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Research on Investigation and Countermeasure of Low Carbon Consumption of College Students

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Abstract: The most important influencing factor of global greenhouse effect is the excessive carbon dioxide emissions, and one of the important ways to affect carbon emissions is people's daily life. College students are a special group. This paper takes the college students in Changqing university town of Jinan as an example to investigate their cognition and action on low carbon consumption at the present stage, hoping to take this as a breakthrough and encourage the whole community to actively participate in the activities of low carbon consumption. The results show that the status quo of College Students' low carbon consumption is related to their gender, family address, educational background and other basic factors, low carbon consumption behavior is influenced by low carbon consumption awareness, social responsibility awareness and personal consumption concept, college students' consumption is tending to low carbon nowadays, but there are obstacles to carry out low carbon consumption in an all-round way. Therefore, from the perspective of the government, universities and college students themselves, this paper puts forward the relevant countermeasures to promote low carbon consumption behavior.

1. Introduction

In recent years, global warming has seriously threatened the sustainable development of human beings, and has become a hot issue of widespread concern in society. The main reason for global warming is that carbon dioxide emissions are too high, and research has found that one of the important ways to affect carbon emissions is people's daily life. The concept of low carbon consumption is also in line with the requirements of the times, and the way of low carbon consumption has gradually attracted the attention of the global people. Low carbon consumption simply means that people should try their best to choose the least energy-consuming goods or ways to reduce carbon dioxide output. The goal of low carbon consumption is to achieve a balance between climate suitability and meeting people's living needs. It requires consumers to take the index of low carbon consumption as the first factor in choosing products to buy. Promoting low carbon economy and implementing low carbon consumption can better lead us to a healthier and safer natural life and achieve coordinated development of ecology and economy. At present, low carbon life is quietly integrating into society, and low carbon consumption has become fashionable in many university campuses. The majority of college students are young people born around 2000. They have received more education and have a broader vision, and are more likely to recognize and accept the low carbon economy. At the same time, they can implement the low carbon consumption into their daily life, and also spread the low carbon economy continuously, which can drive the whole society to implement the low carbon consumption. This research takes the university students in Changqing university town of Jinan as an example to carry



out a survey. The purpose of this study is to explore the cognition and action of college students on low carbon consumption at the present stage, hoping to take this as a breakthrough, and encourage the whole community to actively participate in low carbon consumption activities.

2. Analysis on Investigation of the Current Situation of College Students' Low Carbon Consumption

This survey on the low carbon consumption of college students in Changqing university town adopts the method of random sampling. A total of 2,000 questionnaires were issued, and 1973 were actually recovered, among which 1,962 were valid, with an effective rate of 98.1%. All the questionnaires were designed using the four-choice method, which stipulated: a-1, b-2, c-3 and d-4 points, and 2.5 points were used as the cut-off point between low carbon and non-low-carbon. The specific findings are as follows:

In this survey, male students account for 55.17% of the total number, while female students account for 44.83%. The average value of the total low carbon consumption is 2.46, indicating that the current consumption situation of college students is close to low carbon consumption. The average low carbon consumption of male students is 2.40, which tends to be low carbon consumption. The female student is 2.56, has been for the low carbon consumption. According to this, girls prefer low carbon consumption than boys, but the gap between the two is not too large.

From the perspective of home address of college students, rural students account for 64.62% of the total number, and urban students account for 35.38%. The average of low carbon consumption of rural students is 2.45, which tends to be low carbon consumption. The average low carbon consumption of urban students is 2.63, which has reached the low carbon consumption level. Therefore, urban students have a more complete understanding of low carbon, and they have more channels to understand low carbon.

From the perspective of college students' academic qualifications and grades, the respondents of this survey include undergraduates and junior college students, among which the proportion of undergraduates and junior college students is 3.3:1. In terms of grades, freshmen account for 21%, sophomores 27%, juniors 28% and seniors 24%. Among them, the average value of low carbon consumption of freshmen is 2.64, and low carbon consumption behavior is the most obvious, which may be due to the fact that freshmen just enter the university campus, they still keep the habit of following the rules in the middle school and spend less. The average value of low carbon consumption of sophomore students is 2.32, which is the low point of low carbon consumption behavior in college. It can only be regarded as a trend towards low carbon consumption. However, in junior and senior years, low carbon consumption behavior gradually increases, and the average value of low carbon consumption is 2.51 and 2.57 respectively. The average low carbon consumption of undergraduate and junior college students is 2.56 and 2.52 respectively, indicating that the higher the degree, the more obvious the carbon consumption, which also reflects the education ability and infection ability of college campus.

From the perspective of monthly average consumption, college students with less than 600 yuan account for 13.6% of the total number of respondents, college students with 600-900 yuan account for 45.58%, college students with 900-1200 yuan account for 28.57%, and college students with more than 1200 yuan account for 12.24%. Among them, the proportion of college students with the average monthly consumption of 600-900 yuan is the largest, indicating that the consumption level of most students in changqing university town is in the middle. However, 12.24 percent of the students spend more than 1,200 yuan per month on average, which is quite extravagant.

In general, college students' low carbon consumption behavior is becoming more and more obvious. The questionnaire shows that college students basically have low carbon consumption awareness. The average value of low carbon purchasing and using behavior of college students in Changqing university town of Jinan is 2.46, which is very close to the middle value. College students' low carbon purchasing and using behavior is becoming mainstream. College students have better knowledge of low carbon consumption, and they can distinguish low carbon products. College students have

corresponding social responsibility consciousness, and they are willing to change their living habits for low carbon consumption. Specifically, when college students use computers, they will actively lower their brightness, turn off the lights when they leave the dormitory, classify garbage when they throw away garbage, and pay attention to the quality of products rather than packaging, etc. College students have shown us their changes with concrete actions in daily life. The concept of low carbon consumption has been buried in their hearts. As long as they are good at developing, they will be able to present perfectly.

