



Analysis of Food and Beverage Consumption Preference and Behavior Characteristics of Senior High School Students

Yuming Han

Beijing No.4 High School International Campus, Beijing 100000, China.

Abstract

The rising global prevalence of adolescent obesity and diet-related health issues underscores the importance of understanding youth dietary behaviors. This study aims to analyze the food and beverage consumption preferences and behavioral characteristics of high school students in Beijing, with specific objectives to identify key influencing factors, depict consumption patterns, and examine group differences. Using a questionnaire survey distributed to 52 students, descriptive statistics were employed to analyze data on dining frequency, spending habits, and decision-making influences. The results indicate that high school students exhibit high-frequency, mid-to-high-price consumption patterns, with taste preferences and personal likes being the primary decision drivers. Additionally, students prioritize hygiene, distance, and word-of-mouth evaluations over price promotions and are more influenced by personal habits and peer recommendations than by advertising. These findings offer practical insights for catering businesses and health education initiatives, supporting the development of targeted strategies to promote healthier eating environments for adolescents.

Keywords

High school students; Dietary consumption; Consumption preferences; Influencing factors; Behavioral analysis

<https://oajem.damray.com/>

OPEN ACCESS

DOI: 10.26855/oajem.2025.06.003

Received: September 5, 2025

Accepted: October 2, 2025

Published: October 28, 2025

Copyright: ©2025 Yuming Han. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

1. Introduction

1.1 Background and Problem Statement

Globally, the increasing prevalence of adolescent obesity and diet-related health issues has become a significant public health concern (Bukhari & Wylie-Rosett, 2011). High school students are in a critical period of physical development and the formative stage of establishing lifelong healthy eating habits. Their dietary consumption behaviors are crucial not only for immediate nutritional intake but also exert a profound influence on their long-term health perceptions and lifestyles (Croll & Story, 2001). Concurrently, socio-economic development and the acceleration of daily life rhythms have diversified the dietary choices available to high school students. Restaurants near schools, online food delivery platforms, and convenient pre-packaged foods provide them with a multitude of alternatives beyond home-cooked meals and school cafeterias.

However, these external food options are often characterized by high levels of salt, sugar, and fat, presenting significant issues of nutritional imbalance (Hwang & Lorenzen, 2008). Existing research indicates a significant positive cor-

relation between frequent consumption of such foods and adverse health outcomes among adolescents. Although families and schools attempt to intervene, high school students, as a group, increasingly seek autonomous decision-making and social acceptance, and have their consumption preferences heavily influenced by peers, social media marketing, and personal taste preferences (Pedraja & Yagüe, 2001). This often challenges external efforts to promote healthy eating.

1.2 Research Gap

Against this backdrop, a core question emerges: What are the specific characteristics of the dietary consumption preferences of high school students within the current complex food environment, and which key factors drive their decision-making (Story & French, 2002)? Current research lacks targeted and systematic empirical analysis addressing these questions specifically.

1.3 Research Objectives and Questions

This study focuses on high school students in Beijing as its core research subjects, aiming to conduct an in-depth analysis of their dietary consumption preferences and behavioral characteristics. The research primarily covers three levels: preference analysis, description of behavioral patterns, and investigation of influencing factors.

The overall purpose of this study is to systematically reveal the dietary consumption preference patterns and behavioral regularities of high school students and to explore the underlying driving mechanisms. To achieve this purpose, this study sets the following specific objectives:

1. To quantify the preference intensity of high school students for different dietary attributes through questionnaire surveys and data analysis.
2. To depict the typical dietary consumption behavior patterns of high school students and conduct comparative analyses of differences within the group (e.g., across different genders or grades).
3. To construct multivariate analysis models to identify the most critical factors influencing their food choices.
4. To propose targeted and actionable strategic recommendations based on the empirical findings.

1.4 Significance of the Study

This study holds both theoretical and practical significance. Theoretically, it applies theories from consumer behavior, health psychology, and education to the specific context of Chinese high school students, enriching the empirical case base for research on adolescent eating behaviors. It contributes to a deeper understanding of the adolescent consumer decision-making process (Shim, 1996) and provides empirical evidence from the Chinese socio-cultural context for the theoretical development of related disciplines.

