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RESEARCH ARTICLE

The Impact of Perceived Daily Stress Levels on Obesity: The Moderating Effect of Alcohol Consumption Frequency Over One Year

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ABSTRACT

This study was conducted to identify the moderating effect of alcohol consumption frequency over one year on the impact of perceived daily stress levels on obesity, using data from the 9th National Health and Nutrition Examination Survey (2022). The statistical program SPSS 26.0 was used for the analysis. Frequency analysis and descriptive statistics were conducted to examine the demographic characteristics of the 9th survey data. Differences in general characteristics according to obesity status were analyzed using cross-tabulation (-test) and independent sample t-test. To examine the moderating effect of alcohol consumption frequency over one year on the impact of perceived daily stress levels on obesity, the process macro Model 1 was used to test for the presence of a moderating effect. The analysis results indicated that factors such as being male (p<.001), average age (p=.008), employment as an office worker (p=.036) or in sales/service roles (p=.012), presence of hypertension (p<.001), sleep duration (p=.002), higher levels of perceived daily stress (p=.042), and higher frequency of alcohol consumption (p=.025) had significant effects on obesity. The explanatory power for obesity status was found to be 12.0%, with hypertension (β=2.793) having the most significant impact. The moderating effect of alcohol consumption frequency over one year on the impact of perceived daily stress levels on obesity (B=1.088, p=.020) showed that in the high-stress group, the likelihood of obesity increased as alcohol consumption frequency rose. The findings of this study, indicating that obesity likelihood increases with higher stress levels and that alcohol consumption frequency over one year has an impact, can serve as foundational data for developing educational materials and programs aimed at managing obesity in adults.

INTRODUCTION

1. Necessity of the Study

The World Health Organization (WHO) defines adult body mass index (BMI) classifications as follows: underweight (BMI < 18.5 kg/m2) normal weight (BMI 18.5–24.9 kg/m2) overweight (BMI ≥ 25 kg/m2) and obesity (BMI ≥ 30 kg/m2) (1). As of 2022, 1 in 8 people worldwide is classified as obese, with 43% of adults being overweight and 16% classified as obese—a rate that has more than doubled since 1990 (1). In South Korea, as of 2021, the obesity prevalence rate among adults was 38.4%, an increase of 1.27 times from 30.2% in 2012. The obesity rate was 49.2% among men and 27.8% among women, with both genders experiencing a steady increase over the past decade. Notably, obesity rates rose significantly among individuals in their 20s, 30s, and those aged 80 and

above(2).

Obesity is recognized as a major cause of various health conditions and, since the 1980s, has been associated with joint disorders, type 2 diabetes, and hormonal imbalances. It has also gained attention for its links to increased prevalence and mortality rates of cardiovascular diseases, strokes, and cancers(3-5). Additionally, obesity not only leads to negative body image, psychological stress, and feelings of depression but also diminishes health-related quality of life(6). The obesity prevalence rate in South Korea is expected to increase significantly due to gradually Westernized eating habits and advanced industrialization, with projections indicating rates of 37.0% for women and 61.5% for men by 2030(7).

Perceived stress can negatively impact behavioral choices related to obesity(4). Changes in eating patterns due to stress can lead to overeating or cravings for specific foods, often resulting in frequent consumption of high-fat and high-calorie foods, which contributes to weight gain(4). Stress impacts the balance of physiological responses, such as elevated blood pressure and heart rate, and activates the hypothalamic-pituitary-adrenal (HPA) axis, leading to cortisol release. This, in turn, results in increased appetite(4, 8). The brain's reward system is stimulated through reward processing responses, leading to a tendency to relieve stress by consuming high-calorie, high-sugar foods, or alcohol(4, 9-11). In response to stress, risky behaviors such as smoking, drinking, and overeating may occur. Research also indicates that individuals experiencing high stress levels are more likely to develop alcohol dependency(5). Although studies on the effects of stress and alcohol consumption on obesity are readily available(4, 9, 11-14), it is challenging to find studies that specifically examine the moderating effect of alcohol consumption frequency on these relationships. Therefore, this study used raw data from the 2022 Korea National Health and Nutrition Examination Survey (KNHANES), focusing on adults aged 19 and over, to specifically analyze the moderating effect of alcohol consumption frequency over one year on the relationship between perceived stress levels and obesity. The findings aim to provide foundational data for developing educational materials and programs for adult obesity management.

