Mutiara: Multidiciplinary Scientifict Journal
Volume 3, Number 12 December 2025
p-ISSN 2988-7860 ; e-ISSN 2988-7992

Preventive Strategies and Risk Factors in the Management of Fluor Albus: a Systematic Literature Review

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KEYWORD
Preventive Strategies; Risk Factors; Fluor albus

ABSTRACT
Fluor albus, or vaginal discharge, is a common condition in women that can signal an infection or other health issue if not treated appropriately. This study was conducted to map 1) effective prevention strategies in Fluor albus management and 2) risk factors that contribute to the development of Fluor albus. This study used a systematic literature review approach guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The results showed that known Fluor albus prevention strategies consist of 1) health education, 2) multimedia video learning, 3) audiovisual methods, 4) media booklets, 5) animated educational videos, 6) Pap smears, 7) VIA (Visual Inspection with Acetic Acid), and 8) IHC (Immunohistochemistry). Fluor albus risk factors consist of 1) infection, 2) lifestyle, 3) environmental factors, 4) age, and 5) marital status. Implications for practice include the need for targeted health education programs, especially for adolescents and women in high-risk groups, and the integration of screening tools such as VIA and Pap smears in routine reproductive health services. Therefore, it can be concluded that prevention strategies and various risk factors greatly influence the management of Fluor albus.

INTRODUCTION

Fluor albus management is essential for maintaining women's reproductive health. *Fluor albus*, or vaginal discharge, is a normal condition, but changes in color, odor, or consistency can be a sign of infection or other health problems. Good management allows early detection of infection, prevents serious complications such as pelvic inflammatory disease and infertility, and maintains the health of the reproductive organs. In addition, proper management of *Fluor albus* helps improve comfort and confidence, as well as education regarding normal and abnormal conditions. By keeping the genital area clean, using cotton underwear, eating a healthy diet, managing stress, and consulting a doctor when necessary, women can effectively manage *Fluor albus*, so that reproductive health and overall quality of life can be maintained.

The global problem of *Fluor albus* or vaginal discharge management in women mainly occurs due to lack of access to accurate health information and adequate medical services. Data from the World Health Organization (WHO) shows that approximately 30-50% of women in many developing countries experience symptoms of abnormal vaginal discharge but do not seek medical care due to stigma and lack of education about reproductive health (Krisdayanti & Hasyim, 2021). In addition, about 50% of women in low- and middle-altitude countries do not have access to adequate health facilities (Murbiah, 2023). Product use is underreported by 40% of women in some regions, which may increase the risk of infection and more serious health complications (Rahmasari, 2022). Global efforts to improve education, provide affordable health services, and remove stigma related to reproductive health are essential to address these issues (Murbiah, 2023).

Many women may take vaginal discharge for granted and be reluctant to seek medical help due to social stigma and embarrassment. This can lead to delayed diagnosis and treatment which can increase the risk of serious complications such as pelvic infections or fertility problems. To address these issues, reproductive health education is of key importance. Improved access to gender-sensitive health services is also necessary for women to feel comfortable and assisted in addressing their reproductive health conditions (Syukran, 2023). In addition, it is important to pay attention to regular evaluation and adaptability in dealing with crisis situations in order to achieve the set health targets (Syukran, 2023). In this context, reproductive health education, such as that carried out through providing information to adolescent girls about personal hygiene, can be one solution to increase understanding and awareness of reproductive health (Nurchandra et al., 2020). In addition, empowering health cadres through technological innovation can also help in disseminating reproductive health information more widely and effectively (Yusnaini, 2021).