On a practical level, the findings of this study offer clear, actionable value. It provides a reference for the optimization of food service businesses near schools: the conclusions can help operators gain a deep understanding of the real needs and decision-making logic of their core clientele (high school students), enabling precise improvements in product development, pricing strategies, marketing promotion, and dining environment optimization to enhance commercial effectiveness. It provides a scientific basis for the effective promotion of healthy eating (WHO, 2018). The identified key influencing factors and preference characteristics can guide health education initiatives by schools, public health departments, and parents (Zhang & He, 2007). For instance, if the study finds that students prioritize convenience and taste highly, health promotion activities should focus on recommending and providing healthy meal options that are both convenient and palatable, rather than relying solely on abstract advice. Ultimately, this study aims to guide behavior by first understanding it, providing decision-making support for creating a healthier food environment around schools that better meets student needs, thereby promoting the healthy development of the high school student population.

2. Research Method Design

2.1 Introduction of Research Methods

This study mainly adopts the questionnaire survey method, supplemented by quantitative statistical analysis, and specifically carries out research through the following aspects: first, in terms of theoretical construction, based on daily observation and preliminary interviews, the core issues of the study are clearly defined, namely the types, frequencies, influencing factors and group differences of high school students' catering consumption; second, for data collection, a standardized questionnaire is designed, with on-campus students as the research population, and a convenient sampling survey is conducted online to ensure the convenience and feasibility of data acquisition; third, in the process of data processing, the collected questionnaires are screened and coded, and the effective data are entered into statistical analy-

sis software to form a structured database; fourth, regarding data analysis, descriptive statistics are first used to describe the sample characteristics and consumption behavior, and then different methods are adopted to explore consumption differences and tap potential connections; finally, in terms of conclusion and suggestion, research conclusions are drawn according to the results of data analysis, and targeted suggestions are put forward for the management of school canteens, students' healthy eating and other related aspects, and through the design of questionnaires, first-hand data on high school students' catering consumption behavior is collected, and statistical tools are used to conduct descriptive and inferential analysis of the data.

2.2 Question Description

In the research on senior high school students' catering consumption behavior, three core aspects need to be focused on: first, regarding consumption preference and pattern, it is necessary to clarify the most common types of dining for senior high school students, including school cafeteria, Chinese fast food/lunch, western fast food, casual dining, take-away platform, family-style restaurant and other categories, as well as their corresponding consumption frequency, such as once a day, several times a week and other specific situations; second, for the influencing factors of decision-making, it is required to explore the main factors that affect senior high school students' choice of dining place and dining type, which may involve price level, distance/convenience, health and nutrition considerations, taste preference, peer influence, promotion activities, environmental sanitation, social atmosphere and other aspects; third, in terms of analysis of group differences, it is necessary to verify whether there is a significant difference in the dining consumption behavior of senior high school students due to different demographic characteristics, specifically including gender, grade, monthly disposable pocket money and other demographic variables.

2.3 Data Source and Processing

2.3.1 Questionnaire Design

The questionnaire will be divided into three parts:

Part I: Basic information. Collect demographic variables, including gender, grade, and monthly disposable pocket money.

Part II: Characteristics of consumer behavior.

Dining channels: distinguish between offline (off-campus restaurant) and online takeaway.

Choice of catering types: List common types, and ask respondents to choose the most frequently consumed ones and rank them.

Consumption frequency: set different intervals, such as 1-3 times and 3-5 times.

Single consumption amount: set interval options (for example, below 20 yuan, 21-40 yuan, 41-60 yuan, and above 60 yuan).

Part III: Influencing factors of decision. Richter's five-point scale (1= very unimportant, 5= very important) is used to measure the importance of price, distance, health, taste, coupons, environment, and other factors in decision-making.

2.3.2 Data Collection

A convenient sampling method is adopted, and students in our school are taken as the sample frame. Online distribution: make electronic questionnaires (using platforms such as "Questionnaires" and "Tencent Questionnaires") and spread them through social media groups of all classes and grades to improve recycling efficiency and coverage.

2.4 Model Introduction

2.4.1 Statistical Tools: Descriptive Statistics is One of the Most Basic and Core Analysis Methods in Statistics

Its main purpose is to describe and summarize the basic situation of data sets through simple summaries and visualization, so as to transform the original data into information that is easy to understand and explain. With the help of descriptive statistical methods, this study makes a preliminary study on the distribution, concentration trend, and dispersion degree of high school students' catering consumption behavior, so as to directly and clearly describe the preference map and behavior characteristics of the research objects in catering consumption.

