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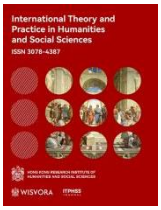

Urban Walkability and Consumer Behavior: An Analysis of Citywalk PreferencesAmong College Students

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Abstract

Based on a questionnaire survey of 1,000 college students in China, this study explored the factors and patterns that influenced the consumption behavior of college students through Citywalk activities. The results showed that the frequency of college students' participation in Citywalk activities was significantly positively correlated with their willingness to consume and the amount of consumption. Environmental factors were the main factors affecting college students' willingness to walk, while social needs and leisure experience were the core driving forces for college students to participate in Citywalk. The study also found that there were significant differences in the consumption behavior of Citywalk among college students of different types of universities and city levels. Based on the research results, this paper put forward policy recommendations and practical inspirations for promoting the optimization of urban walking environment and outdoor leisure consumption of college students.

1. Introduction

Urban walkability has garnered increasing attention in recent years, recognized for its multifaceted benefits encompassing public health, environmental sustainability, and economic vitality. Walkable urban environments not only promote physical activity but also enhance social interactions and contribute to the economic vibrancy of cities (Saelens et al., 2003; Frank et al., 2006). In the context of China, the rapid urbanization and the rise of the "Citywalk" phenomenon—a trend where individuals explore urban spaces on foot—reflect a growing interest among younger populations, particularly university students, in engaging with their urban environments more intimately (Mintel, 2023).

University students represent a significant demographic in urban settings, often exhibiting unique consumption patterns influenced by their mobility and lifestyle choices. Studies have shown that the built environment, including factors such as walkability, significantly affects individuals' transportation choices and, consequently, their consumption behaviors (Ewing & Cervero, 2010).

Moreover, the Theory of Planned Behavior posits that attitudes, subjective norms, and perceived behavioral control influence individuals' intentions and behaviors, suggesting that students' perceptions of walkable environments could impact their engagement in Citywalk activities and related consumption (Ajzen, 1991).

Despite the recognized importance of walkability and its potential influence on consumer behavior, there is a paucity of empirical research examining this relationship within the Chinese context, especially among university students. Understanding how Citywalk activities affect students' consumption behaviors can provide valuable insights for urban planners, policymakers, and businesses aiming to foster sustainable urban development and cater to the needs of this demographic (Yuan et al., 2024).

This study aims to fill this research gap by investigating the impact of Citywalk activities on the consumption behaviors of Chinese university students. By analyzing factors such as the frequency of Citywalk participation, environmental perceptions, and associated spending patterns, this research seeks to elucidate the interplay between urban walkability and consumer behavior in a rapidly urbanizing society (Wang et al., 2024).

2. Related Work

Urban walkability has emerged as a significant focus in urban planning and public health research. Ewing and Cervero (2010) introduced the "5D" model—Density, Diversity, Design, Destination accessibility, and Distance to transit—to evaluate the walkability of urban environments and its influence on travel behavior. Their meta-analysis demonstrated that these built environment factors significantly impact individuals' transportation choices and physical activity levels. Further studies have corroborated that well-designed, pedestrian-friendly environments can enhance residents' willingness to walk and contribute to overall urban vitality (Saelens et al., 2003). However, existing research predominantly centers on general populations, with limited exploration into how walkability affects specific groups, such as university students, particularly concerning their consumption behaviors (Xiao et al., 2025).

Consumer behavior is influenced by a myriad of factors, including individual characteristics, social environments, and physical contexts. Solomon (2017) emphasized that environmental elements—such as ambiance, spatial design, and crowd density—can significantly affect consumers' emotions and purchasing intentions. In the realm of walkable environments, Mehta (2008) found that pedestrian-friendly street designs not only encourage walking but also increase the time individuals spend in commercial areas, thereby enhancing opportunities for consumption. Despite these insights, there remains a paucity of research examining the interplay between walkable urban spaces and consumer behavior among university students, a demographic with distinct lifestyle and consumption patterns (Yuan et al., 2025).

