

The Relationship Between Consumption Patterns, Physical Activity and Sleep Patterns and the Incidence of Obesity in the Jambi Regional Police's National Police Training Center (SPN)

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Abstract

Obesity is a growing health problem among police officers and can reduce physical fitness and work performance. This study aims to analyze the relationship between consumption patterns, physical activity, and sleep patterns with the incidence of obesity among members of the Jambi Regional Police National Police (SPN). This quantitative study used an observational analytical design with a cross-sectional approach. The study population consisted of 109 members, with a sample of 86 respondents selected using simple random sampling. Data were collected using the Food Frequency Questionnaire (FFQ), Global Physical Activity Questionnaire (GPAQ), Pittsburgh Sleep Quality Index (PSQI), and anthropometric measurements. Data analysis was performed using univariate and bivariate methods using the Chi-square test. The results showed a prevalence of obesity of 51.2% and a significant relationship between consumption patterns ($p=0.02$), physical activity ($p<0.001$), and sleep patterns ($p=0.03$) with the incidence of obesity. In conclusion, unhealthy consumption patterns, low physical activity, and disturbed sleep patterns are significantly associated with the incidence of obesity among members of the Jambi Regional Police National Police (SPN).

Keywords: Physical Activity, Sleep Quality, Obesity, Police Personnel, Consumption Patterns

INTRODUCTION

Obesity is a growing health problem worldwide, including in Indonesia. Data from the 2023 Indonesian Health Survey (SKI) shows that the prevalence of obesity in adults is increasing and is more prevalent among formal workers, such as civil servants, the Indonesian National Armed Forces (TNI), and the Indonesian National Police (Polri). This condition can reduce fitness and work productivity, and increase the risk of various non-communicable diseases (World Health Organization, 2022; Simanungkalit & Simanungkalit, 2025).

For members of the Indonesian National Police (Polri), being in peak physical condition is crucial for carrying out their duties. However, data from the Jambi Regional Police's 2024 health checkup still shows a high prevalence of obese personnel. Research on Polri members in other regions also found that obesity remains a significant health problem within the police force (Ramayanti *et al.*, 2024; Rohmatika *et al.*, 2024).

One factor contributing to obesity is dietary habits. Consuming foods high in fat, sugar, and calories and low in fiber can lead to energy imbalances, leading to weight gain. Previous research has shown that unhealthy eating habits are significantly associated with obesity among police officers (Ramayanti *et al.*, 2024; Rohmatika *et al.*, 2024).

In addition to dietary patterns, low physical activity also contributes to an increased risk of obesity. The nature of police work, which is largely conducted indoors and facilitated by technological advances,

can reduce daily physical activity. Several studies have shown that police officers with low physical activity have a higher risk of obesity than those who are physically active (Rohmatika *et al.*, 2024; World Health Organization, 2022).

Sleep patterns are also a factor that can influence the incidence of obesity. Shift work systems and shift schedules cause many police officers to have irregular sleep patterns. Lack of sleep can disrupt the hormonal balance that regulates hunger and satiety, increasing the risk of obesity. This study aims to analyze the relationship between consumption patterns, physical activity, and sleep patterns with the incidence of obesity in the Jambi Regional Police's National Police (SPN). This research is important as a basis for developing personnel health programs, with the novelty of simultaneously assessing these three behavioral factors in police officers in Jambi Province, a field rarely studied (Ramayanti *et al.*, 2024; Rohmatika *et al.*, 2024).

METHOD

This study was a quantitative study with an observational analytical design and a cross-sectional approach. Measurements of the independent variables, namely consumption patterns, physical activity, and sleep patterns, and the dependent variable, obesity incidence, were conducted simultaneously to determine the relationship between the variables without intervention on the respondents (Creswell & Creswell, 2023; Sugiyono, 2022).

The research was conducted at the Jambi Regional Police's National Police Service (SPN) in September–October 2025. The study population consisted of all 109 members of the Jambi Regional Police's National Police Service (SPN). Based on the Slovin formula calculation with a 5% error rate, a sample of 86 respondents was obtained, selected using a simple random sampling technique so that each member of the population had an equal chance of being selected (Sudaryono, 2021; Sugiyono, 2022).