2.4.2 The Specific Application of Descriptive Statistics in this Study

For consumption preferences (such as "What's your favorite food and beverage category?"), Frequency and proportion analysis will be adopted in this study. By calculating the number and proportion of choices (such as Chinese fast food, Western fast food, milk tea drinks, local snacks, etc.), and visually presenting them with pie charts or bar charts, the catering taste preference structure and mainstream selection direction of high school students can be most directly revealed.

For the characteristics of consumption behavior (such as “What is your average total monthly food and beverage consumption?”): This study will use the indicators of centralized trend (mean, median) and dispersion degree (standard deviation, range) for comprehensive analysis. The average value can reflect the overall average consumption level, while the median value can avoid the influence of extreme values and better reflect the level in the middle position. The standard deviation can measure the difference in individual consumption ability. The greater the standard deviation, the more obvious the consumption differentiation among students.

3. Statistical Analysis

3.1 Statistical Results

1) This study investigated the monthly food consumption amount of senior high school students and their main sources of funds, and the statistical results are shown in Figure 1.

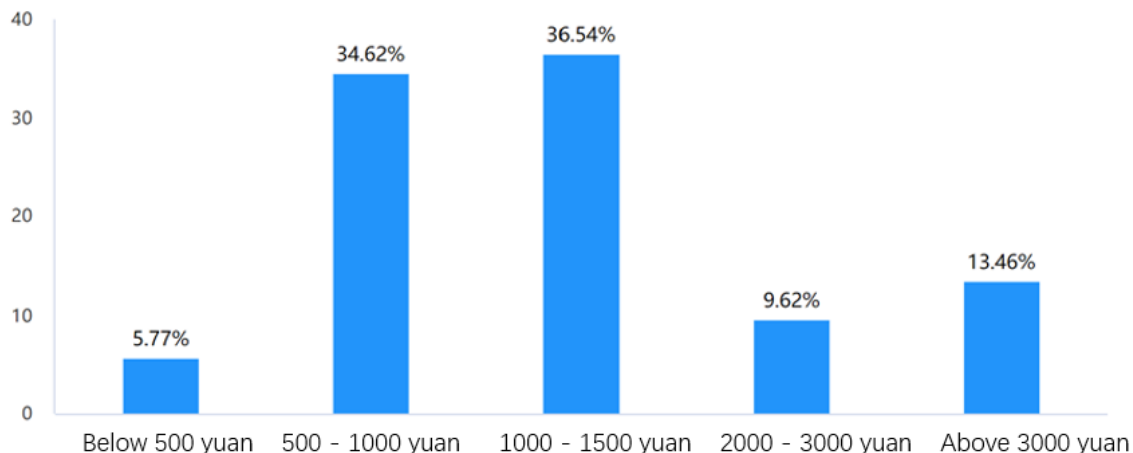


Figure 1. Monthly food consumption amount of senior high school students.

The survey data show that the monthly catering consumption level of senior high school students presents the characteristics of centralization and differentiation (Figure 2). The vast majority of students spend 500-1000 yuan and 1,000-1,500yuan, accounting for 36.54% and 34.62% respectively, which together exceed 70% (71.16%) of the total, which indicates that most senior high school students spend 500-1,500 yuan on meals every month. In addition, 13.46% of students have low consumption, which is below 500 yuan. Students who spend more than 1,500 yuan (including 1,500-2,000 yuan and more than 2,000 yuan) account for a relatively small proportion, accounting for 9.62% and 5.77% respectively.