Fluor albus or vaginal discharge in women has a significant impact, both physically and psychologically. Vaginal discharge that is not treated properly can cause serious infections such as bacterial vaginosis or candidiasis, which can potentially affect fertility and female reproductive organs (Hidayanti & Riana, 2021). From a psychological perspective, excessive vaginal discharge can cause discomfort, embarrassment, and lower self-confidence (Moeri et al., 2013). This vaginal discharge problem requires special attention, especially in adolescent girls who are prone to experiencing this condition (Rahmadayanti et al., 2020). Lack of knowledge about vaginal discharge can also affect healthy living behavior in handling physiological discharge and preventing pathological discharge (Hermanses & Kotarumalos, 2022). Research on *Fluor albus* is important to improve understanding of the causes, prevention, and effective treatment of this condition (Rahmasari, 2022). Bacterial or fungal infections of the genital area can be triggered by daily use of pantyliners (Rahmasari, 2022). In addition, pathological vaginal discharge can be fatal if treated late, and can even lead to infertility, pelvic inflammation, or cervical cancer (Hidayanti & Riana, 2021). Given the wide-ranging impact, this topic is of interest due to the importance of reproductive health in supporting women's quality of life. In addition, this study may contribute to a better understanding of the causes, prevention and effective treatment of *Fluor albus*, thereby improving the overall well-being of women.

Preventive strategies and risk factors are essential in managing *Fluor albus* by focusing on averting symptoms before they manifest and addressing factors that can heighten risks. This approach, rooted in public health theory, underscores the significance of education, lifestyle modifications, and personal hygiene practices to thwart infections and health issues (Sanadhya et al., 2014). Effective health education and hygiene have been shown to lower the prevalence of *Fluor albus*, offering a more cost-effective alternative to post-symptom treatments (Monintja & Anandani, 2020). Studies have identified various risk factors associated with *Fluor albus*, including genital organ hygiene, age, marital status, menstrual cycle characteristics, contraception methods, reproductive history, education, and employment status (Imelda & Nurbaiti, 2018; Arfiputri et al., 2018).

Fluor albus, or abnormal vaginal discharge, is a symptom that indicates a disorder in the female reproductive organs. The importance of early detection and proper treatment is highly emphasised to avoid more serious complications in the future (Khuzaiyah et al., 2015). Risk factors that can affect the incidence of *Fluor albus* include age, marital status, lifestyle, and environmental conditions around the individual. Furthermore, various prevention strategies to maintain overall health also emphasise the importance of adopting healthy living habits. Health campaigns also play a major role in raising public awareness on the importance of prevention and early treatment of various diseases, including *Fluor albus* (Magiera et al., 2024). By combining early detection, management of risk factors and implementation of effective prevention strategies, a holistic approach can be adopted to effectively address *Fluor albus* and its associated health problems (Domingos et al., 2018). This approach not only aims to treat symptoms, but also to improve the overall quality of life and well-being for women. Continuous health campaigns and proper education on the importance of maintaining reproductive health can help reduce the prevalence of *Fluor albus* and related complications in the community.

Fluor albus, or abnormal vaginal discharge, among women, both adolescents and adults. Abnormal discharge can be a sign of underlying health issues such as infections caused by fungi, bacteria, or sexually transmitted diseases. If not managed properly, it can adversely affect a woman's quality of life and psychological well-being. Therefore, understanding the risk factors associated with *Fluor albus* and developing effective preventive strategies are crucial steps in enhancing women's reproductive health. This research aims to provide new insights and practical recommendations for healthcare professionals and the public in managing and preventing *Fluor albus*, ultimately minimizing the negative impacts of this condition. The objectives of this study were 1) To map out effective prevention strategies in *Fluor albus* management and 2) Mapping the various risk factors that contribute to the development of *Fluor albus*. Academically, this research synthesizes the literature on prevention strategies and risk factors for *Fluor albus*, thereby identifying knowledge gaps and providing a foundation for further research. Practically, the findings can serve as a guide for healthcare professionals and policymakers in designing targeted, evidence-based education programs, screening initiatives, and reproductive health interventions. Additionally, by enhancing understanding and reducing stigma, this study is expected to encourage women to be more proactive in maintaining vaginal health and seeking early medical care.

METHOD

This study used a systematic literature review research approach guided by the Preferred Reposrting Items for Systematic Review and Meta-Analysis (PRISMA). This research review allows researchers to identify and map similar research topics simultaneously. This study aimed to generate and map variables that influence *Fluor albus* management. The researcher focused on prevention strategies and risk factors.

