

Disparity between Subjective Health Perception and Lifestyle Practices among Korean Adolescents: A National Representative Sample

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Background: The relationship between subjective health perception (SHP) and lifestyle practices brings into question the future health status of an individual. Recognition of the disparity between one's health consciousness to the real practices encourages change and promotes development of better health programs. The adolescent stage is the best time to identify this disparity wherein lifestyle practices are still being developed. In Korea, adolescents experienced significant shifts in lifestyle due to the fast economic growth and the breakthrough of the digital era. Thus, determining the disparity between SHP and lifestyle practices among Korean adolescents poses a great deal of interest and importance.

Methods: Utilizing the 2019 Korea Youth Risk Behavior Web-based Survey (KYRBS), self-reported data with a national representative sample-57,303 respondents-of Korean adolescents in the 7-12th grades, was used from a multistage sampling, stratification, and clustering was obtained. SHP and lifestyle practices were collected and analyzed.

Results: The findings revealed that most respondents with poor diet, exercise, and sleep behaviors perceived themselves to be normal, healthy, or extremely healthy, which resulted in a negative correlation between SHP and lifestyle behaviors-except in the case of substance use.

Conclusion: There is a significant disparity between Korean adolescents' SHP and lifestyle practices. This highlights the need for lifestyle interventions and re-education among Korean adolescents. Their current lifestyle practices may extend into adulthood, thereby increasing the risks of cardiovascular and other lifestyle-induced diseases.

Key Words: Diet, Lifestyle, Exercise, Sleep, Subjective health, Substance use

INTRODUCTION

Subjective health perception (SHP), also known as self-rated health, merits important attention as an indicator in the targeted prevention of future health problems [1-2]. Studies have shown that perception of subjective health status effectively predicts current health status [3], morbidity [4-5], and mortality [6], as well as multi-illness in early adulthood [1]. SHP was reported to develop mainly and as early as childhood and more so during adolescence. Despite being a single-item general health question, studies suggest

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that SHP is multidimensional and predicts a holistic sense of function with personal, medical, psychological, and social factors as observed in adolescents in Canada and Norway [7]. Determining the disparity between a people's own health assessment and their health behaviors at the adolescent stage is deemed important as it affects the long-term health status of the general population [8-9]. To assess these gaps, SHP must be studied alongside other quantitative and qualitative health factors.

One of the most influential factors that are highly correlated with and significantly affect health is lifestyle [10]. Lifestyle is defined as the daily characteristics, behaviors, and functions of an individual, which include diet, exercise, sleep, substance use, etc. [11-15]. Studies have shown an increased prevalence of lifestyle-induced diseases such as diabetes mellitus, hypertension, overweight, and dyslipidemia, which contribute to cardiovascular diseases and amount to 30% of all mortality worldwide [16]. These lifestyle diseases stem from unhealthy practices such as malnutrition, unhealthy diet, smoking and alcohol consumption, sedentary routines, lack of sleep, and so on [17]. Lifestyle and habitual routines are reported to be established during adolescence when rapid physical, emotional, and cognitive developments occur [18]. Studies showed that health-related behaviors acquired during adolescence tend to be extended to—and worsen in—adulthood among Koreans [19]. Lifestyle behaviors of Korean adolescents have shifted and are influenced by rapid economic growth, fast-emerging technologies, shifting cultural standards, novel work challenges, and changes in educational expectations [18-20]. These technological advances and modern times have been reported to spark changes in their physical and psychological maturation which include incidence of weight increase, drinking alcohol and smoking, sedentary and other health behaviors. The shift in health behaviors is alarming as many studies have reported in recent years that obesity and lifestyle-related diseases have a high prevalence among adolescents in schools [21].

Considering that lifestyles are often transmitted across generations [22], research on Korean adolescents' subjective health and their present lifestyle is important. To date, most studies on the association between SHPs and health behaviors are inclined towards mental health and are generally fo-

cused on the elderly population or the working adults [18-20, 23-24]. Hence, there is a lack of studies on adolescent SHP and patterns of health problems among adolescents [1]. Hence, this study deems to examine the association and disparity of SHP and relevant lifestyle behaviors of Korean adolescents.