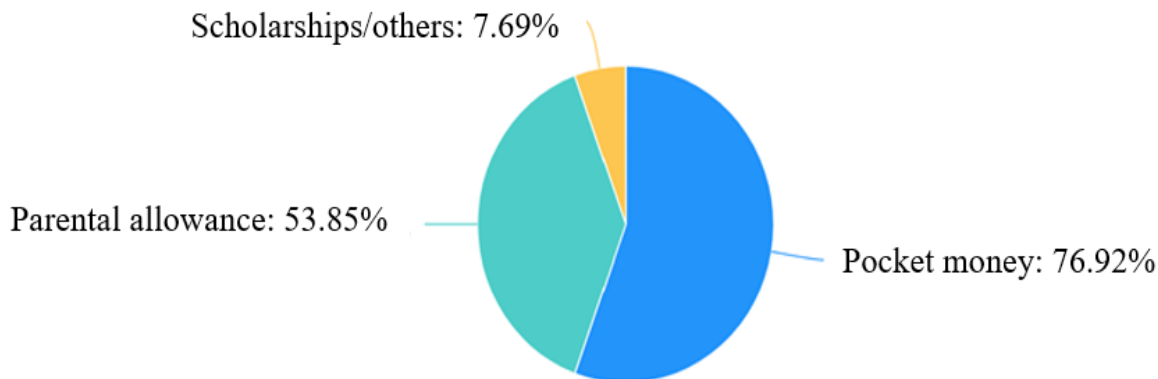


Figure 2. Main sources of funds for catering consumption of senior high school students.

In terms of the source of funds for catering consumption, “pocket money” is the most important channel for senior high school students, accounting for 76.92%. Followed by “parental quota”, accounting for 53.85%. The proportion of students who rely on “scholarship/other” sources is relatively low, only 7.69%. This shows that the catering consumption of senior high school students depends largely on the regular financial support of their families, and a considerable number of students’ catering consumption is directly planned and provided by their parents.

2) According to the survey data, the dining preference of senior high school students shows the remarkable characteristics of diversification and mainstreaming. Among them, traditional Chinese food has become the most popular choice because of its characteristics of conforming to daily eating habits and popular tastes, with a support ratio as high as 80.77%, occupying an absolute dominant position.

At the same time, the choice of students also reflects the pursuit of convenience and popular taste (figure 3). Chinese fast food and snacks are tied for the second popular category, with a selection ratio of 63.46%. Followed by western-style catering and Japanese and Korean cuisine, both accounting for 61.54%, which shows that exotic catering also has a broad market among high school students. In contrast, the choice rate of healthy light food is relatively low, only 28.85%, which reflects that the current high school students still take taste and satisfaction as the primary consideration in food selection, and the concept of healthy eating has penetrated to some extent, but it has not yet become mainstream.

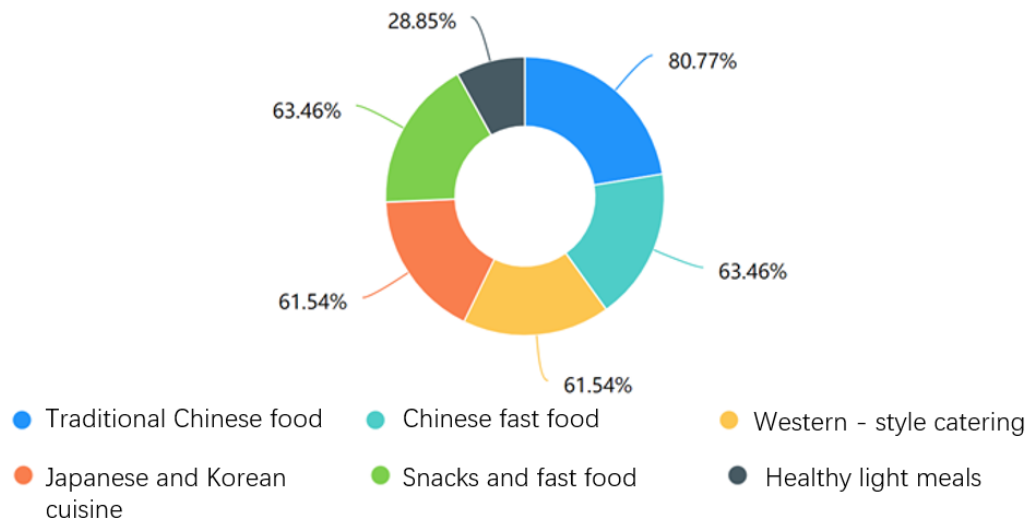


Figure 3. Food choices of senior high school students.

3) In this study, high school students’ attention to various influencing factors in food and beverage consumption decision-making was investigated through matrix scale questions (1-5 points, with increasing attention in turn), and the statistical results are shown in Figure 4. The average score of this matrix question is 3.82, which shows that the high school students have a high degree of comprehensive consideration when choosing meals.