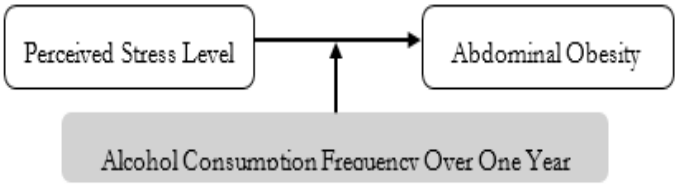
2. Purpose of the Study

The purpose of this study is to examine the impact of perceived daily stress levels on obesity and analyze the moderating effect of alcohol consumption frequency over one year. This research aims to provide foundational data for developing educational and programmatic interventions for obesity management.

II. Research Methodology

1. Research Design

This study is a secondary data analysis research, using raw data from the 9th Korea National Health and Nutrition Examination Survey (KNHANES) to examine the impact of perceived daily stress levels on obesity and the moderating effect of alcohol consumption frequency over one year.



2. Research Subject

This study utilized raw data from the 2022 9th Korea National Health and Nutrition Examination Survey (KNHANES). The sample extraction method for the 9th KNHANES involved a two-stage stratified cluster sampling method, with survey districts and households as the primary and secondary extraction units. The sampling framework was stratified based on region (province/city), urban/rural areas, and housing type (general housing, apartments). Additional internal stratification criteria included residential area ratio, age of household head, and proportion of single-person households. Within each selected survey district, 25 sample households were chosen, excluding facilities such as nursing homes, military bases, prisons, and foreign households. All household members aged one year and older within each sample household were selected as study participants. Of the 6,265 individuals in the raw data, 3,656 adults aged 19–64 were initially selected. After excluding 59 respondents with incomplete responses, 3,597 participants were included in the analysis.

3. Research Instruments

In this study, variables were defined based on the survey items from the 9th KNHANES, as outlined below.
1) General Characteristics

The general characteristics used in this study include gender, age, income, education level, occupation, marital status, physical activity, smoking status, presence of hypertension, dyslipidemia, diabetes, breakfast frequency, frequency of eating out, and frequency of vegetable intake. Gender was categorized as male or female, age was recorded as the actual age in years, and income was divided into quintiles (low, lower-middle, middle, upper-middle, high). Education level was categorized as elementary school or below, middle school, high school, and college or above. Occupation was classified into the following categories: managers and professionals, office workers, service and sales workers, skilled agricultural/forestry/fishery workers, technicians, assemblers, simple labor workers, and unemployed (including homemakers and students). Marital status was classified as married or unmarried, physical activity as yes or no, and smoking status as non-smoker or smoker. The presence of hypertension, dyslipidemia, and diabetes was categorized as either present or absent. Breakfast frequency was classified into the following categories: 5–7 times per week, 3–4 times per week, 1–2 times per week, and rarely or never. Dining-out frequency was categorized as follows: 2 or more times per day, once per day, 5–6 times per week, 3–4 times per week, 1–2 times per week, 1–3 times per month, and rarely or never. Vegetable intake frequency was classified into 3 or more times per day, 2 times per day, once per day, 5–6 times per week, and 4 or fewer times per week.

2) Perceived Daily Stress

Perceived daily stress in this study was categorized into the following levels: feel a great deal of stress, feel a lot of stress, feel some stress, and feel little to no stress.

3) Overweight

According to WHO adult standards, underweight (BMI < 18.5 kg/m2) and normal weight (BMI 18.5–24.9 kg/m2) were classified as normal. Overweight was defined as a BMI of 25 kg/m2 or higher, and obesity as a BMI of 30 kg/m2 or higher.

