PALUWALA: Jurnal Ilmu Kesehatan
Special Issue (GICHS 2025) Pages 280-286
https://ejournal.airlangga.org/index.php/ghj
E-ISSN 3090-0239

Korelasi antara Durasi Duduk, Pola Konsumsi, dan Aktivitas Fisik Harian dengan Status Gizi pada Pelanggan Kedai Kopi Nuansa by Lawa

Correlation Between Sitting Duration, Consumption Patterns and Daily Physical Activity with Nutritional Status Among Coffee Shop Customers at Nuansa by Lawa

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Article info

Article history:
Received: 25 Agustus 2025
Revised: 1 September 2025
Accepted: 29 September 2025
Online: 29 September 2025

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Abstrak

Perubahan gaya hidup masyarakat modern telah meningkatkan aktivitas sedentari, seperti duduk dalam waktu lama di kedai kopi, dan juga memengaruhi pola makan dan aktivitas fisik, yang pada gilirannya memengaruhi status gizi. Masalah penelitian dalam penelitian ini adalah apakah ada hubungan antara durasi duduk, pola makan, dan aktivitas fisik harian dengan status gizi pelanggan kedai kopi. Penelitian ini bertujuan untuk mengetahui hubungan antara durasi duduk, pola makan, dan aktivitas fisik harian dengan status gizi pelanggan di Kedai Kopi Nuansa by Lawa Kota Gorontalo. Penelitian ini merupakan penelitian analitik kuantitatif dengan pendekatan cross-sectional. Populasi terdiri dari pelanggan kedai kopi berusia 18–25 tahun, dengan jumlah sampel sebanyak 188 responden yang diperoleh melalui teknik accidental sampling. Data dikumpulkan menggunakan kuesioner FFQ dan GPAQ beserta pengukuran Indeks Massa Tubuh (IMT). Analisis data dilakukan dengan menggunakan uji ChiSquare. Analisis statistik menunjukkan bahwa durasi duduk ($p = 0,022 < 0,05$), pola makan ($p = 0,000 < 0,05$), dan aktivitas fisik ($p = 0,840 > 0,05$) berpengaruh signifikan terhadap status gizi. Berdasarkan temuan ini, durasi duduk dan pola makan berhubungan signifikan dengan status gizi, sedangkan aktivitas fisik tidak berhubungan signifikan. Diharapkan temuan ini dapat membantu meningkatkan kesadaran masyarakat, terutama di kalangan pelanggan kedai kopi, untuk menjaga pola makan dan mengatur waktu duduk guna mencegah gangguan status gizi.

Kata Kunci: *Antibacterial, Cream, Impatiensbalsamina, Propionibacteriumacnes*

Abstract

Changes in modern society's lifestyle have increased sedentary activities, such as sitting for long periods in coffee shops, and have also influenced dietary patterns and physical activity, which in turn affect nutritional status. The research problem in this study is whether there is an association between sitting duration, dietary patterns, and daily physical activity with the nutritional status of coffee shop customers. This study aims to determine the association between sitting duration, dietary patterns, and daily physical activity with the nutritional status of customers at Nuansa by Lawa Coffee Shop in Gorontalo City. This research is a quantitative analytic study using a cross-sectional approach. The population consists of coffee shop customers aged 18–25 years, with a total sample of 188 respondents obtained through accidental sampling techniques. Data were collected using the FFQ and GPAQ questionnaires along with Body Mass Index (BMI) measurements. Data analysis was conducted using the ChiSquare test. The statistical analysis revealed that sitting duration obtained ($p = 0.022 < 0.05$), dietary patterns obtained ($p = 0.000 < 0.05$), and physical activity obtained ($p = 0.840 > 0.05$). Based on these findings, sitting duration and dietary patterns were significantly associated with nutritional status, while physical activity was not significantly associated. It is expected that these findings can help raise public awareness, especially among coffee shop customers, to maintain dietary patterns and regulate sitting time to prevent nutritional status disorder