Data analysis shows that high school students’ decision-making concerns show a clear value orientation. “Taste and taste” and “personal preference” are the most important determinants, with an average score of 4.63 points. Specifically, 67.31% and 73.08% students gave the highest score (5 points) respectively, which strongly showed that sensory enjoyment and subjective preference were the core driving forces of their consumption behavior.

In contrast, the average score of the “nutrition and health” factor is 3.58, which is at the upper-middle level, and the total proportion of students who choose 4 points and 5 points is 53.85%. This shows that health awareness has a certain foundation in high school students, but its importance has not exceeded taste and preference. The average score of the “price” factor is 3.40, and the distribution is relatively scattered, reflecting the great difference in the sensitivity to price within the student group.

It is worth noting that the average score of “online celebrity restaurant/netizen rating” is the lowest, only 2.87 points, and 21.15% of the students gave the lowest score (1 point). This shows that, despite the prevalence of online marketing, most senior high school students still maintain their independent judgment in food and beverage choices, and are relatively limited by social media and the online celebrity effect.

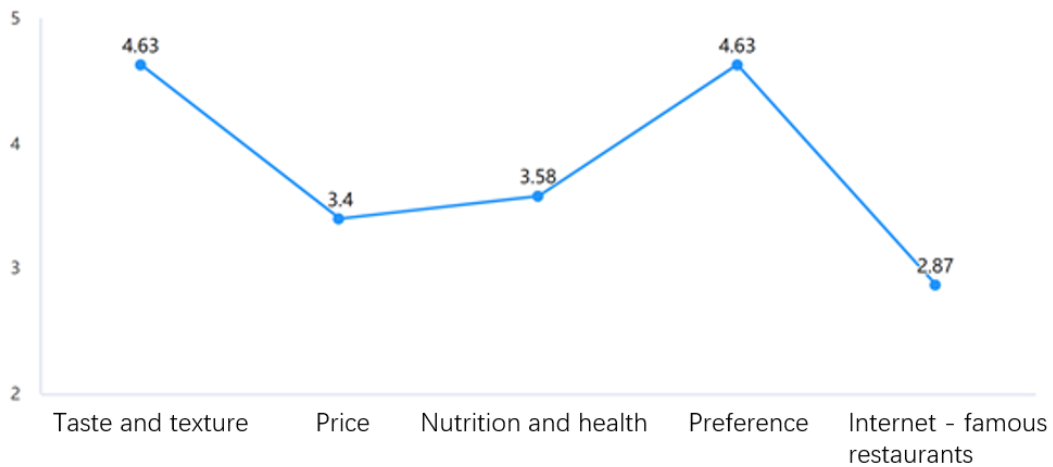


Figure 4. Trend Chart of Factors Influencing Restaurant Choices.

4) In this study, the weight demand preference of high school students in catering consumption was investigated, and the statistical results are shown in Figure 5.

The survey data clearly show that high school students show a strong sense of rational consumption and economy in the demand for weight. The vast majority of students (73.08%) tend to choose “moderate weight and no waste” catering. This shows that this group pays great attention to the actual demand and avoids food waste while pursuing food satisfaction, which reflects its rational consumption concept.

In contrast, the proportion of students who choose to “eat a lot” is 25%, and these students may pay more attention to the satiety and affordability of catering. However, only 1.92% students choose “small quantity, control food intake”, which reflects that consumption for the purpose of controlling diet is not mainstream in this group.

This preference is consistent with the “CD Action” advocated by the current society and the fashion of saving food, and also reflects the improvement of the younger generation of consumers’ sense of responsibility. For catering businesses, providing reasonable and optional package settings is more in line with the expectations of mainstream student customers.

