ADOLESCENTS SELF-EFFICACY IN PREVENTING ABNORMAL VAGINAL DISCHARGE: REVIEW OF PERSONALITY TRAITS AND SOCIAL SUPPORT

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Abstract. Maintaining the cleanliness of the reproductive organs in adolescent girls as a preventive behavior against abnormal vaginal discharge is still a problem in many countries. It is essential to know the factors of adolescent self-efficacy in preventing abnormal vaginal discharge. This study aimed to explain the relationship between personality type, social support, and adolescent self-efficacy in preventing abnormal vaginal discharge behavior. This study used a correlational design with a cross-sectional approach. The snowball sampling technique was used to select 168 adolescent girls as respondents. The independent variables were type, personality, and social support. The dependent variable was self-efficacy of abnormal vaginal discharge prevention behavior. The data were collected using a questionnaire via Google form and analyzed using the Spearman Rho test with a significance level of <0.05. The results showed no significant correlation between personality type and abnormal vaginal discharge prevention behavior self-efficacy. However, adolescents had a significant relationship between social support and abnormal vaginal discharge prevention behavior (p = 0.002, r = 0.238). Non-specific personality type is related to self-efficacy in preventing abnormal vaginal discharge. Adolescent girls with high social support will increase their self-efficacy in preventing abnormal vaginal discharge behavior. For further research, it is necessary to identify the psychological and socio-cultural aspects of the adolescent environment against abnormal vaginal discharge and research causes and interventions to prevent and manage abnormal vaginal discharge.

Keywords: adolescent, vaginal discharge, prevention, reproductive health, self-efficacy

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INTRODUCTION

Abnormal vaginal discharge is one of the health problems faced by many women (Faculty of Sexual and Reproductive Healthcare, 2012). The abnormal vaginal discharge tends to recur and is an uncomfortable condition that can affect a woman physiologically and psychologically (Noyes *et al*, 2018; Sumarah and Widyasih, 2017). Some factors related to reproductive health contribute to the incidence of abnormal vaginal discharge. Lack of knowledge has an impact on self-awareness of reproductive health. Unhealthy behavior in adolescent girls can be caused by disharmony in relationships with parents and parental attitudes that taboo adolescent questions about reproductive functions and processes (Umami *et al*, 2022). Parents tend to feel uncomfortable and unable to provide adequate information about reproductive organs and reproductive processes (Umami *et al*, 2022).

Often found at this time, adolescents experience a crisis of self-identity, a crisis of confidence, and self-esteem, or what is called a period of inner conflict (Solehati *et al*, 2017). Adolescents begin to be objective and sensitive in seeing and analyzing every problem, and they dare to take risks and take steps to solve their problems independently (Bagheri *et al*, 2021). The condition school environment, friends' influence, and the teacher's unpreparedness to teach health about health reproduction adolescents and their functions also affect adolescents' behavior in health reproduction (Iswatun *et al*, 2021).

Each individual has a different stress response. Personality characteristics can influence it. Various behaviors displayed by someone

to react and adapt to stimuli from the environment are expressed as personality (Tommasi *et al*, 2018). The picture of adjustment to the stimulation and stress experienced by a person in various aspects is shown according to personality characteristics such as openness, extraversion, conscientiousness, and agreeable (Huszczo and Endres, 2017).

Self-efficacy is essential in preventing and managing adolescent reproductive health problems (Torun *et al*, 2021). Various background factors are thought to contribute to a person's level of self-efficacy, including adolescents, in self-hygiene behavior to prevent abnormal vaginal discharge (Rachmadianti *et al*, 2019). A vulva that is not kept clean is at risk of being infected with microorganisms called vaginitis. This situation can be caused by various things, such as poor hygiene, dirty, damp underwear, infection, cancer, and other diseases, including fungi (Arfiputri *et al*, 2018). Trigger factors such as stress and the body not being fit, such circumstances can affect the number of secretions in the vagina (Kelčíková *et al*, 2017). Hygiene in the vaginal area is often neglected, making it more susceptible to infection with dangerous viruses (Ilmiawati and Kuntoro, 2017).

