

Investigation and Analysis of Daily Health-Related Behaviors of Senior High School Students

Yan Zhang

School of Physical and Health Education, Nanjing Normal University Taizhou College, Taizhou, China
Email: qiudayongyzh@163.com

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Abstract

Health behavior includes health promoting behavior and health risk behavior. Young people are the future of a nation, and paying attention to young people's health has become a global consensus. The third year of high school is an important stage in the development of life. Under the guidance of the baton of the college entrance examination, society, schools, parents and students themselves tend to only pay attention to learning behaviors, while easily ignoring other behaviors including health behaviors. This paper investigates the health behavior of senior high school students to understand the status quo of their health behavior, and provides a theoretical basis for formulating health behavior intervention strategies for senior high school students.

Keywords

Senior Year, Health Behavior, Status Quo

1. Introduction

In 2015, adolescent health became the core of global strategy for the first time, and focusing on adolescent health has become a global consensus (WHO, 2015). In 2016, China issued the "Healthy China 2030" Plan Outline, which identified adolescents as a key group for promoting health and proposed the development and implementation of adolescent physical health intervention plans; The 13th Five Year Plan for Health and Health also clearly proposes to care for the health of young people, and the national health and education authorities are jointly responsible for carrying out youth health improvement projects. The key to improving adolescent health lies in the cultivation of healthy behaviors. Healthy behavior is a collective term for all activities that people engage in to maintain

and promote physical and mental health and avoid diseases. Health behaviors generally include positive health behaviors and dangerous health behaviors. The third year of high school is an important stage of life development. Due to the significant pressure of the college entrance examination, a student-centered approach has been formed, which makes it easy for high school students to exhibit various behavioral biases, including healthy behaviors. This article investigates and analyzes the current status of daily health behaviors (eye use behavior, sleep behavior, dietary behavior, physical exercise behavior, and smoking behavior) among senior high school students, providing a basis for formulating health intervention strategies for senior high school students.

2. Objects and Methods

The daily health-related behaviors of senior high school students were studied in 33 senior high schools in Taizhou. Under the arrangement of Taizhou Education Quality Testing Center, an online questionnaire survey (Questionnaire Star) was conducted among 1553 senior three students in 33 high schools in Taizhou. Among them, 895 were male, accounting for 57.63%; 658 girls, accounting for 42.37%. The survey data were input into SPSS26.0 for analysis.

3. Results

3.1. Students' Concern about Their Own Health

Self-health concern refers to the tendency of individuals to focus on the content that is intrinsically related to their own health, including feelings, behaviors, attitudes and so on. The survey results show (**Table 1**) that 88.3% of senior three students in Taizhou (sum of very concerned and relatively concerned) pay high attention to their own health; the proportion of general concern was 8.2%; the rates of little concern and no concern at all were 1.9% and 1.6% respectively.

Table 1. Degree of concern about health among senior three students (%).

Degree	%
Most attention	63.0
More attention	25.3
Normal attention	8.2
little attention	1.9
No attention	1.6

3.2. Screen Time

Screen time refers to the time spent in front of electronic devices. Studies have shown that prolonged screen time can affect subcortical structures, resting state functional connectivity, and early adolescent mental health issues (Lissak, 2018; Oswald et al., 2020). The "Implementation Plan for Comprehensive Prevention

and Control of Myopia in Children and Adolescents” jointly issued by the Ministry of Education and eight other departments (Jiao Ti Yi [2018] No. 3) points out that bad eye use behavior should be avoided, and children should be guided not to read or use electronic products while walking, eating, lying in bed, in shaking carriages, in dim light or direct sunlight, and should not use their eyes continuously for more than 40 minutes. In the notice issued by the Jiangsu Provincial Department of Education on the issuance of the “Jiangsu Province Children and Adolescents Myopia Prevention and Control Responsibility List (Trial)” (Su Jiao Ti Yi [2023] No. 9), it is also explicitly required that school teachers and students strictly control the use of video electronic products. According to a survey of high school seniors who spend more than 4 hours watching electronic screens (including whiteboards, televisions, computers, etc.) on and off campus every day (**Table 2**), 54.5% of high school seniors in Taizhou City spend more than 4 hours watching electronic screens on campus; 6.1% of students who spend more than 4 hours a day watching electronic screens outside of school (such as at home, extracurricular tutoring institutions, student dormitories, internet cafes, video game centers, etc.).

