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The relationship between knowledge and personal hygiene and the occurrence of sexually transmitted diseases at the Community Health Center Talise, Palu☆

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ABSTRACT

Objective: This morbidity rate has increased compared to the results of a survey in 2012, which were 16,110 cases of STDs, and 11,141 cases in 2010. This study aimed at determining the relationship between knowledge and personal hygiene and the incidence of sexually transmitted diseases in adolescents at the Community Health Center Talise, Palu.
Methods: This study utilized a case–control study design to assess the relationship between knowledge and personal hygiene and the occurrence of sexually transmitted diseases. There were 84 samples in this study involving 42 cases and 42 controls. Data collection was carried out using a questionnaire.
Result: The variable of personal hygiene showed that the Chi-Square test results provided a value of $p = 0.016$, which means that the difference between individual hygiene and the incidence of sexually transmitted diseases (STDs) in adolescents was significant ($p < 0.05$).
Conclusion: This study concludes that the OR calculation has a value of 4.6, which means that adolescents who have insufficient knowledge have 4.6 times greater risk of suffering from STDs than adolescents who had sufficient knowledge.

Introduction

According to WHO, Sexually Transmitted Diseases (STDs) represent a significant public health problem in the world, both in developed and developing countries. STDs cases are continuously increasing worldwide. Based on data released by WHO in 2005, there were 457 million people worldwide affected by sexually transmitted infections. Furthermore, 70% of female patients and some male patients were infected with asymptomatic gonorrhea or chlamydia; untreated chlamydia infection suffered by between 10% and 40% of women could develop the pelvic inflammatory disease.[1]

Many countries have made efforts to prevent STDs, which apparently have not produced satisfactory results. This is caused by several obstacles such as the emergence of resistance to drugs, the influence of environmental factors that increasingly provide the ease of transmission or spread of sexually transmitted infections, and stigma factors that are still associated with STDs sufferers.[2,3] In 2013, eleven countries in Southeast Asia were predicted to have a curable incidence of sexually transmitted diseases (STDs) of around 78.5 million among a population of 945.2 million, with an age range of 12–49 years. The prevalence of STDs in Southeast Asia shows that 80 million adults are infected with trachomatous, 93 million are infected with gonorrhea, 12.3 million are infected with syphilis, and 28.7 million are infected with *Trichomonas vaginalis*.[1,4]

In Indonesia, the current incidence of STDs tends to increase. It can be seen from the 19,973 cases of STDs in Indonesia in 2015. This morbidity rate has increased compared to the results of a survey in 2012, which were 16,110 cases of STDs, and 11,141 cases in 2010. Its source is difficult to trace because the registration of the patient found has never been done.[1,5] The number of patients who had been recorded showed only a fraction of the actual number of sufferers.[1] A very high prevalence of STDs in Indonesia was found in Bandung, with a prevalence of gonorrhea infection of 37.4%, Chlamydia 34.5%, and syphilis 25.2%; in Surabaya, the prevalence of Chlamydia infection was 33.7%, syphilis 28.8%, and gonorrhea 19,8%; while in Jakarta, the prevalence of gonorrhea infection was 29.8%, syphilis 25.2%, and Chlamydia 22.7%.

Most sufferers of sexually transmitted diseases are adolescents. In 2016, Niode reported that there were 404 patients with Sexually Transmitted Diseases (STDs) and Reproductive Tract Infections (RTI) in the Skin and Genital Polyclinic during the 2012–2014 period. In addition, the prevalence of STDs in Indonesia varied by region. Central Sulawesi has a very strategic geographical location that has the potential for transmission of STDs. The STDs cases in Palu, Central Sulawesi, has increased every year. Based on data

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Table 1
The relationship between knowledge and sexually transmitted diseases at the Community Health Center Talise.

Knowledge	Sample group				Total	*P*	OR (95% CI)
	Case		Control				
	n	%	*n*	%			
Insufficient	16	38.1	5	11.9	21	0.006	4.6 (1.5–14.0)
Sufficient	26	61.9	37	88.1	63		
Total	42	100	42	100	84		

OR = odds ratio; CI = confidence interval.

Table 2
The relationship between personal hygiene and sexually transmitted diseases at the Community Health Center Talise.

