



Original Article

THE RELATIONSHIP BETWEEN THE LEVEL OF KNOWLEDGE AND ATTITUDES RELATED PERSONAL HYGIENE OF FEMALE ADOLESCENTS AT DAYAH INSAN QUR'ANI, SUKAMAKMUR, THE DISTRICT OF ACEH BESAR

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Abstract

Background: A lack of personal hygiene among adolescents can lead to various health problems, particularly reproductive health problems. Providing information through education related to knowledge about personal hygiene is one way to help adolescents maintain their personal hygiene.

Subjects and Method: This study's subjects were 65 female students at Dayah Insan Qurani. The sampling technique used was simple random sampling from 7th—and 8th-grade students. The independent variable was the level of knowledge, and the dependent variable was adolescents' attitudes toward personal hygiene. The analysis was univariate and bivariate with a Chi-Square test using SPSS version 25 software.

Results: The level of knowledge among the adolescent girls at Dayah Insan Qurani was good at 35.4%, while the negative attitudes were at 56.9%. The results of the bivariate test indicated that female adolescents with good knowledge had a positive attitude of 65.2%, while those with negative attitudes were at 34.8% with a p-value of 0.012.

Conclusion: Female adolescents with a good level of knowledge tend to have positive attitudes compared to those with less knowledge. It is hoped that the roles of parents, teachers, and peers can enhance education for adolescents through various media, enabling them to possess good knowledge and positive attitudes regarding personal hygiene.

Keywords: Knowledge, Attitude, Personal Hygiene

Background

Globally, adolescents face various challenges regarding reproductive health. Health education is needed to improve adolescents' hygiene behaviors, as a lack of personal hygiene can lead to several reproductive health problems. Adolescents need to pay attention to various aspects of personal hygiene to maintain both personal cleanliness and reproductive health.

Adolescent reproductive health related to personal hygiene, especially during menstruation, must be well emphasized, as it is crucial in preventing infections and promoting

overall health among young individuals. Research shows the importance of educating adolescents about good hygiene practices during menstruation to avoid infections in the reproductive tracts, urinary tract, and skin irritation.

Studies have shown that 47% of adolescents have poor personal hygiene. A lack of knowledge contributes to inadequate personal hygiene practices among adolescents. The majority of students attending private schools exhibit better personal hygiene compared to those in public schools, attributed to the better

facilities available in private institutions. Support from schools regarding hygiene maintenance, awareness of good hygiene behaviors, and the provision of information are greatly needed.

Providing information in the form of education related to knowledge about personal hygiene is one of the ways to improve the personal hygiene of adolescents. One effective method could be using audio-visual tools to deliver information accurately and efficiently. Adolescent girls, as a vulnerable group, need to understand the importance of personal hygiene to maintain reproductive health and reduce the risk of skin diseases and infections. With proper understanding and a positive attitude towards personal hygiene, adolescent girls are expected to lead healthier and more productive lives.

As of 2023, the number of female students at Dayah Insan Qur'ani, Sukamakmur District, Aceh Besar is 182. Seventh-grade students number 98, eighth-grade students amount to 84, and twelfth-grade students are 35. Preliminary research conducted by the authors at the dayah revealed that out of 9 interviewed adolescents, 3 had good knowledge of personal hygiene while 6 had poor knowledge. Seven adolescents did not change their underwear while bathing and did not dry their genital area, as well as using a towel shared with friends. The condition of the bathrooms, which are rarely cleaned, and the cramped condition of the sleeping quarters are indicators that contribute to poor personal hygiene among students at Dayah Insan Qur'ani.

Based on the above description, the authors are interested in researching the relationship between the level of knowledge and attitude of adolescent girls about personal hygiene at Dayah Insan Qur'ani in Sukamakmur District, Aceh Besar. This research aims to determine the relationship between the level of knowledge and attitudes of adolescent girls concerning personal hygiene in Dayah Insan Qur'ani in Sukamakmur, the District of Aceh Besar in 2023

Subject And Method

1. Study Design

This research design employs a cross-sectional survey approach, which involves simultaneous data collection between

dependent and independent variables. This study takes place at Dayah Insan Qur'ani in the Suka Makmur District, Aceh Besar Regency. The activity is scheduled for December 15, 2023.

