



FACTORS AFFECTING THE INCIDENCE OF VAGINAL DISCHARGE AMONG FEMALE INMATES OF CHILDBEARING AGE IN CLASS IIB WOMEN'S PRISON, PADANG

FAKTOR-FAKTOR YANG MEMPENGARUHI KEJADIAN KEPUTIHAN PADA NARAPIDANA WANITA USIA SUBUR DI LAPAS PEREMPUAN KELAS II B PADANG

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Abstract

Vaginal discharge is an indicator of an abnormal health condition in the body, characterized by the release of a fluid, other than blood, from the female reproductive organ. In July 2023, two female inmates at Class IIB Women's Prison in Padang reported experiencing vaginal discharge accompanied by itching and an unpleasant odor. They received medical treatment at the prison clinic. The incidence of vaginal discharge in West Sumatra is approximately 3.51%. This study aims to identify the factors influencing the occurrence of vaginal discharge among female inmates of childbearing age. A quantitative research approach was used, employing a cross-sectional design and a total sampling technique, with 57 respondents. The variables examined include knowledge level, access to reproductive health information, and personal hygiene behavior during menstruation. Data analysis was conducted using univariate and bivariate methods with chi-square tests. The findings revealed that 43.9% of respondents experienced vaginal discharge, 71.9% had a low level of knowledge, 57.9% faced difficulties in accessing reproductive health information, and 56.1% exhibited poor personal hygiene behavior during menstruation. There was a significant relationship between knowledge level and the incidence of vaginal discharge ($p=0.045$), as well as between personal hygiene behavior and vaginal discharge occurrence ($p=0.037$). However, no significant correlation was found between access to reproductive health information and vaginal discharge ($p=0.426$). This study concludes that improving reproductive health education and providing adequate hygiene facilities in the prison environment are crucial steps in reducing the incidence of vaginal discharge among female inmates.



Keywords: Vaginal Discharge, Knowledge Level, Information Access, Personal Hygiene

Abstrak

Keputihan merupakan indikasi gangguan kesehatan yang ditandai dengan keluarnya cairan abnormal dari vagina. Pada Juli, dua narapidana di Lapas Perempuan Kelas IIB Padang mengeluhkan keputihan yang gatal dan berbau, serta menerima pengobatan dari klinik lapas. Prevalensi keputihan di Sumatera Barat mencapai 3,51%.

Penelitian ini bertujuan untuk mengidentifikasi faktor-faktor yang mempengaruhi keputihan pada narapidana wanita usia subur. Desain penelitian yang digunakan adalah kuantitatif dengan pendekatan cross-sectional. Sampel penelitian berjumlah 57 orang yang diambil dengan teknik total sampling. Data dikumpulkan pada 15–19 Januari 2024 dan dianalisis menggunakan uji chi-square. Variabel yang diteliti mencakup tingkat pengetahuan, akses informasi kesehatan reproduksi, dan perilaku personal hygiene saat menstruasi.

Hasil penelitian menunjukkan prevalensi keputihan sebesar 43,9%. Sebanyak 71,9% responden memiliki tingkat pengetahuan rendah, 57,9% mengalami kesulitan mengakses informasi kesehatan reproduksi, dan 56,1% memiliki perilaku personal hygiene negatif saat menstruasi. Analisis bivariat menunjukkan adanya hubungan signifikan antara keputihan dengan tingkat pengetahuan ($p = 0,045$) serta perilaku personal hygiene saat menstruasi ($p = 0,037$). Namun, tidak ditemukan hubungan antara akses informasi kesehatan reproduksi dengan kejadian keputihan ($p = 0,426$).

Kesimpulan penelitian ini menunjukkan bahwa tingkat pengetahuan dan perilaku personal hygiene berpengaruh terhadap kejadian keputihan. Oleh karena itu, pihak lapas diharapkan meningkatkan upaya menjaga kesehatan narapidana dengan menyediakan fasilitas kebersihan dan layanan kesehatan yang sesuai standar.

