

The Relationship Between Stress Level During the Covid-19 Pandemic with Fluor Albus Incidence in Adolescent

Dina Afkarina^{1*}, Iis Rahmawati², Dini Kurniawati³

¹²³Department of Maternity and Pediatric Nursing, Faculty of Nursing, Universitas Jember, Indonesia;
dinaafkarina811@gmail.com (Corresponding Author)

Article Info:

Submitted:
25-05-2022
Revised:
06-07-2022
Accepted:
17-07-2022

DOI:

<https://doi.org/10.53713/nhs.v2i3.141>



This work is licensed
under CC BY-SA License.

ABSTRACT

Fluor Albus is a condition that is often complained of by women, especially teenagers. Fluor albus can be affected by stress because it can affect changes in the hormonal balance in the body. Meanwhile, the Covid-19 Pandemic condition can be a stressor for a person and if it is not handled properly, it will affect the body's condition, one of which is the influence of hormone balance in the body which can lead to Fluor Albus Incidence. This study aims to determine the relationship between Stress Levels during the Covid-19 Pandemic Period with Fluor Albus Incidence in adolescent students at the Nuris Islamic Boarding School Jember. This study used an analytical observational design with a cross-sectional approach. A total of 107 students of the Nuris Jember Islamic boarding school who were included in this study used purposive sampling as a sampling technique. The instruments used in this study were the COVID-19 pandemic stress level questionnaire and the vaginal discharge questionnaire. The results showed that most adolescents (72%) experienced normal levels of stress and experienced normal occurrences of fluor albus (54,2%). Bivariate analysis was performed using the chi-square test which showed that $p < 0.05$ with $p = 0.003$. There is a Relationship between Stress Levels during the Covid-19 Pandemic and Fluor Albus Incidence in Adolescent at the Jember Nuris Islamic Boarding School. It is hoped that teenagers will try to maintain their reproductive health and try to manage stress during the Covid-19 pandemic.

Keywords: fluor albus; stress levels; covid-19 pandemic; adolescents

INTRODUCTION

The incident of Fluor Albus is one of the problems that are most often complained of by women, especially teenagers. According to the 2017 Indonesian Democracy and Health Survey (IDHS) as many as 65% of women experience vaginal discharge with an age range of 15-24 years (Ummah et al., 2019). In Indonesia, 75% of women experience vaginal discharge at least once in their life and another 25% experience vaginal discharge twice or even more (Pratiwi et al., 2017). The incidence of pathological vaginal discharge in Indonesia reaches 70% experienced by women caused by fungi and parasites such as *Trichomonas Vaginalis*. Fungi and bacteria are easy to grow in unsanitary and humid conditions (Sari, 2019).

Adolescence vulnerable to experiencing vaginal discharge problems because at this time sexual organ maturity occurs in adolescents (Oktaviana Hadi, 2020). Types of Fluor Albus are divided into two, namely physiological fluor albus or normal vaginal discharge caused by hormones in the body and pathological fluor albus or abnormal vaginal discharge caused by bacteria or fungi from outside the body (Supriyatningsih, 2015). Vaginal discharge can cause discomfort to the conditions experienced by vaginal discharge such as itching, uncomfortable smell and humidity in the genital area. Vaginal discharge that lasts continuously for a long time needs further examination to determine the cause (Pratiwi et al., 2017).

One of the factors that can cause vaginal discharge is stress because stress can affect changes in the hormonal balance in the body. Coronavirus Disease 2019 (Covid-19) has disrupted almost all aspects of daily life (Boyras & Legros, 2020). here are changes in lifestyle during quarantine have adverse and potentially prolonged effects on the mental health of each age in adolescents, lack of social support from parents, peers, and adolescents. Teachers in schools can be at risk of psychological disorders (Zainuri et al., 2022). Anxiety living during a pandemic can make you feel depressed, this can be a stressor for someone. Stress experienced and not handled properly will affect the

condition of the body. Body conditions that experience stress both physically and psychologically can affect the work of reproductive hormones including the hormone estrogen which can cause vaginal discharge (Darma, 2017).