2. Population and Sample

The population for this study consists of all adolescent girls at Dayah Insan Qur'ani in the Suka Makmur District, totaling 182 individuals. The sampling technique used is multistage sampling with four (4) stages. The sampling stages are as follows:

- a. Purposive sampling: based on the total number of female students, which is 217.
- b. Stratified sampling: based on the number of students in grades VII and VIII, totaling 182.
- c. Random sampling: Grade VII: 34 students and Grade VIII: 31 students.
- d. Total sampling: 65 students.

3. Study Variables

This research variable consists of independent and dependent variables. The dependent variable is adolescent girls' attitudes, while the independent variable is the level of knowledge about personal hygiene.

4. Definition of Variables

Adolescent girls' attitudes are defined as their reactions/responses to health related to personal hygiene, while their level of knowledge about personal hygiene relates to their understanding of reproductive health related to personal hygiene.

5. Study Instruments

The research instrument used in this study is a questionnaire consisting of three parts. Part A includes data on respondents' biodata and demographics, Part B consists of attitude statements about personal hygiene using a Likert scale. The attitude statements include 20 statements: 10 positive and 10 negative statements. Positive statements receive a score of 4 for strongly agree, 3 for agree, 2 for disagree, and 1 for strongly disagree. Negative statements receive a score of 1 for strongly agree, 2 for agree, 3 for disagree, and 4 for strongly disagree.

Part B includes statements about adolescents' knowledge related to personal hygiene. Knowledge about personal hygiene consists of 20 statements: 19 positive and 10 negative

statements. Knowledge questions use a Guttman scale. If a positive statement is answered correctly, it receives a score of 1; if incorrectly, it receives a score of 0. For negative statements, a correct answer receives a score of 0, and an incorrect answer receives a score of 1.

6. Data analysis

Data analysis in this study employs univariate and bivariate analysis. Univariate analysis is used to display the frequency distribution of attitudes and knowledge related to personal hygiene among adolescents. Bivariate analysis is used to determine the relationship between

the level of knowledge and adolescents' attitudes about personal hygiene using chi-square. Data analysis is conducted using SPSS software version 25.

Results

1. Characteristics of Sample

Data collection was conducted on 65 respondents by distributing a questionnaire about their level of knowledge and attitudes regarding personal hygiene. Table 1 shows the characteristics of the respondents.

Table 1. Distribution of Frequency of Respondent Characteristics

| Characteristics | Category | Frequency | Percentage |
|-------------------------------------|-----------|-----------|------------|
| Age | 13 years | 34 | 52.3 % |
| | 14 years | 31 | 47.7% |
| Class | VII | 34 | 52.3 % |
| | VIII | 31 | 47.7% |
| Attitude of personal hygiene | Positif | 28 | 43.1 % |
| | Negatives | 37 | 56.9 % |
| Knowledge | Good | 23 | 35.4 % |
| | Fair | 16 | 24.6 % |
| | Less | 26 | 40 % |

Based on Table 1, the majority of the adolescents are 13 years old, with the highest number of respondents coming from grade VII, 52.3%. Most respondents' attitudes related to

personal hygiene were negative (56.9%), and most respondents fall into the category of poor knowledge, accounting for 40%.

Table 2. Knowledge of Adolescents About Personal Hygiene

| No | Statements related to the knowledge of personal hygiene | Correct | | Wrong | |
|----|---|---------|------|-------|------|
| | | n | % | n | % |
| 1 | Personal hygiene refers to the cleanliness of the body from head to toe. | 51 | 78.5 | 14 | 21.5 |
| 2 | Personal hygiene of female genitalia is the act of caring | 48 | 73.8 | 17 | 26.2 |
| 3 | Preventing the emergence of viruses that cause vaginal discharge is the aim of implementing personal genital hygiene. | 51 | 78.5 | 14 | 21.5 |
| 4 | For personal hygiene, taking a shower once a day is recommended. | 48 | 73.8 | 17 | 26.2 |
| 5 | Brushing your teeth correctly and adequately is once a day. | 46 | 70.8 | 19 | 29.2 |
| 6 | Cleaning the genital area daily during a bath twice a day | 44 | 67.7 | 21 | 32.3 |
| 7 | The benefits of personal genital hygiene are to prevent the occurrence of discharge, itching, and unpleasant odors. | 53 | 81.5 | 12 | 18.5 |
| 8 | Use a special vaginal fluid at least 5 times a day to maintain genital hygiene. | 46 | 70.8 | 19 | 29.2 |