Kata Kunci : Kejadian Keputihan, Tingkat Pengetahuan, Akses Informasi, Perilaku

1. INTRODUCTION

Reproductive health is a state of complete physical, mental, and social well-being, rather than merely the absence of disease or infirmity, in all matters relating to the reproductive system, its functions, and processes. Reproductive health requires special attention, particularly during the early stages of reproductive system changes, which typically begin in adolescence (WHO, 2018).

One of the reproductive health issues that contribute to increased maternal mortality rates is cervical cancer. Cervical cancer is a non-communicable disease characterized by malignancy in the cervix (uterine neck). In Indonesia, the prevalence of cancer increased from 1.4 per 1,000 people in 2013 to 1.79 per 1,000 people in 2018. Cervical cancer ranks as the second most prevalent cancer after breast cancer, with an incidence rate of 23.4 per 100,000 people and a mortality rate of 13.9 per 100,000 people (Syalfina et al., 2022). Symptoms of cervical cancer include foul-smelling vaginal discharge mixed with blood, abnormal bleeding outside the menstrual cycle, pain during urination, and pelvic pain. Globally, 75% of women experience vaginal discharge at least once in their lifetime, while 45% experience it more than twice. Women in rural areas are more likely to suffer from pathological vaginal discharge than



their urban counterparts due to differences in hygiene behaviors and knowledge about vaginal discharge prevention (Syalfina et al., 2022).

Vaginal discharge is a sign of an abnormal condition in the body, manifesting as a fluid discharge from the vaginal canal that is not blood (Putri, 2021). Indonesia enforces strict regulations against lawbreakers, with penalties varying according to the severity of the offense. Many offenders receive sentences requiring them to serve time in correctional institutions (Yurdika, 2021).

Female inmates pose unique challenges for prison staff, as they constitute a small subgroup within the prison community. Many women are incarcerated due to involvement in drug-related offenses or commercial sex work, making their psychological, healthcare, and social needs significantly different from those of male inmates. These circumstances necessitate adjustments in facilities, programs, and services to cater to the specific needs of female prisoners. Additionally, many incarcerated women belong to socially marginalized groups and have histories of drug use, sex work, or experiences of gender-based or sexual violence. These factors render them particularly vulnerable (Yuridika, 2021). One of the prevalent health concerns among female inmates is vaginal discharge.

Globally, the incidence of vaginal discharge is 75%, while in Europe, 25% of women experience it. In Indonesia, vaginal discharge affects approximately 75% of women (BKKBN, 2009, cited in Putri, 2021). West Sumatra is among the regions with a high prevalence of vaginal discharge. In 2021, approximately 621,887 cases (3.5% prevalence rate) were recorded. This high prevalence is likely influenced by unsanitary environments and poor lifestyle choices (Kemenkes, 2020, cited in Febriani, 2023).

According to the National Population and Family Planning Agency (BKKBN), 75% of Indonesian women have experienced vaginal discharge at least once in their lifetime, and 45% have had multiple occurrences. Many women in Indonesia perceive vaginal discharge as a normal, insignificant condition. However, untreated pathological vaginal discharge can lead to infertility, affecting 15% of women aged 30–34 years, 30% of those aged 35–39 years, and 64% of women aged 40–45 years (BKKBN, 2018).

A preliminary survey conducted at Class IIB Women's Prison in Padang revealed that, as of 2023, there were 57 female inmates of childbearing age, with criminal offenses including 31 drug-related cases, 9 fraud cases, 7 embezzlement cases, 5 corruption cases, and 5 theft cases. In this prison, new inmates undergo monthly HIV and sexually transmitted infection (STI) screenings by the local health center, provided there are at least 20 participants. Visual Inspection with Acetic Acid (VIA) screening is conducted annually for married women of childbearing age, with the most recent screening on July 26, 2023, involving 28 inmates, all of whom tested negative. In July 2023, two inmates reported experiencing itchy and foul-smelling vaginal discharge and received medical treatment at the prison clinic. The prevalence of vaginal discharge cases in West Sumatra aligns with that observed in the prison, approximately 3.51%.

