The Relationship Of Consumption Of Suckling Pig With Obesity

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ABSTRACT

The trend of consuming suckling pig in Bali has become an interesting phenomenon. Babi guling is one of Bali's typical dishes and has become an unavoidable culinary icon for anyone visiting Bali. Suckling pig is known to be high in fat and cholesterol, and excessive consumption can have a negative impact on nutritional status, besides that the frequency of eating outside the home also affects nutritional status. This study aims to determine the relationship between consumption of suckling pig with the obesity. This type of research is observational with a crosssectional design, with a sample size of 68 according to the inclusion criteria. Data was collected using interview and measurement methods. Presentation of data using frequency tables and cross tables was analyzed using the chi-square test. The results of statistical tests using chi-square obtained p-value = 0.00 at a significance level of 5% Because the p-value is <0.05, it can be concluded that there is a relationship between suckling pig consumption and obesity

Keywords: Obesity, Frequency of Visits, Consumption of Suckling Pig

Introduction

Obesity is a body condition that is influenced by how well we get calories and nutrients from food, as well as how it impacts our bodies physically. This includes conditions in which our bodies can have undernutrition, normal nutrition, or overnutrition, depending on how well we obtain and use nutrients. An imbalance between consumption and use of nutrients in the body can result in problems of undernutrition and overnutrition (Arieska and Herdiani, 2022). According to data from WHO in 2018, around 1.9 billion adults aged 18 years and over were overweight. In 2016, the percentage of adult men and women aged 18 years and over who were overweight reached 39% for men and 40% for women (Izhar, 2020).

The results of the 2018 Basic Health Research (Riskesdas) show that around 9.3% of the adult population in Indonesia aged over 18 years are malnourished or classified as underweight, 13.6% are overweight, and 21.8% are underweight. obesity based on Body Mass Index (BMI) (Riskesdas, 2018). The research results show that compared to previous data in 2013, the number of people who were undernourished or underweight increased by 1.3%, people who were overweight increased by 0.1%, and those who were obese increased by 6.4%. Based on age, in Indonesia, in the 30-34 year age group, around 14.4% are overweight and 23.0% are obese.

In the 35-39 year age group, 15.5% were overweight and 27.0% were obese. Meanwhile, in the 40-44 year age group, 16.3% were overweight and 29.6% were obese. In Bali, around 23.30% of adults are obese, and in Gianyar Regency, the obesity prevalence rate reaches 23.52% (Riskesdas, 2018).

In Indonesia, overnutrition problems, such as overweight and obesity, dominate among adults aged over 18 years. Obesity is more common in adults, which can be caused by various factors, both directly and indirectly.

Food consumption directly plays a role in the possibility of obesity or overweight if it is inappropriate or excessive. According to research conducted by (Patmala, 2023), a relationship was found between the consumption of foods containing high fat and the incidence of obesity, where foods containing high fat if consumed excessively can increase the risk of obesity.

One of the traditional Balinese foods that is famous for its high fat content, which can increase the risk of obesity or being overweight, is Babi Guling. The trend of consuming suckling pig in Bali has become a phenomenon that has attracted attention not only from local residents but also from tourists visiting the island of Bali. Babi guling is a typical Balinese dish whose preparation starts with whole pork, which is then filled with a mixture of Balinese spices called "base genep", with a distinctive taste and tempting delicacy, Babi guling has become an icon culinary delights that are unavoidable for anyone visiting Bali. However, behind the deliciousness of suckling pig, there are health aspects that need to be considered. Suckling pig is known to be high in fat and cholesterol, and excessive consumption can have a negative impact on a person's nutritional status. Research conducted by (Maiyena and Mawarnis, 2022) states that the nutritional content contained in 100 grams of pork 4 is 453 kcal, 11.9 protein and 45 grams of fat. With the high fat content in pork, consuming large amounts of pork can cause various health problems. Therefore, you need to be careful about excessive consumption of pork because of its high fat content.