The problem of vaginal discharge tends to occur frequently and recurs quickly (Ilankoon *et al*, 2017). In Indonesia, more than 70% of women have experienced vaginal discharge, however there are opinions that data on vaginal discharge are difficult to obtain (National Population and Family Planning Board, Statistics Indonesia, Ministry of Health and ICF, 2018). Research finding almost 50 percent of women experience vaginal discomfort, and nearly half ignore it. Of the 50 percent of women, only 8 percent call their doctor for a consultation about bacterial vaginosis (Belsky, 2019).

Vaginal discharge is harmless but annoying for the sufferer. Under normal circumstances, all women secrete little or much vaginal mucus. Excessive vaginal discharge is called flour albus (Cluver, 2020). If the vaginal secretions continue to increase, they will form white coagulation.

This is necessary to be attended to when it causes itching and discomfort. If the vaginal discharge continues and recurs, it is a severe disorder because it causes pain and emotional stress (Baker *et al*, 2017). In general, every sufferer of vaginal discharge is always susceptible to disease. If vaginal discharge is not treated, an infection can spread to the uterine cavity, fallopian tubes to the ovaries, and finally into the pelvic cavity (Shariati *et al*, 2014). Abnormal vaginal discharge can be prevented by maintaining personal hygiene correctly. Abnormal vaginal discharge prevention can be done with healthy behavior toward reproductive health, namely by maintaining the cleanliness of the vulva and minimizing the use of cleansers that can disrupt the pH balance in the vagina (Belsky, 2019).

This study explains the correlation between personality traits, social support, self-efficacy, and abnormal vaginal discharge prevention in female adolescents.

MATERIALS AND METHODS

Study design and setting

Study this used correlation design with a cross-sectional approach emphasizes variable data collection only once, which is taken simultaneously. Data collection was carried out during June - July 2022. This study involved female youth aggregate in the East Java region.

Sample and recruitment

The sample size obtained was 168, who were recruited using snowball sampling. Criteria for sample selection were female adolescents 15-21 years old, have experience menstruation, and can access and operate Google forms.

Variables and instruments

Independent variables were personality traits and social support. The dependent variable was self-efficacy prevention of abnormal vaginal discharge.

The instrument used consisted of 4 sets of questionnaires namely the demographic questionnaire, the traits personality questionnaire, the social support questionnaire and the self-efficacy questionnaire. The demographic questionnaire covered age, class, menarche, experience of vaginal discharge, information about vaginal discharge, and complaints moment vaginal discharge. The trait personality questionnaire, adopted from The Junior Eysenck Personality Questionnaire (Eysenck *et al*, 2021) consisted of 20 statements. The score of 2 was given for those who answered 'Yes', and 1 for those who answered 'No'. There is no score of 0 in the answer choices.

The social support questionnaire, was developed by the researchers by referring to the concept of social support; it comprised 15 questions. Positive questions with the answers 'Always', 'Often', 'Sometimes', 'Rarely', and 'Never' were given the scores of 5, 4, 3, 2 and 1, respectively; vice versa scores are given for negative questions. Scores were categorized as Poor (<35 points), Moderate (35-55 points) and Good (>55 points).

The self-efficacy questionnaire for preventing abnormal vaginal discharge comprised 10 questions. Each was rated on a scale ranging from 'Strongly Disagreed' (1) to 'Strongly Agreed' (4), with corresponding values assigned for negative statements. The categorization of self-efficacy levels was as follows: Low (<28 points), Moderate (28-37 points), and High (>37 points).

All the questionnaires were pre-tested in female adolescents at a public senior high school in Surabaya for its validity and reliability.

Data collection and statistical analysis

The qualifications of potential research participants were outlined on the poster, which was distributed through social media platforms such as WhatsApp and Instagram, as well as the Google form link. Explanation research and informed consent were available in the first section of Google Forms. For those who refused, there is no need to fill out Google Forms. Only those who met the inclusion criteria and were willing to participate would respond and made an access to the link provided on the poster, then answer the questionnaires. After filling out the questionnaires, research participants could download a poster containing information about vaginal discharge and preventing abnormal conditions. Data collected from the questionnaire were analyzed using univariate and bivariate analysis. The google form automatically did the scoring. The relationship of variables was analyzed using the Spearman rho test with a significance level of <0.05.

Ethical considerations

The study protocol has been reviewed and approved by the Commission Ethics Faculty of Health Research Airlangga University Nursing with No. 2530-KEPK on May 11, 2022. The study adheres to principles beneficial for female adolescent reproduction health, respecting the autonomy of respondents with the involvement of character volunteers and guarding confidential information against respondents.