Keywords: *Antibacterial, Cream, Impatiens balsamina, Propionibacterium acnes*

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BACKGROUND

The rapid growth of coffee shops in urban areas has transformed these venues from mere places to enjoy food and beverages into multifunctional spaces for socializing, working, and leisure activities. Comfortable atmospheres, appealing designs, and facilities such as Wi-Fi encourage visitors to spend prolonged periods of time in these establishments. This trend, often popularized through social media, has become a distinct element of modern urban lifestyles (Hanna et al., 2023). However, prolonged sitting a key indicator of sedentary behavior—has been correlated with increased risks of obesity, cardiovascular diseases, and metabolic disorders. Moreover, dietary patterns commonly observed in coffee shop settings, such as the frequent consumption of sugarsweetened beverages and high-calorie snacks, may further exacerbate the adverse health effects of physical inactivity.

The combination of prolonged sitting and unbalanced dietary intake can significantly influence nutritional status (Roberts et al., 2021). According to the World Health Organization (WHO, 2023), malnutrition in its dual forms underweight and overweight or obesity remains a major global health issue. In 2023, 2.5 billion adults were classified as overweight, with 890 million obese, while underweight prevalence remains high in low-income countries. In Indonesia, adult obesity prevalence increased from 21.8% in 2018 to 23.4% 2 in 2023, and in Gorontalo Province, underweight prevalence reached 22.0%, with overweight at 4.4%. These figures highlight the urgent need to address lifestyle-related factors such as dietary patterns, sedentary behavior, and physical activity (SKI, 2023). In Gorontalo City, the number of coffee shops reached 182 in 2023, according to data from the Tourism, Youth, and Sports Office of Gorontalo City. reflecting strong public interest in coffee shop culture. Preliminary observations at Nuansa by Lawa one of the most popular coffee shops in the city revealed that most customers spend one to four hours per visit, often consuming high-calorie beverages and snacks, with varying levels of daily physical activity. This behavioral pattern may have measurable correlations with their nutritional status (Wahid et al., 2022). Nutritional status reflects the adequacy of nutrient intake and is influenced by both internal factors and external factors.

Prolonged sitting, measured using tools such as the Global Physical Activity Questionnaire (GPAQ), is a core sedentary behavior that, when excessive, contributes to non-communicable disease risk. Dietary patterns, defined as the type and amount of foods consumed over a specific period, are shaped by knowledge, food availability, socioeconomic conditions, and cultural preferences. Regular physical activity, on the other hand, plays a critical role in maintaining energy balance and preventing non-communicable diseases (Rahma et al., 2024).

Previous studies have identified significant correlations between diet, physical activity, and nutritional status in various populations. However, research specifically examining these relationships in coffee shop customers particularly within a localized urban context remains limited (Hidayat, 2023). This study aims to investigate whether there is a correlation between sitting duration, dietary patterns, and daily physical activity with the nutritional status of coffee shop customers at Nuansa by Lawa. Specifically, it seeks to identify the customers' sitting duration, dietary patterns, and daily physical activity levels, as well as to examine how each of these factors is correlated with their nutritional status. By integrating these objectives, the research intends to provide a comprehensive understanding of how lifestyle behaviors in coffee shop settings may influence overall health outcomes (Aprillia, 2023).

This research integrates three key lifestyle variables sitting duration, dietary patterns, and physical activity to assess nutritional status within a specific and underexplored population coffee shop customers in Gorontalo City. While previous studies have primarily targeted school or university populations, this study focuses on a public social setting that is increasingly relevant to modern urban life. Findings are expected to serve as a basis for health promotion strategies aimed at improving dietary habits and physical activity levels in recreational and social environments.

