

*THE RELATIONSHIP LIFESTYLE AND CENTRAL OBESITY IN CLINICAL STUDENT
FACULTY OF MEDICINE CHRISTIAN UNIVERSITY OF INDONESIA IN 2021*

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ABSTRACT

Introduction: Prevention and control of central obesity is very important to prevent cardiovascular disease. Central obesity is a condition where there is an accumulation of excess fat in the abdominal area so that it looks fat in the stomach and the body shape resembles an apple. Cardiovascular risk increases because fat cells in the abdomen release their fat into the blood vessels. Lifestyle factors such as consumption of fiber foods, physical activity and stress affect the occurrence of central obesity.

Objective: This study aims to determine the relationship between lifestyle and the incidence of central obesity in clinical students faculty of medicine Christian University of Indonesia in 2021. **Methods:** This study used a cross sectional analysis design. Primary data collection was carried out in December 2021-January 2022 in the form of questionnaires distributed to 254 clinical students faculty of medicine UKI in 2021. A total of 156 samples met the inclusion criteria and had complete data and were included in the analysis. The independent variables are age, sex, smoking, stress, diet and physical activity. The dependent variable is central obesity. **Results:** In the univariate analysis, 72% less physical activity was found, central obesity was 41% and smoking was 15.9%. A total of 95.3% of samples with central obesity have a diet lacking in fiber. In the chi-square analysis, there was a significant relationship between dietary patterns and central obesity ($p=0.01$). **Conclusion:** The conclusion of this study is that if we consume less fiber, it will increase the risk of central obesity.

Keywords: Central Obesity, lack of fiber, cardiovascular disease

ABSTRAK

Pendahuluan: Pencegahan dan pengendalian obesitas sentral sangat penting untuk mencegah terjadinya penyakit kardiovaskular. Obesitas sentral adalah suatu kondisi dimana terjadi penumpukan lemak berlebih pada daerah perut sehingga terlihat gemuk di perut dan bentuk tubuh menyerupai buah apel. Risiko kardiovaskular meningkat karena sel-sel lemak di perut melepaskan lemaknya ke dalam pembuluh darah. Faktor-faktor gaya hidup seperti konsumsi makanan berserat, aktivitas fisik dan stress berpengaruh terhadap terjadinya obesitas sentral.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan antara gaya hidup dengan kejadian obesitas sentral pada mahasiswa klinik FK UKI Tahun 2021. **Metode:** Penelitian ini menggunakan desain analisis cross sectional. Pengambilan data primer dilakukan bulan Desember 2021-Januari 2022 berupa kuesioner yang disebarakan kepada 254 mahasiswa klinik FK UKI Tahun 2021. Sebanyak 156 sampel memenuhi kriteria inklusi dan memiliki data lengkap dan diikutkan pada analisis. Variabel independen adalah usia, jenis kelamin, merokok, stress, pola diet dan aktivitas fisik. Variable dependen adalah obesitas sentral. **Hasil:** Pada analisis univariate didapatkan aktivitas fisik kurang aktif sebanyak 72%, obesitas sentral sebanyak 41% dan merokok sebanyak 15.9%. Sebanyak 95,3% sampel yang mengalami obesitas sentral memiliki diet kurang serat. Pada analisis chisquare didapatkan hubungan bermakna antara pola diet dengan obesitas sentral ($p=0,01$). **Kesimpulan:** The pattern of consumption of foods that lack fiber affects the risk of central obesity.

Kata Kunci: *Obesitas Sentral, kurang serat, penyakit kardiovaskular*

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INTRODUCTION

Central obesity is a public health problem that is currently increasing rapidly throughout the world. Central obesity or abdominal obesity is a condition of excess fat centered on the abdominal area (intra-abdominal fat), so it looks fat on the stomach and the body shape resembles an apple (apple type). Riskesdas data in 2007, 2013 and 2018 showed the prevalence of central obesity in the Indonesian population was 18.8%, 26.6% and 31%. (Riskesdas. 2018). The increasing prevalence of central obesity will further increase the risk of coronary heart disease (CHD).

The factors that cause central obesity are multifactorial such as lifestyle changes such as high-fat food intake, less consumption of vegetables and fruits, smoking habits and less physical activity. By knowing the relationship of the influence of lifestyle factors on the incidence of central obesity in Clinical Students of the Faculty of Medicine, Christian University of Indonesia in 2021, the researcher hoped that it will reduce the prevalence of central obesity and avoid the occurrence of CHD.

RESEARCH METHOD

The data in this study are primary data obtained from anthropometric questionnaires distributed to clinical students of the UKI Medical Faculty in 2021. The design of this study was a cross sectional analysis. The sampling technique in this study uses the Slovin equation to calculate the minimum number of samples in a finite population survey. The minimum number of samples obtained is 156 people.

The inclusion criteria for this study were: UKI Medical Faculty clinic students in 2021 who were willing to be research respondents, aged 15 years, UKI Medical Faculty clinical students in 2021 who were not pregnant or breastfeeding. The exclusion criteria are: UKI FK clinic students in 2021 who are not willing to be research respondents, UKI FK clinic students in 2021 who are not at the research location, FK UKI clinic students in 2021 who are pregnant or breastfeeding.

The data collected was inputted, examined and analyzed with SPSS Version 20 software. To obtain the characteristics of each variable, a univariate test was carried out. To test whether there is a relationship between the independent variable and the dependent variable, it is done by using the Chi Square test.