RESULTS

Based on the demographic data presented in Table 1, there were 168 female adolescents participating in the study. Among them, 101 respondents (60.1%) were in the age range of 17-19 years. The majority,

Table 1
Demographic characteristics of respondents (N = 168)

Characteristic	Frequency* *n* (%)
Age group	
<17 years	23 (13.7)
17-19 years	101 (60.1)
>20 years	44 (26.2)
Age (years), mean ± SD	18.89 ± 1.9
Education	
Middle school	6 (3.6)
High school	106 (63.1)
Higher education	56 (33.3)
Age of menarche	
<12 years	36 (21.4)
12-14 years	119 (70.8)
>15 years	13 (7.8)
Age of menarche (years), mean ± SD	12.5 ± 1.7
Menstruation period	
<5 days	7 (4.2)
5-7 days	129 (76.8)
>7 days	32 (19.0)
Menstruation period (days), mean ± SD	6.7 ± 1.3
Frequency of changing sanitary pads per day	
<3 times	35 (20.8)
3-4 times	105 (62.5)
>4 times	28 (16.7)
Frequency of changing sanitary pads, mean ± SD	3.4 ± 1.7

*Unless otherwise stated
SD: standard deviation

106 respondents (63.1%), were enrolled in high school. Furthermore, 119 respondents (70.8%) reported experiencing menarche between the ages of 12-14 years, while 21.4% of adolescents had early menarche below the age of 12 years. Regarding the duration of menstruation, 12 respondents (76.8%) reported a normal range of 5-7 days. Additionally, 105 respondents (62.5%) stated that they change sanitary napkins 3-4 times a day, but 20.8% of respondents change sanitary napkins less than three times daily.

Table 2 reports the results of the cross-tabulation of personality characteristics with self-efficacy and it shows, of the total 168 respondents, 89 (52.9%) were introverted while 79 (47.1%) were extroverts. of 70 respondents who had high self-efficacy; 31 were introverts, and 39 were extroverts. Test results performed by Spearman rho test analysis obtained p=0.142, implying that there was no correlation between personality traits and self-efficacy prevention vaginal discharge in female adolescents.

According to cross-tabulation results in Table 3, 86 respondents (51.2%) have moderate social support while 12 respondents (7.2%) have poor social support. There were 41 adolescents with good social support and high self-efficacy, although two adolescents lacked social support with high self-efficacy. Test results were performed using Spearman Rho Test (p<0.001; r = 0.343). This result showed a significant correlation between social support and self-efficacy prevention of abnormal vaginal discharge in female adolescents, positive direction with medium strength connection. The higher social support, the better self-efficacy.

DISCUSSION

Self-efficacy prevention vaginal discharge in female adolescents is dominant in the moderate category. There are some high categories, though it turns out there were adolescents who have low self-efficacy.

Table 2

Personality traits and self-efficacy in preventing abnormal vaginal discharge (N = 168)

Type of personality traits	Self-efficacy, *n* (%)				Spearman rho $p = 0.142$
	Low	Moderate	High	Total	
Introvert	2 (1.2)	56 (33.3)	31(18.5)	89 (52.9)	
Extrovert	5 (2.9)	35 (20.8)	39 (23.2)	79 (47.1)	
Total	7 (4.2)	91 (54.1)	70 (41.7)	168 (100)	

Table 3

Social support and self-efficacy in preventing vaginal discharge (N = 168)

Social Support	Self-efficacy, *n* (%)				Spearman rho
	Low	Moderate	High	Total	
Poor	4 (1.8)	6 (3.6)	2 (1.2)	12 (7.2)	$p<0.001$ r = 0.343
Moderate	3 (0)	56 (33.3)	27 (16.1)	86 (51.2)	
Good	0 (0)	29 (17.3)	41(24.4)	70 (41.6)	
Total	7 (4.2)	91 (54.1)	70 (41.7)	168 (100.0)	

Characteristics, backgrounds, varied backgrounds, and experiences impact self-efficacy. Mostly female adolescents in stage development end puberty between 17-19 years old. The majority of respondents go through education level senior high school. Self-efficacy is not referred to as the capacity to manage problematic situations, which affects the performance individual when facing duty with arranged source power to reach a specific destination.