4. Data Analysis Method

The study data were analyzed using SPSS 26, with a significance level set at .05. Frequency analysis was conducted to examine the general characteristics of the 9th KNHANES data. Differences in general characteristics according to obesity status were analyzed using cross-tabulation (χ^2-test) and independent sample t-tests. The moderating effect of alcohol consumption frequency over one year on the impact of perceived daily stress on obesity status was tested using Process Macro Model 1.

5. Ethical Considerations

This study was conducted after submitting the research proposal to the Institutional Review Board (IRB) of W University and receiving an exemption from review (202405-039-02).

The raw data, questionnaires, and codebook for the 9th KNHANES were downloaded and used after agreeing to the data usage regulations and following the required procedures on the Korea Disease Control and Prevention Agency's National Health and Nutrition Examination Survey website. The 9th KNHANES data were collected using unique identifiers and do not contain personal information, ensuring that individual identification is impossible and confidentiality is maintained. To use the 9th KNHANES data for research purposes, the researcher registered as a member on the Korea Disease Control and Prevention Agency website (www.kdca.go.kr), provided researcher information and study purpose, agreed to comply with management regulations, and then downloaded the 9th KNHANES raw data, questionnaires, and codebook.

Ⅲ. RESEARCH RESULTS

1. Frequency and Descriptive Statistics of General Characteristics

The analysis of differences in general characteristics according to obesity status showed significant effects for the following variables: gender (p<.001), age (p=.009), income (p=.026), education level (p=.002), occupation (p<.001), perceived health status (p<.001), physical activity (p=.047), smoking status (p<.001), hypertension diagnosis (p<.001), dyslipidemia diagnosis (p<.001), diabetes diagnosis (p<.001), alcohol consumption frequency over one year (p=.025), perceived daily stress level (p<.001), and frequency of dining out (p=.041). Variables affecting obesity status were treated as covariates in subsequent analyses.

<Table 1> General Characteristics (n=4347)

		Total		Normal		Obese		χ^2 or t	p
		n or M	% or SD	n or M	% or SD	n or M	% or SD		
Gender	Male	1537	(42.0)	800	(35.1)	724	(57.0)	159.925	<.001
	Female	2060	(57.3)	1482	(64.9)	547	(43.0)		
Age		44.41	±12.90	44.05	±13.15	45.20	±12.42	-2.596	.009†
Income	Low	718	(20.0)	429	(18.8)	282	(22.2)	11.079	.026
	Lower-Middle	720	(20.0)	456	(20.0)	254	(20.0)		
	Middle	718	(20.0)	450	(19.7)	260	(20.5)		

	Upper-Middle	725	(20.2)	461	(20.2)	253	(19.9)		
	High	714	(19.9)	485	(21.3)	221	(17.4)		
Education Level	Elementary School or Below	153	(4.3)	80	(3.5)	70	(5.5)	15.201	.002
	Middle School	189	(5.3)	106	(4.6)	82	(6.5)		
	High School	1358	(37.8)	866	(37.9)	484	(38.1)		
	College or above	1897	(52.7)	1230	(53.9)	635	(50.0)		
Occupation	Manager and Professional,	686	(20.4)	460	(21.5)	221	(18.4)	258.643	<.001
	Office Worker,	496	(14.7)	303	(14.1)	189	(15.8)		
	Service and Sales,	518	(15.4)	320	(14.9)	194	(16.2)		
	Skilled Agricultural/Forestry/Fishery Worker	84	(2.5)	41	(1.9)	43	(3.6)		
	Technician, Assembler	369	(10.9)	211	(9.9)	156	(13.0)		
	Labor Worker	233	(6.9)	145	(6.8)	87	(7.3)		
	Unemployed	984	(29.2)	662	(30.9)	308	(25.7)		
Marital Status	Married	2617	(72.8)	1636	(71.7)	943	(74.2)	2.568	.109
	Unmarried	980	(27.2)	646	(28.3)	328	(25.8)		
Physical Activity	No	1961	(58.1)	1214	(56.6)	721	(60.1)	3.946	.047
	Yes	1413	(41.9)	931	(43.4)	478	(39.9)		
Smoking	Non-smoker	2131	(59.3)	1472	(64.6)	631	(49.6)	75.179	<.001
	Smoker	1464	(40.7)	808	(35.4)	640	(50.4)		
Hypertension	No	3055	(84.9)	2066	(90.5)	948	(74.6)	161.332	<.001
	Yes	542	(15.1)	216	(9.5)	323	(25.4)		
Dyslipidemia	No	2981	(82.9)	1971	(86.4)	968	(76.2)	59.543	<.001
	Yes	616	(17.1)	311	(13.6)	303	(23.8)		
Diabetes	No	3351	(93.2)	2173	(95.2)	1138	(89.5)	41.606	<.001
	Yes	246	(6.8)	109	(4.8)	133	(10.5)		
Alcohol Consumption Frequency (1 year)	Never	538	(15.8)	344	(15.9)	183	(15.2)	12.827	.025
	Less than once a month	792	(23.2)	521	(24.1)	263	(21.8)		
	About once a month	390	(11.4)	254	(11.8)	133	(11.0)		
	2–4 times a month	868	(25.5)	562	(26.0)	294	(24.4)		