Data collection was conducted using questionnaires and anthropometric measurements. Consumption patterns were measured using the Food Frequency Questionnaire (FFQ), physical activity using the Global Physical Activity Questionnaire (GPAQ), and sleep patterns using the Pittsburgh Sleep Quality Index (PSQI). Obesity was determined based on Body Mass Index (BMI), obtained from respondents' weight and height measurements (World Health Organization, 2022; Ministry of Health of the Republic of Indonesia, 2022).

The collected data underwent editing, coding, entry, and cleaning before being analyzed. Univariate analysis was used to describe the frequency distribution of each research variable, while bivariate analysis used the Chi-Square test to determine the relationship between consumption patterns, physical activity, and sleep patterns with obesity. The magnitude of the risk association was assessed using the Prevalence Ratio (PR) with a 95% confidence level and a significance value of $p < 0.05$ (Emzir, 2023; Sudaryono, 2021).

The research was conducted in three stages: preparation, implementation, and completion. The preparation stage included problem identification, literature review, and instrument development. The implementation stage involved selecting respondents, completing questionnaires through interviews, and conducting anthropometric measurements. The final stage included data processing, analysis of results, preparation of a research report, and implementation of all activities in accordance with ethical research principles such as informed consent, data confidentiality, and scientific honesty (Emzir, 2023; Sugiyono, 2022).

RESULTS AND DISCUSSION

Univariate Analysis

Table 1 Overview of Consumption Patterns, Physical Activity and Sleep Patterns

Variables	Category	N	%
Obesity Incident	Not Obese	42	48.8
	Obesity	44	51.2
Consumption Patterns	Tall	40	46.5
	Low	46	53.5
Physical Activity	Tall	34	39.5
	Low	52	60.5
Sleep Patterns	Undisturbed	34	39.5
	Disturbed	52	60.5

Based on Table 1, the majority of respondents (46 respondents) had low dietary habits (53.5%), low physical activity (52 respondents) (60.5%), and disturbed sleep (52 respondents) (60.5%). Furthermore, 44 respondents (51.2%) were obese, while 42 respondents (48.8%) were not obese.

Table 2 Consumption Patterns

Types of Food	More than 1x a day		1x a day		3-6x/ per week		1-2 x/ per week		Less than 1x per week		Never	
	n	%	n	%	N	%	n	%	n	%	n	%
Padang rice	7	8.1	28	32.6	29	33.7	18	20.9	4	4.7	0	0
Fried rice	0	0	12	14	25	29.1	39	45.3	10	11.6	0	0
Bread	0	0	20	23.3	42	48.8	20	23.3	4	4.7	0	0
Fried noodles	2	2.3	3	3.5	27	31.4	41	47.4	13	15.1	0	0
Kwetiau	1	1.2	4	4.7	5	5.8	24	27.9	40	46.5	12	14
Mixed vegetables with the peanut sauce	0	0	6	7	2	2.3	4	4.7	31	36	43	50
Pempek	44	51.2	21	24.4	14	16.3	6	7	1	1.2	0	0
Ketoprak	1	1.2	1	1.2	11	12.8	43	50.0	30	24.9	0	0
Siomay	11	12.8	30	24.9	33	38.4	4	4.7	6	7	2	2.3
Batagor	1	1.2	6	7	7	8.1	18	20.9	32	37.2	22	25.6
Satay	37	43	40	46.5	9	10.5	0	0	0	0	0	0
Seblak	1	1.2	5	5.8	6	7.0	8	9.3	52	60.5	14	16.3
Ketoprak	17	19.8	35	40.7	24	27.9	9	10.5	1	1.2	0	0
Chicken noodle	0	0	27	31.4	30	34.9	22	25.6	7	8.1	0	0
Sponge	25	29.1	35	40.7	21	24.4	5	5.8	0	0	0	0
Bakpia	11	12.8	41	47.7	30	34.9	4	4.7	0	0	0	0
sushi	0	0	25	29.1	48	55.8	12	14.0	1	1.2	0	0
ramen	1	1.2	13	15.1	29	33.7	34	39.5	9	10.5	0	0
Green Bean Porridge	13	15.1	30	34.9	35	40.7	8	9.3	0	0	0	0

