Research Article

The Relationship Between Risky Food Consumption Behavior And The Incidence Of Obesity In The Community Tanjung Anom

Imelda Derang[1]*, Friska Ginting[2], Jantrisa Maria Magdalena[3]

[1,2,3] *Nursing Study Program, STIKes Santa Elisabeth Medan, Indonesia*

Corresponding Author :
Jantrisa Maria Magdalena
Nursing Study Program, STIKes Santa Elisabeth Medan, Indonesia.
E-mail: jantrisamariamagdalena@gmail.com , Phone: +62 852-0620-2653

ABSTRACT

Background: Obesity is an increase in fat accumulation that results in weight gain and disturbs health, this is caused by a lack of physical activity carried out and poor or unhealthy dietary arrangements such as foods that contain high fat, sweet, salty, irregular eating frequency. This study aims to determine the relationship between risky food consumption behavior and the incidence of obesity in the Tanjung Anom community in 2023.

Methods: The research was observational analytic with a cross sectional design. The study population was 10,087, of which the sample was taken as many as 92 people. Sampling was taken by simple random sampling technique. Data were taken directly using questionnaires and measuring instruments meters and scales.

Results: The results of the study found that risky food consumption behavior was not good at 63.0% and obestias at 80.0%. Based on the results of the chi square test, it was found that the p value = 0.001 ($<\alpha=0.05$)

Conclusions: meaning that there is a relationship between risky food consumption behavior and the incidence of obesity. It is hoped that the Tanjung Anom community will always pay attention to health by regulating diet and increasing simple physical activity during free time to reduce the occurrence of obesity and the impact of obesity in the local community.

Keywords : Food Consumption, Behavior, Obesity, Physical activity

INTRODUCTION

Obesity is a disorder due to excessive fat accumulation, an imbalance between energy intake and physical activity and other factors such as genetics, behavior, environment and is a public health problem that requires special attention because it is the fifth cause of death in the world every year with a total of 2.8 million deaths. This happens a lot among adolescents due to uncontrolled lifestyles because of the current high technology that easily orders food according to taste including fast food without thinking about the effects on health such as coronary heart disease, stroke, diabetes and high blood pressure, and cancer risk. (1)

The 2018 Riskesdas data states that the prevalence of obesity in Indonesia is 21.8%. (2). In West Java province, the prevalence of obesity increased from 23.1% to 25% (3). Central Java province, obese nutritional status in adolescents aged 13-15 years was 9.5% consisting of 7.1% overweight and 2.4% obesity. Semarang city is 11.0% overweight and 4.9% obese. (4). Gorontalo Regency in 2018 was 30.9% which consisted of 6.9% men and 24.0% women(2). Riskesdas 2018, in Sumatra showed an increase in the prevalence of obesity in 2017 there was 10.5% increased to 21.8%. In North Sumatra: overweight 15, %. and has an obesity prevalence greater than the national rate of 23.8%. (5)

Factors that influence obesity include genetics or heredity, it is known that a person who has one or two obese parents, tends to be more at risk of suffering from obesity compared to people without obesity. Changes in lifestyle, in the development of technology and cultural factors that cause

changes in diet, to prefer to consume fast food which contains lots of calories, fat, and cholesterol. (6) From research Hafid (6) that there is a significant relationship between fast food consumption and the incidence of obesity in adolescents in Gorontalo Regency in 2019,where 98.9% of respondents often consume fast food. (6). The behavior of fast food habits: high in sugar, carbohydrates and even high in fat, easily obtained by high technology and affecting a person's lifestyle which used to process itself now becomes a goput culture as a result of which people are easier to order food according to their preferences without thinking about the effects of these foods, especially in urban areas (6)

The results of an initial survey conducted by the author on 9 respondents in hamlet III of Tanjung Anom village obtained the results (100%). The results of the interview 5 of them have unhealthy eating behaviors, namely enjoying eating fried foods 3x a week, consuming sausages, french fries, fried chicken 3x a week, often consuming snacks such as biscuits every day, drinking sweet drinks after meals and 3 of the 5 people often consume soft drinks approximately 3x a week.

Obesity is closely related to risky food consumption behavior because it is a person's reaction or response to an external stimulus. The problem of unhealthy food consumption behavior occurs as well as the wrong diet, which is a factor that results in excess energy input and can lead to obesity and even overnutrition. The habit of *fast food* consumption can increase the prevalence of obesity.

