

Manuscript received February 26, 2024; revised March 16, 2024; accepted March 16, 2024; date of publication April 25, 2024

Digital Object Identifier (DOI): <https://doi.org/10.35882/ijahst.v4i2.272>

Copyright © 2024 by the authors. This work is an open-access article and licensed under a Creative Commons Attribution-ShareAlike 4.0 International License ([CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/))

How to cite: Tarissa Yunita Rahma, Evi Pratami, Rijanto, and Ervi Husni, and Wannarat Lawang, "The Impact of Healthyqueen Education Website on Adolescent Behavior regarding Menstruation", International Journal of Advanced Health Science and Technology, vol. 4, no. 2, pp. 56–61, April. 2024.

The Impact of Healthyqueen Education Website on Adolescent Behavior regarding Menstruation

Tarissa Yunita Rahma¹, Evi Pratami, Rijanto¹, and Ervi Husni¹, and Wannarat Lawang²

¹ Departement of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia

² Faculty of Nursing, Burapha University, Chonburi, Thailand

Corresponding author: Tarissa Yunita Rahma (e-mail: nitarahma956@gmail.com).

ABSTRACT Menstruation is a periodic bleeding and cycle from the uterus accompanied by the decay of the endometrium and this is a cycle that repeats from the first day of menstruation to the next period. While the length of the menstrual cycle is the distance between the start date of the last menstruation and the start of the next menstruation. Menstrual symptoms also have a negative impact on daily activities and well-being, driving problems such as poor mental health, decreased work productivity, and stress on the health system. Based on the Central Statistics Agency (BPS), 49.1% of adolescents are worried about puberty, including menstrual problems. Supported by the results of Yilmaz, Bohara, and Thapa's research in 2021, 48% of samples stated that emotional stress occurs during menstruation. This study aims to analyze the effect of the Healthyqueen website on increasing adolescent behavior regarding menstruation. Type of Pre-Experimental research with one group pre-test post-test research plan. The population all of IX class female student of SMPN 10 Probolinggo 113 adolescents with Proportionate Stratified Random Sampling techniques amounted to 52 adolescents. The independent variable is the Healthyqueen website, while the dependent variable is level behavior adolescent about menstruation. The research instrument is a questionnaire and data analysis techniques with the Wilcoxon Sign Rank Test with $\alpha = 0.05$. The results showed that the level of knowledge after the intervention, almost all of the respondents were at a good level and increased as much (61.4%), the attitude level assessment after the intervention, almost all respondents were in a positive level and increased by (86.5%), in the assessment of the level of action after the intervention, almost all respondents were in the positive category and increased by as much (69.2%). From the results of the analysis, it is known that there is an influence of website application-based education on adolescent girls' behavior about menstruation with p -value of $0.000 p < \alpha (0.05)$. There is an increase in behavior of young women is likely due to the transfer process of educational information through Healthyqueen website, mainly the influence of the website on the behavior of young women about menstruation is likely due to the easy process of accessing the website, namely through gadgets so as to make young women more practical in studying the material that researchers present on the website to be applied in their daily lives and form healthy behaviors for young women in facing menstruation. So, this website also makes it easier for health workers to optimize the socialization process related to menstruation.

INDEX TERMS Website. Healthyqueen, Behaviour, Adolescent, Menstruation.

I. INTRODUCTION

Menstruation is a physiological phenomenon experienced by women of childbearing age, which ultimately affects women from cultural and socioeconomic levels. In the late luteal phase, for example, the majority of women experience at least some degree of mind-body disharmony. Commonly known as premenstrual syndrome (PMS) is a regular late luteal flare of a variety of nonspecific physical, emotional, behavioural, and cognitive symptoms, which

usually subside after menstruation. With more than 200 premenstrual symptoms, and every woman experiences discomfort to varying degrees. These symptoms can have an impact on interpersonal relationships, social interactions, work activities, and one's productivity during their reproductive years. For adolescent, these premenstrual symptoms can be associated with decreased academic performance including poor grades and absenteeism [1].

