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Review

Leucorrhoea in Young Women and Determinants of Preventive Behavior : A Literature Review

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ABSTRACT

Introduction: Vaginal discharge can occur in every woman anywhere in the world. Teenage girls are more at risk, though. It's still a challenge to get teenage females to keep their reproductive organs clean as one of their preventative measures against vaginal discharge. This literature review aims to understand the prevalence of vaginal discharge and the factors that influence adolescents' preventive behavior.

Methods: The academic databases (Scopus, Proquest, Pubmed, and Garuda), which comprise works published in the 2016–2021 time frame, were searched for relevant articles using a combination of keywords. The framework for this investigation is PICOS. Articles were systematically chosen by reviewing their English and Indonesian, checking for duplication, examining titles and abstracts, determining whether they eligible for full-text reviews, and determining whether they were appropriate for the study's objectives. The study's participants were female teenagers.

Results: Ten papers were discovered that satisfied the review's inclusion requirements. While some adolescent females experience vaginal discharge, others think it to be normal and unproblematic. In order to prevent vaginal discharge in adolescent girls, it is essential to have effective personal hygiene. Adolescents' personal hygiene practices are determined by their knowledge, attitudes, and support systems.

Conclusion: Most young women are unaware of the serious effects vaginal discharge can have on reproductive health. To improve adolescent girls' understanding and health status, humanistic health promotion about the behavior of preventing vaginal discharge is still important.

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1. INTRODUCTION

Every woman in the world has the potential to experience vaginal discharge, but teenage females are especially susceptible to it (Little, 2019). In many countries, it is still challenging to get women, especially teenagers, to keep their reproductive organs clean as a preventative measure against vaginal discharge. Most of the reproductive health problems of adolescent girls in Indonesia are the lack of readiness to face challenges and responsibilities related to the reproductive system's processes, functions and changes. Many teenagers do not know about preventive behavior in vaginal discharge, so there will be a negative impact (UNFPA, 2015).

The short-term negative impact is urinary tract infection, given its proximity to the vagina. Symptoms are heat and pain when urinating. The long-term negative impact is that vaginal discharge can become an infection and spread to the internal reproductive organs such as the uterus and fallopian tubes, causing inflammation in these organs. Scar tissue in the fallopian tubes can close the fallopian tubes and become one of the causes of difficulty in having children (Hockenberry and David, 2015). Adolescents must know the factors associated with preventive behavior to reduce the risk of vaginal discharge (Anurogo, D. & Wulandari, 2013).

Vaginal discharge out of the vagina outside the habit, whether smelly or not, and accompanied by itching. The two types of vaginal discharge are normal vaginal discharge (physiological) and pathological vaginal discharge. According to statistics from Indonesia from 2018, among the 43.3 million teenagers between the ages of 15 and 24 who engaged in unhealthy behavior, one of the reasons for vaginal discharge (WHO, 2015). According to research from East Java, 45% of teenagers may experience vaginal discharge twice or more in their lifetime, with 75% of adolescents experiencing it at least once. Adolescents who receive attention because they are relatively young and still in educational status seem to be free from the possibility of facing the problem of pathological vaginal discharge (Rachmadianti, Armini, & Nastiti, 2019). Young girls must take proper care of the genitalia early to reduce the risk of vaginal discharge. Vaginal discharge will harm adolescents, namely urinary tract infections, vaginitis, infertility, and even cervical cancer (Kemenkes RI, 2011).

Unusual vaginal discharge is accompanied by irritation and can be stinky or not. According to statistics from Indonesia from 2017, out of 43.3 million youths between the ages of 15 and 24, unhealthy behavior was one of the reasons for vaginal discharge. According to research from East Java, 45% of teenagers may experience vaginal discharge twice or more in their lifetime, with 75% of them experiencing it at least once (National Population and Family Planning Board (BKKBN), Statistics Indonesia (BPS), Ministry of Health (Kemenkes), & ICF, 2018). Adolescents who receive attention because they are relatively young and still in educational status seem free from the possibility of facing the problem of pathological vaginal discharge (Rachmadianti et al., 2019). Young girls need to take proper care of their genitalia early to reduce the risk of vaginal discharge. Vaginal discharge will harm adolescents, namely urinary tract infections, vaginitis, infertility, and even cervical cancer (Ilmiawati & Kuntoro, 2017). This literature review tries to clarify the prevalence of vaginal discharge and the factors that influence adolescents' preventive behavior.

2. METHOD

2.1 Design

The study method used is a literature review. The justification and goal of the review are included in the study procedure. The eligibility requirements for the study, the information sources, the search strategy, the study selection and data collection procedure, the data items and outcomes searched for, and the techniques for determining the risk of bias for specific studies, as well as the synthesis data (Shamseer et al., 2015).