Black Sticky Rice Porridge	24	27.9	32	37.2	20	23.3	8	9.3	2	2.3	0	0
Donuts	0	0	0	0	0	0	13	15.1	50	58.1	23	26.7
Cheese	1	1.2	6	7	44	51.2	23	26.7	12	14.0	0	0
Fritters	7	8.1	28	32.6	29	33.7	16	20.9	4	4.7	0	0
Chocolate	0	0	12	14	25	29.1	39	45.3	10	11.6	0	0
Fried Nuts	0	0	20	23.3	42	48.8	20	23.2	4	4.7	0	0
Fried Chicken	2	2.3	3	3.5	27	31.4	41	47.7	13	15.1	0	0
Burger	1	1.2	4	4.7	5	5.8	24	27.9	40	46.5	12	14
Gacoan Noodles	0	0	6	7	2	2.3	4	4.7	31	36	43	50
Popcorn	44	51.2	21	24.4	14	16.3	6	7	1	1.2	0	0
Betawi Soto	1	1.2	1	1.2	11	12.8	43	50	30	34.9	0	0
Risol	11	12.8	30	34.9	33	38.4	4	4.7	6	7	2	2.3
Cireng	1	1.2	6	7	7	8.1	18	20.9	32	37.2	22	25.6
Phone	37	43	40	46.5	9	10.5	0	0	0	0	0	0
Boiled rice cake	1	1.2	5	5.8	6	7	8	9.3	52	60.5	14	16.3
Egg rolls	17	19.8	35	40.7	24	27.9	9	10.5	1	1.2	0	0
Sweet Martabak	0	0	27	31.3	30	34.9	22	25.6	7	81,	0	0
Rawon	25	29.1	35	40.7	21	24.4	5	5.8	0	0	0	0
Nastar cake	11	12.8	41	47.7	30	34.9	4	4.7	0	0	0	0
serundeng	0	0	25	29.1	48	55.8	12	14.0	1	1.2	0	0
pizza	1	1.2	13	15.1	29	33.7	34	39.5	9	10.5	0	0
Sausage	13	15.1	30	34.9	35	40.7	8	9.3	0	0	0	0
Meatball	24	27.9	32	37.2	20	23.3	8	9.3	2	2.3	0	0
Nuggets	0	0	0	0	0	0	13	15.1	50	58.1	0	0
Cheese Dumplings	1	1.2	6	7	44	51.2	23	26.7	12	14	0	0
Canned sardines	13	15.1	30	34.9	35	40.7	8	9.3	0	0	0	0
White bread	24	27.9	32	37.2	20	23.3	8	9.3	2	2.3	0	0
Tomato sauce	0	0	0	0	0	0	13	15.1	50	58.1	23	26.7
BBQ sauce	1	1.2	6	7	44	51.2	23	26.7	12	14	0	0
Instant noodles	7	8.1	28	32.6	29	33.7	18	20.9	4	4.7	0	0
Pudding	0	0	12	14	25	29.1	39	45.3	10	11.6	0	0
Agar-agar	0	0	20	23.3	42	48.8	20	23.3	4	4.7	0	0
Sweet tea	2	2.3	3	3.5	27	31.4	41	47.7	13	15.1	0	0
Coffee milk	1	1.2	4	4.7	5	5.8	24	27.9	40	46.5	12	14
Boba Tea	0	0	6	7	2	2.3	4	4.7	31	36	43	50
Ice cream	44	51.2	21	24.4	14	16.3	6	7	1	1.2	0	0