Lodtunduh Tourism Village, located in Ubud District, Gianyar Regency, is famous not only for its natural beauty, but also for its various delicious traditional food menus. One of the most famous dishes in this village is Babi Guling, which is easy to find there. Even though people are aware of the high fat content in Babi Guling which can cause obesity, this does not

reduce their interest in enjoying this dish along with accompanying dishes.

The aim of the research is to determine the relationship between suckling pig consumption and obesity among residents in Lodtunduh Tourism Village, Ubud District, Gianyar Regency.

Research Method

The type of research used was observational using a cross sectional design. Place and Time of Research This research was carried out in Lodtunduh Tourism Village, Ubud District, Gianyar Regency. This research was conducted in February – March 2024. The population in this research was the adult population in Lodtunduh Tourism Village, Ubud District, Gianyar Regency. The sample for this research was taken from the adult population in Lodtunduh Tourism Village, Ubud District, Gianyar Regency with the following criteria: The inclusion criteria in this study were: 1) Residents in Lodtunduh Tourism Village, Ubud District, Gianyar Regency who were willing to be the sample aged 18-55 year 2) Consuming suckling pig. The exclusion criteria in this study were: 1) Residents in Lodtunduh Tourism Village, Ubud District, Gianyar Regency who are sick (under treatment). The sample used in this research was the adult population in Lodtunduh Tourism Village, Ubud District, Gianyar Regency. The sampling technique in this research was purposive sampling to obtain samples that met the research inclusion criteria.

Determining the sample size in this study used the Lemeshow formula, this is because the population size is unknown.

Tabel 1.
Sebaran Karakteristik Sampel

Usia (Tahun)	n	%
18-36 tahun	29	42,6
37-55 tahun	39	57,4
Total	68	100,0
Jenis Kelamin		
Perempuan	41	60,3
Laki -laki	27	39,7
Total	68	100

Selain itu, dari jumlah yang sama, data menurut jenis kelamin menunjukkan bahwa 41 sampel (60,3%) adalah perempuan, sedangkan 27 sampel (39,7%) adalah laki-laki.

Nilai Gizi 1 Porsi Babi Guling

Adapun nilai gizi 1 porsi babi guling yang telah dihitung kandungan zat gizinya yaitu dari rumah makan babi guling ID didapatkan kandungan gizi 1 porsi sajian lengkap babi guling yang terdiri dari babi guling, sate babi, urutan, lawar babi dan babi genyol yang dijual adalah energi sebesar 314 kkal, protein sebesar 11,32 gr, lemak sebesar 29,23 dan KH sebesar 0,33. 36 Sedangkan nilai gizi 1 porsi babi guling yang telah dihitung kandungan zat gizinya yaitu dari rumah makan babi guling LM didapatkan kandungan gizi 1 porsi sajian lengkap babi guling yang terdiri dari babi guling, oret, lawar babi dan babi genyol yang dijual adalah energi sebesar 237 kkal, protein sebesar 10,48 gr, lemak sebesar 20,99 dan KH sebesar 1,12

Results and Discussions

Sample Characteristics

It was found that of the 68 samples, 29 samples (42.6%) were in the age range 18-36 years, while 39 samples (57.4%) were in the age range 37-55 years

Table 1.
Distribution of Sample Characteristics

Age (Years)	n	%
18-36	29	42,6
37-55	39	57,4
Total	68	100,0

Gender		
Female	41	60,3
Male	27	39,7
Total	68	100

In addition, from the same number, data according to gender shows that 41 samples (60.3%) are women, while 27 samples (39.7%) are men.

Nutritional Value of 1 Portion of Suckling Pork

The nutritional value of 1 serving of suckling pig whose nutritional content has been calculated is from the ID suckling pig restaurant. The nutritional content of 1 portion of a complete serving of suckling pig consisting of suckling pig, pork satay, sequence, lawar pork and pork genyol which is sold is energy. 314 kcal, protein 11.32 grams, fat 29.23 and KH 0.33. 36 Meanwhile, the nutritional value of 1 serving of suckling pig whose nutritional content has been calculated is from the LM suckling pig restaurant. The nutritional content of 1 portion of a complete serving of suckling pig consisting of suckling pig, oret, lawar babi and genyol pork which is sold is 237 kcal of energy. , protein is 10.48 grams, fat is 20.99 and KH is 1.12 grams