An electronic database was used for the literature search. Scopus, Proquest, Pubmed, and Garuda were the databases utilized to locate highly credible papers, with output restrictions for the previous five years, from 2016 to 2021, for full-text articles and in English. The term was used in the search

strategy constructed with the Medical Subject Heading (MeSH) and merged with other databases applying Boolean Logic/operators "Young Woman" OR "Adolescent" OR "Girls" AND " Leuchorrea " OR “Fluor Albus ” OR “ Whitish” AND “Behavior” OR “Practice” AND “Preventive”.

2.2 Inclusion and xclusion Criteria

Table 1. Inclusion and xclusion Criteria

PICO S/ T Framework	Inclusion Criteria
Participants	Young women, Adolescents, Teenagers, Girls
Interest	Fluorine Albus or vaginal discharge
Comparison Intervention	No comparison
Outcomes	Preventive behavior
time	2016 - 2021
Study design	Observational
Language	English or Indonesian
Article Types	Original research studies with full text available

2.3 Study selection

Following the protocol guidelines on PRISMA, good studies were drawn from electronic databases (Shamseer et al., 2015). The papers are then rigorously chosen, including by deleting duplicate titles and abstracts from the articles.

2.4 Risk of Bias

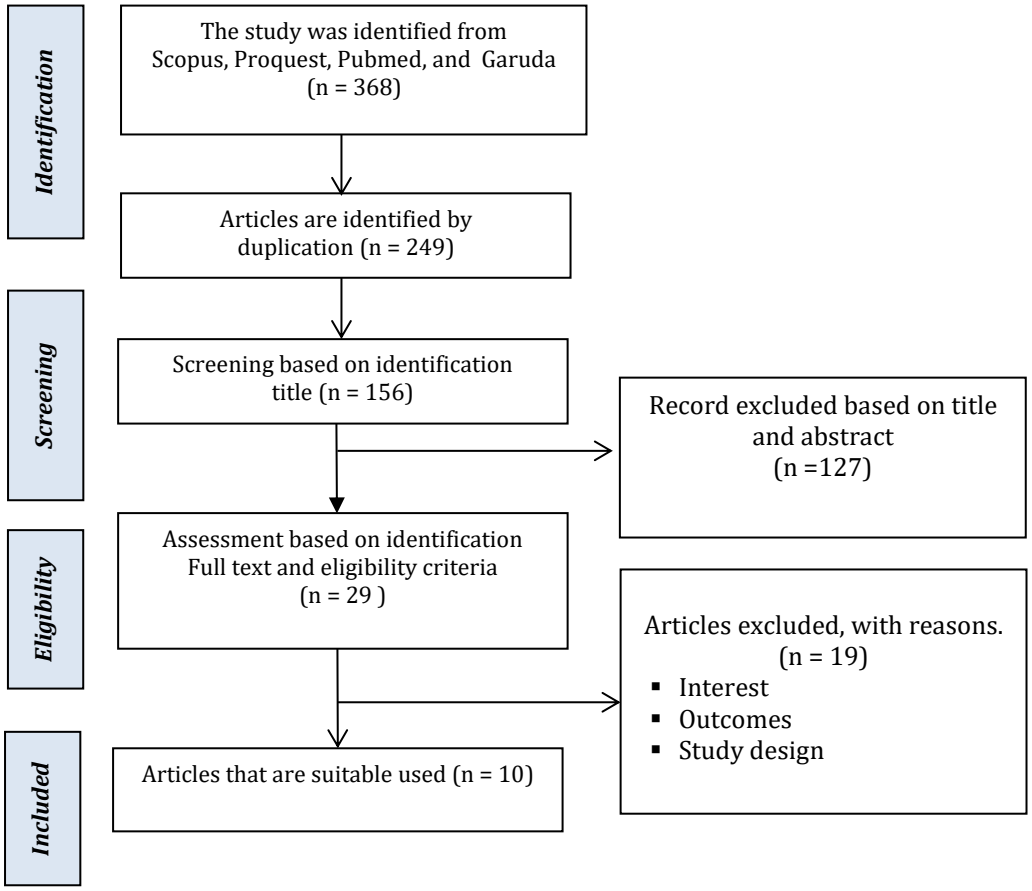
The systematic review's risk of bias was established by the data extraction, which considers the similarity of the research aims, the results, and the study design.

2.5 Procedure Data Extraction

Data extraction methods were created specifically for this study to direct information from records in accordance with study goals. Each of the included studies had data collected on the following topics: year, language, population, study design, study aims, techniques, instruments, and study results. Furthermore, the data to be extracted is in the results section. Data synthesis was carried out qualitatively with discussion to analyze the selected study.