RESULTS

Research Flow

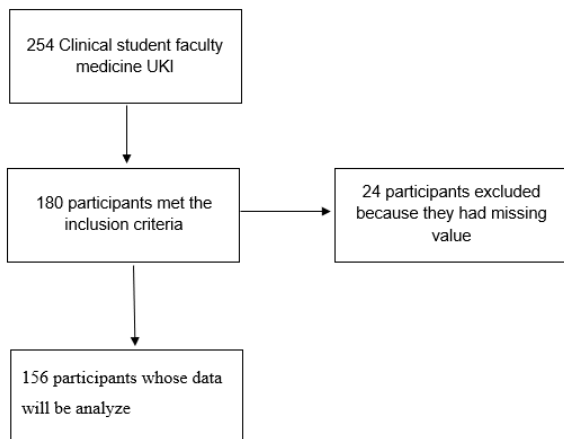


Table 1. The proportion of patients with central obesity in UKI Medical Faculty Clinic Students in 2021

Characteristics	Frequency	Percentage
Central Obesity:		
Yes	64	41%
No	92	59%

Table 2. Distribution and Characteristics of Central Obesity Research Subjects in FK UKI Clinical Students in 2021

Central Obesity Characteristics	Frequency	Percentage	P value
Sex:			
Male	38	24,36%	2,783
Female	118	75,64%	
Diet pattern:			
Enough fiber	7	4,49%	0,010
Less fiber	149	95,51%	
Smoking:			
Yes	33	21,15%	4,738
No	123	78,85%	
Stress:			
Yes	34	21,79%	5,692
No	122	78,21%	
Physical Activity:			
Active	58	37,18%	3,809
Less Active	98	62,82%	

The results of the bivariate analysis did not show a significant relationship between smoking status and the incidence of central obesity. These results are in

accordance with the study of Susanto et al (2021) which stated that smoking had no significant relationship with central obesity. Sex, variable stress did not have a significant relationship with the occurrence of central obesity. This result is not in line with research by Nurrahmawati F which states that central obesity is 1.23 times more in respondents who experience stress. Differences in results occur because there are differences in the number of samples and research instruments. Physical activity and sex are not related to the occurrence of central obesity of UKI Medical Faculty clinical students in 2021. A dietary pattern that is sufficiently fiber is significantly related to the incidence of central obesity of UKI Medical Faculty clinical students in 2021 (p value = 0.010).

DISCUSSION

The results of this study show a significant relationship between diet and the occurrence of central obesity. These results are in accordance with the Sayon-Orea study which showed that women who consumed fried food more than 4 times/week had a 1.37 times risk of being overweight or obese. obese compared with women consuming less than 2 times/week (OR 1.37 (95% CI: 0.97–1.94))

The results of this study show that smoking has no effect on the occurrence of

central obesity. This result is in accordance with Susanto A et al's study in 2021 which stated that smoking did not have a significant relationship with the incidence of central obesity.

The variables of stress, physical activity and gender in this study were not significant for the occurrence of central obesity. The results of this study are not in line with the research in Surabaya conducted by Nurrahmawati F, which found that the incidence of central obesity increased in respondents who experienced stress. Respondents who experience stress are at risk of experiencing central obesity 1.23 times greater than respondents who are not stressed. Likewise with the results of research by Nimas et al in 2018, which stated that physical activity was associated with the incidence of central obesity ($p = 0.001$). Physical activity causes physiological changes in the body. These changes lead to improvements in heart health, which in other words also results in a good state for the human body. This can occur because physical activity causes specific physiological changes that can produce more disease-resistant systems.

CONCLUSION

Dietary patterns that are sufficient in fiber are significantly related to the incidence of central obesity of UKI Medical

Faculty clinical students in 2021 (p value = 0.010).

The variables of gender, stress and physical activity were not significantly related. This could be due to the lack of samples in this study and the different research instruments used.

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REFERENCES

1. Prevalensi obesitas sentral berdasarkan lingkar pinggang pada pengemudi bus antar kota, *Jurnal Muara Sains, Teknologi, Kedokteran, dan Ilmu Kesehatan* Vol. 3, No. 2, Oktober 2019: hlm 231-236
2. Semiardji G. Lingkar Pinggang: Barometer Kesehatan Anda [Internet]. Jakarta. 2008. Available from: [http://www.obesitas.web.id/obesitas/news\(i\)23.html](http://www.obesitas.web.id/obesitas/news(i)23.html)
3. Rezaeian M, Salem Z. Prevalence Of Adult, Obesity And Abdominal Obesity

In A Sample Of Urban Science, Population Within South East Of Iran. *J Med.* 2007;Vol. 23(2)

4. Kim S, Park S, Kim S, Cha B, Lee H, Cho Y. Visceral Fat Amount Is Associated With Carotid Atherosclerosis Even In Type 2 Diabetic Men With A Normal Waist Circumference. *J Obes.* 2008;(1):11–85.
5. Faktor kejadian obesitas sentral pada usia dewasa. Nimas Puspitasari. 2018
6. Kemenkes. Riset Kesehatan Dasar (Riskesdas) 2013. Jakarta:2013
7. Alkerwi, et al. Consumption of ready-made meals and increased risk of obesity: findings from the Observation of Cardiovascular Risk Factors in Luxembourg (ORISCAV-LUX) study. *British Journal of Nutrition.* 2014; 113:270–277
8. Sayon-Orea et al. Consumption of fried foods and weight gain in a Mediterranean cohort: The SUN project. *Nutrition, Metabolism & Cardiovascular Disease.* 2011; xx, 1e7
9. Analisis hubungan perilaku merokok dengan obesitas sentral pada orang dewasa sehat di suradadi kabupaten tegal. Agus Susanto, Eva Novita Sari, Ratih Sakti Prastiwi. 2021
10. Khaira, D Sulastri, R Semiarty. Hubungan Kebiasaan Merokok dengan Waist to Hip Ratio (WHR) pada

Nelayan di Kecamatan Koto Tangah
Kota Padang. 2016. *Jurnal Kesehatan
Andalas*