

**ADOLESCENT MENSTRUAL HYGIENE EDUCATION AND SCREENING: "HAID BERSIH" GUIDELINES FOR WETLAND AREAS**

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**ABSTRACT**

Adolescents in Pekanbaru face significant reproductive health challenges, including anemia, vaginal discharge, and menstrual pain. Many students are hesitant to take the blood supplement tablets provided by the UKS and lack education on menstrual hygiene management. To address these issues, the team developed the "Haid Bersih" module. The initiative aims to deliver promotional and preventive services, as well as education on menstrual hygiene management, aligning with University IKU 3 and 5. The methods employed include reproductive health screening and menstrual hygiene education. Screening is conducted for both female and male students using a questionnaire that covers access to counselling, menstrual experiences, reproductive health problems, and incidents of sexual violence. The "Haid Bersih" module specifically provides guidelines for menstrual hygiene in wetland areas. The results indicated enthusiastic reception of the educational activities by UKS students, teachers, and nurses. Students received booklets and accessed information through posters and QR codes for screening. The screening revealed that while the majority of adolescent girls had received counselling on puberty and sexually transmitted disease prevention, sexual health education remained minimal. Many girls reported discomfort during menstruation and other reproductive health issues. Generally, male students exhibited signs of puberty. There is a clear need for further education and enhanced digital literacy among adolescents to access reproductive and sexual health information. These findings highlight the necessity of a comprehensive approach to addressing adolescent reproductive health in Pekanbaru

**Keywords:** Adolescent Reproductive Health, Menstrual Hygiene Management, Adolescent Screening

**1. INTRODUCTION**

Menstrual Hygiene Management refers to practices and behaviours that are recommended during the menstrual period, including adequate knowledge and information, as well as access to materials and facilities that allow for efficient and personalized menstrual management (Mishra, 2024; Tshomo et al., 2021). Failure to implement proper menstrual hygiene practices can lead to a variety of health problems, including infections of the reproductive system and urinary tract, as well as skin irritation in the genital area. As many as 44% of cases of pruritus vulvae, which is itching in the vulva area, are caused by inadequate menstrual hygiene (Fany et al.,

2023), which allows the growth of fungi, bacteria, and viruses, while 30% are caused by allergens and feminine hygiene products, and another 26% are due to pathological conditions in the vulva (Susanti & Lutfiyati, 2020). In addition, infections of the reproductive system occur in 35%-42% of adolescents and 27%-33% of young adults (Sato et al., 2023).

A study conducted on adolescents in Pekanbaru revealed that most of them have good habits in maintaining genital cleanliness, with a percentage of around 65.1%. However, on the other hand, there is a tendency to behave poorly in the use of sanitary napkins, where 41.4% of adolescents show unrecommended habits (Alfi et al., 2022). This is associated with various factors, such as inadequate knowledge (65.8%), lack of supportive attitude (62.5%), limited access to information (61.7%), as well as lack of support from teachers (72.5%) and peers (86.7%) (Khatib et al., 2019).

Pekanbaru has a population of adolescents aged 10-19 years as much as 16% compared to the total population. One of the schools with the highest number of students in Pekanbaru City is SMA N 8 Pekanbaru City. This school is located in center of Pekanbaru City and is only about 650 m from the Faculty of Nursing, Universitas Riau. At the time the team conducted an initiative visit to the school to review the educational environment and discuss important issues around adolescent reproductive health and sexuality. In this meeting, the team met with an experienced nurse who has devoted her last ten years to this school and currently serves as the daily coordinator of the School Health Unit/Unit Kesehatan Sekolah (UKS).

UKS at SMA N 8 has facilities including a 12 x 8 metre room equipped with two separate break rooms for female and male students, each with five beds. In addition to functioning as a centre for handling health problems, UKS also plays an active role in monitoring student health and becoming an educational centre to increase health awareness among students. Partner schools also have a Youth Red Cross team which is attended by students as an extracurricular activity. Youth Red Cross activities synergize with UKS, such as to provide first aid to students at school.