Isotonic Drinks	1		1		11	12.8	43	50	30	34.9	0	0
		1.2		1.2								
Sweetened condensed milk	11	12.8	30	34.9	33	38.4	4	4.7	6	7	2	2.3
Mixed fruit ice dessert	1	1.2	6	7	7	8.1	18	20.9	32	37.2	22	25.6
Cendol Ice	37	43	40	46.5	9	10.5	0	0	0	0	0	0
Grass jelly cappuccino	1	1.2	5	5.8	6	7	8	9.3	52	60.5	14	16.3
Ice doger	17	19.8	35	40.7	24	27.9	9	10.5	1	1.2	0	0
Es teller	0	0	27	31.4	30	24.9	22	25.6	7	8.1	0	0
Banana/sweet potato/pumpkin compote	25	29.1	35	40.7	21	24.4	5	5.8	0	0	0	0
Sekoteng	11	12.8	41	47.7	30	34.9	4	4.7	0	0	0	0
bandrek	0	0	25	29.1	48	55.8	12	14.0	1	1.2	0	0
Young coconut ice with syrup	1	1.2	13	15.1	29	33.7	34	39.5	9	10.5	0	0
Fruit ice	11	12.8	30	34.9	35	40.7	8	9.3	2	2.3	0	0
Fruit juice	23	26.7	32	37.2	20	23.3	8	9.3	3	3.5	0	0
Kopi Kenangan (Milk Oreo Crumble, Kopi Kenangan Mantan, Caramel Latte, Black Palm Milk Coffee, Matcha Espresso, Butterscotch Sea Salt Latte)	0	0	0	0	0	0	13	15.1	50	58.1	23	26.7
Fore Coffee (Butterscotch Sea Saltlatte, Sugar Palm Latte, Cappuccino, Malty Latte, Cafe Latte, Dark Chocolate, Matcha Green Tea, Classic Milo)	1	1.2	6	7	43	50	23	26.7	13	15.1	0	0
Tomorrow Coffee (Caramel Cheeselatte, Cheese Clod Latte, Dino-Mite Mango Frappe, Tomorrow Aren Latte, Tomorrow Oat Latte, Kopi Susu Palm, Cappuccino, Caffè Matcha, Caramel Macchiato)	1	1.2	1	1.2	11	12.8	43	50	30	34.9	0	0
Coca-Cola	11	12.8	29	33.7	32	37.2	4	4.7	8	9.3	2	2.3
Sprit	7	8.1	25	29.1	30	34.9	18	20.9	6	7	0	0
Fruit Tea	7	8.1	26	30.2	29	33.7	18	20.9	6	7	0	0
Fanta	7	8.1	27	31.4	29	33.7	17	19.8	5	5.8	1	1.2
Tea cups	7	8.1	28	32.6	30	34.9	16	18.6	4	4.7	1	1.2
Hydro Coco	7	8.1	25	29.1	29	33.7	17	19.8	7	8.1	1	1.2
Nescafe	0	0	12	14	25	29.1	38	44.2	11	12.8	0	0
Nii Green Tea	0	0	22	25.6	40	46.5	21	24.4	3	3.5	0	0
M-150	3	3.5	4	4.7	27	31.4	39	45.3	13	15.1	0	0
Good Day	1	1.2	6	7	4	4.7	23	26.7	41	47.7	11	12.8
Floridina	1	1.2	9	10.5	2	2.3	4	4.7	30	34.9	40	46.5
Bottled Tea	43	50	20	23.3	13	15.1	5	5.8	4	4.7	1	1.2