METHODS

This study applied a quantitative cross-sectional design and was conducted at Nuansa by Lawa Coffee Shop, located on Moh. Yamin IV Street, Limba B Subdistrict, Kota Selatan District, Gorontalo City, from March to April 2025. Respondents were selected using an accidental sampling technique with inclusion criteria of being 18–25 years old and willing to participate. Data were collected using the Food Frequency Questionnaire (FFQ) to assess dietary patterns, the Global Physical Activity Questionnaire (GPAQ) to measure sitting duration and physical activity, and body weight and height measurements to calculate Body Mass Index (BMI) as an indicator of nutritional status. The instruments used included validated FFQ and GPAQ questionnaires. Data analysis consisted of univariate analysis and bivariate analysis using the Chi-Square test, and multivariate analysis with a significance level of ($p<0.05$).

RESULTS AND DISCUSSION

3.1 Result

3.1.1 Respondent

Characteristics This study involved 188 respondents who were customers of Nuansa by Lawa Coffee Shop in Gorontalo City. The respondents' characteristics included age, gender, sitting duration, dietary patterns, daily physical activity levels, and nutritional status. Most respondents were aged 18–25 years, with a certain gender being more predominant.

Table 1. Characteristics of Respondents by Age, Gender, and Visit Frequency at Nuansa by Lawa Coffee Shop in 2025

Age	Total	
	Frequency (f)	Percentage (%)
18-20YearsOld	51	27,1
21-23YearsOld	61	32,4
24-25YearsOld	76	40,4
Total	**188**	**100,0**
Gender		
Male	91	48,4
Female	97	51,6
Total	**188**	**100,0**
VisitFrequency		
3-4Times	174	92,6
5-6Times	9	4,8
7 Times	5	2,7
Total	**188**	**100,0**

Source: Primary Data, 2025

Based on Table 1, out of 188 respondents, 51 people (27.1%) were aged 18–20 years, 61 people (32.4%) were aged 21–23 years, and 76 people (40.4%) were aged 24–25 years, indicating that the majority were in the 24–25 age group. In terms of gender, there were 91 males (48.4%) and 97 females (51.6%), showing a relatively balanced distribution with a slight predominance of females. Regarding visit frequency, most respondents, 174 people (92.6%), visited Nuansa by Lawa 3–4 times per week, while 9 people (4.8%) visited 5–6 times per week, and only 5 people (2.7%) visited 7 times per week.

3.1.2 Univariate Analysis

Univariate analysis was conducted to describe the characteristics of each research variable based on the collected data. This type of analysis provides an overview of the frequency distribution and percentage for every variable, allowing the researcher to observe patterns and trends within the dataset. The results are presented in the form of frequency distribution tables, which help to simplify the interpretation of respondent characteristics and the distribut ion of the studied variables.

Table 2. Frequency Distribution of Respondents by Sitting Duration, Dietary Pattern, Daily Physical Activity, and Nutritional Status at Nuansa by Lawa Coffee Shop in 2025

SittingDuration	Total Frequency (f)	Percentage (%)
Short	12	6,4
Moderate	62	33,0
Long	114	60,6
Total	**188**	**100,0**
DietaryPatterns		
Indequate	74	39,4
Aduquate	76	40,4
Good	38	20,2
Total	**188**	**100,0**
DailyPhysicalActivity		
Light	65	34,6
Moderate	80	42,6
Heavy	43	22,9
Total	**188**	**100,0**

Nutritional Status		
Underweight	39	20,7
Normal	108	57,4
Overweight	41	21,8
Total	**188**	**100,0**

Source: Primary Data, 2025

Based on Table 2, out of 188 respondents, 12 (6.4%) had a short sitting duration, 62 (33.0%) had a moderate duration, and 114 (60.6%) had a long duration. This indicates that most respondents tended to spend longer periods at Nuansa by Lawa Coffee Shop as it was considered comfortable for studying, working, or relaxing, while short visits were usually for brief purposes such as buying drinks or meeting friends. In terms of dietary patterns, 74 respondents (39.4%) had poor patterns, 76 (40.4%) moderate, and 38 (20.2%) good, with the majority in the moderate category, showing that most respondents managed their food consumption according to daily needs.