Research conducted in developing countries, which is in Nepal, which includes a focus on menstrual hygiene management states that the confusion/shock that many women when faced with the onset of menstruation is often associated with a lack of knowledge and adequate facilities [2]. According to research conducted by Wardoyo and Setiyorini, only 17.5% of junior high school students have a good level of knowledge [3]. According to [4] and the Central Statistics Agency (BPS), 49.1% of adolescents are worried about puberty, including menstrual problems. Supported by the results of research conducted by Yilmaz, Bohara, and Thapa in 2021, 48% of the sample stated that emotional stress occurs during menstruation [1]. The initial data obtained was that 8 out of 10 (80%) junior high school students were confused about their menstruation. Periodic and cyclical bleeding from the uterus which is accompanied by shedding of the endometrium is known as menstruation. Menstrual bleeding, according to Prawirohardjo in [5], is the result of a sophisticated interaction between the hormonal system and many organs of the body, especially the hypothalamus, pituitary, ovaries and uterus. The length of the menstrual cycle is the distance between the start date of the last menstruation and the start of the next menstruation, while the menstrual cycle is the time period from the first day of menstruation until the arrival of the next menstruation. This cycle can be volatile. Menstrual symptoms also have a strong negative impact on daily activities and well-being, driving problems such as poor mental health, decreased productivity at work, and stress on the health system [6]. Supported by the theory of stress triggers divided into four namely Personality Stress, Psychosocial Stress, Bioecological Stress, and Job Stress in bioecological stress which is triggered by biological conditions, such as the result of menstruation. In terms of behavior, stress has an impact on decreasing the desire to socialize, the tendency to want to be alone, the desire to avoid other people, and the formation of a feeling of laziness [7].

Permenkes Number 21 of 2020 in Indonesia contains reproductive health, one of which is the Adolescent Care Health Service (PKPR) which aims to create youth who have the skills needed to live a clean and healthy life. However, the PKPR program is focused on TRIAD KRR, or the three risks faced by adolescents, namely sexuality, HIV/AIDS and drug use. Due to the lack of health education about menstruation preparation in the program, many adolescents are not ready to face menarche which can cause anxiety. According to Proverawati and Misaroh in [8]. A method or process of outreach about menstrual health that tries to provide information to young women about what to do when experiencing menarche or first menstruation is known as health education about menstruation. By providing health education about menstruation, it is intended that young women feel ready and not afraid when they menarche.

In the research conducted by Freiteis et al, who aimed to see the relationship between curiosity with pre-teenage readiness showed that there was a positive and significant

relationship between curiosity and inspires with adolescent mental readiness in undergoing [9]. Another research that suggests that the use of the impact of website for the increase in knowledge is the research carried out by Purnaningsih 2020 regarding how the use of GEKA.id in the increase of knowledge about the use of seeks for the reimaja in "PIK-R Chlorophyll" in Kampar district, namely metode the introduction of the GEKA.id able to increase the knowledge of its use [10]. While on this website researchers modify so that the display of the website application displayed is more attractive and seems familiar to young women. So it is hoped that they will be fun when accessing and learning all the content that the author presents on the website.

So as to reduce the lack of knowledge about the confusion or shock of many women about menstruation which can cause discomfort that affects interpersonal relationships, social interactions, work activities, and one's productivity during their reproductive years. The author is interested in raising the title "The Influence of the HealthyQueen Website on the Improvement of Adolescent Behavior About Menstruation".

II. METHOD

This type of research is experimental with pre-experimental methods using a one group pre-test posttest design approach. This research was conducted at SMPN 10 Probolinggo in February - April 2023. The population in this study is all X class female students who are still active as students of SMPN 10 Probolinggo N = 113 students. The sample in this study is a sample that meets the inclusion criteria, the sample size in this study was 52 female students. This study used a simple proportionate stratified random sampling technique. The independent variable is the Healthy queen website, while the dependent variable is level behavior adolescent about menstruation. In the data collection process, this study uses primary data types with instruments in the form of questionnaires that This research goes through several stages of data processing including the process of editing, scoring, coding, data entry to data cleaning. Where in analyzing it through two stages, namely in the form of univariate and bivariate analysis have been tested for validity and reliability by researchers. The statistical test in data analysis in this study is the normality test using the Kolmogorov Smirnov test, while analytical tests are carried out with Wilcoxon Sign Rank Test through SPSS statistical software. So that the difference between pretest and posttest will be obtained $\alpha = 0.05$. The hypothesis (H_a) will be accepted if the value of p-value obtained from the calculation of statistical tests is smaller than 0.05 ($p < \alpha$).

