

## **CORRELATION BETWEEN BODY IMAGE PHYSICAL ACTIVITY AND SLEEP DURATION WITH NUTRITIONAL STATUS TEACHING-STUDENTS AT THE UNIVERSITY OF DARUSSALAM GONTOR FOR GIRLS**

*(Hubungan Body Image, Aktifitas Fisik dan Durasi Tidur Dengan Status Gizi Mahasiswi Guru di Universitas Darussalam Gontor Kampus Putri)*

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### **ABSTRACT**

Background: Malnutrition both overweight and malnutrition in children and adolescents often occur in developing countries. At this time many factors affect the nutritional status of adolescents including physical activity, psychological aspects (body image) and sleep duration. Objective: This study aims to determine the risk factors associated with the nutritional status of teaching-students at the University of Darussalam Gontor. Method: This research is an observational survey research with cross-sectional study design. Research subjects were 94 teaching-students 18-21 years old at the University of Darussalam Gontor For Girls. Statistical tests use the Gamma correlation test to determine the relationship between independent variables and dependent variables. The results of this study indicate that there was a significant correlation between body image and nutritional status ( $p = 0.030$ ) and there was no significant correlation between physical activity ( $p = 0.385$ ) and sleep duration ( $p = 0.156$ ) with nutritional status.

Keyword : Nutritional Status, Body Image, Physical Activity, Sleep Duration, Teaching Students

### **ABSTRAK**

Latar Belakang: Malnutrisi baik kelebihan berat badan dan gizi buruk pada anak-anak dan remaja sering terjadi di negara-negara berkembang. Pada saat ini banyak faktor yang mempengaruhi status gizi remaja termasuk aktivitas fisik, aspek psikologis (citra tubuh) dan durasi tidur. Tujuan: Menganalisis faktor risiko yang terkait dengan status gizi mahasiswi guru di Universitas Darussalam Gontor. Metode: Penelitian ini adalah penelitian *survei observasional* dengan desain studi *cross-sectional*, uji hipotesis statistik yang digunakan adalah Uji Korelasi Gamma. Subjek penelitian adalah 94 mahasiswi guru berusia 18-21 tahun di Universitas Darussalam Gontor Kampus Putri. Tes statistik menggunakan uji korelasi Gamma untuk menentukan hubungan antara variabel independen dan variabel dependen. Hasil penelitian ini menunjukkan bahwa ada hubungan yang signifikan antara citra tubuh dan status gizi ( $p = 0,030$ ) dan tidak ada hubungan yang signifikan antara aktivitas fisik ( $p = 0,385$ ) dan durasi tidur ( $p = 0,156$ ) dengan status gizi.

Kata kunci : status gizi, body image, aktifitas fisik, durasi tidur, mahasiswi guru.

## INTRODUCTION

National baseline health research from Ministry of Health of Republic of Indonesia showed the problem of obesity in >18 years old in Indonesia by 21.8% and overweight problems in Indonesia as much as 13.6% (Kemenkes, 2018). Riskesdas of East Java Province (2018) showed that the prevalence of Chronic Energy Deficiency risk in adolescents 15-19 years old amounted to 37.73%, the prevalence of central obesity in those >18 years old at 22.37% and the overweight of 13.75%.

According to Ministry of Health (2016) the results of the examination of obesity in East Java explain that 11.16% or the equivalent with 315.512 peoples. The obese population of East Java (Supriasa, *et al*, 2016). Environmental factors, physical activity also has related to nutritional status, low physical activity will cause negative effects such as less lively movement because of excessive weight, this study use a children as participants was 8,07% (91,323 peoples) for male and 13.23% (224.189 peoples) for woman.

Sleep is one of the risk factors affecting the incidence of obesity that has been reported. Some hormones will mediate the interaction of short sleep duration and BMI with high metabolic two key hormones that regulate appetite leptin and ghrelin. Both these hormones played a significant role in the interaction between short sleep duration with a high BMI (Shi, 2010).