The increasing incidence of obesity in

this digital age is a health problem as well as the risks that arise if you are obese, namely the occurrence of various metabolic and degenerative diseases such as diabetes militus, cancer, heart disease, hypertension etc.(5) then regular physical activity is needed and carried out both in work and leisure time such as walking, washing, cooking and cleaning the house. (7) In addition, physical activities that are carried out must be routine and structured to provide physical fitness, as well as the importance of maintaining a diet by limiting calorie intake, reducing sugary foods / drinks, fatty foods, salty foods, baked goods, preserved foods etc. then improving the quality of food such as fruit, vegetables and foods that contain lots of fiber and limiting foods high in sugar, salty, and fatty, burned foods, preservatives, seasonings and instant foods. (8)

Based on the above background, the authors are interested in examining the relationship between risky food consumption behavior and the incidence of obesity in the Tanjung Anom community in 2023.

METHOD

The type of research design used in this study is correlation using a correlation research design with a cross sectional approach method. The cross sectional approach is to measure or observe data on independent and dependent variables at the same time or at one time (9). The design in this data collection to identify the relationship between food consumption behavior and the incidence of obesity in the Tanjung Anom community was taken with one simultaneous collection.

The population of this study was the Tanjung Anom community in hamlet 3 as many as 10,087 people. The simple random sampling technique can be used if the population is not too varied (Homogeneous) and geographically not too spread out, and the main requirement must be a list of the population. The author focuses on taking respondents of productive age at the age of 18-65 years.

The method used to determine the research sample is to use the Slovin formula.

The independent variable in this study is risky food consumption behavior. The dependent variable in this study is the incidence of obesity. Researchers used instruments in the form of questionnaires and observation sheets to obtain information and data from the community. Respondents' demographic data instruments include initial name, gender, age, occupation, last education, height, weight. Food consumption behavior instrument, The questionnaire on risky food consumption behavior consisted of 15 questions adopted from the standard FFQ questionnaire. The obesity instrument was carried out using observation using measurements of body weight (scales) and height (meter).

This research will be conducted in Tanjung Anom 2023 precisely in hamlet 3. The reason the research chose this location was because there had never been any research on obesity in hamlet 3. The research time will be conducted in November - April in Tanjung Anom village in 2023. The time given by the researcher to respondents to fill out the questionnaire for 20 minutes and measure body weight and height for 5 minutes.

The data collection used by researchers is primary data. Primary data is data obtained directly by researchers from research subjects through questionnaires and observations.The type of data collection used in this study is the type of primary data, namely obtaining data directly from

respondents through questionnaires.

The instrument in this study used a semi-quantitative food frequency questionnaire (FFQ). The questionnaire was no longer tested for validity because it was a standardized questionnaire. The risky food behavior questionnaire was adopted from Nurlidyawati research (10)

In this study, the reliable test was no longer carried out because the questionnaire used was standardized and used to measure risky food consumption behavior.

Univariate analysis aims to describe the status of each variable, while bivariate analysis aims to identify the relationship between one variable and another (9). Data analysis was conducted to answer the research objectives and test the research hypothesis to determine the relationship between the independent and dependent variables using the *Chi Square* statistical test with a significance value ($\alpha = 0.05$).

This research has also been ethically approved by the Health Research Ethics Commission of STIKes Santa Elisabeth Medan with letter number No: 076/KEPK-SE/PE/III-DT/III/2023.

RESULTS

1. Demographic Data

This research was conducted in March 2023. The number of respondents in this study were 92 people of Tanjung Anom Hamlet III Medan. The following shows the results of research related to the demographic characteristics of respondents.

Table 1. Frequency Distribution of Respondents Based on Demographic Data of Respondents of Tanjung Anom Community in Hamlet III

Characteristics	F	%

Characteristics	F	%
Age (Year)		
17 - 25	8	8,7
26 - 35	20	21,7
36 - 45	23	25,0
46 - 55	27	29,3
56 - 65	14	15,2
Gender		
Male	11	12,0
Female	81	88,0
Education		
Not in School	3	3,3
SD	20	21,7
SMP	17	18,5
SENIOR HIGH	41	44,6
SCHOOL	5	5,4
D3	6	6,5
S1		
Jobs		
Self-employed	8	8,7
IRT	52	56,5
Entrepreneurship	21	22,8
Labor	5	5,4
Teacher	4	4,3
More	2	2,2
Total	**92**	**100,0**