There is no routine reproductive health education specifically addressing personal hygiene. Prison authorities provide general health education once a month as part of orientation



programs in designated training rooms. Additionally, sanitary pads are not provided to inmates, except for postpartum women, who receive 2–3 pads per day if they lack family support. Other inmates must rely on family provisions or female prison guards for sanitary supplies.

A survey conducted on October 6, 2023, found that female inmates exhibited poor personal hygiene practices, primarily due to a lack of awareness. Based on these findings, this study aims to investigate the factors influencing vaginal discharge among female inmates of childbearing age at Class IIB Women's Prison in Padang.

2. METHODS

This study employs a quantitative approach with a cross-sectional design. The sampling technique used is total sampling, drawing from the prison's inmate registry. The study sample consists of 57 female inmates of childbearing age incarcerated between January and October 2023. The variables examined include knowledge level, access to reproductive health information, and personal hygiene behavior during menstruation. Data collection was conducted using a questionnaire. Data analysis includes univariate and bivariate methods, employing chi-square analysis. The variables were coded as follows: vaginal discharge incidence (1 = Yes, 2 = No), knowledge level (0 = Incorrect, 1 = Correct), personal hygiene behavior during menstruation (Always = 4, Often = 3, Sometimes = 2, Never = 1), and access to reproductive health information (Timely = 1, Accurate = 2, Relevant = 3, Comprehensive = 4).

3. RESULTS AND DISCUSSION

Table 4.1 Frequency Distribution of Vaginal Discharge Incidence During Menstruation

No Vaginal Discharge Incidence Frequency (f) Percentage (%)		
1	Occurred	25 43.9
2	Did not occur	32 56.1
Total		57 100

Table 4.1 indicates that out of 57 respondents, 32 (56.1%) did not experience vaginal discharge.

Table 4.2 Frequency Distribution of Knowledge Levels on Menstruation

No Knowledge Level of Female Inmates Frequency (f) Percentage (%)			
1	High	16	28.1
2	Low	41	71.9
Total		57	100

Table 4.2 shows that 41 respondents (71.9%) had a low level of knowledge about menstruation.

**Table 4.3 Frequency Distribution of Access to Reproductive Health Information****No Access to Reproductive Health Information Frequency (f) Percentage (%)**

1	Easy	24	42.1
2	Difficult	33	57.9
Total		57	100

Table 4.3 reveals that 33 respondents (57.9%) faced difficulties in accessing reproductive health information.

Table 4.4 Frequency Distribution of Personal Hygiene Behavior During Menstruation**No Personal Hygiene Behavior During Menstruation Frequency (f) Percentage (%)**

1	Positive	25	43.9
2	Negative	32	56.1
Total		57	100

Table 4.4 shows that 32 respondents (56.1%) exhibited negative personal hygiene behavior during menstruation.

Table 4.5 Relationship Between Knowledge Level and Vaginal Discharge Incidence

	Vaginal Discharge Incidence		Total
	Knowledge Level	Occurred f	Not Occurred %
	High	8	50.0
	Low	17	41.5
	Total	25	43.9

p-value = 0.045

Table 4.5 shows that among the 41 respondents with low knowledge, 17 (41.5%) experienced vaginal discharge, while 24 (58.5%) did not. The chi-square test result indicates a p-value of 0.045, which is less than 0.05, signifying a significant relationship between knowledge level and vaginal discharge incidence.