Image 1. UKS Room



Image 2. UKS facilities

Based on discussions with nurses, the reproductive health problem that is often experienced by students is anemia. Some female students suffer from anemia and have symptom of often being weak, lethargic, and often

fainting during ceremonies which after being traced many teenagers have low haemoglobin (Hb) levels (below 7 mg%). He said that the Puskesmas had facilitated UKS with blood tablets that were given free of charge to students. However, the students are still reluctant to take the blood booster tablets. Anemia in adolescents can have short-term effects such as fatigue, decreased concentration, and affect academic achievement, which can indirectly have an impact on reproductive health (Silbert-Flagg & Pillitteri, 2018)(The World Bank, 2022).

Another reproductive health issue faced by female students is frequent complaints of vaginal discharge. These symptoms typically begin with mild discomfort and are often accompanied by an unpleasant odour. Additionally, during menstruation, students regularly experience varying degrees of discomfort, sometimes escalating to severe pain (Franciska & Tampubolon, 2023). During menstruation, adolescent girls often experience various discomforts (Hennegan et al., 2019)(Talukdar et al., 2023).

The UKS has endeavored to educate students, albeit on an individual basis. This education is currently limited to those students who visit the UKS with specific complaints. Schools, in partnership with the Health Centre, have been proactive in enhancing adolescent health through initiatives such as physical examinations, distribution of blood supplement tablets, and anemia education. However, given these challenges, there is a clear need for comprehensive reproductive health screening for adolescents in partner schools. Reproductive health screening in adolescents has an important role in supporting long-term health. In adolescence, a variety of significant physiological and psychological changes occur, including the maturation of the reproductive organs and hormonal changes (Perry et al., 2022). Screening can help identify and address reproductive health problems early(Ward et al., 2016).

In addition, education about menstrual hygiene management is also important to equip adolescents in maintaining cleanliness during menstruation (Nannaware & Kulkarni, 2019). The education needed is not only limited to hygiene practices during menstruation, but also needs to educate their perception of these practices, their trust to manage their menstruation and be involved in other activities during menstruation (Hennegan et al., 2019). Improving menstrual hygiene behaviours is expected to prevent health problems such as vaginal discharge, pruritus and others. In this case, the team has had an innovation from previous research, namely the "Haid Bersih" module that can be implemented in partner schools.

These activities emphasize promotive and preventive efforts in adolescent reproductive health services. These initiatives aim to identify reproductive health issues among adolescents and provide education on menstrual hygiene management. This effort aligns with Indikator Kinerja Utama Universitas (IKU) in IKU 3 and 5, which involve lecturers and students participating in off-campus activities as part of the learning process (IKU 3), and utilizing the outcomes of lecturers' research for the benefit of partner schools (IKU 5).

## 2. PROBLEM AND FORMULATION OF QUESTIONS

Based on the observation and analysis of the problems carried out with partner schools, the problems that can be identified are as follows:

- 1) Some adolescents were identified as suffering from anemia with low haemoglobin (Hb) levels (below 7 mg%). The students often have complaints of being weak, lethargic, and often fainting during the ceremony which after being tracked by many teenagers have. The school's UKS has collaborated with the Health Centre to conduct Hb examinations and provide treatment in the form of giving blood tetter tablets. However, it is necessary to carry out reproductive health screening to identify reproductive problems in adolescents in schools.
- 2) Female students frequently report issues with vaginal discharge, ranging from mild discomfort to unpleasant odour. Additionally, during menstruation, many students experience discomfort that can escalate to severe pain. The UKS has endeavoured to educate students, but this has been limited to those who proactively seek assistance. Thus, it is essential to implement comprehensive education on menstrual hygiene management. This should encompass recommended practices and behaviours during menstruation, provide thorough knowledge and information, and ensure access to the necessary materials and facilities for effective menstrual management.

## 3. LITERATURE REVIEW

### Adolescent reproductive health screening

Reproductive health screening in adolescents is an important step in ensuring that their reproductive health remains optimal. According to WHO, reproductive health includes the physical, mental, and social aspects that are intact in relation to the function, role, and reproductive system. In adolescence, this screening is very important because this period is characterized by rapid physical, mental, and social changes (Perry et al., 2022).

Reproductive health screening in adolescents aims to detect early health problems such as sexually transmitted infections (STDs), unwanted pregnancies, and other reproductive health problems. Providing appropriate reproductive health education is also part of this screening, which aims to provide adolescents with the right information about reproductive health and risky behaviours (Silbert-Flagg & Pillitteri, 2018).