3. RESULT

Table 1. Respondent Characteristics (n=63)



The features related to the study's objective are used to summarize the overview of the ten (10) publications that were reviewed.Table 2: Results of the review of articles

No.	Author	Outcome
1	Iswatun et al. l, 2021	there were significant differences in knowledge (p = 0.000), attitude (p = 0.000) and action (p = 0.000) after being given health education. Providing health education is an alternative to increasing adolescents' knowledge, attitudes and actions. It is expected that, after this, the respondent can understand the concept of leukorrhea and can prevent the occurrence of leukorrhea pathology. (Iswatun et al., 2021)
2	Damai et al. l, 2017	The most frequently reported complaint in the urogenital organ system is leukorrhea, also known as fluor albus. Leukorrhea is a discharge secreted from the genital organs, mainly in females. Leukorrhea has a significant incidence rate and varies according to factors such as hormones and infection. Leukorrhea can be physiological in females, but when other characteristics accompany excess discharge, the leukorrhea is considered pathological(Trilisnawati et al., 2021)
3	Eliza Budi Purnasari, 2018	Part, the big of the respondent has behavior reproduction that is not hygienic (66.04%) and experience incident whiteness pathological (75.58%). Results Chi-Square

		analysis value 0.03276 and PR 1.491. Subjects with poor genital hygiene behavior hygienic have a 1.5 times more risk of extensive experience with whiteness pathological(Purnasari, 2018)
4.	Sumarah , Hesty Widyasih , 2017	There is a significant difference in the student's attitude and practice of pathological vaginal discharge prevention between the intervention and control groups. The students exposed to the vaginal hygiene module for six months showed better attitudes and practice in pathological vaginal discharge prevention than their counterparts in the control group who did not receive any module.(Sumarah & Widyasih, 2017)
4.	Gizachew Abdissa Bulto , 2021	From 403 respondents, 72.5% of school adolescents had good overall knowledge about menstruation, and only 34.7% had adequate MHM practice. The study identified adolescents from urban residences (AOR=2.62, 95% CI: 1.53–4.48), got information about menstruation from mothers (AOR=2.17, 95% CI: 1.18–3.96) and teachers (AOR=5.09, 95% CI: 2.67–9.67), school toilets with inside lock (AOR=2.82, 95% CI: 1.67–4.76), not missing school during menstruation (AOR=4.2, 95% CI: 1.55–11.41), experienced menstrual-related problems (AOR=2.63, 95% CI: 1.49–4.64), experienced any white or grey discharge per -vagina (AOR=2.84, 95% CI: 1.66–4.85) and having good overall knowledge about menstruation (AOR=1.94, 95% CI: 1.07–3.52) were significantly associated with good MHM practice. (Bulto, 2021)
5.	Jessica Davis, 2018	Over half (64.1%, 95% CI = 49.9–76.2) reported poor MHM practices, and 11.1% (95% CI = 8.1–15.2) had missed one or more school days during their most recent menstrual period. Poor MHM practices were associated with rural residence (Adjusted odds ratio (AOR) = 1.73, 95% CI = 1.13–2.64), province (various AOR), lower school grade (AOR = 1.69, 95% CI = 1.05–2.74) and low knowledge of menstruation (AOR = 3.49, 95% CI = 1.61–7.58). (Davis et al., 2018)
6.	Yasemin Aydin Kartal, 2020	31.3% of students had a vaginal shower, 10.9% did not take a shower during the menstrual period and 15.1% had been cleaning the genital area with soap. It was determined that the student's level of grade, living place and mother education level on the genital hygiene behaviors was effective (respectively; p:.015, p:.030, p:.031) Furthermore, the family type and economic situation variables were ineffective (p>0.05). (Kartal, Engin, & Teke, 2020)
7.	Dharin Cerebrina Arfiputri , 2018	In 2011, 69 cases (22.77%) from 303 fluor albus patients, in 2012 69 cases (22.69%) from 304 fluor albus patients, and in 2013 75 cases (28.63%) from 262 fluor albus patients. Risk factors were previous STIs 74 (34.74%), vaginal *douching* (27.70%), pre-martial sexual intercourse (5.63%), other STIs (3.29%), diabetes mellitus (2.34%), gestation (1.88%), other *fluoride albus* infections (0.94%), *pantyliner* (0.47%), and STIs in sexual partners (0.47%).(Arfiputri, Hidayati, Handayani, & Ervianti, 2018)
8.	Helmy Scientist , Kuntoro , 2016	The knowledge of personal hygiene

		Most young girls do not have good knowledge of 46% of respondents of personal hygiene. For the case of white discharge experienced, the most experienced white discharge was abnormal discharge, the number of 54%respondents. Knowledge was not suitable due to limited access to information and a facilitator at the Education(Ilmiawati & Kuntoro, 2017)
9	Emilia dan Fadilah, 2019	*Chi-square* statistical test , *p-value = 0.03* (<0.05). This means that there is a significant difference between the sources of information and knowledge in dealing with vaginal discharge. In the *Chi-square* statistical test , *p-value = 0.001* (<0.05). This means that there is a significant difference between the mother's support for knowledge in dealing with vaginal discharge
10	Muzayyanatul, Wulan, and Ediyasari 2018	Adolescents who experienced vaginal discharge with good genital hygiene were 3 (25%), and 59 (79.7%) had poor genital hygiene. The *Chi-Square* statistical test results, *p-value = 0.00* (<0.05), which means there is a relationship between genital hygiene and the incidence of pathological vaginal discharge in adolescents.