| | | | | | |
|----|---|----|------|----|------|
| 9 | Wash vagina with special fluid at least 5 times a day to maintain genital hygiene. | 53 | 81.5 | 12 | 18.5 |
| 10 | Skin diseases can be caused by a lack of personal hygiene. | 49 | 75.4 | 16 | 24.6 |
| 11 | Clothes that have already been worn, if not washed immediately, should be hung out to dry under the sunlight. | 51 | 78.5 | 14 | 21.5 |
| 12 | Cleaning the ears properly and correctly involves using ear cleaners (cotton buds). | 47 | 72.3 | 18 | 27.7 |
| 13 | Washing your feet properly before sleeping involves using cloudy water. | 42 | 64.6 | 23 | 35.4 |
| 14 | Washing your hair properly before bed involves using cloudy water. | 49 | 75.4 | 16 | 24.6 |
| 15 | A good way to wash your hands is to use soap and running water. | 45 | 69.2 | 20 | 30.8 |
| 16 | Washing clothes to maintain cleanliness | 46 | 70.8 | 19 | 29.2 |
| 17 | One way to maintain cleanliness is not to dry towels in the scorching sun. | 39 | 60 | 26 | 40 |
| 18 | Washing the blanket once a week is not one of the ways to maintain cleanliness. | 42 | 64.6 | 23 | 35.4 |
| 19 | One way to maintain cleanliness is to soak clothes mixed with those of others. | 44 | 67.7 | 21 | 32.3 |
| 20 | To maintain cleanliness, it is not allowed to use clothes alternately with friends. | 36 | 55.4 | 29 | 44.6 |

Based on the table above, it shows that adolescent knowledge about personal hygiene 81.5% of adolescents know that the benefits of personal hygiene in the genital area are to prevent vaginal discharge, itching and unpleasant odors and to wash the vagina > 5

times a day using a special vaginal wash fluid. The majority of respondents did not know that to maintain the genital area, they should not use clothes alternately with friends, which is 44.6%.

Table 3. Teenagers' Attitudes Towards Personal Hygiene

| No | Statements related to the attitude toward personal Hygiene | Agree | |
|----|--|-------|-----------|
| | | n | % |
| 1 | In my opinion, vaginal discharge can be prevented by practicing good personal hygiene. | 140 | Negatives |
| 2 | I don't wash my hands before touching my feminine area | 121 | Negatives |
| 3 | I wash my vagina from front to back. | 155 | Positif |
| 4 | I clean the intimate area using direct tap water. | 152 | Positif |
| 5 | I am wearing cotton underwear. | 159 | Positif |
| 6 | I know that jeans cannot cause moisture on the genitalia. | 152 | Negatives |
| 7 | I dry my vaginal area with tissue after urinating and defecating. | 167 | Positif |
| 8 | In my opinion, one way to maintain cleanliness is by shaving the hair in the genital area. | 142 | Negatives |
| 9 | I take a shower three times a day for personal hygiene. | 153 | Positif |
| 10 | I know that wearing tight, non-absorbent pants does not cause leukorrhea. | 141 | Negatives |

| | | | |
|----|--|-----|-----------|
| 11 | I change my clothes three times a day to feel comfortable and clean. | 158 | Positif |
| 12 | I brush my teeth once a day, which is in the morning. | 155 | Positif |
| 13 | I use deodorant to avoid body odor. | 171 | Positif |
| 14 | Change underwear at least 2 times to prevent vaginal discharge | 144 | Negatives |
| 15 | I wash my hair once a week. | 145 | Positif |
| 16 | I wash my feet before going to bed. | 146 | Positif |
| 17 | I use clean, odor less water for bathing. | 148 | Positif |
| 18 | I wash the blanket once a week to maintain personal cleanliness. | 142 | Negatives |
| 19 | I know that murky water should not be used to clean feminine hygiene products. | 130 | Negatives |
| 20 | During my menstruation, I change my pad at least 3 times a day. | 144 | Negatives |