The University of Darussalam (UNIDA) Gontor has two categories of students which are regular students and teaching-students. Regular students, in addition to serving as teachers to guide female students, teaching-student also mandated a student at the UNIDA Gontor are united in a single container

that Student Council. The teaching-student has a very solid activity from the early waking up until going to sleep. Dense activities possessed by the teaching-student must be balanced with a good diet to optimize their duties as a student and mentor for female students (Anonim, 2019). Thus the researchers wanted to look for risk factors that affect the nutritional status of teaching-student.

Nutritional status is an expression of balance condition in the form of certain variables (Erwinanto, 2017). A positive body image is a person who received a form of body he has, whereas a negative body image is a negative view of one's body shape and is not satisfied with the shape of the body held (Wilianto, 2017).

## METHOD

This research was an observational survey using cross-sectional, the statistical hypothesis test used is the Gamma Correlation Test. The research was conducted during November-December 2019 and the population was 797 teaching-student, so the samples needed was 94 respondent.

The inclusion criteria Teaching-student at the University of Darussalam Gontor For Girls 18-21 years of age and housed in Darussalam Gontor Islamic Modern Institution. The exclusion criteria was ill and not present when the research ongoing and the respondent do not fill out the questionnaire.

Instrument of research was used microtoice and digital scale to measure the nutritional status, Body Shape Questioner (BSQ) used to measure body image, International Physical Activity Questionnaire Short Form (IPAQ-SH) used to measure physical activity and questionnaire for measure sleep duration.

## RESULT AND DISCUSSION

1<sup>st</sup> table showed there was a significant correlation between body image and nutritional status ( $p=0.030$ ). The results are consistent with research conducted by Serly, *et al* (2015), said that there is a significant correlation between body image and nutritional status ( $p=0.000$ ), young women with a negative perception of body image tend

to have underweight, overweight, or obesity. In research Dimas, *et al* (2019), said that there was a significant correlation between body image and nutritional status ( $p=0,001$ ). Adolescents who have a positive perception of body image tend to have a normal nutritional status, but in this study can be seen that many adolescents with negative body image perception have a normal nutritional status.

Table 1. *Correlation Between Body Image Physical Activity And Sleep Duration with Nutritional Status Teaching-Students*

Variable	Category	Nutritional status				CC (r)	p value
		Underweight n (%)	Normal n (%)	Overweight n (%)	Obesitas n (%)		
Body Image	Positive	0 (0)	21 (53,8)	10 (25,6)	8 (20,5)	0,393	0,030
	Negative	7 (12,7)	44 (80)	2 (3,6)	2 (3,6)		
Physical Activity	High	5 (6)	58 (69,9)	11 (13,3)	9 (10,8)	-0,279	0,385
	Moderate	2 (18,2)	7 (63,6)	1 (9,1)	1 (9,1)		
Sleep Duration	Enough	4 (10,8)	27 (73)	2 (5,4)	4 (10,8)	0,285	0,156
	Less	3 (5,3)	38 (66,7)	10 (17,5)	6 (10,5)		

The results of this study differ from Mulyati, *et al* (2019) they said that there was no significant correlation between body image and nutritional status ( $p=0,297$ ). Adolescent body image is also influenced by the environment, peer environment, the figure of the idol and also the media, it does not become a barrier to still meet the nutritional adolescent. One of the factors that influence the formation of body image is the environment, both in the family and school environment. Negative comments about their figure will shape the attitudes and encourage someone to commit an unhealthy diet to achieve the ideal body (Dieny, 2014).

The teaching-student with the positive body image would be stratified with their body shape but the teaching-student was not satisfied with the current body shape and feel that it is larger than the actual shape and judging that her body shape is not ideal (slavish personal opinion). Many of the teaching-student

serve the diet, information about the diet comes from social media and myths which is not necessarily true and they treat diet was not trying to find the truth from the scientific literature.