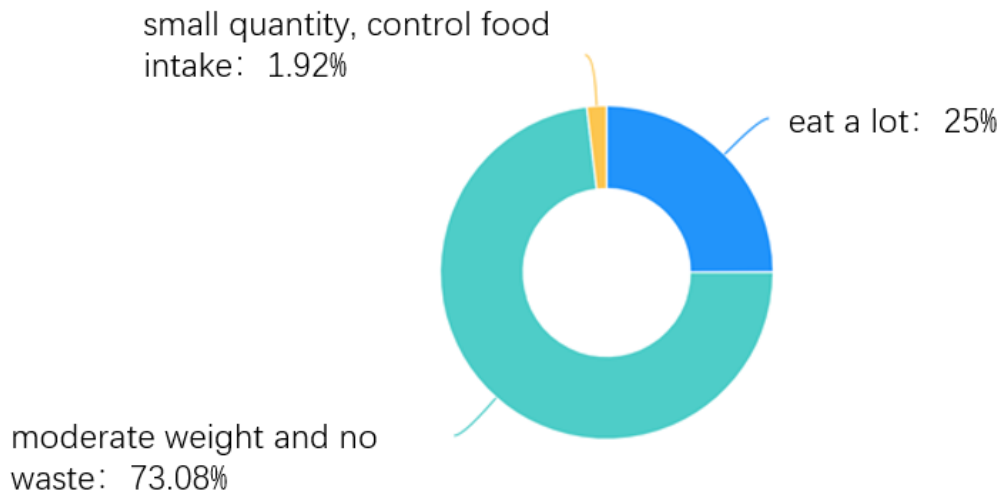


Figure 5. Weight Demand Preference of Senior High School Students in Catering Consumption.

5) The frequency of high school students eating out every week (including eating in restaurants and ordering takeout) was investigated. The survey data showed that the eating out behavior of high school students showed the characteris-

tics of high frequency and normalization (Figure 6).

More than 90% (93.27%) of students have the experience of eating out every week. Among them, students with the frequency of “1-3 times” account for the highest proportion, reaching 50%, which constitutes the main consumer. Students whose frequency is “3-5 times” also account for a considerable proportion, accounting for 28.85%. Together, nearly 80% of the students (78.85%) eat out between 1 and 5 times a week.

It is worth noting that the total proportion of students who eat out more than five times a week (including 5-8 times and more than 12 times) is 15.38%, which shows that a considerable number of students have formed a consumption habit of highly relying on external catering. However, only 5.77% of the students said that they “eat out 0 times a week”, which is a very small number.

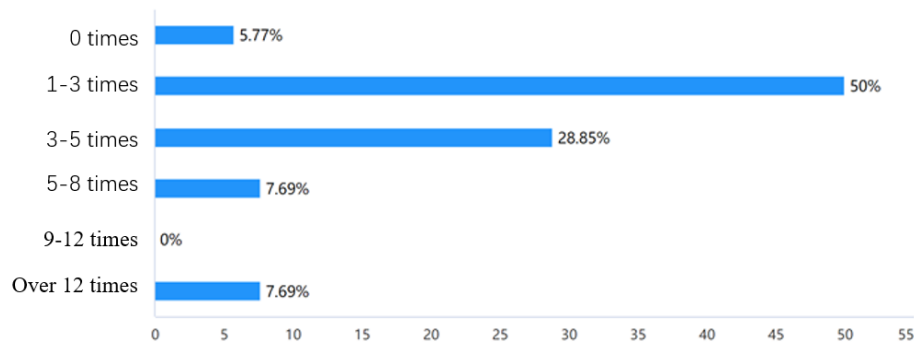


Figure 6. Weekly Frequency of High School Students Eating Out.

6) The dependence of high school students on different information acquisition channels when they have food and beverage needs is investigated through a matrix scale (Figure 7), and the overall average score of the matrix scale is 3.35 points. The data analysis reveals that the preference of high school students’ catering information acquisition channels has obvious characteristics of “acquaintance society” and “path dependence”. Among them, “self-frequented restaurant” ranked first with an average score of 4.71, and 76.92% of the students gave the highest score (5 points). This strongly shows that consumption habits and past direct experience are the core and most reliable decision-making basis for high school students to choose restaurants.

Followed by “recommended by friends, classmates, and family”, with an average score of 3.83. This channel has gained a high degree of trust, with a total of 69.23% students giving 4 or 5 points. This shows that word-of-mouth communication in acquaintances’ social circles has an important influence on this group.

In terms of digital channels, “social media” (average score 3.48) and “take-away platform” (average score 3.37) are at a moderate level of dependence, which is an important supplement for modern high school students to obtain information. However, the traditional “offline store promotion” (with an average score of 2.56) and “TV and advertising” (with an average score of 2.15) are the weakest, with 50% and 63.46% students giving the lowest two scores (1 or 2) respectively, reflecting that the attraction of traditional advertising forms to high school students has been greatly weakened.