### Menstrual Hygiene Management

*Menstrual hygiene management* It is an activity that uses clean materials and absorbs menstrual fluid in the genital area carried out by women during menstruation. Menstrual management includes the process of cleansing the body, especially the genital area, the use of soap and water, access to sanitation facilities and disposal of menstrual waste (UNICEF, 2019)

Effective menstrual hygiene management encompasses several key practices aimed at promoting health and comfort during menstruation (Thurairasu, 2023). Firstly, it is essential to wash hands thoroughly before and after touching the vaginal area to prevent the introduction of dirt and bacteria. Cleaning the vaginal area should be done from front to back (vagina to anus) using mild soap after urination. For those who experience allergies or irritation from soap, warm water serves as a suitable alternative. After

cleaning, the area should be dried with a soft towel or non-perfumed tissue, and it is crucial not to use someone else's towel to avoid cross-contamination (Dewi & Pramana, 2023).

Additionally, it is recommended to change underwear 2-3 times a day, opting for clean and 100% cotton fabric for better breathability and comfort. Regular hair removal, such as shaving vaginal hair at least once every 7 days and a maximum of every 40 days, helps reduce moisture and the potential for bacterial growth. Choosing comfortable pads made of soft, absorbent material that adhere firmly to the underwear, do not leak, and do not cause allergies or irritation is also vital (Anand et al., 2022). During heavy bleeding, pads should be changed at least 4-5 times a day to maintain hygiene and comfort. These practices collectively contribute to effective menstrual hygiene management, ensuring health and wellbeing during the menstrual period. (UNICEF, 2019).

There is a significant prevalence of anemia among adolescents, with many students experiencing low haemoglobin levels, leading to symptoms such as weakness and fainting. Existing measures, such as collaboration with the Health Centre for Hb examinations and treatment, are in place, but there is a need for broader reproductive health screening to identify additional reproductive health issues. Female students frequently experience vaginal discharge and menstrual discomfort, which range from mild to severe. The current educational efforts on menstrual hygiene management are limited to students who seek assistance. There is a need for comprehensive education on menstrual hygiene management, including recommended practices, thorough knowledge dissemination, and access to necessary materials and facilities. The objective is to improve adolescent reproductive health in partner schools by conducting comprehensive health screenings and providing thorough education on menstrual hygiene management.

#### 4. METHOD

Based on the solution that has been formulated, the PKM team has developed an implementation method consisting of several stages, namely:

- a) The first stage is the socialization of PKM activities with students. This activity began with the dissemination of information to students and teachers in schools through banners, websites and social media at school.
- b) The second stage is reproductive health screening activities. Screening is carried out by distributing reproductive health screening instruments with digital media. Reproductive health screening instruments will be given in the form of posters containing QRcodes that will be displayed in each class at school. In addition, reproductive health screening instruments will also be distributed through the Gform link to each student class group.
- c) The third stage is education on "Haid Bersih" menstrual hygiene management guidelines in wetlands. The education provided includes practices and behaviours that are recommended during the menstrual period, including adequate knowledge and information, as well as access to materials and facilities that allow for better menstrual management. In addition, the "Haid Bersih" module also contains education about myths and the disposal of menstrual waste so as not to pollute the environment, especially in wetlands. Educational activities are carried out by lecture



and discussion methods. After that, the students will be given an e-book module "clean menstruation", a poster "Haid Bersih" and a printed module for the library and UKS partner schools.

- d) The fourth activity is the evaluation of adolescent reproductive health screening and education. The evaluation includes checking the completeness of reproductive health screening data, assessing the effectiveness of "clean menstruation" educational activities. Evaluation activities will involve partner schools to assess the effectiveness of the entire activity. Service activities can be said to be achieved with indicators in the form of:
- 1) A database of students' reproductive health conditions can be collected completely. The database of screening results will be displayed quantitatively.
  - 2) There is an increase in the knowledge of female students about menstrual hygiene management by using the "clean menstruation" module. This achievement was measured using a knowledge instrument on menstrual hygiene management.
- e) The last stage is the dissemination of the results of PKM activities. The results of the evaluation of activities will be consolidated with the school, UKS and Puskesmas.