This study aims to determine the relationship between Stress Levels during the Covid-19 Pandemic Period with Fluor Albus Incidence in adolescent students at the Nuris Islamic Boarding School Jember.

METHOD

This research is quantitative research with analytical observational research method with a cross-sectional approach. The Research with Ethics Number 038/UN25.1.14/KEPK2022 and the research was conducted at the Jember Nuris Islamic Boarding School for a period from March 2022 to April 2022 with young female students as respondents with a total of 107 teenage students at the Jember Nuris Islamic Boarding School which was determined by purposive sampling technique. Where the determination of the sample has special characteristics which are then selected based on the inclusion criteria. The inclusion criteria in this study include adolescents who have experienced menstruation, have a history of vaginal discharge, live, and settle in Islamic boarding schools and are willing to be research respondents. These are physiological symptoms, psychological symptoms, and behavioral symptoms. This stress level instrument has been tested for validity and reliability by researchers on 60 respondents at the Assidiqy Putri Jember Islamic boarding school with the results of r table 0.279 with $n=60$ people and a significance level of 0.05% and the reliable test value is 0.821. The fluor albus instrument has also been tested to be valid and reliable on 30 respondents and test results are reliable with Cronbach's alpha value of 0.917. Data collection was carried out by distributing the Covid-19 Pandemic Stress Level Questionnaire and the Fluor Albus Incidence Questionnaire to adolescents who were willing to become research respondents accompanied by researchers. Furthermore, the data was processed using SPSS to determine the relationship of the two variables studied through bivariate test analysis using the Chi-Square test and to find out the frequency table using univariate test analysis.

RESULT

Table 1. Frequency Distribution of Stress Levels During the Covid-19 Pandemic Among Adolescent Students ($n=107$)

Stress Level	Frequency (n)	Percentage (%)
Normal Stress	77	72.0
Mild Stress	21	19.6
Moderate Stress	9	8.4
Heavy stress	0	0.0
Stress is very heavy	0	0.0
Total	107	100.0

Table 1 presents the distribution of stress level data during the Covid-19 pandemic experienced by teenage students at the Jember Nuris Islamic Boarding School. The results showed that 77 respondents (72%) experienced normal stress, 21 respondents (19.6%) experienced mild stress and 9 other respondents experienced moderate stress (8.4%).

Table 2. Distribution of Stress Indicators for Adolescent Students at Pondok Pesantren Nuris Jember ($n=107$)

Indicator of Stress	Median	Min	Max
Physical Symptoms	2.00	0	9.00
Psychological Symptoms	3.00	0	9.00
Behavioral Symptoms	2.00	0	10.00

On Table 2 explains that the most common symptoms experienced by adolescent students are psychological symptoms with a median value of 3.00 with a minimum value of 0 and a maximum of 9.00.

The incidence of fluorine albus is classified into 2 categories, namely normal fluorine albus and abnormal fluorine albus. An illustration of the distribution of Fluor Albus occurrences in Adolescent Santri at Pondok Pesantren Nuris Jember can be seen in table 3.

Table 3. The Frequency of Fluor Albus Occurrence in Adolescent Students at The Nuris Jember Islamic Boarding School (N=107)

Category of fluor albus	Frequency (n)	Percentage (%)
Normal	58	54.2
Abnormal	49	45.8
Total	107	100.0

Based on table 3, the results of the occurrence of fluor albus or vaginal discharge in adolescent students at the Nuris Jember Islamic Boarding School showed that as many as 58 students (54.2%) experienced normal vaginal discharge and 49 students (45.8%) experienced abnormal vaginal discharge.