Table 4.6 Relationship Between Access to Reproductive Health Information and Vaginal Discharge Incidence

	Vaginal Discharge Incidence		Total
	Access to Information	Occurred f	Not Occurred %
	Easy	12	50.0



Access to Information	Vaginal Discharge Incidence		Total
	Occurred	Not Occurred	
	f	%	
Difficult	13	39.4	
Total	25	43.9	

p-value = 0.426

Table 4.6 indicates that among the 33 respondents with difficult access to reproductive health information, 13 (39.4%) experienced vaginal discharge, while 20 (60.6%) did not. The chi-square test result shows a p-value of 0.426, which is greater than 0.05, indicating no significant relationship between access to reproductive health information and vaginal discharge incidence.

Table 4.7 Relationship Between Personal Hygiene Behavior During Menstruation and Vaginal Discharge Incidence

Personal Hygiene Behavior	Vaginal Discharge Incidence		Total
	Occurred	Not Occurred	
	f	%	
Positive	10	40.0	
Negative	15	46.9	
Total	25	43.9	

p-value = 0.037

Table 4.7 shows that among the 32 respondents with negative personal hygiene behavior, 15 (46.9%) experienced vaginal discharge, while 17 (53.1%) did not. The chi-square test result indicates a p-value of 0.037, which is less than 0.05, signifying a significant relationship between personal hygiene behavior during menstruation and vaginal discharge incidence.

UNIVARIATE ANALYSIS

1. Vaginal Discharge Incidence

The study conducted at Class IIB Women's Prison in Padang found that 25 out of 57 respondents (43.9%) experienced vaginal discharge, as shown in Table 4.2. This finding aligns with Atul (2018), who reported that 43.8% of women experienced vaginal discharge in a study on vulva hygiene behavior and its relationship with vaginal discharge. According to the researchers' analysis, responses to the questionnaire indicated that only two respondents affirmed five statements related to vaginal discharge symptoms, while one respondent affirmed six statements. These statements described symptoms such as itching, foul odor, thick consistency, grayish color, and milky-white discharge. Observations revealed that inmates



participate in cleaning activities, wash their clothes in the available toilet facilities, and use designated drying areas or laundry services. However, the study suggests that the lack of awareness regarding vaginal discharge contributes to its prevalence. This issue underscores the need for regular health check-ups within the prison to prevent health problems among female inmates.

2. Knowledge Level on Menstruation

Table 4.2 illustrates that the majority of respondents (71.9%) had a low level of knowledge regarding menstruation. This contrasts with Febrianti (2017), who found that only 16.2% of female inmates at Class IIA Women's Prison in Wirogunan, Yogyakarta, had low menstrual knowledge. The lack of knowledge may be attributed to both internal and external factors, such as limited access to reproductive health information. Monthly health education sessions are conducted, yet reproductive hygiene remains inadequately addressed. According to Notoadmodjo (2010), behavior is influenced by knowledge, beliefs, and emotions, emphasizing the importance of education in shaping health-related decisions.

These findings highlight the need for improved reproductive health education and facilities within correctional institutions to support the well-being of female inmates.

BIVARIATE ANALYSIS

1. Relationship Between Respondents' Knowledge Level and Vaginal Discharge Incidence

The relationship between respondents' knowledge level regarding menstruation and vaginal discharge incidence is presented in Table 4.5. Among the 41 respondents with low knowledge levels, 17 (41.5%) experienced vaginal discharge, while 24 (58.5%) did not. The chi-square test results indicate a p-value of 0.045, which is less than 0.05. This suggests that H_0 is rejected and H_a is accepted, confirming a significant relationship between knowledge level and vaginal discharge incidence among female inmates of reproductive age.

This finding aligns with the study by Novianti (2018) titled *"The Relationship Between Knowledge, Attitudes, and Personal Hygiene Actions During Menstruation Among Female Adolescents at SMP Negeri Satap Bukit Asri, Buton Regency, 2016"*, which found that more than half of the respondents (57.6%) exhibited negative knowledge levels. Similarly, Dewi (2022) in her study *"The Relationship Between Knowledge and Exposure to Information on Preventive Actions for Vaginal Discharge Among Female Students at SMK Wahyu 1 Makassar"* reported that 54.7% of respondents demonstrated positive knowledge levels.