Table 2. Distribution of time for senior high school students to watch electronic screens in and out of campus every day (%).

	Not look	Within 1 h (including 1 h)	1 - 2 h (including 2 h)	2 - 3 h (including 3 h)	3 - 4 h (including 4 h)	Above 4 h
In	2.2	9.3	9.5	14.9	9.6	54.5
Out	28.8	43.7	14.4	5.1	1.9	6.1

3.3. Sleep Time

In recent years, ensuring students’ sleep time and promoting students’ health have attracted the attention of the whole society. Students’ lack of sleep is related to the occurrence and development of myopia and other diseases. In 2021, the “Notice on Further Strengthening the Sleep Management of Primary and Secondary School Students” issued by the General Office of the Ministry of Education (Education and Foundation Office Letter [2021] No. 11) requires that according to the physical and mental development characteristics of students of different ages, high school students should sleep for 8 hours a day. The survey results show (**Table 3**) that only 5.2% of senior three students in Taizhou slept for 8 hours or more. Up to 73.54% of senior high school students sleep less than seven hours a day.

Table 3. Distribution of daily sleep duration of senior high school students (%).

Time	Less than 7 h	7 - 8 h (including 7 h)	8 - 9 h (including 8 h)	9 - 10 h (including 8 h)	More than 10 h
%	73.5	21.3	4.1	0.3	0.8

3.4. Dietary Behavior

The Implementation Plan for the Prevention and Control of Obesity in Children and Adolescents jointly issued by the National Health Commission, the Ministry

of Education, and other six departments (National Health Office CDC [2020] No. 16) requires helping children develop scientific dietary behaviors, cultivate and guide children to have regular meals, and encourage them to eat independently. The Notice of the General Office of the Ministry of Education on Carrying out Health Education Activities on the theme of “Healthy China’s Health for Teachers and Students” in 2021 (JTYTH [2021] No. 9) emphasizes that we should strengthen normal prevention and control, educate and guide teachers and students to implement normal prevention and control measures for the COVID-19, maintain healthy behaviors and habits such as frequent hand washing, regular ventilation, serving of individual dishes, scientific medical treatment and medication, and do a good job of self-protection in daily life. This survey investigated the dietary and hygiene habits of students.

By conducting a survey of high school seniors eating breakfast and dinner, we aim to reflect their dietary habits. The survey results show (Table 4) that 80.5% of high school seniors in Taizhou City eat breakfast every day, while 3.4% of students never eat breakfast. In terms of dinner, 88.3% of high school seniors eat dinner every day, and 1.9% of students never eat dinner.

Table 4. Eating breakfast/dinner among high school seniors (%).

	Never	1 - 2/week	3 - 5/week	Everyday
Breakfast	3.4	4.9	11.3	80.5
Dinner	1.9	2.7	7.2	88.3

3.5. Extracurricular physical exercise behavior

Physical exercise behavior is an individual’s physical activity in his spare time to improve his physical and mental health. The “Notice on Further Strengthening the Physical Health Management of Primary and Secondary School Students” issued by the General Office of the Ministry of Education (Letter [2021] No. 16) stressed that efforts should be made to ensure that students have 1 hour of physical activity each day inside and outside school, vigorously promote family physical exercise activities, and put forward clear requirements on the content, intensity and duration of exercise. The National Health Commission, the Ministry of Education and other six departments jointly issued the “Children and Adolescents Obesity Prevention and Control Implementation Plan Notice” (National Health Office for Disease Control and Prevention [2020] No. 16) proposed to create a good family sports atmosphere, actively guide children to outdoor activities and physical exercise, advocate parents and children to exercise together. Create the necessary conditions to promote the movement of daily life. According to the survey on the independent exercise of senior high school students outside school, the results show (Table 5) that 45.5% of senior high school students in Taizhou participate in extracurricular physical exercise (more than 30 minutes each time) once or twice a week, 29.4% for 3 - 4 times, 19.5% for 5 times or more, and 5.6% for never.

Table 5. Participation of high school students in extracurricular physical exercise (more than 30 minutes each time) per week (%).