This research has also gone through a series of worthy research ethics including providing informed consent to respondents to maintaining the confidentiality of research respondent data.

III. RESULT

A. RESPONDENT CHARACTERISTICS

TABLE 1

Distribution of respondent characteristics

| Charactristic | Category | Frequency (n) | Percentage (%) |
|---------------|-----------|---------------|----------------|
| Age | <15 Tahun | 4 | 7,7 |
| | 15 tahun | 36 | 69,2 |
| | >15 Tahun | 12 | 23,1 |
| | Total | 52 | 100 |
| Age | <12 | 21 | 40,4 |
| | 12 | 15 | 28,8 |
| | >12 | 16 | 30,8 |
| | Total | 52 | 100 |

B. KNOWLEDGE LEVEL OF ADOLESCENTS ABOUT MENSTRUATION BEFORE AND AFTER INTERVENTION HEALTHYQUEEN WEBSITE

TABLE 2

Adolescent knowledge levels about menstruation before and after intervention healthyqueen website

| Knowledge Level | Before | | After | |
|-----------------|--------|------|-------|------|
| | n | % | n | % |
| Good | 14 | 27 | 46 | 88,4 |
| Enough | 15 | 28,8 | 3 | 5,8 |
| Less | 23 | 44,2 | 3 | 5,8 |
| Total | 52 | 100 | 52 | 100 |

Based on TABLE 1 and TABLE 2, it was found that in the assessment of the level of knowledge after the intervention, almost all of the respondents were at a good level and increased as much (61.4%).

TABLE 3

Effect of adolescent knowledge about menstruation before and after given intervention healthyqueen website

| | n | Min-Max | Median | Mean | Std. Deviation | p |
|------------------|----|---------|--------|-------|----------------|-------|
| Knowledge Before | 52 | 18-100 | 64 | 63,19 | 19,752 | 0,000 |
| Knowledge After | 52 | 45-100 | 91 | 86,81 | 12,912 | |

Based on TABLE 3, it gets a significance value $< (0.05)$ so that there is an influence from the Healthyqueen Website on increasing knowledge of adolescents about menstruation.

C. ATTITUDE LEVEL OF ADOLESCENTS ABOUT MENSTRUATION BEFORE AND AFTER INTERVENTION HEALTHYQUEEN WEBSITE

TABLE 4

Adolescent attitude levels about menstruation before and after intervention healthyqueen website

| Attitude Level | Before | | After | |
|----------------|--------|------|-------|------|
| | n | % | n | % |
| Positif | 1 | 1,9 | 46 | 88,4 |
| Netral | 20 | 46,2 | 3 | 5,8 |
| Negatif | 31 | 51,9 | 3 | 5,8 |

| | | | | |
|-------|----|-----|----|-----|
| Total | 52 | 100 | 52 | 100 |
|-------|----|-----|----|-----|

Based on TABLE 4, it was found that in the attitude level assessment after the intervention, almost all respondents were in a positive level and increased by (86.5%).

TABLE 5

Effect of adolescent attitude about menstruation before and after given intervention healthyqueen website

| | n | Min-Max | Median | Mean | Std. Deviation | p |
|-----------------|----|----------|--------|-------|----------------|-------|
| Attitude Before | 52 | (30-85) | 58 | 57,21 | 13,233 | 0,000 |
| Attitude After | 52 | (53-100) | 95 | 91,29 | 10,932 | |

Based on TABLE 5, it gets a significance value of $< (0.05)$ so that there is an influence from the Healthy queen Website to increase attitudes in adolescents about menstruation.