Tebs	1	1.2	3	3.5	11	12.8	41	147.7	29	33.7	1	1.2
Milo	8	9.3	31	36	33	38.4	5	5.8	7	8.1	2	2.3
Coffee Memories	1	1.2	10	11.6	10	11.6	17	19.8	31	36	17	19.8
Bottled Syrup (Marjan, ABC)	34	39.5	38	44.2	10	11.6	1	1.2	2	2.3	1	1.2
Mizone	1	1.2	8	9.3	6	7	8	9.3	51	59.3	12	14
Pocari	16	18.6	32	37.2	24	27.9	9	10.5	4	4.7	1	1.2
Extra Joss	0	0	24	27.9	28	32.6	23	26.7	10	11.6	1	1.2
Nutri Essence	21	24.4	34	39.5	21	24.4	6	7	1	1.2	3	3.5
Cimory Yogurt	9	10.5	40	46.5	39	33.7	4	4.7	3	3.5	1	1.2
Yakult	0	0	24	27.9	47	54.7	13	15.1	2	2.3	0	0
Frestea	1	1.2	13	15.1	27	31.4	33	38.4	11	12.8	1	1.2
Teh Kotak	12	14	30	34.9	33	38.4	8	9.3	2	2.3	1	1.2
Good Time	21	24.4	33	38.4	21	24.4	7	8.1	3	3.5	1	1.2
Luwak White Coffee	1	1.2	7	8.1	3	3.5	12	14	43	50	20	23.3
Buavita	1	1.2	6	7	43	50	23	26.7	13	15.1	0	0

Based on the results of the univariate analysis, it was found that the majority of Jambi Regional Police employees had a low consumption pattern. In the high-calorie food group, the most respondents consumed pempek more than once a day (51.2%) and consumed satay by 43%. In the high-fat food group, popcorn consumption more than once a day reached 51.2% and klepon 43%. In the preserved food group, meatballs and white bread consumption more than once a day were each 27.9%. Meanwhile, in the high-sugar beverage group, the majority of respondents consumed ice cream (51.2%) and es cendol (43%) more than once a day. As for the packaged sweetened beverage group, bottled tea consumption more than once a day reached 50% and bottled syrup 39.5%. Overall, the respondents' consumption patterns tended to be unhealthy and could potentially increase the risk of obesity.

Bivariate Analysis

Table 3 Relationship between Consumption Patterns and Obesity Incidents at the Jambi Regional Police

Obesity Incident	Consumption Patterns				Total		P value
	n	%	N	%	n	%	
Obesity	26	59.1	18	40.9	44	100	0.02
Not Obese	14	33.3	28	66.7	42	100	
Total	40	46.5	46	53.5	86	100	

Based on Table 3, 59.1% of respondents with high consumption patterns experienced obesity, while 40.9% of respondents with low consumption patterns experienced obesity. The statistical test results showed a p-value of 0.02 (<0.05), thus concluding that there is a significant relationship between consumption patterns and the incidence of obesity among members of the Jambi Regional Police.

Table 4 Relationship between Physical Activity and Obesity Incidents at the Jambi Regional Police

Obesity Incident	Activity				Total		P value
	Low		Tall		n	%	
	n	%	N	%			
Obesity	27	61.4	17	38.6	44	100	0.00
Not Obese	7	16.7	35	83.3	42	100	

Total	34	39.5	52	60.5	86	100
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Based on the table, it is known that 61.4% of respondents with low physical activity were obese, while 38.6% of respondents with high physical activity were obese. The statistical test results showed a p-value of 0.00 (<0.05), thus it can be concluded that there is a significant relationship between physical activity and the incidence of obesity among members of the Jambi Regional Police.

Table 5 Relationship between Sleep Patterns and Obesity Incidents at the Jambi Regional Police

Obesity Incident	Sleep Patterns				Total		P value
	Disturbed		Undisturbed		n	%	
	N	%	N	%			
Obesity	32	71.7	12	27.3	44	100	0.03
Not Obese	20	47.6	22	52.4	42	100	
Total	52	60.5	34	39.5	86	100	

Based on the table, it is known that 71.7% of respondents with disturbed sleep patterns were obese, while 27.3% of respondents with undisturbed sleep patterns were obese. The statistical test results showed a p-value of 0.03 (<0.05), thus concluding that there is a significant relationship between sleep patterns and the incidence of obesity among members of the Jambi Regional Police.