Based on table 1 shows that the characteristics of respondents. Based on the age of the most in the age group 46-55 years with a total of 27 people (29.3%), second there is an age of 36-45 years with a total of 23 people (25.0%), third there is an age of 26-35 years with a total of 20 people (21.7%) fourth there is an age of 56-65 years with a total of 14 people (15.2%) and the least age is at the age of 17-25 years with a total of 8 people (8.7%). The characteristics based on gender were mostly women 81 people (88.0%) and the least gender characteristics were men 11 people (12.0%). Characteristics of respondents based on the most education, namely high school / high school education 41 people (44.6%), then elementary school education there are 20 people (21.7%) junior high school education there are 17 people (18.5%) S1 education there are 6

people (6.5%) D3 education there are 5 people (5.4%) and the least education respondents are in school education there are 3 people (3.3%). The characteristics of respondents based on the most work are housewives, namely 52 people (56.5%) then there are entrepreneurs as many as 21 people (22.8%) then there are self-employed as many as 8 people (8.7%) then there are laborers as many as 5 people (5.4%) then the least work is other where there are 2 people (2.2%).

2. Patterns of Risky Food Consumption in the Community of Dusun III Tanjung anom Village, Pancur batu Medan Subdistrict in 2023.

Table 2 . Frequency Distribution of Risky Food Consumption Behavior in Tanjung Anom Community in 2023

Consumption Behavior	f	%
Not good	58	63,0
Good	34	37,0
Total	**92**	**100,0**

Based on table 2 above, The results of the study of risky food consumption patterns in the community in Tanjung Anom Medan village in 2023 included 34 people (37.0%) and 58 people (63.0%).

3. Incidence of Obesity in Tanjung Anom Community in 2023

Table 3 Frequency Distribution of Obesity Incidence in Tanjung Anom Community in 2023

IMT	f	%
Obesity	80	80,0
Not Obese	12	12,0
Total	92	100,0

Based on table 3 therapeutic The results showed that the body mass index (BMI) obtained the majority of respondents were obese as many as 80 respondents (80.0) and not obese as many as 12 respondents (12.0%).

4. Relationship between risky food consumption behavior and obesity

Table 4 Respondents in this report are the people of Tanjung Anom hamlet III Medan 2023 as many as 92 respondents.

Consumption of risky foods	Incidence of obesity				Total		p
	Obesity		Not Obese				
	f	%	f	%	f	%	
Not good	56	60,9	2	2,2	58	63,0	0,001
Good	24	26,0	10	10,9	34	37,0	

Based on table 4 it can be seen that the results of cross tabulation between risky food consumption behavior and the incidence of obesity show that of the 92 respondents, the majority of risky food consumption is not good as many as 58 respondents (63.0%), while the incidence of good food consumption is 34 respondents (37.0%). Based on the Chi Square test results, the p-value is 0.001 (<0.05), meaning that there is a relationship between risky food consumption behavior and the incidence of obesity in Tanjung Anom Village, Medan 2023.

DISCUSSION

1. Risky food consumption

Based on the results of research conducted by researchers in Tanjung Anom Medan in 2023, the majority of people who were respondents with poor risk food consumption behavior were 58 people (63.0%), while the minority of

good food behavior was 34 respondents (37.0%).

Based on the questionnaires that have been filled in by the respondents, the results show that there are several questions that cause bad behavior, including the community often eats and drinks sweets such as sweet tea, soft drinks, syrups, packaged juices, dodol, cakes, canned fruit, people often add food flavorings such as vetsin, and masako in their dishes, and people also often add sauce, soy sauce in their food.

This study is in line with previous research according to Sriwahyuni et al (2021) showing the results of 30 children, there were 7 people (23.3%) with a rare fast food diet, while a frequent category diet there were 23 people (76.6%), of which there were 22 people (73.3%) who were obese. With this, there is a relationship between fast food diet and the incidence of obesity in children at SD Frater Bakti Luhur Makasar.(11) The adverse effects that will be obtained from the habit of consuming fast food if consumed excessively, can cause obesity which results in decreased self-confidence. Adolescents must have knowledge about the dangers arising from the habit of consuming fast food. Knowledge about fast food, from what fast food is, types of fast food, and the consequences of consuming fast food must be known to many people, especially for adolescents, which is useful to prevent the increasing incidence of disease if consuming fast food.

The problem of lifestyle changes in adolescents usually arises and becomes a significant influence on eating habits, where adolescents begin to interact with the environment that has a major influence on the formation of behavior, which makes adolescents more active, more often choose to eat outside the home, and get a lot of influence in determining food choices. Teenagers are often motivated to try new foods, one of which is fast food, therefore it is necessary to have the right education so that changes in people's behavior about healthier fash food increase.(12)

2. **Incidence of Obesity**

In the results obtained by researchers in Tanjung Anom in 2023, it was found that the majority of the obese category was 90 respondents (97.8%), while the non-obese category was 2 respondents (2.2%).