Outdoor recreational activities have been recognized for their benefits to mental health and social well-being, especially among university students. Clough et al. (2016) highlighted that participation in outdoor activities can bolster psychological resilience and overall well-being in young adults. Similarly, studies have shown that engaging in outdoor recreation correlates positively with life satisfaction and academic performance among university populations (Aslan & Çelik, 2021). Nonetheless, while the advantages of outdoor activities are well-documented, there is a notable gap in understanding how such activities, particularly urban walking or "Citywalk," influence the consumption behaviors of university students. This study aims to bridge this gap by investigating the relationship between urban walkability and consumer behavior within this specific demographic (Xu, Yuan, & Jiang, 2025).

3. Methods

3.1 Research design and samples

This study uses a questionnaire survey method to collect data. The questionnaire was distributed through an online platform, and 2,698 questionnaires were initially collected. After data cleaning and screening, 1,000 valid questionnaires were finally obtained. The survey subjects were Chinese college students, covering different genders, grades, types of colleges and cities. The questionnaire content included demographic characteristics, pedestrian environment evaluation, Citywalk participation, consumer behavior and willingness, etc (Wang et al., 2025).

In the survey sample, the ratio of male and female students was relatively balanced, and students of all grades were distributed, covering different types of colleges and universities such as "985 Project", "211 Project" and ordinary undergraduate colleges. The geographical distribution was also relatively wide, covering different city levels such as first-tier cities, new first-tier cities, second-tier cities and third-tier cities. Such a sample structure ensures the representativeness and reliability of the research results (Tang et al., 2024).

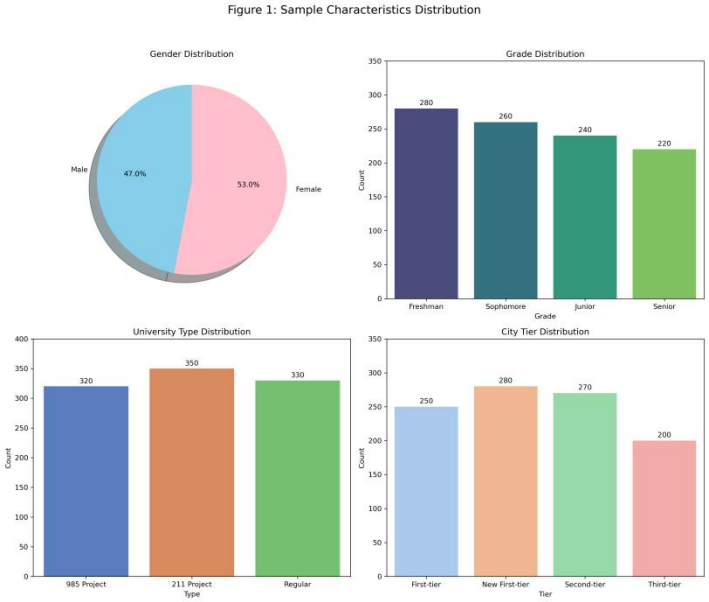

Figure 1: Sample Characteristics Distribution

In Figure 1, we show the distribution of the basic characteristics of the sample, including gender, grade, university type, and city level, so that readers can more intuitively understand the sample composition of this study. As can be seen from the figure, the sample covers all kinds of people and is quite representative.

3.2 Data collection and processing

The questionnaire survey was conducted in the form of an online questionnaire and distributed through student groups of major universities and social media platforms. To ensure data quality, the questionnaire set logical test questions and time limits for filling in the questionnaire, and eliminated questionnaires with too short a time limit and inconsistent answers. After the data collection was completed, Python's pandas library was used for data cleaning and organization, matplotlib and seaborn libraries were used for data visualization, and scipy library was used for statistical analysis.

During the data processing process, we recoded and transformed some variables. For example, variables such as "monthly living expenses" and "average consumption" were converted into

continuous variables for analysis; categorical variables such as "whether to participate in Citywalk" and "whether there is consumption" were converted into binary variables for statistical testing. For multiple-choice questions such as "factors affecting walking willingness" and "consumption items", we conducted frequency statistics and proportion calculations for each option.

