Analysis on the Characteristics and Driving Factors of College Students' Green Consumption Behavior

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Abstract: Green consumption can reduce environmental pressure and promote the sustainable development of society. College students have a certain guiding role for other social groups, and have an important impact and significance on the development of green consumption. In this study, the college students in Tai'an City were taken as examples. Through a questionnaire method, their awareness and behavior of green consumption was studied and their characteristics of green consumption were analyzed. The results showed that most of the respondents had a high level of green consumption awareness, but there were some which had deficiencies in green consumption behavior. There was a certain gap between behavior and awareness. 87.88% of the respondents believed that citizens are the main body responsible for promoting green consumption. Meanwhile, government should play a leading role in promoting green consumption and strengthening the construction of relevant facilities, so as to improve the public awareness of green consumption.

1. Introduction

With the continuous development of society, people's consumption ideas and patterns are changing rapidly. Because of the increasing environmental problems, the concept of green consumption has been formed. Green consumption is the purchase and recycling of ecological products[1]. In China, some scholars believe that green consumption behavior is to add environmental protection and social responsibility into traditional consumption behavior[2]. Green consumption is an improvement of the traditional consumption mode and a new consumption mode in line with modern ecological ethics. It is of great significance to the development of human beings, the protection of ecological environment, and the sustainable development of social economy[3].

It is reported that China's green consumption is constantly developing, and most of the current consumers agree with the concept of green consumption, but there are not many consumers who can seriously practice green consumption behavior[4]. Although most consumers have a weak sense of consumption, they still support the development of green consumption. At the same time, the government also actively guides the public to establish a correct concept of green consumption and to strengthen the relevant supervision work.

With the gradual improvement of environmental protection awareness, people's concern and protection of the ecological environment have gradually changed into behaviors performed in the
process of consumption. There is a positive correlation between green consumption awareness and green consumption behavior\textsuperscript{[5]}. The higher the college students know about the ecological environment, the more frequently they adopt green consumption behavior\textsuperscript{[6]}. College students have a large number of consumption and wide influence. As a special consumer group, their ability to accept new things is far greater than others, which is an important force in market. They are more receptive to the idea of green consumption than other social consumers. However, research results indicated that there were some limitations in college students' cognition of green consumption\textsuperscript{[7]}. At the same time, college students come from different regions, with different economic development and family income levels, resulting in the difference of consumption levels. Moreover, the consumption behavior of college students is easily influenced by the surrounding social environment, and they will unconsciously imitate some bad consumption behaviors, which often causes the deviation of consumption consciousness and behavior\textsuperscript{[8]}.

2. Method
According to the relevant data on Statistical Yearbook (2018) of Tai’an City, there are 127,000 college students in Tai’an City. In order to understand the green consumption awareness and behavior characteristics of college students in Tai’an City and their cognitive level of relevant knowledge, we surveyed college students about green consumption awareness and behavior. Through literature research on green consumption behavior and the characteristics of consumption behavior of college students, a questionnaire was designed. The basic information of the respondents, including gender, place of birth and consumption level were collected, and the impacts of various factors on their cognition of green consumption were analyzed. Their consumption behavior in daily life was investigated, and the relationship between consumption awareness and behavior was explored.

3. Results

3.1 Sample distribution of respondents
The subjects of this study are mainly the students from Shandong Agricultural University. 42.13% of respondents are from the city, while 57.87% of them are from the countryside. Through the analysis of the questionnaire, most of the respondents' monthly living expenses are 800-1200 RMB, accounting for 52.28%.

3.2 Analysis of College Students' cognition of green consumption
Currently, the global ecological environment problem is one of the important reasons for putting forward the concept of green consumption. Therefore, the group's understanding of environmental problems was first analyzed. Among all the respondents, the vast majority (75.13%) thought that the current ecological environment was average.