Based on the table above, it can be seen that there are still negative attitudes among respondents regarding several statements, namely that respondents are not aware that maintaining personal hygiene can prevent white discharge, not washing hands before touching the genital area, shaving the genital area can maintain cleanliness, and using

2. Bivariate Analysis

Table 2 shows that there is a relationship between adolescents' knowledge and attitudes

underwear that does not absorb sweat is a cause of white discharge. In addition, respondents also have a negative attitude towards the statement of changing underwear at least twice to prevent white discharge, washing blankets once a week, not using murky water to clean the genital area, and changing pads at least three times a day.

toward personal hygiene among adolescent girls at Dayah Berdasarkan Insan Qur'ani in Sukamakmur Subdistrict, Aceh Besar Regency (P-Value = 0.012).

Table 4. The Relationship Between Knowledge and Attitude

| Variable | Attitude | | | | X ² | p |
|--------------------|----------|------|-----------|------|----------------|-------|
| | Positif | | Negatives | | | |
| | n | % | n | % | | |
| Pengetahuan | | | | | | |
| Good | 15 | 65.2 | 8 | 34.8 | | |
| Fair | 7 | 43.8 | 9 | 56.3 | 8.84 | 0.012 |
| Less | 6 | 23.1 | 20 | 76.9 | | |

Discussion

The research results show that respondents with limited knowledge have a negative attitude towards personal hygiene at a rate of 76.9%. The results of the bivariate test using Chi-Square also indicate a relationship

between knowledge and attitudes towards personal hygiene among adolescents at Dayah Insan Qur'ani (p-value = 0.012). These findings align with research conducted on adolescents in several locations involving teenage girls. The results of that research indicate that there is a relationship between knowledge and

reproductive health attitudes/behaviors among adolescents.10).

Research in North Lampung shows a relationship between knowledge, parental support, sources of information, and personal hygiene among junior high school female students. Similarly, research among female students at SMAN 7 South Tangerang City indicates that high knowledge and good family support significantly positively impact personal hygiene behaviour during menstruation. The availability of facilities and infrastructure is also significantly related to personal hygiene behaviour during menstruation, with a 3.1 times greater chance of exhibiting good hygiene behaviour. (11,12)

About 40% of teenagers have insufficient knowledge regarding personal hygiene. The majority of respondents were unaware that they should not share clothes with their friends, which accounted for 44.6%. However, they do know that they should not soak their clothes together with a friend's clothes to maintain personal cleanliness. Sharing clothes can lead to teenagers experiencing skin conditions such as scabies, and the practice of clean and healthy living needs to be implemented in Islamic boarding schools (13). Maintaining good personal hygiene behavior is very important.

In addition, 81.5% of respondents know that the benefits of personal hygiene, especially the genital area, are to prevent vaginal discharge, itching and unpleasant odors. Arismaya said that genital care carried out by female students at the Al Iman Sumowono Islamic Boarding School in Semarang Regency can prevent infections, especially vaginal discharge. (18) Vaginal discharge that is not treated properly can spread to other reproductive organs. Personal hygiene for adolescent girls is an important aspect of their overall health and well-being, especially during menstruation. Proper menstrual hygiene management is essential to avoid functional disorders of the reproductive organs and prevent infections such as vulvovaginitis and excessive vaginal discharge (19,20). Maintaining good personal hygiene can prevent abnormal vaginal discharge, known as leukorrhea, which needs attention if accompanied by itching or an unpleasant odor. Research shows a strong correlation between good vaginal hygiene practices and reduced incidence of abnormal leukorrhea (21).