In this literature systematic review process, researchers used journal indexing portals accessed through Google Scholar, IEEE, and Scopus. The article search process was adjusted to the research topic, which focuses on preventive strategies and risk factors in *Fluor albus*

management. The process of systematic review of literature in this study begins with determining the string category or coding used to search for related articles.

In this case, the researcher used the string 'Preventive Strategies and Risk Factors in *Fluor albus*'. Through the search string, researchers then began to search for articles through search engines and collect the articles before data reduction and extraction. The first discovery through Google Scholar, researchers get data as many as 314 articles using Indonesian strings and 97 articles using English strings. While in IEEE, researchers found 19 articles that used English strings, and in Scopus researchers found 33 articles that used English strings. Furthermore, researchers conducted data reduction and extraction by identifying topic suitability, completeness of inclusion and exclusion criteria, and eliminating duplication of topics. The final result of the extraction on the three journal indexing portals, the researcher obtained 20 articles.

Data extraction in a systematic literature review plays an important role in organising relevant information from selected literature sources. This process allows researchers to collect relevant data according to the established research objectives, organise them into a systematic format, and evaluate the quality of the extracted studies. As a result, researchers can construct strong arguments in their literature reviews, identify knowledge gaps in the existing literature, and plan further research to address these gaps. Thus, data extraction is not only an administrative step but also an important stage that helps in the analysis and interpretation of information from various literature sources. The data extraction process in this study focused on preventive strategies and risk factors. Extraction was carried out on 20 articles that were identified according to the criteria. By conducting data extraction, researchers can map the fields, technological innovations, and outputs generated from the article search results.