	2–3 times a week	601	(17.6)	352	(16.3)	244	(20.2)		
	4 or more times a week	220	(6.5)	128	(5.9)	90	(7.5)		
Perceived Stress Level	Very Low	479	(13.3)	287	(12.6)	186	(14.6)	19.910	<.000
	Low	2091	(58.2)	1369	(60.0)	694	(54.6)		
	High	853	(23.7)	538	(23.6)	308	(24.2)		
	Very High	172	(4.8)	86	(3.8)	83	(6.5)		
Breakfast Frequency	5~7 times a week	1568	(46.7)	1017	(47.6)	533	(44.8)	3.230	.357
	3~4 times a week	439	(13.1)	278	(13.0)	153	(12.9)		
	1~2 times a week	478	(14.2)	302	(14.1)	173	(14.6)		
	Rarely or never	876	(26.1)	539	(25.2)	330	(27.8)		
Dining-Out Frequency	More than 2 times a day	170	(5.1)	105	(4.9)	64	(5.4)	13.140	.041
	Once a day	627	(18.7)	386	(18.1)	234	(19.7)		
	5~6 times a week	680	(20.2)	431	(20.2)	244	(20.5)		
	3~4 times a week	500	(14.9)	302	(14.1)	190	(16.0)		
	1~2 times a week	785	(23.4)	538	(25.2)	237	(19.9)		
	1~3 times a month	470	(14.0)	298	(14.0)	170	(14.3)		
	Rarely or never	129	(3.8)	76	(3.6)	50	(4.2)		
Vegetable Intake Frequency	3 or more times a day	893	(26.6)	572	(26.8)	312	(26.3)	1.021	.907
	2 times a day	1682	(50.1)	1057	(49.5)	606	(51.0)		
	1 time a day	671	(20.0)	432	(20.2)	233	(19.6)		
	5–6 times a week	42	(1.3)	29	(1.4)	13	(1.1)		
	4 or fewer times a week	71	(2.1)	45	(2.1)	24	(2.0)		
Physical Activity: Moderate or higher intensity † Equal variance assumption not met									