During the activity process, the schools participate in providing buildings and facilities in each stage of the activity. Teachers at schools are also involved as facilitators in activities

## 5. RESEARCH RESULTS AND DISCUSSION

### a. Result

Socialization activities about activities are carried out by disseminating information through teachers, school wall and student group WhatsApp. On the day of the activity, all students were gathered in the large hall of SMA N 8 Pekanbaru City. A total of 33 female students and 2 male students participated in this screening activity. This activity was welcomed and opened by UKS teachers and school nurses. Before starting educational activities, the students were first given ice breaking in the form of fun activities to attract students' interest in the activity. The next activity continued with health screening. Each student is welcome to access the screening link through the QR code that has been provided. Different Qrcodes are available for female students and male students.



Image 3. Menstrual Hygiene Education Activity



Image 4. Teenagers enthusiastically asked questions in the discussion session



Image 5. The students fill out a reproductive health screening questionnaire

After all students carried out the screening process, the team then checked the completeness of the questionnaire through the database. The activity continued with the provision of education about puberty and menstrual hygiene management. Education is provided in the form of lectures, discussions and questions and answers through slides and videos. Each student is also given a booklet "Haid Bersih" which contains the same material as the education provided. The students seemed enthusiastic when the process was completed. The students asked a lot of questions related to myths about treatment during menstruation. After the educational activity was completed, the students were given sanitary napkins to be used as hygiene tools during menstruation. The last activity was to invite the students to paste "Haid Bersih" posters at strategic locations in schools. The results of reproductive health screening in female students and male students can be seen in the following table:

**Table 1. Results of reproductive health screening for female students and male students**

No	Question	Female Students	Male Students
1	Have you ever participated in counselling activities about reproductive and sexual health in the form of? (can select more than one)		
	a) Menstruation/menstrual hygiene	48,5%	-
	b) Puberty		

No	Question	Female Students	Male Students
	c) Anemia/anemia prevention	69,7%	100%
	d) Sexual education	51,5%	-
	e) Prevention of sexually transmitted diseases	12,1%	100%
	f) Never	54,5%	100%
	g) More write	15,2%	-
		6,1%	-
2	Where do you get information about reproductive health or problems with your personal body?		
	a) Parents		
	b) Teacher	54,5%	100%
	c) Friend	42,4%	50%
	d) UKS	18,2%	50%
	e) Public Health Service	15,2%	50%
	f) Counselling in schools	54,5%	50%
	g) Social media	54,5%	50%
	h) Google	36,4%	100%
	i) Books or print media	48,5%	100%
	j) Other	36,4%	100%
		9,1%	-
3	How old are you when you first menstruate?		
	a) < 8 years	3%	
	b) 8-15 years	97%	
	c) > 15 years	-	
4	Do you have regular periods every month?		
	a) Yes	42,4%	
	b) Not	60,6%	
5	How long is your menstrual cycle each month?		
	a) < 25 days	51,5%	
	b) 25-35 days	30,3%	
	c) > 25 days	21,2%	
6	Have you ever experienced a lot of bleeding during your period?		
	a) Yes		
	b) Not	57,6%	
		42,4%	
7	Is menstruation accompanied by severe abdominal pain?		
	a) Yes	81,8%	
	b) Not	18,2%	
8	Have you ever experienced vaginal discharge that is yellow or greenish and smells?		



No	Question	Female Students	Male Students
	a) Yes	24,2%	
	b) Not	75,8%	
9	Have you ever experienced itching around the genitals?		
	a) Yes	66,7%	
	b) Not	36,4%	
10	Have you ever felt pain when urinating?		
	a) Yes	12,1%	
	b) Not	87,9%	
11	Have you ever been forcibly touched on your vital parts of your body (genitals/breasts, buttocks)?		
	a) Yes	3%	
	b) Not	97%	
12	Have you experienced the following signs of puberty (you can choose more than one)		
	a) Growing an Adam's Apple		100%
	b) Growing moustache and beard		100%
	c) Grow fine hair on the armpits and genitals		100%
	d) Enlarged genital organs		50%
	e) Sound turns heavy		100%
	f) The chest is getting wider		
	g) Wet dreams		50%
	h) Secreting sperm when aroused		100%
			50%
13	Have you ever experienced thick yellow urine like milk/pus		
	a) Yes		
	b) Not		100%
			-
14	Have you ever experienced itching around the genitals?		
	a) Yes		50%
	b) Not		50%

#### b. Discussion

The majority of adolescents have participated in counselling on various aspects of reproductive health. It can be seen that the topic of puberty is the most followed by adolescent girls (69.7%) and boys (100%). This indicates an early awareness of the changes that occur during puberty. However, only 12.1% of adolescent girls have participated in sexual education. This shows the need to increase education about sexual health so that adolescents better understand the risks and how to prevent them. Adolescent reproductive and sexual health is a crucial aspect of their development that includes physical, mental, and social changes.