D. PRACTICE LEVEL OF ADOLESCENTS ABOUT MENSTRUATION BEFORE AND AFTER INTERVENTION HEALTHYQUEEN WEBSITE

TABLE 6

Adolescent action levels about menstruation before and after intervention healthyqueen website

| Action Level | Before | | After | |
|--------------|--------|------|-------|------|
| | n | % | n | % |
| Good | 11 | 21,2 | 47 | 90,4 |
| Enough | 26 | 50 | 3 | 5,8 |
| Less | 15 | 28,8 | 2 | 3,8 |
| Total | 52 | 100 | 52 | 100 |

Based on TABLE 6, it was found that in the assessment of the level of action after the intervention, almost all respondents were in the positive category and increased by as much (69.2%).

TABLE 7

Effect of adolescent action about menstruation before and after given intervention healthyqueen website

| | n | Min-Max | Median | Mean | Std. Deviation | p |
|---------------|----|---------|--------|-------|----------------|-------|
| Action Before | 52 | 20-100 | 60 | 63,85 | 16,468 | 0,000 |
| Action After | 52 | 40-100 | 80 | 81,35 | 10,670 | |

Based on TABLE 7, it gets a significance value $< (0.05)$ so that there is an influence on the HealthyQueen website for increasing action on adolescents with menstruation problems

IV. DISCUSSION

A. THE EFFECT OF THE HEALTHYQUEEN WEBSITE ON INCREASING ADOLESCENTS' KNOWLEDGE ABOUT MENSTRUATION

Based on the results of the research, it can be interpreted that there is an increase in the knowledge of adolescents, with almost half of the youth having knowledge that is in

the less category before being given the intervention from the healthyqueen website. According to the level of interest, almost all of the respondents are in the good category. Knowledge according to theory is the result of knowing, and this happens after sensing a particular item. Without someone's knowledge, people do not have a basis for making decisions and solving challenges [11]. Everything that is understood is called knowledge. Learning and experience are used to carry out this process [12]. A lot of information is currently accessible easily because it is supported by technology that is always balanced and constantly updated, for example websites. The website is a collection of digital pages that contain information in the form of text, animation, images, sound and video or a combination of all that is connected to the internet, so that anyone who is connected to the internet can see it [13].

Sarwono (2012) in [14] The ability to learn and effectively apply information reaches its peak between the ages of 12 and 15 years because this is when the brain's balance is most balanced [15]. According to Green, age is one of the determining factors in the level of knowledge, experience, confidence and motivation, so that age influences a person's behavior towards the specified object. The results of research conducted by Darsini et al, that behavior based on knowledge will be more lasting than behavior that is not based on knowledge [16]. According to research conducted by Taopan et al, that based on the results of interviews conducted in fact 9 out of 10 students had good knowledge about ICT (Communication Information Technology), as evidenced by the explanation from 9 respondents who wanted to benefit from applications installed or installed on mobile phones, they said really understand about the benefits of HP applications [17].

The results of Maulida and Wijayanti's research show that as age increases, the way of thinking and seeking information will become more mature and balanced [18]. This theory is in line with the results of Ayu and Sinulingga's research which concluded that the respondent's knowledge was at the age of >13 years and had good knowledge [19]. The results of research conducted at Junior High School 10 Probolinggo, the age range of the menarche respondents who filled out the questionnaire was 9-13 years old, so it can be said that the longer the menarche age in teenage girls, the more knowledge and experience of adolescent girls about menstruation will increase. Teenagers between the ages of 14 and 17 who participated in the survey were respondents, and more than half respondent is 15 years age. The results of the research conducted by the authors, before conducting an investigation of most of the knowledge of adolescents, are in the less certain category, it will cause discomfort, anxiety, and discomfort if not accompanied by knowledge [20]. This is possible due to the lack of good use of sources of information about menstruation, for example sources of information from social media. internet/website. Apart from the media, it could be caused by a lack of concern for her response to her menstruation. However, after an

intervention was carried out in the form of a website Healthyqueen the level of knowledge of adolescents increased.