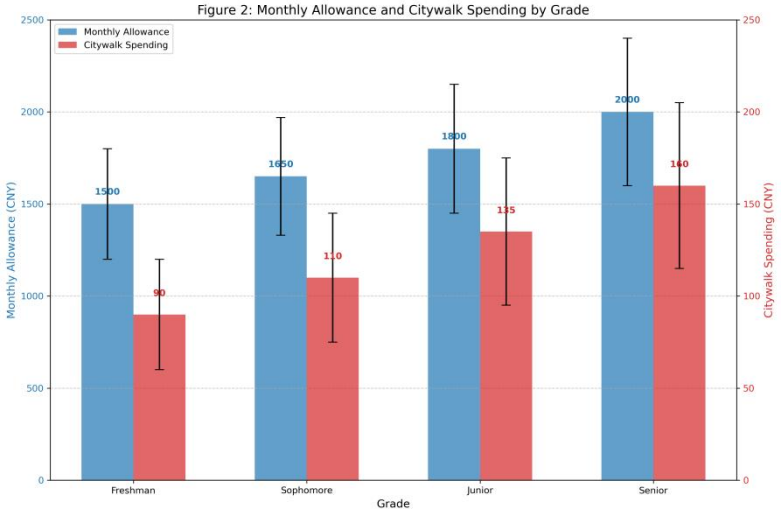

Figure 2: Monthly Allowance and Citywalk Spending by Grade

Figure 2 shows the distribution of monthly living expenses and Citywalk-related consumption of college students in different grades. As can be seen from the figure, with the increase of grade, students' monthly living expenses and Citywalk consumption show a certain trend of change, which provides basic data for us to analyze the relationship between consumption ability and Citywalk participation.

3.3 Analysis method

This study uses descriptive statistics, chi-square test, correlation analysis and regression analysis to analyze the data. Descriptive statistics are used to present the basic characteristics of the sample and the distribution of each variable; chi-square test is used to analyze the correlation between categorical variables, such as the relationship between gender and whether to participate in Citywalk; correlation analysis is used to examine the degree of correlation between continuous variables, such as the relationship between walking environment score and Citywalk participation frequency; regression analysis is used to explore the factors and their mechanisms that affect college students' Citywalk consumption behavior.

In the regression analysis, we use "whether there is consumption" and "average consumption" as dependent variables, and demographic characteristics, walking environment score, Citywalk participation frequency, etc. as independent variables to construct binomial logistic regression models and multivariate linear regression models to explore the key factors affecting college students' Citywalk consumption behavior.

Through these quantitative analysis methods, we can systematically reveal the impact of the Citywalk activity on college students' consumption behavior and the mechanism of action of different factors in this process, providing empirical basis for subsequent discussions and policy recommendations.

4. Experiment

In the empirical analysis part of this study, we systematically processed and analyzed the collected questionnaire data, focusing on the characteristics, influencing factors and related consumption behaviors of college students participating in Citywalk activities.

First, from the overall participation situation, the survey shows that about 67.5% of college students said they had participated in Citywalk activities. This proportion was significantly different between different genders, with the participation rate of girls (72.3%) higher than that of boys (62.8%). In terms of participation frequency, 39.2% of participants said they participated 1-2 times a month, 35.6% participated 3-4 times, 18.7% participated 5 times or more, and only 6.5% said less than 1 time. This data shows that Citywalk has become a more common leisure activity among college students.

Regarding the evaluation of the walking environment, the average score of the interviewed college students for the walking environment of their city was 7.246 points (out of 10 points), indicating that college students generally have a relatively positive evaluation of the urban walking environment. Further analysis found that there was a significant positive correlation between the walking environment score and the frequency of CityWalk participation ($r=0.412$, $p<0.001$), that is, the higher the quality of the walking environment, the more frequently college students participated in CityWalk.