MATERIALS AND METHODS

1. Study population and source of data

Conducted annually, the Korea Youth Risk Behavior Web-based Survey (KYRWBS) is a self-administered and web-based survey led by the Centers for Disease Control and Prevention to examine the pervasiveness of public health and behaviors of adolescents who are attending middle and high schools in Korea since 2005. As a protocol of this survey, the participants were supplied written informed consent to take part in the survey and were guaranteed anonymity. The surveys were conducted in the respective schools' computer rooms through an internet-based and structured questionnaire which was divided into multiple sections on socio-demographic characteristics, physical and mental health, and other health-related behaviors. The web-based and anonymously self-administered questionnaire was done by allotting one class period for students for public and private middle- and high-school students within the 17 provinces of Korea. Institutional Review Board of the Korea Centers for Disease Control and Prevention has approved KYRWBS (Statistics Korea, Approval No. 11758), and all methods carried out in this study follow the relevant guidelines and regulations set thereof.

The sample was taken from the 15th KYRWBS 2019. Multistage sampling, stratification, and clustering were employed to obtain a national representative of the adolescent population. The data released a reported high response rate of > 95% which was attributed to the systematic online survey with the support of the Ministry of Education. After excluding participants with incomplete information, a final sample size of 57,303 was used for analysis.

2. Variable measurement

Sociodemographic characteristics, including age, sex, socioeconomic status (SES), and type of residence, were

collected. To satisfy the objectives, the SHP of respondents (dependent variable) were analyzed in contrast to lifestyle behaviors (independent variables), including data attributed to diet, physical activity, sleep, and substance use.

1) Subjective health perception

A single item question was used to measure SHP asking “How is your current health?” with categories indicating their health as (1) excellent, (2) good, (3) average, (4) poor, or (5) very poor.

2) Lifestyle behaviors

To assess their lifestyle behaviors, respondents were requested to rate their activities over the past week. Answers were then reclassified based on WHO recommendations as desirable practices.

Food intake patterns were assessed using questions regarding how frequently they had daily breakfast, fruit and vegetable consumption in the past week. These were reclassified as dichotomized variable indicating desired variables: daily breakfast, fruits (≥ 1 serving/day), and vegetables (≥ 1 serving/day, except Kimchi) [26-27] consumption. Water intake was assessed by determining the quantity of water consumption daily during the past 7 days and data were reclassified as a dichotomized variable indicating the desired intake as ≥ 5 cups/day [28].

Physical activity was assessed by evaluating their participation level in high-intensity physical activity, muscle-strengthening exercise, and walking experience within the past week that allowed them to increase their heart rate for a total minimum of 60 minutes per day. These responses were then reclassified into 2 categories: ≥ 3 times/week and < 3 times/week [17]. Sleeping patterns were determined based on their sleep and wake-up time on weekdays during the past 7 days and then solved for the number of sleeping hours. Hours of sleep were then transformed into new data variables reclassifying them as ≥ 8 hours/day and < 8 hours/day [29]. Substance use in terms of cigarettes and alcohol was determined based on their lifetime alcohol and smoking experience, regardless of frequency. These were determined using a dichotomous category of either ‘yes’ or ‘no’.

3. Data Analysis

Descriptive statistics were calculated including actual frequencies, means, standard deviation, and percentages for all variables. Using the chi-square test of independence, the differences between the means of sociodemographic characteristics, lifestyle behaviors, and SHP levels were analyzed. The multinomial logistic regression analysis was performed to ascertain the odds ratio for SHP levels after adjusting for age, sex, SES, and residence type. Adjustments were rendered for preliminary analysis, which suggested that these characteristics are highly associated with SHP. All statistical analyses were performed using SPSS v22 (IBM Corp., New York, NY, USA).

RESULTS

Data of 57,303 Korean adolescents between 12-18 years old were 52.1% males and 47.9% females. Most respondents had an average SES (47.9%) and residing with family (94.7%). The characteristics of the study samples and all variables for lifestyle behaviors are presented in Table 1.