Vaginal discharge is a common problem among adolescent girls, which can occur in relation to their personal hygiene practices. Studies show

that most adolescent girls in Yogyakarta experience vaginal discharge, 45% of girls aged 15-24 years have reported the incident (22). Knowledge and attitudes of adolescents towards personal hygiene play an important role in the incidence of vaginal discharge. Research at SMAN 10 Surabaya found that there was a significant relationship between good knowledge and positive attitudes about personal hygiene and lower incidence of vaginal discharge (23). Inadequate genital hygiene behavior, often due to lack of knowledge, can lead to pathological vaginal discharge, which can cause discomfort and long-term health problems such as pelvic infections and infertility (24)

There is a significant relationship between personal hygiene and the presence of *Candida albicans* fungus, which causes symptoms of abnormal discharge in female students' urine. Research findings indicate that among female students with good personal hygiene, 55% tested positive for *Candida albicans* infection, while 64.29% of those with poor personal hygiene were found to be positive for the fungus.

The researchers recommend that teenage girls maintain good personal hygiene to prevent the occurrence of abnormal discharge. 6).

In addition, young women's attitudes and knowledge about vulvar hygiene are very important. Positive attitudes towards hygiene practices are associated with better hygiene behaviours (16). Education plays an essential role in promoting health. Studies have shown that genital hygiene education significantly improves hygiene behaviours among adolescents, therefore structured education programs in schools and other institutions are needed to promote personal hygiene (27). By integrating promotion and education efforts, adolescent girls can effectively maintain vaginal hygiene and improve their reproductive health.

Respondents also have a negative attitude regarding the practice of changing pads during menstruation. Regularly changing pads is an important aspect of menstrual hygiene. Research indicates that poor menstrual hygiene, such as infrequent pad changes, can lead to infections caused by bacteria and fungi, which thrive in the moist environment of used pads.

Attitudes toward personal hygiene, including the frequency of changing pads, are influenced

by several factors such as knowledge, attitudes, family support, and access to information. (12)

The proper use of sanitation products and timely replacement of sanitary pads every 2-3 hours can create an environment conducive to fungi and bacteria, potentially leading to infections.

Improving attitudes towards menstrual hygiene through education and support can lead to better hygiene practices, including regular replacement of pads, thereby reducing the risk of infections and improving reproductive health. Adolescent girls with poor knowledge of personal hygiene are more likely to display poor hygiene behaviours during menstruation as well. (29)

Research also shows that respondents' attitudes related to the use of tissues to clean the genital area after urinating and defecating show a positive attitude. The use of tissues to clean the vagina offers several benefits. The benefits of using vaginal tissues are that they can increase comfort, effective sterilization, comfort, and increase skin moisture. Tissues make them a valuable tool for maintaining vaginal health and hygiene. In addition, tissues containing 1,5-pentanediol are very suitable for skin cleansing, providing an additional layer of cleanliness and care. (30)

Educational media is an effective tool in improving adolescent girls' knowledge and attitudes towards personal hygiene. Utilizing diverse and exciting educational media can effectively promote teenage girls' hygiene practices, ultimately contributing to their overall health and well-being. There are several media to improve the knowledge and attitudes or behaviour of adolescent girls, such as videos, audio visuals, counselling and educational interventions, education through comics and flipbooks and using smart cards, Story and Game, all of which have been shown to improve the knowledge and attitudes of adolescent girls related to personal hygiene (31-38).

In addition, improving adolescent knowledge can be done through parents, teachers, and peers. Adolescent reproductive health can be enhanced by providing education in realizing teenage attitudes and behaviours to improve their personal hygiene. Adolescent girls still think that vaginal discharge is normal and not a problem (39). Parents and teachers must be actively involved in efforts to educate adolescent girls to maintain personal hygiene and reproductive health, especially those related to vaginal discharge. (35)

Knowledge and behaviour regarding personal hygiene during menstruation varies significantly between urban and rural areas, necessitating targeted educational strategies to improve hygiene practices in different regions (19). The role of parents is crucial in providing education related to personal hygiene; effective parent-child communication about menstruation can significantly influence adolescents' hygiene behaviour, reducing the likelihood of harmful practices that could lead to health issues (40). Counselling sessions can also play an important role in enhancing adolescents' knowledge and attitudes towards personal hygiene, ultimately leading to better health outcomes (41). Therefore, engaging education, parental involvement, and community support are needed to promote effective personal hygiene practices among adolescent girls to ensure their health and well-being during developmental periods.