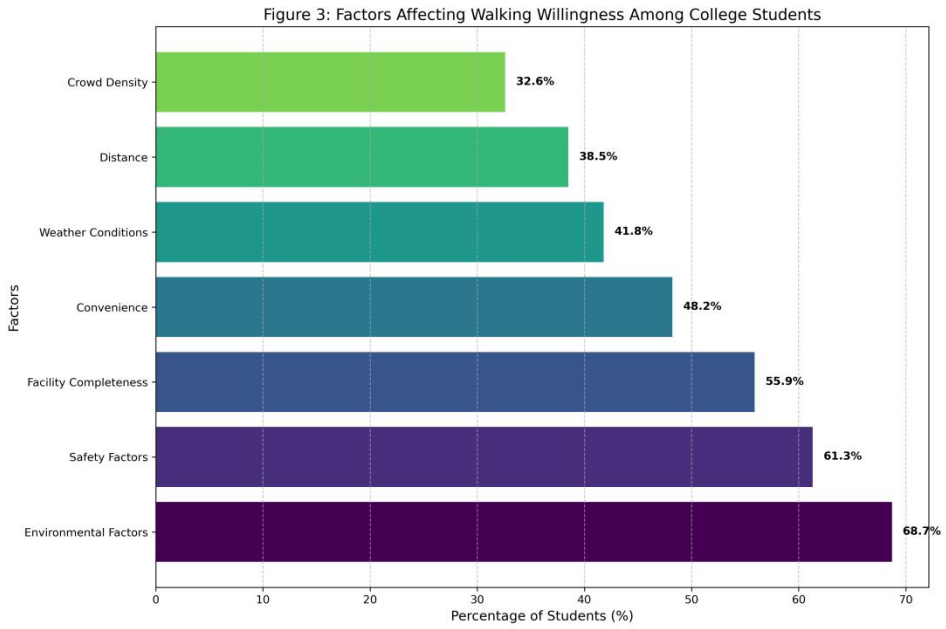

Figure 3: Factors Affecting Walking Willingness Among College Students

Figure 3 shows the main factors that affect college students' willingness to walk. It can be clearly seen from the figure that environmental factors (including greening, air quality, etc.) are the most important influencing factors, followed by safety factors and the degree of facility improvement. This finding is consistent with the results of international research on urban walkability, and further confirms the important impact of environmental quality on walking activities.

In terms of the companions of Citywalk, the data shows that friends (68.3%) are the most common companions, followed by lovers (42.5%) and classmates (38.7%), and the proportions of family members (15.2%) and being alone (12.8%) are relatively low. This shows that Citywalk has obvious social attributes for college students and is often a carrier of social interaction.

Regarding the purpose of Citywalk, data analysis shows that leisure and relaxation (78.6%) is the main purpose, followed by social interaction (65.4%), fitness exercise (45.3%) and exploring the

city (42.7%). This shows that Citywalk is not only a way of leisure for college students, but also an important way to socialize and explore.

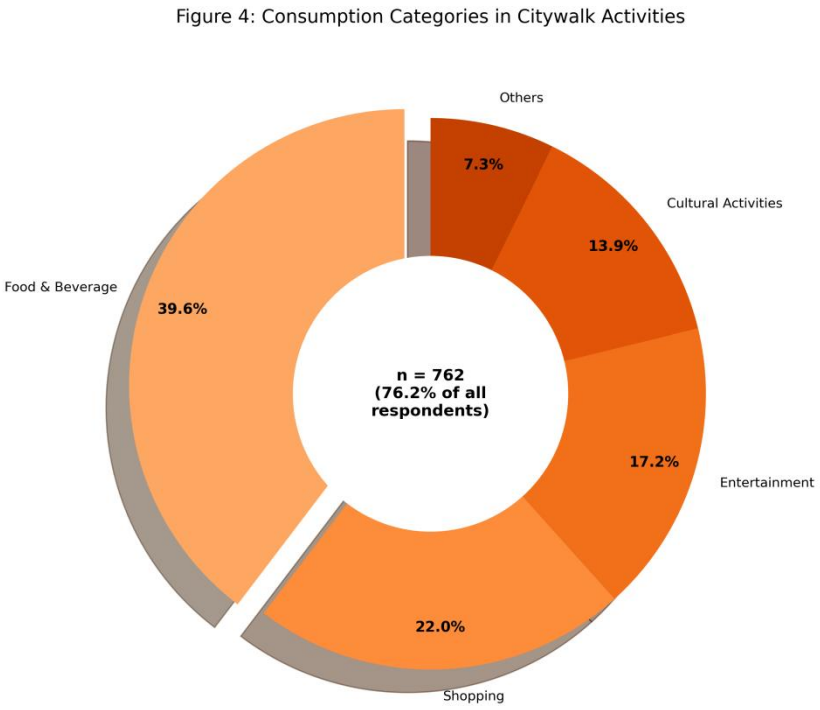

Figure 4: Consumption Categories in Citywalk Activities

In terms of consumption behavior, 76.2% of college students who participated in Citywalk said they would make related consumption. Figure 4 shows the distribution of consumption items of college students in Citywalk, among which catering consumption accounts for the highest proportion, reaching 82.5%, followed by shopping (45.8%), entertainment (35.7%) and cultural activities (28.9%). This shows that Citywalk activities are closely related to catering consumption and also provide a market foundation for the development of related industries.