Discussion

1. Overview of Obesity Incidents in Jambi Regional Police Members

ResultsUnivariate analysis showed that 44 respondents (51.2%) were obese. This condition can be influenced by several factors, such as an unbalanced diet, lack of physical activity, work stress, and irregular sleep patterns. Police officers face high job demands, long working hours, and administrative activities, which can lead to reduced daily physical activity. As a result, energy expenditure increases, leading to the accumulation of body fat.³¹

Obesity is a condition of excessive fat accumulation that can increase the risk of various non-communicable diseases such as hypertension, diabetes mellitus, heart disease, and other metabolic disorders.³¹ According to the World Health Organization, obesity occurs due to an imbalance between calories consumed and calories used by the body. Increased consumption of foods high in fat, sugar, and low in fiber is one of the main causes of the rising obesity rate in various countries.

In police officers, obesity can also be influenced by work stress levels. Workload, job pressure, and shift work systems can impact healthy lifestyles. Prolonged stress can increase overconsumption of food as a coping mechanism, particularly fast food and high-sugar drinks. Furthermore, lack of rest and regular exercise contributes to an increase in body mass index (BMI).

ResultsThis research aligns with Nurhidayah's research, which states that high-stress jobs and sedentary activities are associated with an increased risk of obesity (Nurhidayah, 2020). Other research also shows that police officers are among the occupational groups vulnerable to overweight and obesity due to work patterns that do not support a healthy lifestyle.

Obesity among police officers requires attention because it can impact physical fitness and work productivity. Police officers are required to be in peak physical condition to carry out their duties of public service and security. Therefore, promotional and preventive measures are needed, such as education on balanced nutrition, increased physical activity, regular health check-ups, and the implementation of a healthy lifestyle in the workplace.

2. The Relationship between Consumption Patterns and the Incidence of Obesity in Jambi Regional Police Members

The research results revealed that 59.1% of respondents with high consumption patterns were obese. Meanwhile, 40.9% of respondents with low consumption patterns were obese. The statistical test

showed a p-value of $0.02 < 0.05$. Therefore, it can be concluded that there is a significant relationship between consumption patterns and obesity incidence in the Jambi Regional Police.

Unbalanced eating patterns, such as excessive consumption of foods high in fat, sugar, fast food, and sugary drinks, can increase the risk of obesity. Energy intake exceeding energy expenditure leads to fat accumulation in the body, which increases body mass index (BMI).³¹

Police officers have busy work schedules and irregular schedules, often resorting to convenience foods and fast food. Consistently consuming high-calorie, low-calorie foods can contribute to weight gain. Furthermore, insufficient fruit and vegetable consumption can lead to nutritional imbalances that contribute to obesity.

The results of this study are in line with Sari and Wahyuni (2021) who also showed that individuals with more frequent fast food consumption have a higher risk of obesity compared to individuals with a healthy diet.

In addition to food type, meal frequency and portion size also influence obesity. Eating large portions at night and consuming high-calorie snacks can increase total daily energy intake. If this is not balanced with adequate physical activity, weight gain is more likely.

In police officers, environmental factors can also influence eating patterns. Busy work schedules and limited rest time often lead some members to skip breakfast or eat irregularly. Irregular eating patterns can disrupt metabolism and increase the tendency to overeat at certain times, leading to obesity.

Thus, consumption patterns are a significant factor associated with obesity among police officers. Therefore, efforts are needed to raise awareness about the importance of a healthy diet, portion control, and balanced nutritional intake to maintain ideal body weight and improve police officer health.

3. The Relationship between Physical Activity and the Incidence of Obesity in Jambi Regional Police Members

The research results revealed that 61.4% of respondents with low levels of physical activity were obese, while 38.6% of respondents with high levels of physical activity were obese. The statistical test showed a p-value of $0.00 < 0.05$. Therefore, it can be concluded that there is a significant relationship between physical activity and obesity in the Jambi Regional Police.

Low physical activity can increase the risk of obesity because the body expends less energy than it takes in through food. This imbalance causes fat to accumulate in the body, leading to weight gain.

Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure. Individuals who rarely engage in physical activity or exercise tend to have a lower metabolism, resulting in less optimal calorie burning. For police officers, work activities that involve more administrative work or prolonged sitting can lead to reduced daily physical activity and an increased risk of obesity.