WHO states that adolescents aged 10-24 years experience a variety of significant changes that affect their reproductive health (WHO, 2021). The survey data we reviewed underscored the importance of education and access to adequate reproductive health information and services for adolescents.

Parents and social media are the main sources of information for teenagers. As many as 54.5% of adolescent girls and 100% of adolescent boys get information from their parents, while social media is used by 36.4% of women and 100% of men. This highlights the importance of the role of parents in providing accurate information and supporting their children during adolescence. In accordance with UNICEF's recommendation that the family is the first place for adolescents to get health education (UNICEF, 2020). However, the use of social media and Google for health information needs to be wary, given the risk of invalid or misleading information that can worsen their health condition (Livingstone, 2017).

Data shows that most teenage girls (97%) start menstruating at the age of 8-15, with 60.6% reporting their periods irregular. In addition, 57.6% experienced heavy bleeding, and 81.8% experienced severe abdominal pain during menstruation. These Images suggest that many teenage girls experience significant discomfort during menstruation, which may affect their overall well-being. Further education on healthy menstrual management and medical support can help address this issue (Hanifah et al., 2023).

Coloured and smelly vaginal discharge was reported by 24.2% of adolescent girls, and 66.7% experienced itching around the genitals. This can be an indicator of an infection or other health condition that needs medical attention. In addition, 12.1% of adolescent girls reported pain when urinating, which also required further evaluation. Coloured, smelly vaginal discharge and itching around the genitals are reported by some adolescent girls, which can be a sign of infection or other health problems that require medical intervention (Hawkins & Roberto-Nicholas, 2017). Education regarding personal hygiene and infection prevention (Sapitri et al., 2023) should be increased among adolescents to reduce the prevalence of this problem.

As many as 3% of adolescent girls reported having experienced sexual harassment. Although the percentage is small, this Image indicates the need for effective prevention and treatment measures to protect adolescents from sexual violence (Azrina et al., 2024). Sexual abuse in adolescents is a serious problem that has a significant impact on their physical, mental, and emotional health. According to the theory of sexual behaviours put forward by Sarwono (2011), deviant sexual behaviours, including sexual harassment, can arise due to uncontrolled sexual urges and a lack of internal and external inhibitors. Adolescents, who are in the phase of searching for their identity and are often unable to resist firmly, are easy targets for sexual abusers.

All adolescent boys surveyed reported having experienced signs of puberty such as growing jackals, moustaches and beards, as well as voice changes. This data confirms that physical changes related to puberty are quite evenly distributed among adolescent boys. According to the characteristics Puberty which usually begins between the ages of 9 and 14. This process is triggered by an increase in the hormone

testosterone, which brings various changes to the body and mind (Silbert-Flagg & Pillitteri, 2018).

The results of this survey show the importance of improving reproductive health education and services in schools and communities. Involving parents in education and supporting them to become a reliable source of information is an important step (Caldwell & Melton, 2020). In addition, the provision of better access to reproductive health services, including comprehensive medical consultation and education, is urgently needed.

Overall, the survey highlights some of the challenges adolescents face when it comes to reproductive and sexual health. Timely and comprehensive interventions are needed to ensure that adolescents get the support they need to maintain their reproductive health and overall well-being.

## 6. CONCLUSION

The results of adolescent reproductive health screening show that the majority of adolescent girls have participated in counselling on puberty and prevention of sexually transmitted diseases, but education about sexual health is still minimal. The main sources of information for teens are parents and social media, but there are concerns about the validity of the information they get from the internet. A large number of adolescent girls experience discomfort during menstruation, such as heavy bleeding and severe abdominal pain. Some also report other reproductive problems such as coloured and smelly vaginal discharge, as well as itching around the genitals. In addition, there have been reports of sexual harassment despite the small amount. Teenage boys generally have experienced signs of puberty, but there are still those who report experiencing itching around the genitals. These results show that further education is needed related to improving the digital literacy skills of adolescents in accessing reproductive and sexual health information.

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