4. DISCUSSION

While some adolescent females have vaginal discharge, others view it as normal and unproblematic (Monalisa; Bubakar, 2012). Personal hygiene practices, knowledge, and attitudes are linked to the prevention of vaginal discharge in adolescent girls (Bulto, 2021; Davis et al., 2018; Purnasari, 2018; Sumarah & Widyasih, 2017), Support and personal hygiene practices as factors influencing adolescents' behavior to prevent vaginal discharge.

Adolescent attitude toward preventing vaginal discharge can be affected by age factors. (Kusmiran, 2012; Trilisnawati et al., 2021) argued that teens were included in their teens who are still in the age of demanding freedom and has unstable behavior and change. Research conducted affects attitudes toward the prevention of vaginal discharge (Iswatun et al., 2021). Most teenagers with a negative attitude are teenagers at the age of 16 that are included still early teens that need guidance throughout adolescence to adulthood.

In addition, the age factor menarche influences attitudes toward discharge prevention. Iswatun et al. (2021) argue that menarche is essential for a woman and deserves special attention because it marks the beginning of a woman's biological maturity. When subjected to menarche diverse, there is experience at 11 years old and some even younger. It shows that menarche at a young age and not yet ready to change biology and psychology will be challenging to adjust to the changes experienced, so would risk doing a negative attitude in the prevention of vaginal discharge(Gruer et al., 2021). Most adolescents with a negative attitude at 12 are still young and not ready to change.

Factors residence (Ademas et al., 2020)e may also affect the negative attitude toward preventing vaginal discharge. The residence is where a person spends all activities in a place liveable (Arfiputri et al., 2018). On condition must stay outside the dwelling house to boarding because the schools are far from their homes and require teenagers to be boarding separated from their parents for a relatively long time. It can affect the behavior of teenagers in the prevention of vaginal discharge. A place to stay undetected, one of the borders has a disease that can infect other people. All activities are conducted in the same place as washing, drying clothes, keep the same clothes in the closet (Widyasari, Widyasari, Prabandari, & Utarini, 2020). Affect the environment living. When teenagers boarding life has a negative attitude toward the prevention of whiteness will cause teens to be at risk of discharge. Dwelling factors can affect the behavior of teenagers in preventing vaginal discharge.

Teen weight loss also affects negative attitudes toward the prevention of vaginal discharge. Kusmiran (2012) argues that being

overweight also has excessive sweat secretion, which will cause the female organs to become moist, so the risk of discharge if they have a negative attitude toward the prevention of vaginal discharge.

Menarche can also affect teenagers. Menarche at that age too early resulted in teenagers menstruating longer than their peers and adjusting anatomy and psychology, which started to change (Monalisa; Bubakar, 2012). Older teens who experience longer periods also experience vaginal discharge, so these teens have a high intention to prevent the discharge. Research conducted (Kelčíková, Mazúchová, & Kaisová, 2017) to clean the female organs or personal hygiene with no goodwill result in vaginal discharge, so although still within the compulsory school age children know it. Bad personal hygiene dramatically affects the handler for controlling teens is confident and robust in preventing vaginal discharge behavior(Umami, Paulik, Molnár, & Murti, 2022).

Besides the age factor and menarche, a residence may also affect the control controls in preventing vaginal discharge. On condition must stay outside the dwelling house to boarding because the schools are far from their homes and require teenagers to be boarding separate with their parents for a relatively long time. (Purnasari, 2018; Sumarah & Widyasih, 2017) Argues that parents and siblings are the people who play an essential role in providing health information. Teenagers have to adjust to the neighbourhood with their peers and without the supervision of parents. During much with the parents of teenagers, they should be able to control the negative influence of their behaviour. Factors of residence can also affect lousy behavior in the prevention of whiteness. (Kartal et al., 2020) argues that in addition to demographic factors, behavior is also driven by the family and surrounding areas.

5. CONCLUSION

Most young women are ignorant of the serious effects leucorrhoea can have on reproductive health. To improve the awareness and health status of adolescent girls, humanistic health promotion about the behavior of preventing pathologic vaginal discharge is still important.

6. ACKNOWLEDGEMENT

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7. CONFLICT OF INTEREST

There are no conflicts of interest.

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