Table 4. The Relationship Between Stress Levels During the Covid-19 Pandemic and The Incidence of Fluor Albus in Adolescent Students at The Jember Nuris Islamic Boarding School (N=107)

Stress Level	Fluorine Albus Incident				Total		p-value
	Normal		Abnormal				
	n	%	n	%	n	%	
Normal Stress	46	43.0	31	29.0	77	72.0	0.003
Mild stress	12	11.2	9	8.4	21	19.6	
Moderate stress	0	0.0	9	8.4	9	8.4	
Total	58	54.2	49	45.8	107	100	

Based on table 4 above, from 107 students studied, it is known that teenage students who experience normal stress are 77 people (72.0%) of which 46 people (43%) experience normal vaginal discharge and 31 people (29%) experience abnormal vaginal discharge. Then the students who experienced mild stress as many as 21 people (19.6%) of which 12 people (11.2%) experienced normal vaginal discharge and 9 people (8.4%) experienced abnormal vaginal discharge. Meanwhile, there were 9 students who experienced moderate stress (8.4%) who all experienced abnormal vaginal discharge, namely 9 people (8.4%). Based on the results of the chi-square statistical test with a significance limit of 95% with a value of sig 0.05, Table 4. shows the relationship between stress levels during the COVID-19 pandemic and the incidence of fluor albus in adolescent students at the Nuris Jember Islamic Boarding School, with the results of the p statistic test. Value = 0.003 < 0.05 where if p Value then H_a fails to be rejected so it can be concluded that there is a significant relationship between Stress Levels during the Covid-19 Pandemic and the incidence of fluor albus in adolescent students at the Nuris Jember Islamic Boarding School.

DISCUSSION

Based on table 4 the distribution of stress levels and the table of occurrence of vaginal discharge in Adolescent Santri shows that adolescents who experience normal stress levels who experience physiological vaginal discharge are 46 people (43%) and respondents with normal stress levels who experience abnormal vaginal discharge are 31 people (29%). Then the adolescents who experienced mild stress levels with physiological vaginal discharge amounted to 12 people (11.2%) and adolescents with mild stress levels who experienced pathological vaginal discharge amounted to 9 people (8.4%). While students who experienced moderate stress levels all experienced pathological vaginal discharge amounted to 9 people (8.4%). This is because the incidence of vaginal discharge, especially pathological vaginal discharge, is influenced by various factors other than the level of stress experienced. Pathological vaginal discharge can be triggered by many things (Kusmiran, 2012). This is in line with research conducted by Deska 2019 which states that there are several factors that influence the occurrence of vaginal discharge in adolescents such as personal hygiene where respondents who have poor personal hygiene are more at risk of 0.030 times experiencing abnormal vaginal discharge, then Vaginal Douching is also a factor that affects vaginal discharge where as many as 90.6% of respondents with vaginal douching experienced abnormal vaginal discharge and physical activity was also one of the factors affecting vaginal discharge with the result that 80.3% of respondents with heavy activities experienced abnormal vaginal discharge.

Stress levels can affect the incidence of fluor albus due to the influence of hormone balance in the body. The hormones estrogen and progesterone influence the occurrence of vaginal discharge physiologically after the menstrual process. Estrogen plays a role in the production of secretions and progesterone plays a role in the release of thicker secretions. Stress conditions will stimulate the hypothalamus to produce CRH, where this CRH causes the release of ATCH in the pituitary, the release of ATCH will stimulate the adrenal cortex to release cortisol which also secretes

progesterone (Hana et al., 2012). Stress conditions allow an increase in the hormone adrenaline which can cause a decrease in the elasticity of blood vessels, thereby disturbing the balance of the hormone estrogen in the genital organs. This estrogen hormone imbalance will cause a decrease in lactic acid which triggers vaginal acidity conditions so that bacteria, parasites, and fungi easily develop and are at risk of pathological vaginal discharge (Ni Wayan Armini et al., 2016).

The results of this study state that there is a relationship between stress levels during the Covid-19 pandemic and the incidence of Fluor Albus. This is indicated by the results that most experienced normal to mild stress levels, then the incidence of vaginal discharge experienced by adolescents was in the normal category, while the higher the level of stress experienced, namely moderate stress levels, the incidence of vaginal discharge experienced by adolescents was mostly found in the abnormal category. or pathological vaginal discharge. Although there are some levels of normal to mild stress but experiencing abnormal vaginal discharge. This is influenced by various other factors that can affect the condition of vaginal discharge experienced by adolescents apart from the stress they face, such as correct reproductive organ care behavior.

