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RELATIONSHIP OF NUTRITIONAL STATUS AND AGE OF MENARCHE WITH THE INCIDENCE OF DISMENORE IN ADOLESCENTS AT SMP NEGERI 3 JEMBER

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ABSTRAK

Kesehatan reproduksi merupakan hal yang penting bagi remaja, perubahan awal yang terjadi pada remaja adalah mengalami menarche, yang dapat menyebabkan dismenore. Kejadian dismenore akan meningkat dengan kurangnya status gizi saat menstruasi. Metode: Penelitian ini menggunakan metode observasi dengan desain penelitian kuantitatif dan melalui pendekatan cross sectional dan penelitian ini menggunakan uji Chi-Square dengan pengambilan sampel menggunakan random sampling dengan jumlah populasi 126 dan 56 sebagai sampel penelitian. Hasil Penelitian: Status gizi sebagian besar dalam kategori IMT normal (59,8% Hasil usia menarche sebagian besar dalam kategori >12 tahun (73,7%,) hasil kejadian dismenore sebagian besar responden mengalami dismenore sebanyak (89,9%). Analisis menggunakan uji chis square diperoleh nilai p-value (0,00 < a (0,05) disimpulkan bahwa ada hubungan antara status gizi dengan kejadian dismenore dan ada hubungan antara usia menarche dengan kejadian dismenore pada remaja putri di SMP Negeri 3 Jember. Kesimpulan: Ketidakseimbangan kebutuhan asupan akan menyebabkan masalah gizi pada remaja dan menyebabkan terjadinya dismenore. Saran: status gizi pada remaja putri harus terpenuhi dengan baik karena akan mempengaruhi pertumbuhan dan kejadian disminore saat menstruasi.

Keywords:
Nutritional status, age of menarce, incidence of dysmenorrhea and adolescent girls.

Abstract

Reproductivehealth is important for adolescents, the initial change that occurs in adolescents is experiencing menarche, which can cause dysmenorrhea. The incidence of dysmenorrhea will increase with lack of nutritional status during menstruation. Method: This study used observation method with quantitative research design and through cross sectional approach and this study used Chi-Square test with sample taking using random sampling with a total of 126 populations and 56 as research samples. Study: Nutritional status), is mostly in the normal BMI category (59.8% menarche age results are mostly in the >12 years category (73.7% ,) as a result of the incidence of dysmenorrhea, most respondents experienced dysmenorrhea as much as (89.9%). Analysis using the chis square test obtained p-value (0.00 < a (0.05) concluded that there is a relationship between nutritional status and the incidence of dysmenorrhea and there is a relationship between menarche age and the incidence of dysmenorrhea in adolescent girls at SMP Negeri 3 Jember. Conclusion: Imbalance of intake needs will cause nutritional problems in adolescents and cause dysmenorrhea. Advice: nutritional status in adolescent girls must be fulfilled properly because it will affect the growth and incidence of dysminore during menstruation.

Introduction

Reproductive health is an important issue for adolescents. The characteristics of early changes that occur in adolescents include experiencing menarche, which can give rise to dysmenorrhea . At that time many were marked by changes both physical, mental and psychosocial (Saguni et al, 2018). One factor that can affect the age of menarche in adolescents is nutritional status (Soetjiningsih, 2017). Consumption of diverse and nutritionally balanced foods affects the development of female students' reproductive organs. Based on research by Susanti (2017) shows that fat consumption intake plays a role in accelerating the age of menarche. At that time many were marked by changes both physical, mental and psychosocial. One of the changes experienced by adolescents, especially adolescent girls, is menstruation (Saguni et al, 2018). Teenagers need a good nutritional status because it will benefit them for the growth process and over a long period of time during their lives. One of the advantages is to improve blood circulation. The incidence of dysminore will increase with lack of nutritional status during menstruation, this can cause blood and oxygen circulation to decrease (Herawati, 2019).

Nutritional status problems in Jember Regency in 2018/2019 were 4,116 adolescents consisting of 266 very thin people, 2633 thin people, 1,217 people with excess weight, and 177 people with obesity. And in 2019/2020 this prevalence increased in the nutritional status of very thin to 394 adolescents, underweight 3,315 adolescents, and more weight 1,222 adolescents, but the prevalence of nutritional status of obesity decreased by 147 adolescents (Jember Health Office, 2020).