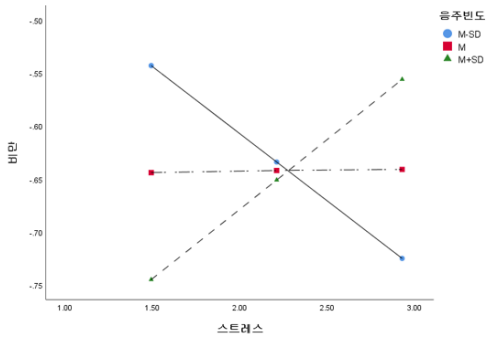


Fig (a) Moderating Effect Graph

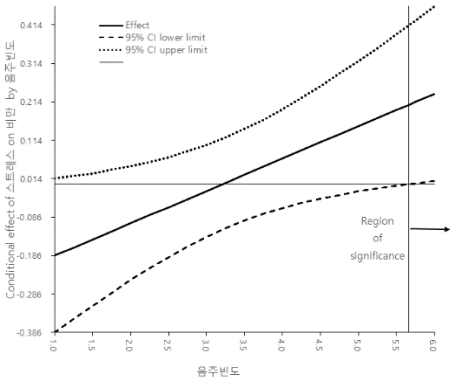


Fig (b) Johnson-Neyman Method

2. Analysis of Factors Affecting Abdominal Obesity

A logistic regression analysis was conducted to examine the effect of perceived stress on obesity status, controlling significant general characteristic variables such as dummy variables. These variables included gender, age, income, education level, occupation, perceived health status, physical activity, smoking status, hypertension, dyslipidemia, diabetes, weekday sleep duration, and frequency of dining out. The logistic regression analysis results on factors affecting life satisfaction indicated that gender (p<.001), age (p=.008), occupation as office worker (p=.036) or in service/sales (p=.012), perceived health status (p<.001), presence of hypertension (p<.001), stress levels (p=.042), and alcohol consumption frequency (p=.025) had significant effects on obesity status <Table 2, Step 2>. The moderating effect of alcohol consumption frequency on the impact of perceived stress levels on obesity status (OR: 1.088, 95% CI: 1.013–1.168, p=.020) indicated that in the high-stress group, the likelihood of obesity increased as alcohol consumption frequency rose (Fig. a). The Johnson-Neyman analysis showed that the probability of obesity increased significantly for individuals with high stress levels and an alcohol consumption frequency of 2–3 times per week or more (Fig. b).

<Table 2> Analysis of Factors Affecting Abdominal Obesity

	step1				**step2**			
	OR			**p**	**OR**			**p**
	Exp(β)	**95%CI**			**Exp(β)**	**95%CI**		
Gender(male)	1.995	1.483	~2.683	<.001	2.710	2.192	~3.347	<.001
Age	.959	.944	~.974	<.001	.990	.982	~.997	.008
Income (Low-Middle)	.863	.636	~1.171	.343	.881	.682	~1.137	.329
Income (Middle)	.982	.723	~1.332	.905	.987	.763	~1.276	.921

Income (Upper-Middle)	1.017	.743	~1.393	.916	.949	.731	~1.232	.697
Income (High)	.861	.620	~1.195	.370	.797	.607	~1.046	.101
Education (Middle School)	.709	.429	~1.173	.180	.645	.379	~1.099	.107
Education (High School)	.626	.412	~.951	.028	.664	.431	~1.025	.065
Education (College or Higher)	.582	.371	~.912	.018	.741	.476	~1.153	.184
Occupation (Manager)	1.006	.718	~1.409	.974	1.004	.770	~1.310	.974
Occupation (Office Worker)	1.308	.920	~1.858	.134	1.344	1.019	~1.774	.036
Occupation (Service/Sales)	1.386	1.020	~1.883	.037	1.395	1.077	~1.808	.012
Occupation (Agriculture, Forestry, and Fisheries)	1.652	.992	~2.752	.054	1.675	.995	~2.824	.052
Occupation (Skilled Worker)	.958	.669	~1.371	.815	.942	.693	~1.281	.073
Occupation (Labor Worker)	1.009	.677	~1.504	.965	1.037	.720	~1.492	.846
Subjective Health Perception	1.129	.991	~1.286	.069	1.350	1.214	~1.501	<.001
Physical Activity (Yes)	.870	.708	~1.070	.186	.914	.772	~1.082	.297
Smoking	1.169	.889	~1.537	.263	1.043	.848	~1.283	.690
Hypertension	2.835	2.217	~3.625	<.001	2.793	2.177	~3.579	<.001
Dyslipidemia	1.227	.961	~1.567	.101	1.228	.959	~1.571	.105
Diabetes	1.271	.912	~1.772	.157	1.373	.982	~1.919	.064
Sleep Duration	1.585	.627	~4.007	.330	.896	.836	~.961	.002
Number of Dining Outs (2 or more times a day)	1.138	.591	~2.191	.699	1.058	.584	~1.914	.854
Number of Dining Outs (Once a day)	.831	.493	~1.400	.487	1.021	.609	~1.713	.936