CONCLUSION

The results of a study obtained most of them were in the normal stress category, the vaginal discharge experienced by adolescents' students experienced the most normal or physiological vaginal discharge, and there was a relationship between stress levels during the Covid-19 pandemic. with the incident of Fluor Albus in teenage students at the Nuris Islamic Boarding School Jember.

ACKNOWLEDGEMENT

The author would like to thank Allah SWT because of His mercy and grace, the writer was able to complete this research well. Thank you also to all parties who always provide guidance, prayers, and motivation for the smooth running of this research process.

REFERENCES

- Boyratz, G., & Legros, D. N. (2020). Coronavirus Disease (COVID-19) and Traumatic Stress: Probable Risk Factors and Correlates of Posttraumatic Stress Disorder. *Journal of Loss and Trauma*, 25(6–7), 503–522. <https://doi.org/10.1080/15325024.2020.1763556>
- Darma, M. (2017). Hubungan Pengetahuan, Vulva Hygiene, Stres dan Pola Makan Dengan Kejadian Infeksi Flour Albus. *Jurnal Ilmiah Mahasiswa Kesehatan Masyarakat*, 2(6), 1–9.
- Hana, C., Zuhdy, N., & Widyasih, H. (2012). *Stres Psikososial dan Kejadian Fluor Albus Patologis pada Santri*
- Kusmiran. (2012). *Kesehatan Reproduksi Remaja dan Wanita*. Jakarta: Salemba. Medika.
- Mustafa, D. R. (2019). Analisis Kejadian Keputihan Pada Siswi Kelas IX Di SMP Negeri 21 Kota Serang Tahun 2019. *Skripsi Fakultas Ilmu Kesehatan Universitas Nasional*. <http://repository.unas.ac.id/635/>
- Ni Wayan Armini, S. S. T. M. K., Ni Gusti Kompiang Sriasih, S. S. T. M. K., & Gusti Ayu Marhaeni, S. K. M. M. B. (2016). *Asuhan Kebidanan Neonatus, Bayi, Balita dan Anak Prasekolah*. Penerbit Andi. <https://books.google.co.id/books?id=Ei5LDwAAQBAJ>
- Oktaviana Hadi, A. (2020). Hubungan Tingkat Stress Dengan Kejadian Fluor Albus Pada Remaja Putri. *Psychiatry Nursing Journal (Jurnal Keperawatan Jiwa)*, 2(1), 1. <https://doi.org/10.20473/pnj.v2i1.19135>
- Pratiwi, T. M., Sabilu, Y., & Fachlevy, A. F. (2017). Hubungan Pengetahuan, Stress, Penggunaan Antiseptik dan Penggunaan Pembalut dengan Kejadian Fluor Albus pada Remaja Siswi SMA Negeri 8 Kendari tahun 2017. *Angewandte Chemie International Edition*, 6(11), 951–952., 2(6), 1–8.
- Sari, W. K. (2019). Identifikasi Faktor Penyebab Keputihan Pada Remaja Putri. *Scientia Journal*, 8(1), 263–269. <https://doi.org/10.35141/scj.v8i1.470>
- Supriyatiningsih. (2015). Monograf Penggunaan Vaginal Douching Terhadap Kejadian Candidiasis pada Kasus Leukorea. In *Universitas Muhammadiyah Yogyakarta* (Vol. 1, Issue). <https://repository.umy.ac.id/handle/123456789/778>
- Ummah, N. K., Susanto, T., & Susumaningrum, L. A. (2019). Hubungan Harga Diri Dengan Perilaku Pemeliharaan Kesehatan Reproduksi Remaja Santri Putri Di Pondok Pesantren Kabupaten Jember. *Jurnal Kesehatan Reproduksi*, 10(1), 79–88. <https://doi.org/10.22435/kespro.v10i1.1397>
- Zainuri, A., Endro Sulistyono, R., Maisyaroh, A., & Mahardhika Rahmawati, P. (2022). Impact of The Covid-19 Pandemic on The Psychological Response of Adolescents: A Literature Review. *Nursing and Health Sciences Journal (NHSJ)*, 2(2), 10–19. <https://doi.org/10.53713/nhs.v2i2.81>