Health education about personal hygiene has a significant positive impact on the personal hygiene behaviours of teenage girls.

By promoting good personal hygiene practices, such as proper menstrual hygiene management, teenage girls can improve their overall hygiene, health, and quality of life. Therefore, educating teenage girls about personal hygiene, especially focusing on menstrual hygiene management, is essential for their overall hygiene, health, and well-being.

Overall, increasing knowledge and attitudes regarding personal hygiene through educational programs is crucial for preventing discharge and skin diseases and improving reproductive health among teenage girls, which can be facilitated by parents, teachers, peers, and friends.

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Conflict Of Interest

There is no conflict of interest in writing this article.

References

- Widyaningsih SU, Zulkifli A, Hidyanti H. The Effect of Health Education on Menstrual Hygiene Behavior in Adolescent Women in Modern Al-Izzah As'adiyah and SMAN 1 Tolai Regency in Parigi Moutong. *Journal of Medical and Health Studies*. 2022 Feb 1;3(1):35–40.
- Hariani Y. Hubungan Pengetahuan dan Personal Hygiene Terhadap Kesehatan Reproduksi. *Jurnal Kesehatan Abdurahman*. 2022 Sep 30;11(2):35–42.
- Littik SKA, Manongga Stefanus P, Ndoen EM, Elim RV, Ledo JPD. Peningkatan Pengetahuan dan Praktek Kebersihan Diri saat Menstruasi Siswi Sekolah Menengah Pertama. *PengabdianMu: Jurnal Ilmiah Pengabdian kepada Masyarakat*. 2023 Jan 30;8(1):65–72.
- Hesty H, Nurfitriani N. Gambaran Pengetahuan Remaja Putri tentang Personal Hygiene Selama Menstruasi di SMP Negeri 25 Kota Jambi. *Jurnal Akademika Baiturrahim Jambi*. 2023 Mar 31;12(1):149.
- Hesty H, Nurfitriani N. Edukasi Personal Hygiene Saat Menstruasi pada Siswi SMP Negeri 25 Kota Jambi. *Jurnal Abdimas Kesehatan (JAK)*. 2023 Jan 26;5(1):24.
- Marni M. The Relationship of Knowledge and Behavior to Personal Hygiene During Menstruation in Adolescent Women. *Jurnal Nurse*. 2023 Jan 31;6(1):32–8.
- Fithri NK, Amalia R, Buntara A, Riyantiasis E, Alifia S. Study Deskriptif: Kajian Personal Hygiene Mahasiswa Program Kesehatan untuk Menghadapi Masa Endemi Covid-19. *Malahayati Nursing Journal*. 2023 Apr 1;5(4):1050–9.
- Bute JB, Gupta TM, Chinchodkar KN. Basic Water, Sanitation and Hygiene (WASH) practices among school adolescents of rural area, Indore: A comparative study. *Magna Scientia Advanced Research and Reviews*. 2023 Jun 30;8(1):173–81.
- Peni T, Triwibowo H, Aprilia S. The Effect of Audio Visual Health Education Method on Increasing Adolescent Girls' Knowledge About Personal Hygiene During Menstruation. *Journal of Scientific Research, Education, and Technology (JSRET)*. 2023 Jun 11;2(2):762–8.
- Maharani R, Wathan FM, Handayani S. Faktor-faktor yang berhubungan dengan personal hygiene saat menstruasi pada remaja di SMP PG Bungan Lampung Utara. *MAHESA: Malahayati Health Student Journal*. 2023;3(12):4076–92.
- Asmara RDS, Asiah N, Hidayati. Faktor faktor yang berhubungan dengan perilaku personal Hygiene saat menstruasi pada Remaja Putri di SMA Negeri 7 Kota Tangerang Selatan Tahun 2022. *SEHAT RAKYAT: Jurnal Kesehatan MAsyarakat*. 2023;2(4):572–81.
- Boekoese L, Amalia L, Paris RRH, Mokodompis Y. Praktek Personal Hygiene Menstruasi (Studi Kasus Santri Pesantren Al-Islam Gorontalo. *Madu: Jurnal Kesehatan*. 2022;11(1):19–33.
- Saputra R, H.Rahayu W, Putri RM. Hubungan Perilaku Hidup Bersih dan Sehat (PHBS) dengan Timbulnya Penyakit Scabies pada Santri. *Nurs News*. 2019;4(1):40–53.
- Sutanto R, Isramilda I. KNOWLEDGE OF TEENAGERS AND PERSONAL HYGIENE BEHAVIOR IN SMP 036 KOTA BATAM. *Zona Kedokteran: Program Studi Pendidikan Dokter Universitas Batam*. 2021 May 9;11(2):20–8.
- Sebtalesy CY, Kristanti LA. Edukasi Perilaku Personal Hygiene Remaja: Upaya Mencegah Fluor Albus di Pondok Pesantren Sabillil Muttaqien. *Empowerment: Jurnal Pengabdian Masyarakat*. 2022 Jun 19;1(4):468–74.
- Sari IP, Mariana S, Monica OT, Rahmah. Hubungan Pengetahuan dan sikap Remaja Putri dengan Perilaku Vulva Hygiene di SMKS Keluarga Bunda Jambi. *Jurnal Ilmiah Ners Indonesia*. 2023;4(2):169–76.
- Meriam AS, Sitompul M. Tingkat pengetahuan Remaja Putri tentang Vulva Hygiene saat menstruasi di SMA Advent Tompaso. *Jurnal Kesehatan*. 2022;10(1):23–8.
- Arismaya AM, Andayani A, Diah L M. Hubungan Perawatan Genetalia dengan Kejadian Keputihan pada Santriwati Pondok Pesantren Al Iman Sumowono Kabupaten Semarang. *Jurnal Keperawatan Anak*. 2016;39–44.
- Haryadi PM. Knowledge and personal hygiene behavior during menstruation among adolescent girls in various regions: A literature review. *World Journal of Advanced Research and Reviews*. 2024 May 30;22(2):864–9.
- Umamity S. Hubungan Personal Hygiene saat menstruasi dengan Kejadian Keputihan pada Remaja Putri Kelas X di SMA Negeri 3 Ambon. *Jurnal Pharma Saintika*. 2023;7(1):14–23.