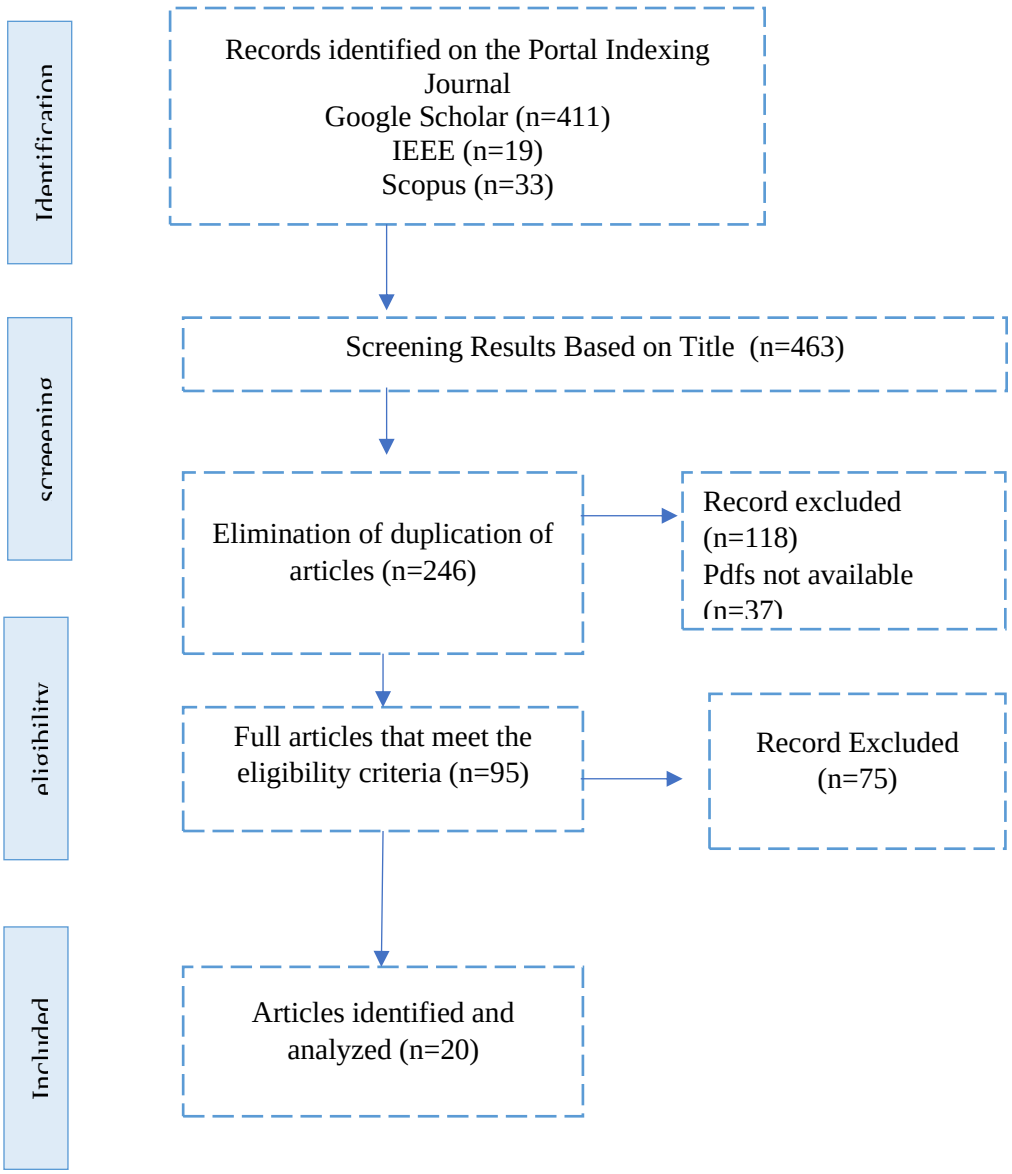

Figure 1: PRISMA Flow Diagram of Article Selection

RESULTS AND DISCUSSION

a. Distribution Paper

Tabel 1. Distribution of Articles

No	Autor	Year	Countries	Type of Article	Preventive Strategies	Risk Factor
1	Alfi et al.	2024	Indonesia	Journal	Animated video education	Environmental Factors
2	Arfiputri et al.	2018	Indonesia	Journal	Health Education & Audiovisual	Infections: Vulvoginal Candidiasis, Lifestyle & Age

No	Autor	Year	Countries	Type of Article	Preventive Strategies	Risk Factor
3	Mukhtar et al.	2022	Indonesia	Journal	Multimedia Video Learning	Marital Status
4	Noviyanti et al.	2023	Indonesia	Journal	Audiovisual	Lifestyle & Age
5	Fatwa et al.	2018	Indonesia	Journal	Pap Smear, IVA (Inspeksi Visual dengan Asam Asetat) & IHC (Imunohistokimia)	Marital Status & Age
6	Siti et al.	2015	Indonesia	Journal	Pap Smear & IVA	Environmental Factors
7	Hans et al.	2020	Indonesia	Journal	Audiovisual	Infections: Bacterial Vaginosis, Age & Marital Status
8	Ana et al	2023	Indonesia	Journal	Multimedia Video Learning	Age
9	Sebtalesy et al.	2022	Indonesia	Journal	Health Education	Lifestyle
10	Agni et al.	2024	Indonesia	Journal	Health Education	Lifestyle
11	Sunanto et al.	2023	Indonesia	Journal	Health Education & Audiovisual	Infection: Vulvoginal Candidiasis
12	Nasution et al.	2022	Indonesia	Journal	Animated video education	Environmental Factors
13	Monalisa et al.	2012	USA	Journal	Multimedia Video Learning	Lifestyle
14	Murbiah	2023	Indonesia	Journal	Health Education	Lifestyle
15	Rizki et al.	2024	Indonesia	Journal	Pap Smear	Infections: Bacterial Vaginosis
16	Nurlaila et al.	2024	Indonesia	Journal	IVA	Age
17	Husni et al	2023	Indonesia	Prosiding	Health Education	Environmental Factors
18	Hidayati et al.	2024	Indonesia	Journal	Media booklet	Infections: Bacterial Vaginosis
19	Setyorini et al.	2023	Indonesia	Prosiding	Health Education	Environmental Factors
20	Nurhumairah et al.	2020	Indonesia	Journal	Multimedia Video Learning	Lifestyle & Marital Status