In terms of average consumption, the average consumption of college students participating in Citywalk is 126.732 yuan per time, among which girls (143.568 yuan) are higher than boys (110.876 yuan), and the consumption level of senior students (juniors and seniors) is also higher than that of junior students. The results of regression analysis show that monthly living expenses (β =0.354, $p<0.001$), Citywalk participation frequency (β =0.287, $p<0.001$) and walking environment score (β=0.195, $p<0.01$) are the main factors affecting the amount of consumption.

Figure 5: Citywalk Participation Frequency and Average Spending by University Type

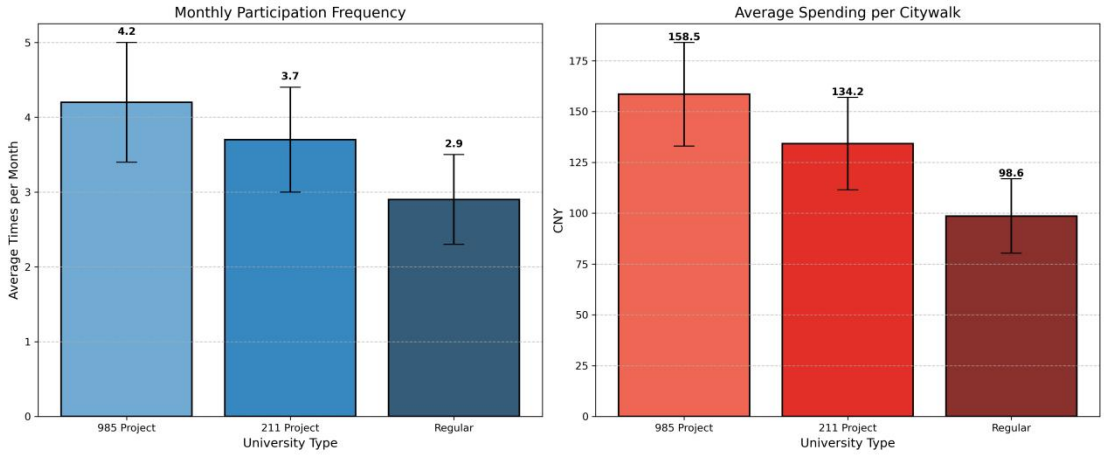

Figure 4: Consumption Categories in Citywalk Activities

Figure 5 shows the differences in Citywalk participation and consumption levels among students from different types of universities. As can be seen from the figure, students from "985 Project" and "211 Project" universities have higher frequency of Citywalk participation and average consumption than students from ordinary undergraduate colleges, which may be related to factors such as the walking environment of the cities where high-level universities are located, students' consumption capacity and consumption concepts.

In addition, the survey also found that 78.3% of college students expressed their willingness to use Citywalk as a daily leisure option, and in terms of expectations for improvement, environmental improvement (68.7%), improved facilities (56.9%) and rich activities (52.4%) are the aspects that college students pay most attention to. This provides a clear reference direction for urban planning and commercial development.

Overall, the experimental results show that Citywalk has become an important leisure activity and consumption scene among college students, and the quality of the walking environment, social needs and leisure experience are the core factors affecting college students' participation in Citywalk and related consumption. These findings provide a solid empirical basis for subsequent discussions and policy recommendations.

5. Discussion

Based on the empirical analysis results in the previous section, this section will discuss in depth the impact of Citywalk on college students' consumption behavior and its internal mechanism from multiple perspectives.

First, this study found that environmental factors are the primary factor affecting college students' participation in Citywalk, which is consistent with the urban walkability theory. A good walking environment not only increases college students' willingness to walk, but also prolongs their stay time in the walking area, thereby increasing consumption opportunities and consumption amounts. This finding confirms Mehta's (2008) conclusion that a pedestrian-friendly environment is positively correlated with consumer behavior, and also provides empirical evidence for urban planning and commercial layout. By improving the quality of the walking environment, such as increasing greening, improving facilities, and ensuring safety, college students' walking activities and related consumption can be effectively promoted.