Personal hygiene	Sample group				Total	*P*	OR (95% CI)
	Case		Control				
	n	%	*n*	%			
Poor	17	40.5	7	16.7	24	0.006	43.4 (1.2–9.4)
Good	25	59.5	35	83.3	60		
Total	42	100	42	100	84		

OR = odds ratio; CI = confidence interval.

recorded at the Ministry of Health of the Republic of Indonesia, up to 2017, the cumulative number of STDs in Central Sulawesi province was 102,667 cases. Additionally, data from the Palu City Government Service show that the cumulative number of STDs up to December 2018 was 1442 cases.

The highest STDs case for the city of Palu is at the Community Health Center Talise, where the number of sufferers keeps increasing every year. In 2017, there were 396 STDs cases treated from a total of 762 cases, while in 2018, the cases increased to 417 cases treated from a total of 1200 cases, with a variety of cases. However, there are presumably still many actual cases that have not yet been detected. From those cases, 42 of them were adolescents including 29 Gonorrhea patients, three syphilis patients, and ten condyloma patients who were still undergoing outpatient treatment.[6] The main factor for genital health problems is conditions around the genitals that are very susceptible to infection. Infection can easily occur since the genitals are very close to the urethra and anus so that microorganisms (fungi, bacteria, parasites, viruses) easily enter the genitals.

The genital area that is moist, closed, folded, and not sterile is also a suitable place for the development of microorganisms that are harmful to the body.[7] There are several ways that can be done to maintain the cleanliness of external genital organs including cleaning the genitals from front to back using clean water, drying genital organs with clean tissues or dry towels, and using soap to clean genitals.[6] The impact caused by STDs, especially in adolescents, cannot be ignored. Reproductive tract infections are recognized to have become a serious global health problem that can have a devastating effect on men and women.[8]

Material and methods

This research was conducted at the Community Health Center Talise, Palu, on February 3rd to April 28th, 2020. This study utilized a case-control study design to assess the relationship between knowledge and personal hygiene and the occurrence of sexually transmitted diseases in adolescents at the Community Health Center Talise, Palu. The population and sample in this study were adolescents who came for their health check-ups, including STDs sufferers and non-STDs sufferers. Sampling in this study was conducted by an interview questionnaire. There were 84 samples in this study involving 42 cases and 42 controls.

Data collection

Primary data in this study were taken directly from respondents, which were adolescents who came for their health check-ups at the Community Health Center Talise, Palu. Data obtained in this study were analyzed using the univariate analysis to describe the frequency distribution of each variable and bivariate analysis to see the relationship between the independent and dependent variables.

Result

The following are the results, based on variables, of the relationship between knowledge and personal hygiene and Sexually Transmitted Diseases at the Talise Community Health Center, Palu in 2020, which can be seen in Table 1 as follows.

Based on Table 1, the percentage of adolescents who had insufficient knowledge was found to be higher in adolescents with STDs (case group) than in adolescents who did not suffer from STDs (control group); 38.1% and 11.9% respectively. Furthermore, the percentage of adolescents with sufficient knowledge was found to be higher in controls than in cases, which was 88.1% compared to 61.9%. Chi-Square statistical test results provided a value of $p = 0.006$, which means that the difference was significant ($p < 0.05$). These results indicated a significant relationship between knowledge and the incidence of STDs in adolescents. The OR calculation obtained a value of 4.6, which means that adolescents who had insufficient knowledge had 4.6 times greater risk of suffering from STDs than adolescents who had sufficient knowledge.

The relationship between personal hygiene and sexually transmitted diseases

Based on Table 2, the percentage of adolescents who had poor personal hygiene was found to be higher in adolescents with STDs (case group) than in adolescents who did not suffer from STDs (control group), which was 40.5% compared to 16.7%. In addition, the percentage of adolescents who had good personal hygiene was found to be higher in the control group than in the case group, which was 83.3% compared to 59.5%. Chi-Square statistical test results obtained a value of $p = 0.016$, which means that the difference was significant ($p < 0.05$). These results indicated that there was a significant relationship between knowledge and the incidence of STDs

in adolescents. The OR calculations obtained a value of 3.4, which means that the adolescents who had poor personal hygiene had a 3.4 times greater risk of suffering from STDs than adolescents who had good personal hygiene.