The researcher's assumption is in accordance with the data from the questionnaire on the incidence of obesity, the majority of the community consumes sweet foods or drinks once a day, eats salty foods once a day, consumes fatty / fried foods 1-2 times a week, eats preservative processed foods such as sausages, corned beef and others 3-6 times a week, then the habit of adding flavorings to dishes such as Masako,micin and others once a day, eating instant noodles 3-6 times a week, eating wet noodles such as meatball chicken noodles, then the habit of consuming junk food 1-2 times a week where people also stay more at home rarely moving which causes fat accumulation in the body so that obesity occurs in the community.

A person's body mass index (IMT)> 30 can be categorized as obese, which is a condition of imbalance between height and weight due to excessive amounts of body fat tissue. This can be seen through the IMT indicator and vice versa, the IMT value <30, then it is not classified as

obese. (13)

3. **Relationship between Risky Food Consumption Behavior and Obesity Incidence**

This study explains that the Chi Square test results obtained a p-value of 0.001 where (p <0.005) which means that there is a relationship between risky food consumption behavior and the incidence of obesity in the Tanjung Anom community in 2023. It was found that food consumption behavior was not good and the incidence of obesity in the Tanjung Anom community where consumption behavior was not good as many as 58 people (63.0%) where people like sweet foods / drinks, salty foods, oily foods such as fried then people also often use additives such as micin, masako and consume large portions of instant noodles in one consumption where they consume these foods once a day, then there is good consumption behavior as many as 34 people (37,0%) where some people can control their food portions by rarely consuming sweet foods / drinks, salty foods, fried foods, but once the community consumes risky foods that exceed the calories the body needs every day, while the incidence of obesity in the Tanjung Anom community is 00 people (80.0%) who are not obese there are 12 people (12.0%) respondents where people also stay more at home. Risky food consumption behavior with obesity has a close relationship, with the habit of consuming risky foods and lack of physical activity in daily activities is the biggest trigger for obesity in the community.

A person's lifestyle greatly affects the level of obesity including physical activity. Many things affect people not doing physical activity, such as work in the office that every day sitting and busy in front of a laptop or computer, lazy to move because they prefer to watch TV, and so on. Good and correct physical activity should be done regularly every day, at least 30-60 minutes, or 150 minutes per week, therefore the relationship between diet and the incidence of obesity with the results of the spearman rank statistical test with a value of p = 0.000, it can be said that it is very significant. (7).

Besides that, consumption of foods that lead to chronic diseases such as hypertension will also lead to other complications such as chronic kidney failure (15-17).

CONCLUSION

Based on the results of research and discussion conducted by researchers with a sample size of 92 respondents regarding the relationship between risky food consumption behavior and the incidence of obesity, namely;

1. The frequency distribution of respondents based on risky food behavior was not good at 60.9%.
2. The frequency distribution of respondents based on obesity was 87.0%.
3. There is a relationship between risky food consumption behavior and the incidence of obesity with a p-value of 0.001 (α < 0.05).

To solve problems related to the risk of uncontrolled food consumption, you can create a strategy by involving cadres in controlling food served. This will be effective because cadres are able to assist in assessing food standards of hygiene and sanitation (18).

REFERENCES

1. Puspita Sari F, Setiyo Nugroho P. Risiko Perilaku Konsumsi Makanan Cepat Saji dan Minuman Berkarbonasi Terhadap Obesita pada Remaja di Indonesia. Borneo Student Res. 2021;3(1):707–13.

2. Arifani S, Setiyaningrum Z. Faktor Perilaku Berisiko yang Berhubungan Dengan Kejadian Obesitas Pada Usia Dewasa di Provinsi Banten Tahun 2018. J Kesehat [Internet]. 2021;14(2):160–8. Available from: 10.23917/jk.v14i2.13738

3. Azkia FI, Miko Wahyono TY. Hubungan Pola Konsumsi Makanan Berisiko dengan Obesitas Sentral Pada Wanita Usia 25-65 Tahun di Bogor Tahun 2011-2012. J Epidemiol Kesehat Indones. 2019;2(1):11–8.