Most respondents perceive themselves as healthy (43.3%). However, 68.7% of the respondents do not eat breakfast, $> 60\%$ do not consume fruits and vegetables daily, and drink less than the required daily water intake. Results revealed that almost half of the respondents did not eat breakfast daily, and out of these, $> 80\%$ consider themselves normal, healthy, or very healthy. The association between SHP and lifestyle behaviors among Korean adolescents shows significant differences in all lifestyle behavioral characteristics (Table 2). Despite skipping breakfast daily, a high number of respondents considered themselves very healthy (24.6%), healthy (43.3%), or normal (24.0%). Similar trends are found for unhealthy diet habits, i.e., no daily fruit and vegetable consumption, inadequate daily water intake. Among those with unhealthy diet behaviors, $< 8\%$ recognized these practices as ‘unhealthy’ or ‘very unhealthy’. Adolescents with poor exercise regimes (≤ 3 times/week) perceived themselves as ‘very healthy’ ($> 20\%$), ‘healthy’ ($> 40\%$), or ‘normal’ ($> 20\%$), and only about 7% considered themselves as ‘unhealthy’. Among those with inadequate sleep duration (≤ 8 hrs), the majority indicated themselves as

Table 1. General characteristics of the participants (N = 57,303)

Variables	N (%)	Mean (SD)	Variables	N (%)
Sex			Daily Breakfast Intake	
Male	29,841 (52.1)		Yes	17,933 (31.3)
Female	27,462 (47.9)		No	39,370 (68.7)
Age		14.97 (1.776)	Daily Fruit Consumption	
12	4,870 (8.5)		Yes	11,485 (20.0)
13	9,537 (16.6)		No	45,818 (80.0)
14	9,840 (17.2)		Daily Vegetable Consumption	
15	9,661 (16.9)		Yes	21,652 (37.8)
16	9,120 (15.9)		No	35,651 (62.2)
17	9,434 (16.5)		Daily Water Intake	
18	4,607 (8.0)		> 5 cups	20,399 (35.6)
Socioeconomic Status		2.65 (0.893)	≤ 5 cups	36,903 (64.4)
High	6,379 (11.1)		Physical Activity	
Above Average	16,126 (28.1)		> 3 times/week	12,659 (22.1)
Average	27,457 (47.9)		≤ 3 times/week	44,644 (77.9)
Under Average	6,042 (10.5)		High-Intensity Exercise	
Poor	1,299 (2.3)		> 3 times/week	11,646 (20.3)
Type of Residence			≤ 3 times/week	45,657 (79.7)
Family	54,267 (94.7)		Muscle Training Exercise	
Relative	332 (0.6)		> 3 times/week	8,097 (14.1)
Boarding House	347 (0.6)		≤ 3 times/week	49,206 (85.9)
Dormitory	2,126 (3.7)		Sleep Duration	
Childcare Facility	231 (0.4)		> 8 hrs	6,656 (11.6)
Subjective Health Perception		2.11 (0.898)	≤ 8 hrs	50,647 (88.4)
Very healthy	15,471 (27.0)		Alcohol Drinking Experience	
Healthy	24,785 (43.3)		Yes	22,240 (38.8)
Normal	12,810 (22.4)		No	35,063 (61.2)
Unhealthy	3,915 (6.8)		Cigarette Smoking Experience	
Very Unhealthy	322 (0.6)		Yes	7,076 (12.3)
			No	50,227 (87.7)

SD: standard deviation.

‘healthy’ (43%), ‘very healthy’ (26.1%), or ‘normal’ (23%). Among the adolescents who consumed alcohol and/or smoked, > 21% identified themselves as ‘very healthy’ or ‘normal’, and > 38% thought they were ‘healthy’; about 9% indicated themselves as ‘unhealthy’. A chi-square test of independence was performed between SHP and diet lifestyle behaviors, and all expected cell frequencies were greater than five.

Table 3 provides adjusted odds ratio for the association between SHP levels and lifestyle behaviors. Results show that adolescents who perceived themselves as having good health were less likely to have a healthy diet, exercise regimen, and normal sleeping patterns. Notably, adolescents who perceived themselves as possessing excellent and/or good health were less likely to consume alcohol drinking

and/or smoke.

DISCUSSION

The main findings of this study reveal that majority of Korean adolescents who have a poor diet, poor exercise regimen, and unhealthy sleep behaviors perceived their health conditions as fair, healthy, or even excellent, thus resulting in a negative correlation between SHP and these said lifestyle behaviors.