In this study, showed that was no significant correlation between physical activity and nutritional status ( $p=0.835$ ). The results are consistent with Pibriyanti (2018) research said that there is no significant correlation between physical activity and central obesity ( $p=0.135$ ) due to the majority of respondents have a heavy physical activity that is not at risk of central obesity. Research conducted by Anggraeny, *et al* (2018) said that there was no significant correlation between physical activity and nutritional status ( $p=0.487$ ), he explained that in adolescence, teenagers prefer limiting the food of the limiting physical activity.

The results of this study different from Ruslie and Darmadi's (2012) research said that there was a significant

relationship between physical activity and nutritional status ( $p=0.027$ ), adolescents with low physical activity will overweight. In the Mulyati, et al (2019) research said that there was a significant association of physical activity with adolescent nutritional status ( $p=0.000$ ) due to youth activities that are heavy and will reduce the risk being overweight in adolescents.

83% of respondents (teaching-student) had a heavy physical activity. All activity on the Darussalam Gontor Modern Islamic Institute was not stopped 24 hours in one day, there was a slogan is "*Alma`hadu Laa Yanaamu Abadan*", which means "Islamic Boarding School will Never Sleep". The meaning of this slogan is any activity in Gontor never stopped for 24 hours, day or night there will always be a wide range of activities done by the students/teaching-students even *asaatidz* and *ustadzaat*. This research can be seen in the 1st table, that 83% of teaching-student have a heavy physical activity. This activity had been doing for occupying ITTC education for 4 to 6 years.

Once a teaching-student, the activities are becoming increasingly congested. In addition to running the obligation to be a student that entered the classroom lectures, teaching-student also have a responsibility as teachers for students. Being teachers 24 hours ready for lead guiding students in terms of academic and non-academic.

In this study, it was found that there was no significant relationship between sleep duration and nutritional status ( $p=0.156$ ). In the study conducted by Sabatini (2019) said that there was no correlation between sleep duration and the nutritional status of students ( $p=0.704$ ).

The results of this study different from Besti's (2019) research he found that there was a significant correlation

between sleep duration and nutritional status ( $p=0.000$ ), due to a number of hormones mediate the interaction of short sleep duration, metabolism and high BMI.

وَجَعَلْنَا نَوْمَكُمْ سُبَاتًا ] ٩ [

That means, "*And have appointed your sleep for repose*". [QS. An-Naba (78):9]

The majority of teaching-student (66.7%) with short sleep duration (<7 hours), had a normal nutritional status, this is due to the density of activities as teacher in Islamic Boarding School Darussalam Gontor For Girls and the many duties as a student to be done and completed on time. So, a lot of teaching-student chose the evening time for tasks and therefore a lot of teaching-student have time to sleep a little.

Events like this have a habit of each individual teaching-student, because when studying at ITTC majority of students chose to reduce their sleep time to continue studying after hours of studying the night at 21:30 pm and when the event will be held a large majority of students to perform its obligations to complete the preparation of the event at night because the density of activity in the morning, afternoon and evening.

## CONCLUSSION

There was a significant correlation between body image with the nutritional status of the teaching-student at the University of Darussalam Gontor for girls ( $p=0.030$ ). There was no significant correlation between physical activity ( $p=0.385$ ) and sleep duration ( $p=0.156$ ) with the nutritional status of the teaching-student at the University of Darussalam Gontor for girls.

It is expected that the teaching-student to monitor weight regularly and maintain a good diet maintain the

adaptation to physical activity and set the sleep time in order to obtain and maintain normal nutritional status so as to optimize the learning and taught at the University of Darussalam Gontor for girls and Islamic Boarding School Darussalam Gontor For Girls.

