1):41–52. Available from: <https://doi.org/10.26911/thejmch.2016.01.01.07>
12. Cahyani DA. Dukungan Sosial dalam Melakukan Vasektomi di Kecamatan Tanggulangin Kabupaten Sidoarjo. *J Biometrika dan Kependud* [Internet]. 2017;6(2):171–179. Available from: <https://doi.org/10.20473/jbk.v6i2.2017.171-179>



13. Widyastuti W, Zuryani N, Karmaya INM. Persepsi Perempuan, Dukungan Keluarga dan Media Massa Berpengaruh pada Penggunaan Gurch Vagina Ratus, Bali, 2013. *Public Heal Prev Med Arch* [Internet]. 2014;2(1):12–16. Available from: <https://doi.org/10.15562/phpma.v2i1.116>
14. Hendarin ED. Faktor-Faktor yang Berpengaruh terhadap Praktek Bilas Vulvo-Vaginal pada Pekerja Seks Komersial di Lokalisasi Peleman Kabupaten Tegal [Internet]. Universitas Diponegoro; 2009. Available from: <http://eprints.undip.ac.id/24740/>
15. Suri D. Pemanfaatan Media Komunikasi dan Informasi dalam Perwujudan Pembangunan Nasional. *J Komun Pembang* [Internet]. 2019;17(2):177–187. Available from: <https://doi.org/10.46937/17201926848>
16. Maidartati M, Hayati S, Nurhida LA. Hubungan Pengetahuan dengan Perilaku Vulva Hygiene pada Saat Menstruasi Remaja Putri. *J Ilmu Keperawatan* [Internet]. 2016;IV(1):50–57. Available from: <https://ejournal.bsi.ac.id/ejournal/index.php/jk/article/view/405>
17. Megatsari H, Dwi Laksono A, Akhsanu Ridlo I, Yoto M, Nur Azizah A. Perspektif Masyarakat tentang Akses Pelayanan Kesehatan (Community Perspective about Health Services Access). *Bul Penelit Sist Kesehat* [Internet]. 2018;21(4):247–253. Available from: <https://doi.org/10.22435/hsr.v21i4.231>
18. Ilmiawati H, Kuntoro K. Pengetahuan Personal Hygiene Remaja Putri pada Kasus Keputihan. *J Biometrika dan Kependud* [Internet]. 2016;5(1):43–51. Available from: <https://doi.org/10.20473/jbk.v5i1.2016.43-51>
19. Notoatmodjo. *Metodologi Penelitian Kesehatan*. Jakarta: Rineka Cipta. Notoatmodjo, S (2018) *Metodol Penelit Kesehatan Jakarta Rineka Cipta*. 2018;
20. Istiqomah N, Notobroto HB. Pengaruh Pengetahuan, Kontrol Diri terhadap Perilaku Seksual Pranikah di Kalangan Remaja SMK di Surabaya. *J Biometrika dan Kependud* [Internet]. 2016;5(2):125–134. Available from: <https://doi.org/10.20473/jbk.v5i2.2016.125-134>