Almost half of the respondents skipped breakfast daily, and out of these, > 80% consider themselves normal, healthy, or very healthy. Breakfast skipping is prevalent not only in Korea but also in Europe and the Americas [30-32]. However, this does not diminish the importance of breakfast

Table 2. Lifestyle behavior characteristics according to subjective health perception among Korean adolescents

Lifestyle Behavior	Frequency	Subjective Health Perception n (%)					p-value*
		Very Healthy	Healthy	Normal	Unhealthy	Very Unhealthy	
Diet							
Breakfast Intake	Yes	5,777 (32.2)	7743 (43.2)	3378 (18.8)	957 (5.3)	78 (0.4)	500.49 [†]
	No	9,694 (24.6)	17042 (43.3)	9432 (24.0)	2958 (7.5)	244 (0.6)	
Daily Fruit Consumption	Yes	3,923 (34.2)	4,801 (41.8)	2,104 (18.3)	592 (5.2)	65 (0.6)	443.45 [†]
	No	11,548 (25.2)	19,984 (43.6)	10,706 (23.4)	3,915 (6.9)	322 (0.6)	
Daily Vegetable Consumption	Yes	7,104 (32.8)	9,114 (42.1)	4,058 (18.7)	1,259 (5.8)	117 (0.5)	702.37 [†]
	No	8,367 (23.5)	15,671 (44.0)	8,752 (24.5)	2,656 (7.5)	205 (0.6)	
Daily Water Intake	> 5 cups	9,778 (32.0)	12,878 (42.2)	5,951 (19.5)	1,766 (5.8)	162 (0.5)	975.02 [†]
	≤ 5 cups	5,693 (21.3)	11,906 (44.5)	6,859 (25.6)	2,149 (8.0)	160 (0.6)	
Exercise							
Physical Activity	> 3 times/week	5,311 (42.0)	5,128 (40.5)	1,697 (13.4)	462 (3.6)	61 (0.5)	2199.29 [†]
	≤ 3 times/week	10,160 (22.8)	19,657 (44.0)	11,113 (24.9)	3,453 (7.7)	261 (0.6)	
High Intensity Exercise	> 3 times/week	5,193 (44.6)	4,500 (38.6)	1,510 (13.0)	393 (3.4)	50 (0.4)	2584.06 [†]
	≤ 3 times/week	10,278 (22.5)	20,285 (44.4)	11,300 (24.7)	3,522 (7.7)	272 (0.6)	
Muscle Training	> 3 times/week	3,706 (45.8)	290 (36.8)	1,095 (13.5)	270 (3.3)	46 (0.6)	1819.14 [†]
	≤ 3 times/week	11,765 (23.9)	21,805 (44.3)	11,715 (23.8)	3,645 (7.4)	276 (0.6)	
Sleep Duration	> 8 hrs	2,273 (34.1)	2,983 (44.8)	1,140 (17.1)	242 (3.6)	18 (0.3)	362.95 [†]
	≤ 8 hrs	13,198 (26.1)	21,802 (43.0)	11,670 (23.0)	3,673 (7.3)	304 (0.6)	
Substance Use							
Alcohol Consumption	Yes	5,866 (26.4)	9,209 (41.4)	5,159 (23.2)	1,847 (8.3)	159 (0.7)	
	No	9,605 (27.4)	15,576 (44.4)	7,651 (21.8)	2,068 (5.9)	163 (0.5)	175.89 [†]
Cigarette Smoking	Yes	2,108 (29.8)	2,751 (38.9)	1,528 (21.6)	606 (8.6)	83 (1.2)	
	No	13,363 (26.6)	22,034 (43.9)	11,282 (22.5)	3,309 (6.6)	239 (0.5)	150.21 [†]

*These value were obtained by chi-square test.

[†]p < 0.001.

as the most important meal of the day [33]. Skipping breakfast is one of the many negative aspects of an unhealthy lifestyle and indirectly promotes numerous health risk behaviors such as a sedentary lifestyle, low educational attainment, depressive symptoms [34,35], as well as low quality of life and chronic stress, which may in turn, increase risks of cardiometabolic diseases [36-38]. Giovanni et al. [38] and Raaijmakers et al. [32] reported that eating breakfast impacts diet quality and food choices among adolescents affecting their well-being and establish healthy habits. This may explain why respondents did not consume fruits (> 80%) and vegetables (60%) daily. Additionally, 90% who do not consumption of fruits and vegetables daily perceive themselves as having normal to excellent health. There is strong epidemiological evidence suggesting the benefits of daily

consumption of fruits and vegetables for cancer prevention and protection from coronary heart disease, eye complications, and pulmonary diseases [39-42]. In Korea, low intake of fruits and vegetables was reported in 2,014 adults [43,44]. Adolescents tend to follow the example set by adults as parents and providers. Hence, observable trends among adolescents were found to be similar. Studies shown that Korean adolescents with low fruit and vegetable intake are linked to obesity [45], depression [43,46], and mental health issues [44]. Studies by Lytle et al. [47] and Granner et al. [48] reported that self-efficacy, subjective norms, knowledge, parenting style/parental modeling, and religiosity were significant predictors for fruit and vegetable intake among adolescents. However, Bae et al. [27], in their study on adolescent dietary behaviors and their association