## REFERENCE

- Anggraeny, O, Ridhanti, D, Ari. F. N. 2018. Tidak Ada Korelasi Antara Asupan Karbohidrat Sederhana, Lemak Jenuh, Dan Tingkat Aktivitas Fisik Dengan Status Gizi Pada Remaja Dengan Kegemukan Dan Obesitas. *Jurnal Action : Aceh Nutrition Journal*. 3(1). ISSN 2527-3310. Hal 1-8.
- Anonim. 2019. (Universitaria) UNIDA Menjadi Kantor Pusat Afro Asia. *Wardun (Warta Dunia Pondok Modern Darussalam Gontor)*. Vol. 72. hal 10-16.
- Besti. 2019. Hubungan Keturunan, Aktifitas Fisik, Durasi Tidur Terhadap Obesitas Pada Remaja di SMA 13 Kota Padang. *Karya Tulis Ilmiah. Sekolah Tinggi Ilmu Kesehatan Perintis*. Padang.
- Dimas, M. B, Adriani, M, Retno, D. S. 2019. Hubungan Body Image dengan Status Gizi pada Siswi di SMA Negeri 9 Surabaya. *Amerta Nutrition*.
- Dieny, F. F. 2014. *Permasalahan Gizi Pada Remaja Putri*. Yogyakarta. Graha Ilmu
- Erwinanto, D. 2017. Hubungan Antara Tingkat Aktifitas Fisik dengan Kebugaran Jasmani Siswa Kelas X Tahun Ajaran 2016/2017 di SMK Muhammadiyah 1 Wates Kabupaten Kulon Progo DIY. *Skripsi*. Fakultas Ilmu Keolahragaan. Universitas Negeri Yogyakarta.
- Kemenkes RI. 2018. *Hasil Utama Riskesdas 2018*.
- Kemenkes RI, 2016. Profil Kesehatan Provinsi Jawa Timur Tahun 2016.
- Kemenkes RI. 2018. *Hasil Utama Riskesdas Provinsi Jawa Timur 2018*.
- Mulyati, H, Ahmil, Mandola, L. 2019. Hubungan Citra Tubuh, Aktifitas Fisik dan Pengetahuan Gizi Seimbang dengan Status Gizi Remaja Putri. *CHMK Midwifery Scientific Journal*. 2(2).
- Pibriyanti, K. 2018. Studi Obesitas Sentral Pada Mahasiswa Prodi Kesehatan Masyarakat Univet Bangun Nusantara Sukoharjo. *Jurnal Kesehatan*. 11(1). ISSN : 1979-7621.
- Ruslie, Riska, H, Darmadi. 2012. Analisis Regresi Logistik Untuk Faktor-Faktor yang Mempengaruhi Status Gizi Remaja. *Majalah Kedokteran Andalas*. 1(36).
- Sabatini, F. S. 2019. Hubungan Pengetahuan Tentang Gizi Seimbang, Kebiasaan Olahraga, Durasi Tidur, Peer Influencer, Intensitas Penggunaan Media Sosial dan Kebiasaan Konsumsi Fastfood Dengan Status Gizi Remaja di SMAN 6 Surabaya. *Skripsi Thesis*. Universitas Airlangga.
- Serly, V, Sofian, A, Ernalina. Y. 2015. Hubungan Body Image, Asupan Energi dan Aktifitas Fisik dengan Status Gizi pada Mahasiswa Fakultas Kedokteran Universitas Riau Angkatan 2014. *Jom FK*. 2(2).

- Shi, Z, Taylor AW, Gill TK, Tuckerman J, Adams R, Martin J. 2010. Short Sleep Duration And Obesity Among Australian Children. *BMC Public Health*.
- Supariasa, I. N, B, Bakri, I, Fajar. 2016. Penilaian Status Gizi. Edisi 2. EGC. Jakarta.
- Wilianto, D. A. 2017. Hubungan Antara Konsep Diri dan Citra Tubuh pada Perempuan Dewasa Awal. *Skripsi*. Sanatha Dharma University.