Number of Dining Outs (5~6 times a week)	.888	.535	~1.474	.646	1.075	.645	~1.791	.782
Number of Dining Outs (3~4 times a week)	1.258	.761	~2.081	.371	1.283	.771	~2.136	.338
Number of Dining Outs (1~2 times a week)	.756	.469	~1.216	.249	1.029	.628	~1.689	.907
Number of Dining Outs (1~3 times a month)	1.157	.720	~1.860	.546	1.273	.770	~2.102	.346
Stress(x)	.945	.818	~1.093	.447	.763	.589	~.990	.042
Drinking Frequency (Mo)					.825	.698	~.976	.025
x×mo					1.088	1.013	~1.168	.020
-2LL(p) CoxSenell (Nagelkrk)	2464.565(<.001) .112(.152)				3521.790(<.001) .118(.162)			
Gender: Female, Income: Low, Education Level: Below Elementary School, Occupation: Unemployed, Physical Activity: No, Smoking Status: Non-smoker, Hypertension: None, Dyslipidemia: None, Diabetes: None, Frequency of Dining Out: Almost Never, which is a dummy variable with a value of 0								

Ⅳ. DISCUSSION

Since 1990, the proportion of overweight and obese adults worldwide has more than doubled, with 43% of adults now classified as overweight and 16% as obese (1), In South Korea, adult obesity rates have also risen from 30.2% in 2012 to 38.4% in 2021(2), highlighting that obesity has shifted from an individual issue to a societal concern. The increase in the overweight and obese population has doubled the national financial burden over the past decade, reaching approximately 6 trillion won as of 2016(15). This represents a significant aspect of why obesity should be regarded as a serious social issue.

Perceived stress and obesity are identified as interrelated factors (9). Physiologically, stress activates the sympathetic nervous system, leading to increased respiration, blood pressure, and heart rate. Activation of the hypothalamic-pituitary-adrenal (HPA) axis further elevates glucocorticoid secretion, promoting similar catabolic processes(4, 8). Studies such as (16) have examined the effects of stress and hormones, showing that groups experiencing high interpersonal stress had decreased leptin levels and increased ghrelin levels, leading to higher calorie intake and increased consumption of protein and fats. As a result, this contributes to obesity (9, 14, 17-19), with alcohol consumption also identified as a contributing factor to obesity(5, 17).

This study analyzed general characteristics based on obesity status, including participants' gender, age, income, education level, occupation, marital status, physical activity, smoking status, hypertension, dyslipidemia, diabetes, weekday sleep duration, breakfast frequency, dining-out frequency, and vegetable intake frequency. Variables affecting obesity status were treated as covariates in subsequent analyses. Using Process Macro Model 1, the study aimed to confirm the

moderating effect of alcohol consumption frequency over one year on the impact of perceived daily stress on obesity status.

The analysis of general characteristics according to obesity status showed that obesity was more prevalent among men, aligning with previous research indicating a higher obesity rate among men than women in South Korea (20). This suggests differences in attitudes and perceptions toward obesity based on gender in South Korea.