Based on data from the Jember Regency Health Office in 2017, the highest cases of menstrual disorders in adolescent school students aged 10-14 years were 1457 cases, Sumbersari area ranked first with 740 cases, Ledokombo 122 cases, Embankment 116 cases, Sumberbaru 109 cases, Ajung 63 cases (Jember Health Office, 2017).

Dysmenorrhea will have an impact on adolescents between not focusing on what is done such as studying, school and activity disorders. The location of this pain is also felt in the lower abdomen, to the thighs and pelvis back. These problems have an effect on the quality of life of adolescent girls who experience dysmenorrhea or menstrual pain (Oktavianto et al., 2018). Menstrual pain

(dysmenorrhea) has a considerable impact on adolescent girls because it causes disruption of daily activities. Adolescents who experience menstrual pain (dysmenorrhea) during menstruation will feel limited in carrying out activities, especially learning activities at school (Rohmat, 2018).

Efforts that can be made in dysmenorrhea are divided into two, pharmacologically dysmenorrhea pain can be treated with analgesic therapy while non-pharmacologically dysmenorrhea pain can be treated with warm compresses, relaxation techniques such as deep breathing and yoga. Warm compresses are one of the non-pharmacological methods to reduce pain (Tyas &; Heru, 2017). Lack of nutrition occurs because the amount of energy consumption and other nutrients do not meet the needs of the body. In adolescent girls, malnutrition generally occurs due to dietary limitations or limiting their own food intake. The incidence of more nutrition in adolescents is caused by poor eating habits so that the amount of energy intake is excessive (Nurhayati, 2018).

Method

This study used observation method with quantitative research design and through *cross sectional* approach and this study used *Chi-Square* test with random sampling using *random sampling* with a total of 126 populations in SMPN 3 Jember and 56 as research samples.

Results

Nutritionalstatus is mostly in the normal BMI category), (59.8%), menarche age results are mostly in the),>12 years category as much as (73.7%% , the results of dysmenorrhea are mostly Respondents experienced dysmenorrhea (89.9%). Analysis using the chis square test obtained *p-value (0.00 < a (0.05))* concluded that there is a relationship between nutritional status and the incidence of dysmenorrhea and there is a relationship between menarche age and the incidence of dysmenorrhea in adolescent girls at SMP Negeri 3 Jember

Discussion

Based on the results of the study, in table 5.8 it is concluded that data analysis using the chi square statistical test obtained *p* value of 0.00 ≤α 0.05 which means H1 is accepted so that there is a relationship between nutritional status and the incidence of dysmenorrhea. Nutritional status is very influential on the incidence of dysmenorrhea in adolescent girls, some things that can cause dysmenorrhea are due to

insufficient intake of nutrients such as iron intake. Iron is the main component that has an important role in blood formation (hemopoiesis), which synthesizes hemoglobin. In addition, women who have dysmenorrhea tend to lack zinc nutrients so they have high prostaglandin levels. Zinc contains antioxidants and anti-inflammatory which is useful in inhibiting prostalglandin metabolism.

The results of this study are in line with research conducted by Syafriani (2020) which states that there is a relationship between nutritional status and the incidence of dysmenorrhea in adolescent girls at SMAN 2 Bangkinang Kota in 2021, Based on statistical tests, a value of p = 0.001 was obtained

Nutritional status is one of the causes of dysmenorrhea, nutritional status that is overweight is a risk factor for dysmenorrhea, 68.25% of dysmenorrhea with overweight nutritional status (Beddu, 2019). There is a factor that affects primary dysmenorrhea, namely nutritional status. Nutritional status can be divided into three groups, namely normal nutrition and undernutrition, then more nutrition. Adolescents with less nutritional status in addition to will get disruption of reproductive function. This is what has an impact on dysmenorrhea disorders, it will be good if the nutritional intake is good (Nataria, 2020).

Nutritional status on a diet that is in accordance with a balanced menu can help adolescents in achieving optimal growth and development. This is because the imbalance of intake needs will cause nutritional problems in adolescents and cause dysmenorrhea. So that adolescent girls who experience dysmenorrhea will also experience a decrease in concentration, the body becomes weak and powerless, thus having a negative impact on daily activities, and psychologically will be very disturbing, even becoming one of the most reasons women do not enter school.