The results of this study are in line with research conducted by Nurhidayah stated that low physical activity has a significant relationship with increased body mass index (BMI) and the incidence of obesity in adults.

Lack of physical activity can lead to energy accumulation in the form of body fat. Furthermore, sedentary habits such as prolonged sitting, motor vehicle use, and lack of regular exercise also contribute to weight gain. For police officers, busy and irregular work schedules often lead to a lack of time for exercise, limiting daily physical activity.

Regular physical activity can help maintain energy balance, boost metabolism, and aid fat burning. Exercises such as walking, jogging, gymnastics, or regular physical exercise can help maintain an ideal body weight and reduce the risk of obesity.

Thus, physical activity is a significant factor associated with obesity among police officers. Therefore, efforts are needed to increase physical activity through regular exercise, adopting an active

lifestyle, and managing work and rest schedules effectively to maintain police officers' health and fitness.

4. The Relationship Between Sleep Patterns and the Incidence of Obesity in Jambi Regional Police Members

The study found that 72.7% of respondents with disturbed sleep patterns were obese. Meanwhile, 27.3% of respondents with undisturbed sleep patterns were obese. The statistical test revealed a p-value of $0.03 < 0.05$. Therefore, it can be concluded that there is a significant relationship between sleep patterns and obesity incidence in the Jambi Regional Police.

PatternPoor sleep, such as short sleep duration, poor quality, and irregular sleep schedules, can increase the risk of obesity. Lack of sleep can affect the balance of hormones that regulate hunger and satiety, thereby increasing appetite and calorie intake.

PatternInadequate sleep can lead to an increase in the hormone ghrelin, which stimulates hunger, and a decrease in the hormone leptin, which promotes satiety. This condition makes individuals feel hungry more easily and tends to consume foods high in calories, fat, and sugar. If this continues without sufficient physical activity, the risk of obesity will increase.

OnPolice officers often experience sleep disruption due to irregular work schedules, shifts, night shifts, and high levels of work pressure. Lack of rest can lead to physical fatigue and reduced sleep quality. Furthermore, work stress can also affect sleep patterns, making police officers more susceptible to sleep disorders and weight gain.

ResultsThis research is in line with research by Sari and Wahyuni (2021) which shows that individuals with poor sleep quality are at greater risk of obesity compared to individuals with good sleep patterns.

Besides sleep duration, staying up late and irregular sleep patterns can also disrupt metabolism. These metabolic disorders can affect energy burning and fat storage, making weight gain easier. Lack of sleep can also lead to daytime fatigue, reducing physical activity and increasing the risk of obesity.

Thus, sleep patterns are a factor associated with obesity among police officers. Therefore, efforts are needed to maintain good sleep patterns by ensuring adequate rest periods, reducing late-night activities, and developing a healthy lifestyle to maintain police officers' health and fitness.

CONCLUSION

This study shows that the incidence of obesity among members of the Jambi Regional Police's National Police (SPN) is relatively high, at 51.2%. Bivariate analysis results indicate that consumption patterns, physical activity, and sleep patterns are significantly associated with obesity. Respondents with high consumption patterns are more likely to be obese than those with low consumption patterns. Furthermore, low physical activity and disturbed sleep patterns are also found to be more prevalent among obese respondents. These findings indicate that health behavior factors play a significant role in the occurrence of obesity among police officers.

This study has limitations due to its cross-sectional design, which cannot directly explain the causal relationship between risk factors and obesity. Furthermore, data on consumption patterns, physical activity, and sleep patterns were obtained through questionnaires, potentially introducing information bias. Future research is recommended to use a longitudinal or cohort design involving a larger number of respondents and considering other factors such as stress levels, work duration, and medical history. Practically, the results of this study can serve as a basis for the Jambi Regional Police's National Police Service (SPN) in developing health promotion programs through education on balanced nutrition, increasing routine

physical activity, regulating work patterns that support sleep quality, and implementing regular health checks to prevent and control obesity among police officers.

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