This study found that obesity was more common among those aged 45 and older, consistent with findings showing that 56.9% of individuals aged 40 to 69 are classified as obese (21). These results are believed to be associated with the social and cultural lifestyle factors prevalent in South Korea. Obesity rates were higher than normal weight across all income levels—low, lower-middle, middle, upper-middle, and high—which did not align with previous research suggesting that higher-income groups have lower obesity rates(22). This discrepancy may stem from differences in the criteria used to categorize income levels, or it could be due to the lack of detailed analysis between groups in this study. For education level, obesity rates were higher than normal weight across all categories—elementary or below, middle school, high school, and college or above—which contrasts with studies indicating that higher education levels are associated with lower obesity rates(21). Obesity rates were high among managers and professionals, office workers, service and sales workers, technicians, assemblers, simple laborers, and the unemployed, which contradicts studies suggesting that professionals have lower obesity rates(8). This indicates a need for future research to analyze differences between these occupational groups in more detail. The probability of obesity was higher in the group that did not engage in physical activity, aligning with findings that increased physical activity(7) and higher rates of weight loss attempts are associated with a lower likelihood of obesity. The probability of obesity was higher among smokers compared to non-smokers. This is consistent with findings showing a smoking rate of 10.8% in the normal-weight group, 29.3% in the obese group, and 23.5% in the overweight group, indicating a trend of higher smoking rates with increasing obesity(23). This suggests that smoking may be a contributing factor to obesity. Obesity was more prevalent among individuals diagnosed with hypertension, dyslipidemia, and diabetes, which aligns with research suggesting that obesity is a contributing factor to conditions like hypertension, hyperlipidemia, and diabetes(8, 13, 18, 23, 24). Obesity increases blood cholesterol levels and promotes the accumulation of adipose tissue in the bloodstream. Additionally, obesity is thought to increase insulin resistance, making blood sugar regulation more difficult. Higher levels of perceived daily stress were associated with an increased likelihood of obesity, aligning with research that shows a positive correlation between high stress levels and obesity(4, 17, 18). Finally, it was confirmed that a higher frequency of alcohol consumption over the past year was associated with an increased likelihood of obesity. This finding aligns with research indicating that higher alcohol intake correlates with a greater risk of obesity(5, 17). On the other hand, some studies have found no significant relationship between alcohol consumption and obesity (23). Future research examining the physiological changes underlying the interaction between alcohol consumption and obesity is needed.

After controlling for the measured variables as dummy variables, the moderating effect of alcohol consumption frequency on the impact of perceived stress on obesity status was examined. The results showed that in the high-stress group, the likelihood of obesity increased as alcohol consumption frequency rose. Specifically, the probability of obesity was higher when alcohol consumption occurred 2–3 times per week or more. While the findings of this study align with previous research showing that higher stress levels lead to increased alcohol consumption (5), it is difficult to make a precise comparison due to the lack of studies specifically examining the moderating effect of alcohol consumption frequency. Alcohol contains a high caloric content of 7 kcal per gram, which can lead to

additional calorie intake, contributing to weight gain and obesity. Moreover, it alters the body's energy metabolism pathways, reducing fatty acid oxidation and promoting fat accumulation (25). Therefore, it is essential for the government to provide education and recommendations to help individuals reduce alcohol consumption as stress levels rise. Even for those who do drink, education should encourage limiting alcohol intake to once a week or less. Additionally, the government should offer various stress-relief alternatives and create environments that support healthier coping mechanisms.

This study is a secondary data analysis using the Korea National Health and Nutrition Examination Survey (KNHANES) to examine the moderating effect of alcohol consumption frequency on the impact of perceived stress on obesity. The aim is to provide foundational data for creating an environment that effectively alleviates perceived stress. This study used cross-sectional data from the Korea National Health and Nutrition Examination Survey (KNHANES), which limits the ability to explain causal relationships between variables. This study also has the limitation of analyzing only the variables provided by the Korea National Health and Nutrition Examination Survey. However, its significance lies in highlighting the need to create an environment that helps South Korean adults effectively manage perceived stress. Furthermore, the findings are expected to serve as foundational data for developing various programs aimed at stress relief.

CONCLUSION

This study used data from the 9th Korea National Health and Nutrition Examination Survey to examine the moderating effect of alcohol consumption frequency over one year on the impact of perceived stress on obesity. The multiple regression analysis revealed that obesity was significantly influenced by factors such as being male, aged 45 and above, employed as an office worker or in service/sales, having a hypertension diagnosis, higher stress levels, and higher alcohol consumption frequency. Additionally, by using alcohol consumption frequency over one year as a moderating variable, the study found that the likelihood of obesity increased as alcohol consumption frequency rose, particularly for those consuming alcohol 2–3 times per week or more. Therefore, this study can serve as foundational data for developing environments and programs that help alleviate perceived stress, ultimately preventing the progression to obesity. Based on the findings of this study, it is suggested that future research should investigate the specific physiological causal relationship between stress and obesity in the South Korean population.

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