A study conducted in Ethiopia identified a total of 1,421 cases of sexually transmitted infections (STIs) among individuals exhibiting STI symptoms. The most common symptoms reported were vaginal discharge (52.2%), followed by urethral discharge (25.3%), lower abdominal pain (13.3%), and genital ulcers (7.4%). Notably, out of the total cases, 968 individuals (68.1%) were women (Demissie *et al*, 2019). In Indonesia, as many as 63 million, both males and females adolescents, are at risk of not maintaining the cleanliness of their reproductive organs (Ningrum and Indriyanti, 2018). However female adolescents who have experienced menarche become more vulnerable to reproductive health problems specially STI (Liang *et al*, 2019).

Self-efficacy is a dynamic perception, which can be changed through the experience of studying specific and interacting with the surrounding environment (Azmoude *et al*, 2017). Increasing age, maturity, and several years of experience support female adolescents to act positively, specifically in preventing abnormal vaginal discharge. Self-efficacy beliefs are forged in specific settings, which are considered perception related contextual with field-specific from function individual, such as understanding domain emotional and interpersonal relationships (Yuksel *et al*, 2019).

Personality traits of female adolescents do not correlate with self-efficacy prevention of abnormal vaginal discharge. Characteristics of personality describe the method in which somebody acts (Tommasi

et al, 2018). Female adolescents with introvert and extrovert characters have the attention same as health. This is different from research that states the existence of correlations between personality traits and psychological well-being. Contrary to other studies, self-efficacy does not have any relevant association with the components of psychological well-being, except for environment mastery (Huszczo and Endres, 2017). Unlike distinctive features, personality, belief efficacy is defined as the perception of somebody about the ability to face challenging practical situations or reach the destination in the domain of life. Self-efficacy in learning is usually linked with academic performance, skills learning, independence, motivation, and the ability to solve a problem (Pocnet *et al*, 2017). Though respondents with type more introverted personalities, the difference is not significant with extroverts. Personality traits are brought since born and shaped by the environment. Adolescents with extrovert's characteristics have more social skills, take many profits from the opportunity environment, and are more capable of chasing potency. They tend to be more optimistic and capable of getting social support. The introvert personality tends to observe and contemplate before deciding. An introvert feels it is challenging to make a decision in a hurry (Barbaranelli *et al*, 2021). Female adolescents with internal and external locus control do not show a difference in self-efficacy in preventing abnormal vaginal discharge.

Social support obtained by female adolescents relates to self-efficacy prevention of abnormal vaginal discharge. A positive coefficient correlation means that the better social support, the higher self-efficacy in preventing abnormal vaginal discharge in female adolescents. Self-efficacy has an essential role in the development of changing adaptation. It influences self-motivations and keeps somebody survived when facing difficulty, quality emotions, invested effort in various activities, and choices made in the life phase (Bandura, 2004). Concept of cognition efficacy personal as the core of the human agency. High social support

will motivate adolescents to be persistent and invest more energy in maintaining health, specifically preventing abnormal vaginal discharge. The majority of adolescents received social support at a moderate and good level. Social support parameters indicate that there are people who become places to tell stories for women and adolescents who experience abnormal vaginal discharge. There is someone to share about adolescents' worries facing abnormal vaginal discharge. Social support is both psychological and material support. Social support can come from family, friends, or the religious community, followed by women adolescents (Hennegan *et al*, 2017).

Study limitations

The limitation of this study is that it used a cross-sectional study design, only inferring the strength and direction of the correlation between the variables measured. The study only involved adolescent internet users who could use google forms. All constructs were measured solely by self-report, which was subjective and susceptible to desirability and mood bias.

In conclusion, female adolescents have moderate self-efficacy of abnormal vaginal discharge prevention. However, some adolescents had low self-efficacy. Personality traits of adolescents do not correlate with self-efficacy in preventing abnormal vaginal discharge. Introvert and extrovert adolescents have the same level of self-efficacy in abnormal vaginal discharge prevention. Support for social gain by adolescents contributes to self-efficacy. The better social support, the better self-efficacy prevents abnormal vaginal discharge in adolescents. More research is needed about interventions for increasing social support in female adolescents, including peer group, family, and environmental education.

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CONFLICT OF INTEREST DISCLOSURE

There are no known conflicts of interest associated with this publication.

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