4. Nuraini A, Murbawani EA. Hubungan Antara Ketebalan Lemak Abdominal Dan Kadar Serum High Sensitivity C-Reactive Protein (Hs-Crp) Pada Remaja. J Nutr Coll [Internet]. 2019;8(2):81. Available from: doi: https://doi.org/10.14710/jnc.v8i2.23817

5. Rumida R, Doloksaribu LG. Hubungan Pola Makan Dengan Kejadian Obesitas Pada Orang Dewasa : Studi Literatur. Wahana Inov J Penelit dan Pengabdi Masy UISU [Internet]. 2021;10(2):272–9. Available from: https://journal.universitaspahlawan.ac.id/index.php/jkt/article/downloadSuppFile/1795/261

6. Hanafi S, Hafid W. Hubungan Aktivitas Fisik dan Konsumsi Fast Food dengan Kejadian Obesitas Pada Remaja. Kampurui J Kesehat Masy (The J Public Heal [Internet]. 2019;1(1):6–10. Available from: 10.55340/kjkm.v1i1.49

7. Suryadinata RV, Sukarno DA. THE EFFECT OF PHYSICAL ACTIVITY ON THE RISK OF OBESITY IN ADULTHOOD. Indones J Public Heal [Internet]. 2019 Jul 5;14(1):104. Available from: https://e-journal.unair.ac.id/IJPH/article/view/7509

8. Fitriani NS, Wurjanto A, Kusariana N, Yuliawati S. Hubungan Tingkat Pengetahuan dan Pengaruh Media Sosial dengan Perilaku Konsumsi Makanan Berisiko Diabetes Melitus pada Mahasiswa Universitas Diponegoro. J Epidemiol Kesehat Komunitas [Internet]. 2022 Feb 28;7(1):404–10. Available from: https://ejournal2.undip.ac.id/index.php/jekk/article/view/13308

9. Denise F. Polit CTB. Nursing Research: Principles and Methods. Seventh Ed. New York: Lippincott Williams & Wilkins; 2012.

10. Nurlidyawati. FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN PERILAKU KONSUMSI BUAH DAN SAYUR PADA SISWA KELAS VIII DAN IX SMP NEGERI 127 JAKARTA. Jakarta: Universitas Syarif Hidayatullah Jakarta; 2015. 20 p.

11. Fadilah N, Sefrina LR. Hubungan Pola Makan, Asupan Kebisaan Makan, Dan Aktifitas Fisik Terhadap Kejadian Obesitas Pada Anak Sekolah Dasar : Literature Review. JUMANTIK (Jurnal Ilm Penelit Kesehatan) [Internet]. 2022 Aug 1;7(3):200. Available from: http://jurnal.uinsu.ac.id/index.php/kesmas/article/view/11500

12. Ariyana D, Wiwin W. Hubungan Pengetahuan dengan Kebiasaan Konsumsi Makanan Cepat Saji (Fast Food) pada Siswa-Siswi Kelas XI di SMA Negeri Samarinda. Borneo Student Res [Internet]. 2020;1(3):1841–6. Available from: https://journals.umkt.ac.id/index.php/bsr/article/view/912

13. Saputra Z, Putranto D, Walton EP, Muhammadiyah U, Belitung B. ANALISIS DAYA TAHAN SISWA. J Olahraga dan Kesehat Indones [Internet]. 2022;3:16–23. Available from: https://jurnal.stokbinaguna.ac.id

14. Akbar MI, Effendi DS, Dewi N, Lestari H, Kohali RE. Interconnection study of stunting events in North Buton District. InProceedings of the 2nd Alauddin Health and Medical International Conference 2024 Mar 28.

15. Tasnim, T., Sugireng, Imran, Akib, N.I. Analysis of differences in early detection of chronic kidney disease with urine creatinine, proteins and individual health status based on behavioural, stress and genetic factors in Kendari City, Indonesia. Public Health of Indonesia. 2024. 10(2). 203-213. Doi: https://doi.org/10.36685/phi.v10i2.801.

16. Tasnim, T., Sugireng, Imran, Akib, N.I. Early Detection Patterns Of Chronic Kidney Disease Based On Differences In Individual Health Status In Kendari City. Indonesian Journal of Health Sciences Research and Development. (2023). 5(2), 168-177. Doi: https://doi.org/10.36566/ijhsrd/Vol5.Iss2/190.

17. Tasnim, T., Imran, Sugireng, Akib, N.I. Early detection of the risk of chronic kidney disease based on eating and drinking behaviors in Kendari City Indonesia. Healthcare in Low-resource Settings. 2024. Ealry access (89), 1-18. Doi: https://doi.org/10.4081/hls.2024.12133

18. Tasnim, T., Lusida, M.I. The relationship between cadre's capacity and assessing to the fast food seller's performance in food hygiene and sanitation in Mokoau Primary Health Care, Kendari City. Infectious Disease Reports. (2020), 12(s1. 8765), 128-131. Doi: https://doi:10.4081/idr.2020.8765.