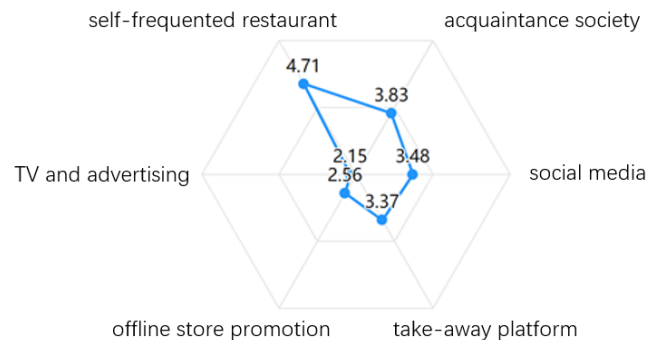


Figure 7. High School Students’ Dependence on Different Information Acquisition Channels for Catering Needs.

7) The key factors that affect high school students' choice of specific catering businesses were investigated through multiple-choice questions (Figure 8). The effective number of people filling in this question is 52, because it is a multiple-choice question, and the sum of the proportions exceeds 100%.

Data analysis shows that when high school students choose specific catering businesses, their decision-making is multi-dimensional, and they attach great importance to convenience, safety, and word of mouth. "Distance (whether the traffic is convenient)" has become the primary influencing factor with the highest selection rate of 88.46%, which highlights the importance of convenience and accessibility for high school students with tight time and relatively fixed activities. "Word-of-mouth evaluation (platform rating evaluation)" (82.69%) and "health status" (78.85%) were ranked second and third, respectively, with the selection rates exceeding 75%. This shows that high school students will actively refer to other people's consumption experience as the basis of risk assessment before choosing a business, and have higher requirements for food hygiene and safety, reflecting their rational consumption attitude.

In addition, "service attitude" (65.38%) and "brand awareness" (59.62%) are also factors considered by more than half of the students, which shows that they attach importance to consumer experience and brand reputation. The selection rate of "preferential activities" is 50%, although it is still an important factor, but its importance is relatively lower than the above items, which is slightly different from the discovery that this group generally pays attention to coupons (71.15%), indicating that when faced with specific choices, the priority of basic service elements (distance, health, word of mouth) will be higher than that of simple price concessions.

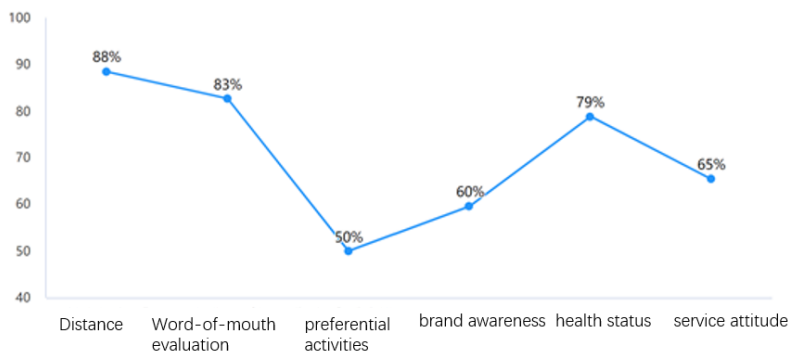


Figure 8. Key Factors Affecting High School Students' Choice of Specific Catering Businesses.

8) The consumption amount of high school students' single dining out was shown in Figure 9. The survey data showed that the consumption level of high school students' single dining out showed a high-end trend. The proportion of students who choose "above 80 yuan" for a single consumption is the highest, reaching 40.38%, which shows that a considerable number of students have strong instant consumption ability and have higher requirements for catering quality.

The proportion of students spending in the "40-60 yuan" range is 26.92%, ranking second. The proportion of students who choose "60-80 yuan" and "20-40 yuan" is 19.23% and 13.46% respectively. It is worth noting that the total proportion of "above 60 yuan" is close to 60% (59.61%), which clearly shows that the single catering consumption of most high school students has stabilized at the level above 60 yuan.