Discussion

The relationship between knowledge and sexually transmitted diseases

The results of this study indicated a significant relationship between knowledge and the incidence of Sexually Transmitted Diseases (STDs) in adolescents.[9] The OR calculation obtained a value of 4.6, which means that adolescents who had insufficient knowledge had 4.6 times greater risk of suffering from STDs than adolescents who had sufficient knowledge. Adolescent knowledge about reproductive health affects them in premarital sexual relationship.[10]

There were previous studies that showed the same and different results. One of the studies with the same results was a study conducted by Fiya Diniarti, Epina Felizita, Hasanudin, which studied the relationship between knowledge and the incidence of sexually transmitted Infections at the Community Health Center Penurunan, Bengkulu 2018. Additionally, a study with different results was conducted by Herliyanti. She conducted a study on the relationship between knowledge and attitudes toward the prevention of sexually transmitted infections in the students of SMA N 5 Banda Aceh.

The difference was likely due to differences in sample and cultural background. Last but not least, another study with different results was a study conducted by Cahya Indra Lukmana, Falasifah Ani Yuniarti on the description of the knowledge level about adolescent reproductive health in junior high school students in Yogyakarta in 2017.[9] The difference might be caused by several factors, one of which was the source of information obtained by students.[11,12]

Knowledge of reproductive health is crucially needed by teenagers. This is because by having appropriate information and knowledge about reproductive health, they can increase knowledge about sexually transmitted diseases (STDs).[4,13] Knowledge about reproductive health covers information known by a person in terms of reproductive health, including the reproductive system, functions, processes, and methods of prevention/response to pregnancy, abortion, as well as sexually transmitted diseases.

The relationship between personal hygiene and sexually transmitted diseases

The results of this study indicated a significant relationship between personal hygiene and the incidence of sexually transmitted diseases (STDs) in adolescents. The OR calculations obtained a value of 3.4, which means that the adolescents who had poor personal hygiene had a 3.4 times greater risk of suffering from STDs than adolescents who had good personal hygiene.[14,15] Hygiene is a preventive health effort that focuses its activities on individual health efforts and personal health efforts of human life. Hygiene is a science concerned on the prevention of illness and maintenance of health.[3,10]

There were previous studies that showed the same and different results. The studies with the same results as this study include (1) a research conducted by Mahrani Muin, Ummu Salmah, Mukhsen Sarake on the relationship between knowledge of sexually transmitted diseases (STDs) and acts of cleaning the external reproductive organs in female adolescents at SMA Nasional Makassar 2013, and (2) a study conducted by Eliza Budi Purnasari on the relationship between genital hygiene behaviors and the incidence of pathological vaginal discharge in the seventh-grade students of SMP Negeri 3 Depok in 2018.[16] Furthermore, a study that obtained different results from this study was conducted by Desmawati, Ari Pristiana Dewi, and Oswati Hasanah on the Relationship between Personal Hygiene and Environmental Sanitation and the Incidence of Scabies at Al-Kautsar Islamic Boarding School in 2015. This difference was likely due to different samples and background of respondents.

The cleanliness of a person is an action to maintain the cleanliness and health of a person for physical and psychological prosperity.[17] The personal hygiene measures in this study are how to clean and maintain the cleanliness of the external genital organs by washing from the front to the back, cleaning and drying the genitals, flushing the toilet first before using it, changing underwear at least two times a day and changing pads at least 3 h once when it feels wet, as well as cutting pubic hair at least once a month, by distributing several statements in the form of a questionnaire.[2,18] The results showed that 71.4% had good hygiene, while 28.6% had poor personal hygiene.

Bad habits in maintaining personal hygiene, such as washing genitals with dirty water and rarely changing underwear, can trigger the emergence of infections that cause disease so as to facilitate the entry of bacteria, viruses, and parasites that cause sexually transmitted diseases into the genitals. Personal hygiene can be achieved if someone is aware of the importance of maintaining health and personal hygiene since basically hygiene is developing good habits to maintain health.[8,19]

Conclusion

There is a significant relationship between insufficient knowledge and the incidence of sexually transmitted diseases (STDs) in adolescents. Adolescents who had insufficient knowledge had 4.6 times greater risk of suffering from STDs than adolescents who had sufficient knowledge. There is a significant relationship between personal hygiene and the incidence of sexually transmitted diseases (STDs) in adolescents. Adolescents who had poor personal hygiene had a 3.4 times greater risk of suffering from STDs than adolescents who had good hygiene.

Conflict of interest

The authors declare no conflict of interest.

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