Frequency	%
1 - 2/week	45.5
3 - 4/week	29.4
More than 5	19.5
Never	5.6

3.6. Smoking Behavior

Youth smoking is a major public health problem. In 2021, the attempted smoking rate of middle school students in China was 16.7%, while the current smoking rate is 4.7% (CCDCP, 2022; Zuo et al., 2012; Liu, 2019). The anti-smoking education in schools plays an important role in the intervention of students' smoking behavior. In 2020, the Ministry of Education and the National Health Commission "Notice on Further Strengthening the Construction of Smoke-Free Schools" clearly pointed out that students' smoking behavior is an important part of the daily behavior management of students. The smoking behavior of senior high school students was investigated through student questionnaire. The results showed (Table 6) that the proportion of senior high school students in Taizhou who had smoked cigarettes was 4.7%; of these, 6.6 per cent of boys and 2.1 per cent of girls had smoked.

Table 6. Smoking behavior of senior high school students (%).

	Male	Female
Yes	6.6	2.1
No	93.4	97.9

4. Discussion

The third year of high school is the most tense and heavy stage of academic pressure. Under the influence of the college entrance examination baton, many high school seniors have to race against time and devote themselves wholeheartedly to cultural learning. The heavy academic burden can easily lead to deviations in the daily health behavior of high school seniors, resulting in damage to their health. The health awareness and daily health behaviors of students are closely related to their health level. 88.3% of high school seniors are more concerned about their own health and demonstrate a certain level of health awareness. Health awareness is a prerequisite for the public to engage in healthy behavior, and the strength of health awareness is a prerequisite for determining the quality of health status (Xia & Su, 2004). The overall health awareness of Chinese residents is increasing, and is influenced by factors such as gender, education level, and occupational type (Shi et al., 2019).

Screen front behavior is one of the main static behaviors among adolescents. With the advancement of educational technology modernization, electronic screens have been used in daily teaching in most primary and secondary schools in China, greatly increasing the occurrence of on-campus screen behavior among students. Some studies suggest a positive correlation between prolonged screen activity and behavioral problems in children and adolescents (Riehm et al., 2019; Zeng, 2017). This survey shows that 79% of high school seniors in Taizhou spend more than 2 hours in front of the school screen every day. Long-term use of electronic products can easily have adverse effects on students' eyesight.

Sleep is an important means to restore human function. Lack of sleep is likely to lead to a decline in individual health and even the occurrence of a variety of diseases. Studies have shown that lower sleep quality (Zhou et al., 2015), shorter sleep duration (Jee et al., 2016), and later bedtimes (Qu et al., 2020) are associated with a higher incidence of myopia. The results of this study show that 94.8% of senior three students in Taizhou city sleep less than 8 hours per day as stipulated by the Ministry of Education, which has a serious impact on students' health to a certain extent.

The prevalence of poor eating behaviors among adolescents is one of the common public health problems worldwide, including the intake of foods high in sugar and fat and irregular eating behaviors (Das et al., 2017). Eating breakfast regularly helps to reduce the risk of overweight, obesity and related chronic diseases in school-age children (Ardeshirlarijani et al., 2019), and improves exercise ability and physical fitness (CNS, 2022). The results of this study show that 80.5% and 88.3% of high school students in Taizhou can eat breakfast and dinner every day, and there are still a certain proportion of students who cannot eat breakfast and dinner every day.

Middle school is an important period for the growth of students' athletic ability and the formation of exercise habits. Physical exercise has a positive significance for promoting the healthy development of middle school students' physical and mental health. This study shows that 48.9% of the senior high school students can exercise more than 3 times a week, indicating that nearly half of the senior high school students in Taizhou have developed good physical exercise behavior; At the same time, more than half of the senior high school students do independent exercise less than 3 times a week, and even 5.6% of the students never participate in independent exercise after class.

Smoking is harmful to health, especially for young people who are still in the growth and development stage. Smoking has adverse effects on their developmental development and increases the risk of smoking-related diseases among young people. This study shows that the proportion of male and female senior three students in Taizhou who have tried and smoked cigarettes is 6.6% and 2.1% respectively, and the overall smoking rate of senior three students is low.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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