Regarding physical activity, 65 respondents (34.6%) were in the light category, 80 (42.6%) moderate, and 43 (22.9%) heavy, suggesting that most engaged in moderate-intensity activities such as brisk walking, cycling, or household chores, while fewer performed heavy activities like exercising or carrying loads. For nutritional status, 39 respondents (20.7%) were underweight, 108 (57.4%) normal, and 41 (21.8%) overweight, showing that the majority were in the normal category, although some respondents still experienced undernutrition or overnutrition due to imbalanced energy intake.

3.1.3 Bivariate Analysis

To test the validity of the formulated hypotheses, the researcher used the Chi-Square test. The selection of this test was based on the type of data, which is nominal or categorical, making the ChiSquare test appropriate for determining whether there is a relationship between two variables. The Chi-Square test is used to analyze differences between the observed frequency distribution and the expected frequency, as well as to determine whether there is a statistically significant relationship between the variables studied. The significance value (Sig.) obtained from this test serves as the basis for determining whether the proposed hypothesis is accepted or rejected.

Table 3. Correlation Between Sitting Duration and Nutritional Status Among Customers at Nuansa by Lawa Coffee Shop

Sitting	**Nutritional Status**						**Total**		
Duration	***Underweigh***		**Normal**	***Overweight***		***Value***			
	F	***%***	***F***	***%***	***F***	***%***	***F***	***%***	
Short	***1***	***8,3***	***11***	***91,7***	***0***	***0,0***	***12***	***6,4***	
Moderate	***17***	***27,4***	***36***	***58,1***	***9***	***14,5***	***62***	***33,0***	***0,022***
Long	***21***	***18,4***	***61***	***53,5***	***32***	***28,1***	***114***	***60,6***	
Total	***39***	***20,7***	***108***	***57,4***	***41***	***21,8***	***188***	***100***	

Source: Primary Data, 2025

Based on Table 4.10, the longest sitting duration was the most common, found in 114 respondents (60.6%), with 61 respondents (53.5%) having a normal nutritional status and 32 respondents (28.1%) being overweight. A moderate sitting duration was found in 62 respondents (33.0%), with the majority having a normal nutritional status (36 respondents or 58.1%). Meanwhile, a short sitting duration was found in only 12 respondents (6.4%), with most having a normal nutritional status (11 respondents or 91.7%).

The Chi-Square test results showed a significant correlation between sitting duration and nutritional status ($p = 0.022 < 0.05$). This indicates that the longer a person's sitting duration, the higher the tendency to have an abnormal nutritional status (underweight or overweight) compared to those with shorter sitting durations.

Table 4. Correlation Between Dietary Patterns and Nutritional Status Among Customers at Nuansa by Lawa Coffee Shop

Sitting	Nutritional Status						Total		
Duration	*Underweigh*		Normal	*Overweight*		*Value*			
	F	%	F	%	F	%	F	%	
Indiquate	34	45,9	36	48,6	4	5,4	74	39,4	
Aduquate	5	6,6	69	90,8	2	2,6	76	40,4	**0,000**
Good	0	0,0	3	7,9	35	92,1	38	20,2	
Total	**39**	**20,7**	**108**	**57,4**	**41**	**21,8**	**188**	**100**	

Source: Primary Data, 2025

Based on Table 9, the majority of respondents were in the moderate dietary pattern category, totaling 76 respondents (40.4%), with most having a normal nutritional status (69 respondents or 90.8%). In the poor dietary pattern category, there were 74 respondents (39.4%), with the highest nutritional status distribution in the underweight category (34 respondents or 45.9%). Meanwhile, in the good dietary pattern category, consisting of 38 respondents (20.2%), the majority were overweight (35 respondents or 92.1%).

The Chi-Square test results showed a significant correlation between dietary patterns and nutritional status ($p = 0.000 < 0.05$). This indicates that dietary patterns are significantly related to nutritional status, where poor dietary patterns tend to be associated with underweight, while good dietary patterns are more associated with overweight.