Source: Compiled by the author based on the systematic literature review

b. Distribution Paper Based on Year

Table 2. Distribution of Articles by Publication Year

Year	No. of Paper	Percentage
2012	1	5 %
2015	1	5 %
2018	2	10 %
2020	2	10 %
2022	3	15 %
2023	6	30 %
2024	5	25 %

Source: Compiled by the author based on the systematic literature review

Based on the year, this research is in the range of 2012 to 2024. From that year, it is known that 20 articles were published with a total percentage of 100%. The year with the highest number of articles was in 2023 as many as 6 articles with a percentage of 30%. The years with the least number of published articles were in 2012 and 2015, namely only 1 article with a percentage of 5% each. Then followed in 2018 and 2020, namely a total of 2 articles with a percentage of 10%. In 2022, there were 3 articles with a percentage of 15%. And in 2024, there were 5 articles with a percentage of 25%. Based on this data, it can be concluded that from 2012 to 2024 there were fluctuations in publishing where the peak of the most publications was in 2023 and again decreased in 2024.

c. Distribution Paper Based on Developing Countries

Table 3. Distribution of Articles by Country

Countries	No. of Paper	Percentage
Indonesia	19	95 %
US	1	5 %

Source: Compiled by the author based on the systematic literature review.

Based on country, this research was published in several countries including Indonesia and the US. From these countries, it is known that 20 articles were published with a total percentage of 100%. The country with the highest number of articles is Indonesia with 19 articles with a percentage of 95%. The country with the least number of published articles is the US as many as 1 article with a percentage of 5%. Based on this data, it can be concluded that Indonesia occupies a position as a country with the highest number of published articles compared to other countries included in the list of countries with similar article publications.

d. Target Paper

Table 4. Distribution of Articles by Publication Type

Type of Paper	No. of Paper	Percentage
Journal	18	90%
Proceeding	2	10%

Source: Compiled by the author based on the systematic literature review

Based on the type of journal, this research is divided into two, namely proceedings and scientific journals. Based on the findings in scientific journals there are 18 studies while in prociding there are 2 studies. So that from these two types of research, there are 20 published studies with a total percentage of 100%.

e. Preventive Strategies

Table 5. Preventive Strategies for *Fluor albus*

No.	Preventive Strategies	Description	Total	Percentage
1.	Health Education	Educational programs aimed at increasing awareness and understanding of *Fluor albus* and its prevention.	7	28%
2.	Multimedia Video Learning	Utilizes video materials to educate individuals about *Fluor albus*, offering a dynamic and engaging learning experience.	4	16%

3.	Audiovisual	Combines audio and visual components to deliver educational content, enhancing retention and understanding.	4	16%
4.	Media booklet	Printed booklets that provide detailed information about *Fluor albus*, its causes, prevention, and management.	1	4%
5.	Animated video education	Animated videos used to simplify complex information and make it more accessible and engaging for the audience.	2	8%
6.	Pap Smear	A medical procedure that involves collecting cells from the cervix to detect any abnormalities, including those that might cause *Fluor albus*.	3	12%
7.	IVA (Visual Inspection with Acetic Acid)	A screening method where the cervix is visually inspected after applying acetic acid, helping identify any precancerous changes.	3	12%
8.	IHC (Immunohistochemical)	A laboratory method used to identify specific antigens in cells, which can help in the diagnosis and management of conditions associated with *Fluor albus*.	1	4%

Source: Compiled by the author based on the systematic literature review

The table highlights various preventive strategies for *Fluor albus*, emphasizing educational and screening methods. Health education programs are the most prevalent, accounting for 28% of the total strategies, underscoring the importance of raising awareness and understanding of *Fluor albus* and its prevention. Multimedia video learning and audiovisual methods, each constituting 16%, show a significant reliance on visual and engaging educational tools to enhance retention and understanding. Although less utilized, animated video education, which represents 8%, simplifies complex information and makes it more accessible to the audience. Printed media booklets, despite being informative, are the least used, making up only 4% of the strategies.