According to the researchers' analysis, knowledge is primarily acquired through auditory and visual perception. Various factors influence respondents' knowledge, including occupation, education, age, and sources of information. Internal factors such as education significantly impact behavior, as individuals with higher knowledge levels are more receptive to new information. The findings of this study support this claim, as inmates with low knowledge levels exhibited a higher incidence of vaginal discharge (17 cases), compared to those with high knowledge levels (8 cases). Good knowledge is directly associated with better



behavior. Learning experiences serve as stimuli for respondents in shaping their knowledge. In addition to internal factors, external factors such as environmental influences also affect knowledge levels.

2. Relationship Between Access to Reproductive Health Information and Vaginal Discharge Incidence in Class IIB Women's Prison, Padang

As shown in Table 4.6, among the 33 respondents with limited access to reproductive health information, 13 (39.4%) experienced vaginal discharge, while 20 (60.6%) did not. The chi-square test results indicate a p-value of 0.426, which is greater than 0.05. This suggests that H_0 is accepted and H_a is rejected, indicating no significant relationship between access to reproductive health information and vaginal discharge incidence.

This finding is consistent with Dewi (2022), who found that 52.3% of respondents in her study on *"The Relationship Between Knowledge and Exposure to Information on Preventive Actions for Vaginal Discharge Among Female Students at SMK Wahyu 1 Makassar"* exhibited exposure to information that helped prevent vaginal discharge. According to the researchers' analysis, reproductive health information accessibility within the prison is generally adequate. The results indicate that access to information in prison does not significantly correlate with vaginal discharge incidence. However, reproductive health education and screenings should be enhanced to address inmates' reproductive health issues. The researchers suggest that improved access to reproductive health information within the prison system can enhance inmates' knowledge and awareness, ultimately preventing vaginal discharge.

3. Relationship Between Personal Hygiene Behavior During Menstruation and Vaginal Discharge Incidence in Class IIB Women's Prison, Padang

Table 4.7 shows that among the 32 respondents with negative hygiene behaviors, 15 (46.9%) experienced vaginal discharge, while 17 (53.1%) did not. The bivariate analysis results indicate a p-value of 0.037, which is less than 0.05. This suggests that H_0 is rejected and H_a is accepted, confirming a significant relationship between personal hygiene behavior during menstruation and vaginal discharge incidence. This finding is consistent with Atul (2018), who in his study *"The Relationship Between Vulva Hygiene Behavior and Vaginal Discharge Incidence Among Women of Reproductive Age"* reported that 45% of respondents exhibited negative vulva hygiene behaviors and experienced vaginal discharge.

According to the researchers' analysis, education plays a critical role in shaping an individual's behavior, including hygiene practices. Individuals with higher knowledge levels are more likely to adopt positive behaviors. The results of this study confirm that inmates with negative hygiene behaviors had a higher incidence of vaginal discharge (15 cases) compared to those with positive hygiene behaviors (10 cases). Therefore, a significant relationship exists between personal hygiene behavior during menstruation and vaginal discharge incidence in the prison setting.



This study aligns with Atul (2018), who noted that abnormal vaginal discharge could be caused by wearing tight synthetic underwear, leading to inadequate ventilation and irritation in the vaginal area.

The researchers suggest that poor personal hygiene behavior, particularly among inmates who rarely clean their genital area, significantly contributes to vaginal discharge incidence. Inadequate personal hygiene allows bacteria to thrive, increasing the risk of vaginal infections.

4. CONCLUSION

This study concludes that there is a significant relationship between vaginal discharge incidence and knowledge level, no significant relationship between access to reproductive health information and vaginal discharge incidence, and a significant relationship between personal hygiene behavior during menstruation and vaginal discharge incidence. It is recommended that prison authorities enhance efforts to maintain the health of female inmates within the prison environment. Preventive measures should be implemented by providing adequate hygiene and healthcare facilities that meet general health standards.

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