Table 3. Association between subjective health perception and lifestyle behaviors

Lifestyle Behavior/ Subjective Health Perception		aOR*	(95% CI)
Diet	Breakfast Intake (≥ 3 days/week)	1.00	
	Very unhealthy	1.095	(1.049, 1.143)
	Unhealthy	0.920	(0.875, 0.968)
	Normal	0.892	(0.828, 0.960)
	Healthy	0.674	(0.533, 0.852)
	Very Healthy		
	Daily Fruit Consumption (Yes)	1.00	
	Very unhealthy	1.095	(1.662, 1.820)
	Unhealthy	0.785	(0.736, 0.838)
	Normal	0.757	(0.685, 0.838)
	Healthy	0.736	(0.748, 0.853)
	Very Healthy		
	Daily Vegetable Consumption (Yes)	1.00	
	Very unhealthy	0.812	(0.777, 0.848)
	Unhealthy	0.712	(0.676, 0.751)
	Normal	0.754	(0.697, 0.816)
	Healthy	0.848	(0.664, 1.082)
	Very Healthy		
	Daily Water Intake (≥ 5 cups)	1.00	
	Very unhealthy	0.793	(0.759, 0.829)
Unhealthy	0.784	(0.743, 0.827)	
Normal	0.842	(0.777, 0.912)	
Healthy	0.958	(0.749, 1.226)	
Very Healthy			
Exercise	Physical Activity (≥ 3 times/week)	1.00	
	Very unhealthy	0.856	(0.808, 0.908)
	Unhealthy	0.630	(0.583, 0.680)
	Normal	0.632	(0.556, 0.712)
	Healthy	0.872	(0.607, 1.253)
	Very Healthy		
	High Intensity Exercise (≥ 3 times/week)	1.00	
	Very unhealthy	0.700	(0.659, 0.745)
	Unhealthy	0.583	(0.537, 0.633)
	Normal	0.551	(0.480, 0.633)
	Healthy	0.496	(0.330, 0.746)
	Very Healthy		
	Muscle Training Exercise (≥ 3 times/week)	1.00	
	Very unhealthy	0.698	(0.657, 0.743)
	Unhealthy	0.642	(0.591, 0.698)
	Normal	0.519	(0.450, 0.600)
Healthy	0.767	(0.528, 1.115)	
Very Healthy			
Sleep (≥ 8 hrs)	Very unhealthy	1.00	
	Unhealthy	0.927	(0.870, 0.989)
	Normal	0.787	(0.724, 0.855)
	Healthy	0.680	(0.588, 0.786)
	Very Healthy	0.629	(0.379, 1.044)

with Korean government nutrition policies, suggests that promotion of environmental improvement (i.e., school programs) was more effective than the promotion of individual

behavior.

More than 60% of respondents drank < 5 cups of water daily and $> 80\%$ of them considered themselves normal to

Table 3. Continued

Lifestyle Behavior/ Subjective Health Perception		aOR*	(95% CI)
Substance Use	Alcohol Consumption (Yes)		
	Very unhealthy	1.00	
	Unhealthy	1.080	(1.029, 1.133)
	Normal	1.158	(1.095, 1.226)
	Healthy	1.312	(1.209, 1.424)
	Very Healthy	1.022	(0.787, 1.328)
	Cigarette Smoking (Yes)		
	Very unhealthy	1.00	
	Unhealthy	0.925	(0.863, 0.992)
	Normal	0.948	(0.873, 1.029)
Healthy	1.117	(0.998, 1.250)	
Very Healthy	1.525	(1.116, 2.085)	

*Adjusted variables include age and reported SES.
CI: confidence interval.