B. THE EFFECT OF THE HEALTHYQUEEN WEBSITE ON INCREASING ADOLESCENTS' ATTITUDE ABOUT MENSTRUATION

Based on the results of the research, it can be interpreted that there is an increase in the attitude of adolescents, by showing that most of the adolescents have attitudes that are in the negative category before being given the intervention from the healthy queen website. According to the level of interest, almost all of the respondents are in the good category. Attitude is a person's internal and external closed response to a stimulus or item, both of which are a type that prevents quick memory but, on the contrary, requires further interpretation of closed behavior. This is in accordance with Gerungan's theory (2002) that attitudes cannot be formed before receiving information, seeing or experiencing an object alone [21]. Affirmation of someone's intention to do something is considered as their attitude. Beliefs resulting from knowledge of the said matter. This will be manifested in the form of behavior [22].

When a teenager experiences menstrual problems, many end up not doing any activity. This is not in line with the theory which states that during menstruation one can still carry out all normal activities, for example: running, exercising, swimming, exercising, dancing, and others [23]. PMS symptoms are more severe if marked by an unstable mood accompanied by crying or known as PMDD [24]. This theory is in line with the research conducted by Ping et al., which showed that the majority of teenage girls experience symptoms of mild premenstrual syndrome [22].

The results of Meinarisa's research show that the Menstrual Hygiene Health Education given to young girls in maintaining personal hygiene during menstruation has an impact on the attitudes of young women [25]. The research conducted by Agustina and Hidayat found that the way female students handled dysmenorrhea influenced the attitude displayed. The psychological impact of dysmenorrhea on students who do not receive assistance includes emotional conflict, tension, and anxiety [26]. And the research conducted by Murtiningsih namely that exercise can affect the level of dysmenorrhea in adolescents [27]. The results of the research at Junior High School 10 Probolinggo show that the attitude of the majority of respondents is in the good category after being given intervention. This can be seen through the results of the research questionnaire, that the majority of respondents were able to control emotions well during menstruation and still carry out normal activities. The large number of students who are in the negative attitude category means that they cannot handle menstrual problems well, so that it can result in unstable emotions. In this research, most of the respondents had a positive attitude after being given an intervention, namely website Healthy queen in accordance with their knowledge. To improve the attitude of adolescent

girls, good knowledge from adolescents is needed. However, after the intervention was given, the use of the Healthy queen website which contained information about how to convey the attitudes of students in the positive category increased.

C. THE EFFECT OF THE HEALTHYQUEEN WEBSITE ON INCREASING ADOLESCENTS' PRACTICE ABOUT MENSTRUATION

Based on the results of the research, it can be interpreted that there is an increase in the practice of adolescents, by showing that half of the adolescents have actions that are in the sufficient category before being given the healthyqueen website intervention. According to the level of interest, almost all of the respondents are in the good category. Practice is the embodiment of knowledge and attitudes from a right action, claimed Notoatmodjo in 2003. A person's response to a stimulus in a concrete or open form is also interpreted as an Pracyice. Attitude according to theory is not necessarily automatically manifested in an action (overt behavior). Facilities, as well as other supporting elements, are needed so that this attitude can be realized or can be realized into concrete practice [28].

Consuming foods that are high in protein, this type will cause more water to leave the body, thereby reducing the feeling of fullness in the lower abdomen [25]. This theory is in line with the research conducted by Wahyuni and Dewi, namely the results of their research concluded that. Fulfillment of protein, iron and vitamin C intake has a significant relationship with the menstrual cycle of lacto ovo vegetarian adolescents [21].

With good knowledge, of course this will make adolescents ready to face menstruation. In this study, it was found that respondents knew that consuming protein was very good for helping overcome menstrual problems. So education or knowledge about menstruation must be provided with more supportive facilities. The facilities here can be in the form of a website to increase knowledge or information about menstruation. The findings of studies that measure the effectiveness (success) of the Female Daily website show that it is very effective (very successful) in meeting the information needs of its users [22]. This is in accordance with the results of Surmiasih and Priyatin's research that there is a relationship between knowledge about menstruation and efforts to deal with dysmenorrhea, handling efforts here can be interpreted as actions taken by young women [18].