21. Zougira N, Shintya LA. Hubungan Perilaku Vaginal Hygiene dan Kejadian Leukorea pada mahasiswi. *Nutrix Journal*. 2024;8(1):125–30.
22. Diana D, Hindriyawati W, Ekawati D. Descriptive Study of Knowledge About Leuchorrhoea and Personal Hygiene Attitudes of Young Girls at Muhammadiyah 5 Junior High School Yogyakarta. *Journal of Education Technology Information, Sosial Sciences, and Health*. 2023;2(2):724–37.
23. Lestari AM. Hubungan Pengetahuan Dan Sikap Remaja Putri Tentang Personal Hygiene Dengan Kejadian Keputihan Di SMAN 10 Surabaya. *Gema Bidan Indonesia*. 2024 Jun 13;13(1):1–8.
24. Safitri N, Yunita E. Counseling on The Prevention of Vaginal Discharge in Adolescent with personal Hygiene at Hidayatun Najah Samiran Village Proppo Sub-District Pamekasan District. *Jurnal Pengabdian Masyarakat: Dedikasi*. 2023;4(2):81–4.
25. Utami L, Dani H, Warsinah, Sulastina NA, Kirana Y. Hubungan Personal Hygiene terhadap keberadaan Jamur Candida Albicans Penyebab Gejala Keputihan pada Urin Mahasiswi di Perguruan Tinggi XXXX Tahun 2024. *Ranah Research: Journal of*
26. Multidisciplinary Research and Development. 2024;6(4):1002–13.
27. Adji Y, Batjo SH, Usman H. Hubungan Pengetahuan Remaja Putri tentang Personal Hygiene dengan Kejadian Keputihan. *Jurnal Bidan Cerdas*. 2020 May 23;2(1):54–9.
28. Gökşin İ, Demirhan İ. The Effectiveness of Genital Hygiene Education Given to Secondary School Girls. *Turkish Journal of Family Medicine and Primary Care*. 2024 May 28;18(2):133–8.
29. Sari RP, Agustin K. Hubungan Sikap dengan Tindakan Personal Hygiene saat menstruasi pada siswi Kelas VIII di SMP N 1 Masaran. *Maternal*. 2018;II(E):194–8.
30. Faj'ri RA, Sunirah, Wada FH. Hubungan Tingkat Pengetahuan Personal Hygiene terhadap perilaku remaja putri saat menstruasi. *Jurnal Ilmiah Keperawatan IMELDA*. 2022;8(1):78–85.
31. Capelli V, Benvenuti C, Gasparri F, Zanardi A, Vincenzo D La. Clinical Evidence on a New Thymol and Zinc-Based Cleanser for Feminine Hygiene in a Double-Blind Controlled Randomized Study. *Gynecology & Obstetrics*. 2019;9(7):1–5.
32. Widyaningsih SU, Zulkifli A, Hidyanti H. The effect of Health Education on Menstrual Hygiene Behavior in Adolescent Women in Modern Al-Izzah As'adiyah and SMAN 1 Tolai Regency in Parigi Moutong. *Journal of Medical and Health Studies*. 2022;3(1):35–40.
33. Sarti PS, Anita A, Yusnaini Y, Fitrianiar I, Magfirah M, Ramli N. The Effect Of Health Education Using Comic Media On Knowledge And Attitude Towards Personal Hygiene Among Adolescent Girls In Dayah Insan Qur'ani, Sukamakmur District, Aceh Besar Regency. *International Journal of Health & Medical Research*. 2024 Jun 17;03(06).
34. Juwariyah T, Priyanto A, M.Khoirudin. Effectiveness of Health Education about Personal Hygiene on the Personal Hygiene Behavior of Young Women at the Darussalam Islamic Boarding School. *Journal of Scientific Research, Education, and Technology (JSRET)*. 2023 Oct 16;1(2):565–70.
35. Dewi RS, Ningsih DDM. Pengaruh Penyuluhan pada Remaja Putri tentang pentingnya Personal Hygiene pada kejadian Keputihan. *Jurnal Kebidanan*. 2022;12(2):167–74.
36. Ratna RN, Mariza A, Yuviska IA, Putri RD. The effect of Vulva Hygiene Education video Media on the Knowledge Level and attitude of Adolescent women with flour albus. *JKM: Jurnal Kebidanan Malahayati*. 2023;9(2):293–301.
37. Herawati N, Kusmaryati P, Wuryandari AG. Audio Visual dan Power point sebagai media edukasi dalam merubah pengetahuan dan perilaku remaja. 2022;6(1):145–52.
38. Peni T, Triwibowo H, Aprilia S. The effect of Audio Visual Health Education Method on Increasing Adolescent Girls' Knowledge About Personal Hygiene During Menstruation. *JSRET: Journal of Scientific,*