Secondly, the research results show that Citywalk has obvious social attributes, friends and lovers

are the most common companions, and social interaction is also one of the important purposes of participation. This is consistent with the research conclusion of Chen Bo and Liu Fang (2019) that social needs are the main driving force of college students' consumption. As a social scene, Citywalk not only meets the social needs of college students, but also promotes the occurrence of consumer behavior. Compared with individual activities, group activities are more likely to drive consumption, especially social consumption such as catering and entertainment. Therefore, when planning and designing commercial spaces for college students, their social attributes should be fully considered to provide convenience and attraction for group activities.

Third, this study found that the frequency of Citywalk participation was significantly positively correlated with the amount of consumption, and that female students and senior students had a higher level of consumption in Citywalk. On the one hand, this reflects the differences in consumption capacity and consumption preferences among different groups. On the other hand, it also shows that with the accumulation of participation experience, college students' cognition and value assessment of Citywalk have changed, and they are more willing to make related consumption. This is consistent with the "experience value" theory in consumer psychology, that is, consumers will adjust their consumption decisions and behaviors based on past experience. Merchants can increase the frequency of college students' Citywalk participation, such as organizing theme activities and providing exclusive discounts, to enhance their consumption willingness and consumption level.

Fourth, there are significant differences in Citywalk participation and consumption levels among students of different types of universities, which may be related to a variety of factors, such as the quality of the walking environment in the city where the university is located, the family background and consumption capacity of the students, and the school culture and values. This finding suggests that when promoting Citywalk and related consumption, we should consider the characteristics and demand differences of the target groups and adopt targeted strategies and measures. For example, for students in ordinary undergraduate colleges, more cost-effective consumption options can be provided; for students in "985 Project" and "211 Project" colleges, experience and quality can be emphasized.

In addition, this study also found that college students' consumption items in Citywalk are mainly catering, followed by shopping and entertainment. This consumption structure reflects the lifestyle and consumption preferences of college students and also provides development directions for related industries. The catering industry can attract college students to consume by setting up specialty stores in pedestrian-friendly areas and providing food suitable for eating while walking; the retail and entertainment industries can also design products and services that meet the preferences of college students in combination with the characteristics of Citywalk.

It is worth noting that although this study provides empirical evidence for the impact of Citywalk on college students' consumption behavior, there are still some limitations. First, although the survey sample covers different types of colleges and cities, there may still be certain selection biases; second, the questionnaire survey method makes it difficult to deeply understand the specific consumption decision-making process and psychological mechanism of college students; third, the study fails to fully consider the impact of situational factors such as season and weather on Citywalk activities and consumption behavior. Future research can combine qualitative methods such as in-depth interviews and observations to more comprehensively explore the relationship between Citywalk and college students' consumption behavior; longitudinal tracking design can also be used to examine the dynamic changes of college students' Citywalk consumption behavior and its influencing factors.

In short, the results of this study show that Citywalk, as a leisure activity and consumption

scenario, has a significant impact on college students' consumption behavior. By improving the walking environment, meeting social needs, and enriching leisure experience, college students can be effectively encouraged to participate in Citywalk activities and make related consumption, which is not only conducive to improving the quality of life of college students, but also provides new opportunities and directions for urban commercial development.

6. Conclusion

This study systematically analyzes the impact of Citywalk on college students' consumption behavior and its mechanism through a questionnaire survey of 1,000 Chinese college students. The study found that the proportion of college students participating in Citywalk activities is high and is closely related to consumption behavior; the quality of the walking environment, social needs and leisure experience are the core factors affecting college students' participation in Citywalk and related consumption; there are significant differences in Citywalk participation and consumption levels among students of different genders, grades and types of colleges. These findings provide empirical evidence and practical inspiration for urban planning, commercial development and campus activity organization. Future research can further explore the impact of more situational factors on Citywalk consumption behavior, as well as the impact of Citywalk on other aspects of college students such as physical and mental health, academic performance, etc., to provide a more comprehensive reference for relevant policy formulation and practice optimization.

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