Teenagers who may still think that it is taboo to discuss. And maybe they are reluctant and feel embarrassed if they want to consult a health worker if they experience disturbances or problems related to their menstruation. So, what happens is less action is taken to address their menstrual problems because they feel ashamed, anxious, sad, and stressed about their menstruation. However, after the intervention using the healthy queen website, almost all the practice of adolescent in the good category increased. In doing this study, researchers found limitations in the form of Not all respondents have good access to the internet

network and this research was only carried out in one place, so the results are still not fully representative. So, it would be better if further research is done with the improvement of the existing educational website "HealthyQueen".

IV. CONCLUSION

There is an increase in behavior of young women is likely due to the transfer process of educational information through Healthyqueen website, mainly the influence of the website on the behavior of young women about menstruation is likely due to the easy process of accessing the website, namely through gadgets so as to make young women more practical in studying the material that researchers present on the website to be applied in their daily lives and form healthy behaviors for young women in facing menstruation. So, this website also makes it easier for health workers to optimize the socialization process related to menstruation.

The results of research on the use of the Healthyqueen website affect the improvement of behavior so it is recommended that adolescents keep updating news or info about menstruation through the Healthyqueen website it would be better if supported by health workers who participate in optimizing technology in providing health counseling. This is because now technology has become a unity with human life.

REFERENCES

- [1] Adiputra, I. S., Trisnadewi, N. W., Oktaviani, N. W., Munthe, S. A., Hulu, V. T., Budiastutik, I., . . . Lusiana, S. A. (2021). Health Research Methodology. Denpasar: Yayasan Kita Tulis.
- [2] Adventus, Jaya, I. M., & Mahendra, D. (2019). Health Promotion Textbook. Jakarta: Indonesian Christian University.
- [3] Agustina, W., & Hidayat, F. R. (2020). The relationship between attitudes about handling dysmenorrhea with actions in handling dysmenorrhea of female students of the Nursing Study Program, University of Muhammadiyah East Kalimantan, Samarinda. Borneo Student Research, 1(3), 2156–2161.
- [4] Ayu A, D., & Prodalima Sinulingga. (2020). Young Women's Knowledge of Menarche. Imelda Scientific Journal of Nursing, 6(2), 123–127. <https://doi.org/10.52943/jikeperawatan.v6i2.405>
- [5] Chao, M., Menon, C., & Elgendi, M. (2022). Menstrual Cycles During Covid-19 Lockdowns: A Systematic Review And Meta-Analysis. Frontiers In Reproductive Health, 4(1). <https://doi.org/10.3389/frph.2022.949365>
- [6] Darsini, Fahrurrozi, & Cahyono, E. A. (2019). Knowledge; Article Review. Journal of Nursing, 12(1), 97.
- [7] Handayani, M., Silawati, V., & Carolin, B. T. (2022). The effectiveness of health education with Android application media on adolescent anxiety levels in facing menarche. Medika Tower, 5(1), 1–15. <https://doi.org/10.31869/Mm.V5i1.3490>
- [8] Harzif, A. K., Silvia, M., & Wiweko, B. (2018). Facts about menstruation in adolescents.
- [9] Irwan. (2017). Health ethics and behavior.
- [10] Matsumoto, T., Egawa, M., Kimura, T., & Hayashi, T. (2019). A Potential Relation Between Premenstrual Symptoms And Subjective Perception Of Health And Stress Among College Students: A Cross-Sectional Study. Biopsychosocial Medicine, 13(1), 1–9. <https://doi.org/10.1186/S13030-019-0167-Y>
- [11] Maulida, I., & Wijayanti, T. (2020). The relationship between the level of knowledge and the incidence of flour albus in young women at the Al-Masyhuriyah Bukit Raya Islamic Boarding School, Tenggarong District.... Borneo Student Research (BSR), 1(2), 772–776. <https://journals.umkt.ac.id/index.php/Bsr/Article/Download/863/164>