The data that has been collected regarding nutritional status shows that from a total of 68 samples, there are 17 samples (25%) with normal nutritional status, 10 samples (14.7%) with obese nutritional status, and 41 samples (60.3%) with fat nutritional status. obesity nutrition, as seen in the picture below:

Figure 1.
Sample Obesity Distribution

The results of data collection regarding the distribution of the sample's nutritional status showed that the average BMI was 27.70 kg, while the highest BMI was 40.48 and the lowest BMI was 27.5.

Consuming Suckling Pig

From shows that the average energy consumption of samples from 1 portion of suckling pig is 402.30 kcal. The lowest consumption was recorded at 170 kcal, while the highest consumption reached 599 kcal
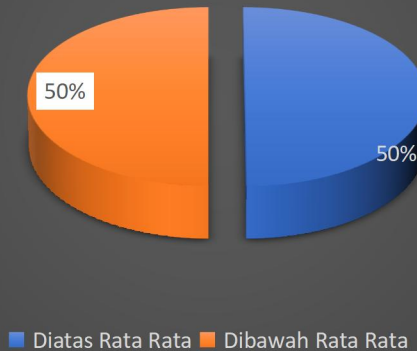
Figure 2.
Distribution of Sample Suckling Pork Rice Consumption

From the results of data collection based on suckling pig consumption, it was stated that from 68 samples, it was found that the number of samples consuming suckling pig was < the average, namely 34 samples (50%) and the number of samples consuming suckling pig ≥ the average, namely 34 samples (50%).

Based on the age characteristics of the sample, it was found that the majority of the sample aged 37-55 years had the nutritional status of obesity. A total of 21 samples (30.9%) of this age were recorded as obese.

Table 2.
Distribution of Sample Obesity by Age

Usia	Status Gizi						Jumlah		P-Value
	Normal		Gemuk		Obesitas				
	n	%	n	%	n	%	n	%	
18-36	7	10,3	2	2,9	20	29,4	29	42,6	0,00
37-55	10	14,7	8	11,8	21	30,9	39	57,4	
Total	17	25	10	14,7	41	60,3	68	100	

Based on the results of the sample's gender characteristics, it can be seen that the majority of the female sample has the nutritional status of obesity. A total of 25 samples (36.8%) from this group were recorded as obese.

Table 3
Distribution of Sample Obesity by Gender

Jenis Kelamin	Status Gizi						Jumlah		P-Value
	Normal		Gemuk		Obesitas				
	n	%	n	%	n	%	n	%	
Perempuan	11	16,2	5	7,4	25	36,8	41	60,3	0,00
Laki-laki	6	8,8	5	7,4	16	23,5	27	39,7	
Total	17	25	10	14,7	41	60,3	68	100	

Of the 68 samples who consumed suckling pig below average, the majority had normal nutritional status with a total of 17 samples (25%), followed by obese nutritional status with 9 samples (13.2%), and obese nutritional status with 8 sample (11.8%)

Table 4
Distribution of Sample Obesity Based on Suckling Pig Consumption

Konsumsi Babi Guling	Status Gizi						Jumlah		P-Value
	Normal		Gemuk		Obesitas				
	n	%	n	%	n	%	n	%	
< rata-rata	17	25	9	13,2	8	11,8	34	50	0,00
≥ rata-rata	0	0,0	1	1,5	33	48,5	34	50	
Total	17	25	10	14,7	41	60,3	68	100	

Meanwhile, of the samples that consumed at least as much suckling pig as the average, most had obese nutritional status with a total of 33 samples (48.5%), followed by obese nutritional status with only 1 sample (1.5%), while none had normal nutritional status. The results of statistical tests using chi-square show a p-value of 0.00 at a significance level of 5%. Therefore, because the p-value is smaller than 0.05, it can be concluded that there is a significant relationship between suckling pig consumption and obesity.