Medical procedures and screening methods also play a crucial role in preventing *Fluor albus*. Pap smear and IVA (Inspeksi Visual dengan Asam Asetat) each represent 12% of the strategies, highlighting their importance in detecting abnormalities and precancerous changes early. IHC (Imunohistokimia), another diagnostic tool, also constitutes 4%, indicating its specialized use in managing *Fluor albus*-related conditions. Overall, the distribution of these strategies reflects a balanced approach between education and medical intervention, with a strong emphasis on using modern, engaging methods to disseminate information and conduct screenings.

f. Risk Factors

Table 6. Preventive Strategies for *Fluor albus*

No.	Risk Factors	Description	Total	Percentage
1.	Infection	Various infections, including bacterial, viral, and fungal infections, can increase the risk of *Fluor albus*. Common pathogens include Candida, Gardnerella vaginalis, and Trichomonas vaginalis.	5	18,5%
2.	Lifestyle	Certain lifestyle choices, such as poor hygiene practices, frequent use of douches, wearing tight or non-breathable	7	25,9%

No.	Risk Factors	Description	Total	Percentage
		clothing, and having multiple sexual partners, can contribute to the development of *Fluor albus*.		
3.	Environmental Factors	Environmental factors such as humidity, poor sanitation, and exposure to irritants or allergens can increase the risk of *Fluor albus*.	5	18,5%
4.	Age	Age can play a role in the prevalence of *Fluor albus*, with higher incidence rates observed in women of reproductive age due to hormonal changes and sexual activity.	6	22,2%
5.	Marital Status	Marital status may be a risk factor, with studies showing that married women or those in long-term relationships may have different exposure risks compared to single women, possibly due to sexual activity patterns and partner stability.	4	14,8%

Source: Compiled by the author based on the systematic literature review

The data presented in the table highlights various preventive strategies and risk factors associated with *Fluor albus*, with percentages indicating the relative significance of each factor. Lifestyle choices, accounting for 25.9%, are the most significant contributing factor. This suggests that habits such as poor hygiene practices, frequent use of douches, wearing tight or non-breathable clothing, and having multiple sexual partners play a major role in the development of *Fluor albus*. Age is also a notable factor, making up 22.2% of the total, indicating that women of reproductive age are particularly susceptible to this condition due to hormonal changes and sexual activity.

Infections and environmental factors each account for 18.5%, underscoring the importance of addressing bacterial, viral, and fungal infections, as well as maintaining good sanitation and avoiding exposure to irritants or allergens. Marital status, comprising 14.8%, suggests that sexual activity patterns and partner stability may influence the risk of developing *Fluor albus*. This comprehensive analysis emphasizes the need for a multifaceted approach in prevention, addressing lifestyle choices, hygiene, environmental factors, and specific population groups to effectively reduce the incidence of *Fluor albus*.

Prevention Strategy of *Fluor albus*

Based on the findings of this research study, it was found that *Fluor albus* Prevention Strategies consisting of Health Education, Multimedia Video Learning, Audiovisual, Media booklet, Animated video education, Pap Smear, IVA (Visual Inspection with Acetic Acid), and IHC (Immunohistochemistry). Health Education had the highest number of findings at 28% of all studies in this research.

Health education plays a crucial role in the prevention of abnormal vaginal discharge by offering a comprehensive approach to enhancing public awareness and knowledge regarding personal hygiene and healthy behaviors (Ilankoon et al., 2017). Through health education initiatives, individuals can learn about the significance of maintaining intimate hygiene, the correct methods of washing and drying the area, as well as recognizing the early signs and symptoms of

abnormal vaginal discharge (Noviyanti et al., 2023). This strategy empowers individuals by providing accessible information that can be applied in their daily lives, thereby making prevention efforts more effective (Ilankoon et al., 2017). Moreover, health education enables early detection and appropriate treatment, reducing the risk of further complications and enhancing the quality of life for those involved (Suryasa et al., 2022).