- [12] Meinarisa, M. (2019). The influence of Menstrual Hygiene (PMH) health education on the attitude of adolescent girls in maintaining personal hygiene during menstruation. *Journal of Endurance*, 4(1), 141. <https://doi.org/10.22216/Jen.V4i1.3542>
- [13] Murtiningsih, M., Maelani, M., & Fitriani, H. (2018). Techniques to reduce primary dysmenorrhea with exercise. *Journal of Maternity Nursing Science*, 1(2), 24. <https://doi.org/10.32584/Jikm.V1i2.144>
- [14] Musabiq, S. A., & Isqi Karimah. (2018). Overview of Stress and Its Impact on College Students. *Insight: Scientific Journal of Psychology*, 20(2), 75–83. <https://doi.org/10.26486/psikologi.v20i2.240ya> to college students. *Insight: Scientific Journal of Psychology*, 20(2), 75–83.
- [15] Ping, M. F., Natalia, E., & Jho, Y. L. (2020). Prevalence of Premenstrual Syndrome in Adolescent Girls at Kartini Samarinda Dormitory. *Journal of Nursing Dirgahayu (jkd)*, 2(1), 25–28. <https://doi.org/10.52841/Jkd.V2i1.139>
- [16] Prayuni, E. D., Imandiri, A., & Adianti, M. (2019). Therapy For Irregular Menstruation With Acupuncture And Herbal Pegagan (Centella Asiatica (L.)). *Journal Of Vocational Health Studies*, 2(2), 86. <https://doi.org/10.20473/Jvhs.V2.I2.2018.86-91>
- [17] Saleh, A. A. (2018). *Introduction to Psychology*. Makassar : Eastern script.
- [18] Salsabil, Z., & Arfa, M. (2019). The effectiveness of the website Femaledaily.Com in meeting the information needs of users. *Journal of Library Science - Diponegoro University*, 8(2), 199–210.
- [19] Sari, A. O., & Abdilah, A. (2019). The book Web Programming I contains learning material about the basics of web programming. This book is recommended for beginners learning web programming. This book explains how to learn the basics of web programming easily, practically and quickly.
- [20] Sary, Y. N. E. (2017). Cognitive and emotional development psychology of early adolescence. *Journal of Community Service*, 01(01), 6–12.
- [21] Sinaga, E., Saribanon, N., Suprihatin, Sa'adah, N., Salamah, U., Murti, A. Y., Trisnamiati, A., Lorita, S., (2017). *Menstrual Health Management*. Jakarta : IWWASH Global One National University.
- [22] Surmiasih, & Priyati, D. (2018). Midwifery Journal | Midwifery Knowledge about menstruation with efforts to handle dysminorea in students of Mts Al-Hidayah Tunggul Pawenang Adiluwih District, Pringsewu Regency Info Article Abstract. *Journal of Midwifery*, 3(1), 48–53.
- [23] Suyanti, Evitasari, D., & Suteja, N. E. C. I. (2022). The relationship of knowledge with the level of anxiety of young women in facing the first menstruation (menarche) in class VII students at Mts Negeri 7 Sumedang. *Mother Edu-Midwifery Journal (Bemj) P-ISSN*; 5(2), 1–9.
- [24] Taopan, Y. F., Oedjoe, M. R., & Sogen, A. N. (2019). The impact of the development of information and communication technology on the moral behavior of adolescents in SMA Negeri 3 Kupang City. *Journal of Education: Journal of Research Results and Literature Studies in the Field of Education, Teaching and Learning*, 5(1), 61. <https://doi.org/10.33394/Jk.V5i1.1395>
- [25] Villasari, A. (2021). *Physiology of menstruation*. Kediri : Strada Press.
- [26] Wahyuni, Y., & Dewi, R. (2018). Menstrual cycle disorders are related to nutrient intake in vegetarian adolescents. *The Indonesian Journal Of Nutrition*, 6(2), 76–81. <https://doi.org/10.14710/Jgi.6.2.76-81>
- [27] Wardoyo, S. B., Setiyorini, A. (2021). Young women's level of knowledge about menstruation and dysmenorrhoea. *Carolus Journal of Nursing*, 3(2), 122-129. <http://ejournal.stik-sintcarolus.ac.id/>
- [28] Yilmaz, S. K., Bohara, A. K., & Thapa, S. (2021). The Stressor In Adolescence Of Menstruation: Coping Strategies, Emotional Stress & Impacts On School Absences Among Young Women In Nepal. *International Journal Of Environmental Research And Public Health*, 18(17). <https://doi.org/10.3390/Ijerph18178894>