Table 5. Correlation Between Physical Activity and Nutritional Status Among Customers at Nuansa by Lawa Coffee Shop

Sitting	Nutritional Status						Total		
Duration	*Underweigh*		Normal	*Overweight*		*Value*			
	F	%	F	%	F	%	F	%	
Light	13	20,0	38	58,5	14	21,5	65	34,6	
Moderate	17	21,2	43	53,8	20	25,0	80	42,6	**0,840**
Heavy	9	20,9	27	62,8	7	16,3	43	22,9	
Total	**39**	**20,7**	**108**	**57,4**	**41**	**21,8**	**188**	**100**	

Source: Primary Data, 2025

Based on Table 4.12, the majority of respondents had moderate physical activity, totaling 80 respondents (42.6%), with most having a normal nutritional status (43 respondents or 53.8%). Light physical activity was reported by 65 respondents (34.6%), with the highest nutritional status in the normal category (38 respondents or 58.5%). Meanwhile, heavy physical activity was reported by 43 respondents (22.9%), with the majority having a normal nutritional status (27 respondents or 62.8%). The Chi-Square test results showed no significant correlation between physical activity and nutritional status ($p = 0.840 > 0.05$). This indicates that variations in respondents' physical activity levels do not have a significant relationship with nutritional status.

3.2 Discussion

The findings of this study indicate that sitting duration has a significant correlation with nutritional status. This is consistent with Widyastuti et al. (2022), who reported that prolonged sedentary behavior contributes to an increased risk of obesity and metabolic disorders. These results highlight the importance of managing sitting time and incorporating light physical activities, such as walking or standing periodically, to maintain a balanced daily energy expenditure and support a healthy nutritional status.

Dietary patterns are one of the important factors influencing nutritional status, as they reflect the quality and quantity of food consumed in daily life. In this study, dietary patterns also showed a correlation with nutritional status, aligning with the findings of Pradana et al. (2020), which demonstrated that the consumption of high calorie, high sugar, and low-fiber foods increases the risk of obesity. This observation is further supported by field findings, where sweetened beverages and high calorie snacks were identified as the most frequently ordered menu items.

Previous studies have shown that regular physical activity, particularly at moderate to vigorous intensity, contributes positively to weight control and nutritional status (Sasmita, 2021). Nevertheless, it is equally important to balance physical activity with appropriate dietary patterns in order to maintain optimal nutritional status. The findings of this study suggest the need for a more comprehensive approach in evaluating the lifestyle of respondents considering

not only physical activity, but also dietary habits and other daily behaviors that may influence health and nutritional status.

CONCLUSION

The study findings show that most customers of Nuansa by Lawa Coffee Shop had a long sitting duration, moderate dietary patterns, and moderate levels of physical activity. Statistical analysis revealed a significant relationship between sitting duration and nutritional status, as well as between dietary patterns and nutritional status, while no significant relationship was found between physical activity and nutritional status. These results highlight that prolonged sitting and unbalanced dietary 7 patterns are more strongly associated with nutritional status compared to the level of physical activity. status.

RECOMMENDATIONS

This research is expected to provide input for curriculum development and encourage further studies on lifestyle and nutritional status. For Nuansa by Lawa Coffee Shop, it is recommended to offer healthier menu options and create a supportive environment for light activity. Customers are encouraged to be more aware of the risks of prolonged sitting and to maintain a balanced diet. Future researchers are advised to use broader study designs, involve more diverse respondents, and apply objective measurement tools to improve accurac.

AKNOWLEDGEMENTS

The author would like to express sincere appreciation and gratitude to all parties who have provided support during the implementation of this research. Special thanks are extended to the management and staff of Coffee Shop Nuansa by Lawa in Gorontalo City for granting permission and facilitating the data collection process. The author is also deeply grateful to the respondents who willingly devoted their time to participate in this study.

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