The research results showed that most of the samples were aged 37-55 years, 39 samples (57.4%) and 29 samples (42.6%) aged 18-36 years. Most of the people who were respondents in Lodtunduh Village, especially in the 2 selected hamlets, indeed most of the people who met the research inclusion criteria were aged 37-55 years. The research results obtained are also in line with research (Safitri and Rahayu, 2020) which states that most of the increase in the risk of obesity begins at the age of 30 years and above. Obesity or more commonly known as overweight is often associated with the amount of fat in the body. The accumulation of fat in the body causes enlargement and increase in fat cells, changes in preadipocyte tissue into adiposity and an increase in the number of fat tissue cells, causing obesity.

The results of the analysis of nutritional status data based on age illustrate that the majority of samples aged 37-55 years have the nutritional status of obesity, where the number of respondents who are obese is 21 samples (30.9%). Obesity occurs more often in adulthood, where the older you get, the higher the risk of obesity. Apart from that, increasing age is also known to be related to changes in body composition, where at the age of 30 years and over there is a decrease in fat-free mass and an increase in fat mass. This is in accordance with research conducted by (Agustina and Lampah, 2018) which shows that those aged 30 years and over are at high risk of

becoming obese. Based on gender, it is known that the majority of respondents were female, namely 41 samples (60.3%) and male respondents, namely 27 samples (39.7%). Most of the respondents who met the inclusion criteria in this study were female.

The results of this study which state that the majority of respondents are female are also in line with research conducted by (Nugroho et al., 2020) which states that the prevalence of obesity in women is 32.9%, much higher than men at 19. 7%. Differences in fat metabolism between men and women can also explain 43 why obesity is more common in women than men and in general women have greater body fat than men. Analysis of nutritional status data based on gender illustrates that the majority of female samples have the nutritional status of obesity, where the number of female respondents who are obese is 25 samples (36.8%). Overnutrition or obesity can happen to anyone, whether women or men, however, women actually have a higher risk of experiencing overnutrition or obesity compared to men due to hormonal factors. Some experts say that in women, the influence of hormones can also increase the risk of obesity. This is in accordance with research conducted by (Ujiani, 2019) where women will lose 30-50% of their total muscle mass at the age of 45 years. Many women gain weight during menopause and have excess fat.

Based on nutritional status, it was found that 17 samples (25.0) had normal nutritional status, 10 samples (14.7%) had obese nutritional status and 41 samples (60.3%) had obese nutritional status. Over nutritional status (obesity) can occur due to multifactorial factors

Conclusion

50% of Lodtunduh Tourism Village residents consume suckling pig less than the average and 50% also consume suckling pig ≥ average. The population of Lodtunduh Tourism Village is 60.3% obese. After analysis, there is a relationship between consumption of suckling

such as lack of physical activity, stress factors, genetic factors and so on (Safitri and Rahayu, 2020). The factor that usually has the most support and direct influence on a person's nutritional status is consumption or food intake.

From the research results of the 68 samples that have been studied, it is known that the average consumption of suckling pig and its companion is 402.30 kcal. From the research results it is also found that the minimum consumption of suckling pig is 170 kcal and the maximum consumption of suckling pig is 599 kcal. The results of data collection based on the consumption of 1 serving of suckling pig also showed that from 68 respondents it was found that the number of samples consuming suckling pig < the average was 34 samples (50%) and the number of samples consuming suckling pig ≥ the average was 34 samples (50%).

Food consumption is a factor that can directly influence the incidence of obesity or overweight if it is inappropriate or consumed in excess. Based on research conducted by (Patmala, 2023), using the chi-square test shows the result of p, namely <0.05, which means there is a relationship between consumption of foods containing high fat and the incidence of obesity, where foods containing high fat if consumed excessively can increases the risk of obesity. One of the traditional Balinese foods which is famous for its high fat content, which can increase the risk of obesity or being overweight is Babi Guling along with its accompaniments such as lawar pork, pork genyol, sequence and oret and pork satay. From the results of the chi-square test, p-value = 0.00 at a significance level of 5%. pig and obesity of residents in Lodtunduh Tourism Village, Ubud District, Gianyar Regency.

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