excellent health. With regards to exercise, the majority indicated minimal to no physical activity (77.9%), high-intensity exercises (79.7%), or muscle training (85.9%). These results are similar to the findings of Kim et al. [49] who reported that the most consumed drink among Korean adolescents is carbonated beverages with about 31% of respondents indicated consuming this more than once a week, whereas only 3.6% reported drinking daily required water volume. Kim et al. [49] suggested that low water intake among Korean adolescents was significantly associated with not meeting physical activity recommendations and, therefore, highly associated with weight problems. These findings are supported by our results, which show that most adolescents performed exercises infrequently. Park et al. [50] also found that the strongest factors highly associated with low water content is when adolescents are not or minimally involved in physical activities such as sports. Previous studies showed that the absence or low intake of water can be lethal as water is a critical nutrient for the body and its deficiency can instigate headaches, urolithiasis, and impaired cognition [51]. A review of Vézina-Im and Beaulieu [52] found that individual (e.g., behavioral variables), social (e.g., peers), environmental (e.g., availability) factors, and school policies are determinants of water consumption among adolescents. Several studies have recommended educational, behavioral, and legislative interventions to promote increased water consumption among adolescents to counter obesity and promote healthy dietary habits during formative years [52-55].

Almost 90% of the respondents slept ≤ 8 hours daily, and a cumulative percentage of about 90% among those considered themselves to be in normal to excellent health conditions. Similar trends were found by Yang et al. [56], who reported that Korean adolescents were sleep-deprived, with sleep duration decreasing with the rise in educational grades causing daytime somnolence, irregular sleep behavior, and mood changes. Sleep health among adolescents has been progressively recognized as a universal and critical concern in many countries and was noted that Asian adolescents go to bed later than their American and European counterparts [57]. Inadequate sleep poses a myriad of physical, mental, and academic performance problems [58]. Sleep deprivation among Korean adolescents has been closely associated with obesity [59], suicidal risk and psychological health [60,61], poor academic performance and multitasking [62,63], and poor oral health [64]. Yang et al. [56] concluded that the main reasons for Korean adolescents' inadequate sleep hours included high academic demands and early school time. Korean adolescents—burdened under parental and societal emphasis on education—often attend extra private lessons in addition to their regular school [63]. However, limited information is available on government programs and interventions for such lifestyle behaviors regardless of numerous research findings.

On a positive note, > 60% and 85% of the respondents reported no exposure to alcohol consumption and cigarette smoking, respectively, and considered themselves in good

health. According to Hong et al. [18], alcohol and tobacco use among Korean adolescents is influenced by sociodemographic, family, academic, and economic factors. Yu et al. [65] reported that dissatisfaction to these risk factors was significantly associated with higher smoking or drinking rates. The influence of peers, family, and even strangers who practiced such a lifestyle was found to significantly affect substance use in adolescents [66-70].

Additionally, smoking and alcohol consumption was found to be highly related to suicidal thoughts and attempts, depression, stress, sleep deprivation, and sedentary lifestyles [71-73]. It was also reported that the frequency and amount of smoking and drinking among adolescents are high as those among adults [65], and socioeconomic costs and having drinking among Korean adolescents are higher compared to those in the US [74]. Despite the implementation of various policies by the government, i.e., Health Promotion Act and the Korean Alcohol Policy, studies recommend stricter, more effective measures to discourage and reduce substance use, especially among adolescents [50,74-76].

The adolescent population must be recognized as an integral part of society and their needs and health issues must be addressed [77]. Generally, adolescents feel healthy because of their youth and age, but may have unhealthy lifestyles [78]. Determining the gap between their SHP and lifestyle practices is necessary to address areas that require utmost attention. Several measures may be adopted to lessen this gap, such as strengthening public health policies and school-based component programs to promote healthy lifestyles, with added emphasis on the support system at home for implementing lifestyle reforms.

As a recap, majority of Korean adolescents who have a poor diet, poor exercise regimen, and unhealthy sleep behaviors perceived their health conditions as fair to excellent resulting in a negative correlation between SHP and lifestyle behaviors. Most of the respondents perceive themselves as healthy. In terms of lifestyle, most of them have an unhealthy diet, exercise, and sleep practices. However, most of them neither smoke cigarettes nor consume alcohol. These results imply that there is a huge disparity between SHP and the current lifestyle practices of Korean adolescents.

The findings of this study emphasize the necessity of more effective lifestyle interventions as well as reformations

in health consciousness during adolescence when behaviors are forming, which are practiced to adult life. Results also highlight the need to reevaluate the efficacy of current health policies and educational programs for the youth.

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