One of the key advantages of health education programs is their role in disease prevention and health promotion (Suryasa et al., 2022). By disseminating information and raising awareness, these programs serve as essential tools in empowering individuals to make informed decisions about their health (Suryasa et al., 2022). In the context of abnormal vaginal discharge prevention, health education programs can equip individuals with the knowledge and skills necessary to adopt proper hygiene practices and seek timely medical intervention when needed (Noviyanti et al., 2023). This proactive approach not only reduces the incidence of abnormal vaginal discharge but also contributes to overall community well-being (Suryasa et al., 2022).

Research has shown that health education interventions can have a significant impact on improving knowledge and changing attitudes towards preventive health behaviors (Moshthafavi, 2024). For instance, studies have demonstrated that using animated video media as a tool for health education can effectively influence attitudes towards pathological abnormal vaginal discharge prevention among young women (Moshthafavi, 2024). Similarly, the use of audiovisual media in health education has been found to enhance knowledge levels about abnormal vaginal discharge (Noviyanti et al., 2023). These findings underscore the importance of utilizing innovative and engaging educational resources to effectively communicate health information and promote positive health behaviors (Moshthafavi, 2024).

Furthermore, the effectiveness of health education in promoting preventive behaviors is evident in studies focusing on reproductive health education for young women (Mukhtar et al., 2022). By employing multimedia video learning and interactive approaches, health education interventions have been successful in improving abnormal vaginal discharge prevention behaviors among adolescent girls (Mukhtar et al., 2022). This highlights the importance of tailoring educational strategies to the specific needs and preferences of the target audience to maximize the impact of health education initiatives (Mukhtar et al., 2022). In the context of vaginal health, particularly in relation to abnormal vaginal discharge, health education plays a critical role in empowering women to recognize and address potential health issues (Ilankoon et al., 2017). Studies emphasize the importance of directing health education efforts towards younger women to enable early detection of abnormal vaginal discharge and prompt intervention (Ilankoon et al., 2017). By increasing awareness and knowledge about vaginal health, health education initiatives can help women make informed decisions regarding their reproductive health and seek appropriate medical care when necessary (Ilankoon et al., 2017).

Moreover, the relationship between health education and knowledge levels about abnormal vaginal discharge has been investigated in various settings, including schools and communities (Siswosuharjo, 2024). Research has shown that implementing health education programs focusing on personal hygiene behaviors among high school students can positively influence their

understanding of abnormal vaginal discharge and promote healthy practices (Siswosuharjo, 2024). This highlights the role of educational interventions in shaping behaviors and attitudes towards vaginal health from a young age (Siswosuharjo, 2024).

In conclusion, health education serves as a powerful tool in the prevention of abnormal vaginal discharge by raising awareness, disseminating essential information, and promoting healthy behaviors. By empowering individuals with knowledge about intimate hygiene practices, early detection of symptoms, and the importance of seeking timely medical care, health education initiatives contribute to improved health outcomes and enhanced quality of life. Through innovative approaches such as multimedia resources, interactive learning methods, and targeted educational interventions, health educators can effectively engage with diverse audiences and drive positive behavior change in the realm of vaginal health.

The Risk Factors of *Fluor albus*

Based on the findings of this research study, it was found that *Fluor albus* risk factors consisted of Infection, Lifestyle, Environmental Factors, Age, and Marital Status. Lifestyle has the highest number of findings which is 25.9% of the entire study in this research.