Conclusion

1. The nutritional status of adolescent girls at SMP Negeri 3 Jember describes the nutritional status of the normal category.
2. The age of menarche in adolescents at SMP Negeri 3 Jember mostly describes being in the >12 years category.
3. The incidence of dysmenorrhea in adolescents at SMP Negeri 3 Jember illustrates that most adolescents experience dysmenorrhea.

4. The results showed that there was a relationship between nutritional status and the incidence of dismenore in adolescent girls at SMP Negeri 3 Jember with *p* value results of 0.00 ≤α 0.05 .
5. The results showed that there was a relationship between Menarche age and the incidence of dismenore in adolescent girls at SMP Negeri 3 Jember with *p* value results of 0.00 ≤α 0.05 .

References

Ammar. Risk Factors for Primary Dysmenorrhea in Women of Childbearing Age in Ploso Village, Tambaksari District, Surabaya. Risk Factors for Prim Dysmenorrhea in Wan of Childbearing Age in Ploso Village, Tambaksari District, Surabaya. 2018 (January 2017):37–49.

Anurogo D, Wulandari A (2018). Surefire Ways to Deal with Menstrual Pain. Yogyakarta: Andi

Beddu, S., Mukarramah, S., &; Lestahulu, V. (2018). Relationship of Nutritional Status and Age of Menarche with Primary Dysmenorrhea in Adolescent Girls. The Southeast Asian Journal of Midwifery, 1(1), 16–21

Dewantari,N.M. 2018. The Role of Nutrition in Reproductive Health. Journal of Husada Scale. 10(2): 219-224.

Jember District Health Office, 2017. Health Profile of Jember Regency in 2017. Jember: Jember District Health Office.

Dyah E, Tinah (2019). The relationship between body mass index < 20 with the incidence of dysmenorrhea in adolescent girls at SMA Negeri 3 Sragen. Journal of Midwifery. VoIume I. Number 2.

Fitriana, Wahyu R. Factors Influencing the Incidence of Dysmenorrhea in Female Students at the Midwifery Academic Meuligo Meulaboh in 2013. Obstetrics Meuligo Meulaboh; 2019. 5.

Fuadah, F. 2018. The Relationship Between Nutritional Status and Early Menarche Age in Adolescents at SMP Umi Kulsum, Banjaran, Bandung District, West Java Province in 2018.

Iqlima, A.A., Wicaksono, A., Effiana. 2018. The relationship between thick fat folds under the skin and primary dysmenorrhea in female students of Muhammadiyah Private High School 1 Pontianak City, West Kalimantan.PSPD FK Student Journal of Tanjungpura University. 3(1): 1- 14

Ismalia N. Lifestyle Relationship with Primary Dysmenorrhea in Students of the Faculty of Medicine, University of Lampung, Class of 2015. Medical Education Study Program, Faculty of Medicine, University of Lampung. [Float]; 2018.

Ministry of Health (2017). Decree of the Minister of Health of the Republic of Indonesia Number: 1995 / MENKES / SK / XII / 2010 concerning Anthropometric Standards for Child Nutritional Status Assessment. http://gizi.depkes.go.id/wpcontent/uploads/2011/11/buku-sk-antropometri 2010. pdf - Retrieved March 2014.

Ministry of Health of the Republic of Indonesia. 2017. Nutritional Status Monitoring Pocketbook 2017. Jakarta. Ministry of Health of the Republic of Indonesia.

Khairani. (2018). The Relationship between Adolescents's Knowledge About Dysmenorrhea and Dysmenorrhea Management at SMPN 2 Bangkinang in 2018.

Lestari NMSD. National Seminar of FMIPA UNDIKSHA III. Influence of dysmenorrhoea in adolescents [Internet]. 2018;323–9. Available from: ejournal.undiksha.ac.id/index.php/semn asmipa/article/download

Marmi. 2018. Nutrition in Reproductive Health. Yogyakarta: Learning Library

Nasution D. Relationship between Nutritional Status and the Incidence of Primary Dysmenorrhea in Adolescents at Istiqlal Private High School, Delitua District, Deli Serdang Regency. 2017

Nataria. (2019). Factors Associated with the Incidence of Dysmenorrhea in Students of the Faculty of Medicine of the University of National Development "Viteran". Jakarta.