In the investigation of the reasons of environment problems, five aspects were given: "unreasonable production mode, bad life style, disordered resource development, poor environmental awareness of residents and inadequate government management". The data showed that more than 65% of the five options given were selected, and the respondents believed that these five aspects had a negative impact on the ecological environment (Figure 1). It is worth noting that 87.88% of the respondents chose the option of "poor environmental awareness of residents" (Figure 1). It could be seen that college students paid more attention to the individual responsibility of citizens in environmental protection than the responsibility of government management.
3.3 Analysis of College Students' green consumption behavior

In this study, the college students' behavior habits of shopping, eating, travel choice and saving resources in their daily lives were analyzed. According to the survey, 54.04% of the respondents...
directly discarded the old clothes, only 37.37% and 16.16% of the respondents would donate or sell the old clothes as second-hand goods. It was obvious that discarding old goods would cause waste and pollution of resources. According to the survey, the proportion of people with large proportion of meat was 22.34%. In terms of drinking water, 6.09% of the respondents often buy bottled water. The results of these two aspects reflected the characteristics of College Students' diet consumption, which was more environmentally friendly than the ordinary urban residents. In terms of living habits, this study investigated college students' awareness of saving water and electricity in their daily life. According to the survey, 42.13% of the respondents paid attention to saving electricity in their daily life, and 43.65% of the respondents paid attention to saving water in daily life. According to the survey, 6.60% of the respondents paid attention to garbage classification. 39.09% of the respondents paid attention to garbage classification, but it could not be realized due to objective factors.

In terms of daily travel, College Students' choice tendency was investigated. The results showed that 77.78% of the respondents preferred public transport, which was much higher than other travel modes. 49.49% and 53.03% of the respondents also chose walking, bicycle or electric vehicle (Figure 3), which was mainly due to the majority of the college students' activities on campus. 32.32% of the respondents chose taxi, which was significantly higher than the relatively low-carbon carpooling (23.23%) (Figure 3).

![Figure 3. College students' choice tendency of transportation.](image)

### 3.4 Analysis on the influencing factors of College Students' green consumption

Based on the analysis of the survey, we summarized the demographic characteristics of the survey objects, and tested the main effect according to 3 factors: gender, living expenses and the place of birth (Table 1). Gender factors had a significant impact on the purchase of clothing and bottled water in daily life. The frequency of female college students buying clothing was significantly higher than that of male students, while male students bought more bottled water. With the increase of monthly living expenses, the respondents' understanding of green consumption had increased significantly. The most direct embodiment was the significant increase in the frequency of clothing purchase. The place of birth (rural or urban) had a significant impact on the related behaviors in daily life. The frequency of clothing and bottled water purchased by the respondents from urban was significantly higher than that from rural, while the rural students pay more attention to saving water and electricity in daily life.
According to Chen and Fan's research, college students had higher awareness of green consumption but less action[9]. Many students had a certain awareness of green consumption, but it could not be realized because of objective factors. 39.09% of the college students paid attention to garbage classification, but it could not be realized because of objective factors. Therefore, government needs to strengthen the publicity and promotion of green consumption awareness, and some related supporting facilities and management should be also in place[10]. We should strengthen the college students' cognition of green consumption, to promote the green consumption of the social. At the same time, we should strengthen the propaganda of government and media, vigorously promote and implement the green consumption mode, so as to promote the sustainable development of society.

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### Table 1. Main effect test of the influencing factors of green consumption behaviour.

|                      | gender    | living expenses | place of birth |
|----------------------|-----------|-----------------|----------------|
|                      | F         | Sig.            | F              | Sig.          | F              | Sig.          |
| cognition of green consumption | 2.224  | 0.138 | 2.801 | 0.041* | 0.252 | 0.616 |
| purchase of clothing | 16.145  | 0*** | 7.896 | 0*** | 9.292  | 0.003** |
| purchase of bottled water | 6.012  | 0.015* | 1.916 | 0.128 | 7.267 | 0.008** |
| saving water         | 0.409   | 0.523 | 1.997 | 0.116 | 7.389  | 0.007** |
| saving electricity   | 0.853   | 0.357 | 1.703 | 0.168 | 5.967  | 0.016* |
| garbage classification| 0.029  | 0.866 | 2.24  | 0.085 | 0.542  | 0.463  |

Significant effects are indicated by asterisks: *P < 0.05, **P < 0.01, ***P < 0.001.
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