Fluor albus, commonly known as vaginal discharge, is influenced by various lifestyle factors that can significantly impact vaginal health. Poor hygiene practices, such as infrequent underwear changes and the use of scented products that disrupt the natural pH balance of the vagina, can lead to infections and excessive discharge (Bautista et al., 2016). Additionally, a sedentary lifestyle and unhealthy dietary choices can weaken the immune system, making the body more susceptible to infections, including those affecting the vaginal area (Bautista et al., 2016). Wearing tight or non-breathable clothing creates a moist environment that promotes the growth of bacteria and fungi, further contributing to conditions like *Fluor albus* (Bautista et al., 2016).

Stress and lack of sleep, common components of modern lifestyles, can alter hormonal balance in the body, potentially affecting the vaginal flora and increasing the risk of abnormal discharge (Bautista et al., 2016). Sexual behaviors, such as unprotected sex or frequent changes in sexual partners, can introduce foreign bacteria and elevate the risk of sexually transmitted infections (STIs), often accompanied by abnormal discharge (Bautista et al., 2016). Smoking and excessive alcohol consumption can compromise the body's natural defenses, making it more vulnerable to infections, including those affecting the vaginal area (Bautista et al., 2016). Therefore, maintaining a healthy lifestyle that includes proper hygiene, balanced nutrition, regular physical activity, and safe sexual practices is crucial in reducing the risk of *Fluor albus*.

Research indicates that Bacterial Vaginosis (BV) occurs when the healthy vaginal flora dominated by Lactobacillus spp. is replaced by anaerobic bacteria like Gardenella vaginalis and others (Bautista et al., 2016). This shift in the vaginal microbiota composition can lead to conditions like BV, which is associated with abnormal vaginal discharge. Furthermore, studies have shown that the vaginal microbiota plays a role in Human Papillomavirus (HPV) infections, with interactions between pathogen recognition receptors and cytokine signaling cascades influencing immune responses in the vaginal environment (Li et al., 2020).

The syndromic management of vaginal discharge syndrome (VDS) is complex due to the prevalence of mixed infections with sexually transmitted infection (STI) pathogens and non-STI causes like bacterial vaginosis and candidiasis (Kularatne et al., 2022). Pathological vaginal discharge can originate from the vagina or cervix, highlighting the importance of accurate diagnosis and targeted treatment approaches (Zemouri et al., 2016). Additionally, women with high-risk HPV infections may exhibit abnormal vaginal flora and immune function imbalances, emphasizing the intricate relationship between vaginal health, immune responses, and viral infections (Zheng, 2024). Group B Streptococcus (GBS), a bacterium commonly found in the vaginal tract, can lead to severe neonatal infections and adverse pregnancy outcomes, underscoring the significance of understanding and addressing vaginal health issues during pregnancy (Wang, 2023). Lifestyle factors, such as stress levels during events like the Covid-19 pandemic, have been linked to changes in hormonal balance that can contribute to conditions like *Fluor albus* (Afkarina et al., 2022). Educational interventions using various media formats have been employed to enhance knowledge about vaginal discharge, emphasizing the importance of health education in promoting women's reproductive health (Noviyanti et al., 2023).

In conclusion, lifestyle factors play a crucial role in the development and management of *Fluor albus*. From hygiene practices to dietary choices, stress levels, and sexual behaviors, various aspects of an individual's lifestyle can impact vaginal health and the risk of experiencing abnormal vaginal discharge. Understanding the intricate interplay between lifestyle factors and vaginal health is essential in developing effective prevention and management strategies for conditions like *Fluor albus*.

CONCLUSION

This systematic literature review identifies key prevention strategies for *Fluor albus* (vaginal discharge), including health education, multimedia video learning, audiovisual methods, media booklets, animated educational videos, Pap smears, VIA (Visual Inspection with Acetic Acid), and IHC (Immunohistochemistry), alongside major risk factors such as infection, lifestyle, environmental factors, age, and marital status. These findings underscore the significant influence of targeted prevention strategies and risk factor mitigation on effective *Fluor albus* management. For future research, longitudinal studies could evaluate the long-term efficacy of combined educational and screening interventions (e.g., multimedia tools with VIA/Pap smears) in diverse populations, particularly high-risk groups in low-resource settings like Indonesia, to inform scalable public health policies.

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