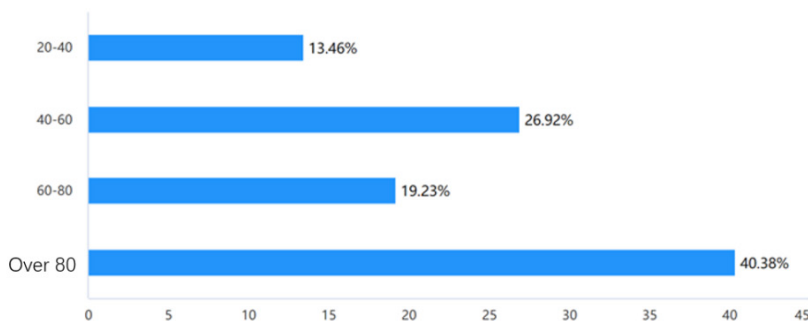


Figure 9. Consumption Amount of High School Students' Single Dining Out.

of “high frequency, high end”. Most students eat out 1-5 times a week, and the single consumption amount is concentrated above 60 yuan, which shows that external catering has become an important part of their daily life and shows strong consumption potential.

Secondly, in the motivation of consumption decision-making, the choice of high school students follows the core principle of “taste-oriented, rational and pragmatic”. “Taste and taste” and “personal preference” are the most important factors; At the same time, they are sensitive to “price” (more than 70% of students actively seek preferential treatment), but in the final decision, “distance”, “health status” and “word of mouth evaluation” have higher priority than simple price promotion, which reflects their mature consumption concept.

Thirdly, in terms of information acquisition and merchant selection, this group shows a tendency of “trusting experience and alienating advertising”. “Restaurant I often go to” and “recommendation by acquaintances” are the most reliable information channels, but the trust in traditional advertising and online celebrity marketing is low. This reflects that its decision-making depends on direct experience and word-of-mouth in social circles, rather than commercial propaganda.

Finally, in the concept of consumption, senior high school students show the importance of cost performance, food safety, and anti-waste. They prefer “moderate weight and no waste” meals, and have higher requirements for the basic quality of the business, such as hygiene and service, and outline a portrait of a young consumer who pursues sensory enjoyment and has a sense of rational responsibility.

4.2 Policy Recommendations

Product and Pricing: Improve taste consistency and innovation. Offer affordable basic meals with premium specials. Introduce student discounts and membership benefits to address price sensitivity.

Operations and Service: Prioritize food safety and hygiene (e.g., open kitchens). Optimize locations near schools, improve staff service, and encourage genuine online reviews to build a reputation.

Marketing and Communication: Focus on retaining existing customers and encouraging social sharing (e.g., “friend discount” promotions, creating shareable food or spaces).

Social Responsibility: Support anti-waste initiatives by offering half-portions. This aligns with student values and enhances brand image.

4.3 Limitations and Future Research

This study has limitations: a small sample size (52) from a single area limits generalizability, and descriptive statistics only identify patterns, not causality.

Future research should expand the sample size and geographic scope, use advanced statistical models (e.g., regression) to identify key decision factors, and conduct longitudinal studies to track changes in preferences over time.

References

- Bukhari, A., Fredericks, L., & Wylie-Rosett, J. (2011). Strategies to promote high school students' healthful food choices. *Journal of Nutrition Education and Behavior*, 43(5), 414-418.
- Croll, J. K., Neumark-Sztainer, D., & Story, M. (2001). Healthy eating: What does it mean to adolescents? *Journal of Nutrition Education*, 33(4), 193-198.
- Hwang, J., & Lorenzen, C. L. (2008). Effective nutrition labeling of restaurant menu and pricing of healthy menu. *Journal of Food-service*, 19(5), 270-276.
- Li, X., Braakhuis, A., Li, Z., & Roy, R. (2022). How does the university food environment impact student dietary behaviors? A systematic review. *Frontiers in Nutrition*, 9, 840818.
- Pedraja, M., & Yagüe, J. (2001). What information do customers use when choosing a restaurant? *International Journal of Contemporary Hospitality Management*, 13(6), 316-318.
- Ragavi, M. (2024). Factors affecting eating behavior and impact of nutrition education on the eating behaviour of adolescents (17-19 years). *Nutrition & Food Science*. Advance online publication.
- Shim, S. (1996). Adolescent consumer decision-making styles: The consumer socialization perspective. *Psychology & Marketing*, 13(6), 547-569.
- Story, M., Neumark-Sztainer, D., & French, S. (2002). Individual and environmental influences on adolescent eating behaviors. *Journal of the American Dietetic Association*, 102(3), S40-S51.
- World Health Organization. (2018). Obesity and overweight fact sheet. Geneva: Author.
- Zhang, X., & He, Y. (2007). Influence of educational attainment on consumption. *Frontiers of Education in China*, 2(2), 259-272.