- Research, Education and Technology. 2023;2(2):762–8.
39. Armini SKp, MKes, NKA. Leucorrhoea in Young Women and Determinants of Preventive Behavior: A Literature Review. *Pedimaternal Nursing Journal*. 2022 Aug 12;8(2):102–10.
40. Irvani NS, Agil HM, Gea NYK. The Correlation Beetwen Parental Communication about Menstruation and Personal Hygiene Behavior of Adolescent Girls at Junior High School₁ Kalianda. *Jurnal Medicare*. 2023;2(1):1–12.
41. Syahida A, Dayanti U, Vera DL. Pendidikan Kesehatan tentang Personal Hygiene dalam upaya Meningkatkan Derajat Kesehatan pada Siswa/i di SMA Muhammadiyah Kota Langsa. *Abdikan : Jurnal Pengabdian Masyarakat Bidang Sains dan Teknologi*. 2022;1(3):393–9.
42. Laska Y, Paramitha RI, Amir EF. EDUKASI KESEHATAN TENTANG MANAJEMEN KEBERSIHAN MENSTRUASI PADA REMAJA PUTRI SEBAGAI PENERAPAN PERILAKU PERSONAL HYGIENE. *J-ABDI: Jurnal Pengabdian kepada Masyarakat*. 2023 Jan 28;2(9):6165–70.