Nugroho et al. The relationship between nutrient intake and nutritional status with the incidence of early menarche in elementary school students 2. Health. 2020;VI (1):36–42

Nurwana, Sabilu., Y., A.F Fachlevy. 2017. Analysis of factors related to the incidence of dysminorea in adolescent girls at SMA Negeri 8 Kendari in 2018. Scientific Journal of Public Health Students 2(6):1-14

Paramita. (2020). The Relationship Between Anxiety Level and Dysmenorrhea in Adolescents at Imam Syuhodo Polokarto Sukoharjo Islamic Boarding School.From http://undip.ac.id.

Ramadhayanti, E., Rohmin, A. 2018. The relationship between nutritional

status and age of menarche with primary dysmenorrhea in adolescent girls grade Xi SMA Negeri 15 Palembang. Journal of Health. VII(2):255-259

Basic Health Research. 2018. Health Research and Development Agency. Jakarta: Ministry of Health, Republic of Indonesia

Rosanti, A. 2018.Factors affecting the incidence of disminore in grade VIII students of SMP Negeri 1 Ungaran Semarang Regency in 2018. Ngudi Waluyo Ungaran University.

Sari.A.P. 2019.Factors Associated with the Incidence of Dysmenorrhoea in Students of Private Vocational School Istiqlal Deli Tua Deli Serdang Regency.Thesis. Faculty of Public Health, University of North Sumatra. Terrain

Shinta, D., Sirait, Hiswani, &; Jumadi. (2014). Factors Associated with the Incidence of Dysmenorrhea in Students of SMA Negeri 2 Medan in 2019. USU Journal, 1. Retrieved from http://jurnal.usu.ac.id/index.php/gkre/article/view/8583

Soesilowati, R., Annisa., Y. 2016. The influence of menarche age on the occurrence of primary dysminore in students of Mts Maarif Nu Al Hidayah Banyumas. Scientific Journal of Health Sciences 14(3):8-14.

Sophia Sophia, F., Sori, M., & Jemadi. (2018). Factors Associated with Dysmenorrhea in Students of SMK Negeri 10 Medan. University of North Sumatra, 2, 5. 19.

Saadah S. The Relationship of Physical Activity with Dysmenorrhea in Sports Science Study Program Students. 2018

Sugiharti. R. K. 2018. The relationship between nutritional status and the incidence of dysmenorrhea. AlIrshad Health Journal. XI (2): 19-25

Sugiyono (2018). Qualitative Quantitative Research Methods and R&D. Bandung: Alfabeta.

Susanti, A.V., Sunarto. 2012. Risk factors for early menarche in adolescents at SMP N 30 Semarang. College Journal Of Nutrition. 1(1): 115-126

Trihono. (2010). Basic Health Research. Health Research and Development Agency, 78. Retrieved from https://doi.org/1 December 2013.

Trimayasari, D., &; Kuswandi, K. (2018). The Relationship Between Menarche Age and Nutritional Status of Grade 2 Junior High School Students with the Incidence of Dysmenorrhea. Journal of Obstretics Scientia, 2(2), 192–211. https://doi.org/ISSN 2337-6120

Trimayasari, D., Kuswandi, K. 2018. The relationship between the age of menarche and the nutritional status of grade 2 junior high school students with the incidence of dysmenorrhea. Journal of Obstretics Scientia 2(2): 192-211

Welinda A. Relationship of age of menarche with incidence of primary dysmenorrhea. 86 University of Andalas. [Field]; 2016. 20.22.

Wulandari, S., &; Ungsianik, T. (2013). Nutritional Status, Physical Activity, and Age of Adolescents's Menarche. Indonesian Journal of Nursing, 16(1), 55–59. Retrieved from journal.ui.ac.id

Yuni Handayani, et al (2022). The Effect of Deep Breath Relaxation Techniques on Reducing Dysmenorrhea Pain. Journal of Midwifery. VoIume 5. Number 1

Yuni Handayani, et al (2023). Nutritional status of the bride-to-be. Journal of Midwifery. VoIume 10. Number 1

Yustiana. The relationship between nutritional status and complaints of pain (dysmenorrhea) during the first menstruation (menarche) in junior high school students in Surakarta. 2018

Zukri et al. Primary Dysmenorrhea Among Medical And Dental University Students In Kelantan: Prevalence And Associated Factors. 2019