3. Analysis on the Existing Problems of College Students' Low Carbon Consumption

This study mainly analyzes the relevant independent variables from the three aspects of low carbon consumption cognition, social responsibility consciousness and personal consumption concept. Among them, the cognition of low-carbon consumption is reflected by the content of 5 questions, the consciousness of social responsibility is reflected by the content of 3 questions, and the personal consumption concept is reflected by the content of 4 questions. The analysis table of relevant independent variables affecting college students' low carbon consumption behavior is shown in table 1.

Table 1. Analysis table of related independent variables.

Relevant independent variables	Topic content	Low carbon consumption means
Cognition of low carbon consumption	1.Do you know about Low carbon consumption?	2.27
	2.When choosing a beverage, what kind of lowest carbon do you think?	2.58
	3.When choosing clothing materials, what materials do you think have the lowest carbon content?	2.91
	4.When choosing laundry detergent, do you know which one is lower in carbon?	3.54
	5.Do you know which of the following is not a low carbon diet?	3.52
Sense of social responsibility	1. Have you ever paid attention to the impact of your consumption on the environment?	2.86
	2. Do you agree that you have the responsibility to reduce the amount of garbage and recycle it?	3.37
	3. Would you change your living habits in response to low carbon consumption?	3.21
Personal consumption concept	1. What is your personal consumption philosophy?	2.49
	2. Compared with your classmates, do you agree that you pay more attention to material consumption?	2.53
	3.Do you like the products of popular brands?	2.51
	4.Are you satisfied with the current low carbon consumption situation of college students?	2.39

From Table 1, we can see that the average value of low carbon consumption is less than 2.5, and the other five questions about low carbon consumption are all more than 2.5. Question 1 examines self-perception, which shows that college students' perception of low carbon consumption exceeds their imagination, and reflects the lack of self-perception of College students. But they can clearly analyze which products belong to low carbon products, which may be related to the development of electronic information technology. Students use mobile phones and computers to learn more about the relevant information.

For the sense of social responsibility, the average value of low carbon consumption is more than 2.5, which indicates that college students have a strong sense of social responsibility, which may be related to their years of education, or may be the ability of individuals, so they are more confident and responsible.

For personal consumption concept, the answer set of this part of the question adopts the reverse progressive method, so the average value of low carbon consumption is less than 2.5, indicating that college students do not pay much attention to material consumption, but the average value of the second and third questions is more than 2.5, indicating that college students' personal consumption concept tends to material consumption, and they like new products and brand goods. It may be related to the innovative personality of college students born around 2000. Shopping is relatively impulsive and lacks the guidance of planning and related consumption concepts.

4. Analysis on the Causes of the Problems Existing in the Low Carbon Consumption of College Students

In this survey, it is found that many college students are in a non-low-carbon consumption state, which is mainly influenced by their home address, attention, awareness, personal consumption concept and daily habits, and this is also the key to comprehensively improve the low carbon consumption behavior of college students.

4.1. Low carbon consumption in rural areas knowledge propaganda is not in place

The low carbon consumption value of rural students is 2.45, which is still in a non-low-carbon consumption state, while the low carbon consumption value of urban students is 2.63, which shows that the low carbon consumption level of rural students is significantly lower than that of urban students. This may be due to the low level of rural development, the proportion of households with wireless networks, computers and other equipment is less than that in cities, so the access of rural students to low carbon knowledge becomes narrow.

4.2. Some college students lack attention and recognition to low carbon consumption

From the table 1 above, we can see that college students have a good understanding of low carbon consumption, which has reached a low carbon level. However, they have a poor understanding of the first and second questions. They do not know what kind of drinks are lower carbon, what kind of clothes are more environmentally friendly, and even do not understand what is low carbon consumption, let alone the significance of low carbon consumption.

4.3. Some college students have weak awareness of low carbon consumption

From the table 1 above, we can see that the average low carbon consumption of college students is 2.48, which is very close to 2.5. However, this part of the options is arranged according to the reverse recurrence and is at the level of non-low-carbon consumption. In terms of personal consumption concept, college students pay more attention to themselves. They not only take low carbon consumption seriously, but also like comparing and famous brands. For example, some students change a mobile phone every year, and it is the latest version at that time, but college students never pay attention to whether the mobile phone is environmentally friendly.

4.4. Some college students lack low carbon environmental protection in their daily life habits The overall actual consumption behavior of college students is shown in table 2, from which it can be seen that the overall actual consumption behavior of college students has reached the level of low carbon consumption. The answers to questions 4 and 6 show that the performance of low carbon consumption behavior of college students is worse.

Table 2. Analysis table of actual consumption behavior.

Relevant	Topic content	Low carbon
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independent variables		consumption means
Actual consumption behavior	1. Do you often pay attention to low carbon consumption in your daily life?	2.51
	2. Do you often bring your own shopping bag when you go to the supermarket shopping?	2.74
	3. Whenever possible, do you try to recycle (or reuse) the product until it is completely discarded?	2.62
	4. When you use a computer, do you take the initiative to turn down the brightness of the computer screen?	2..17
	5. When buying an electronic product, do you consider its energy consumption?	3.11
	6. When you buy food in the canteen, would you consider eating in the canteen instead of using plastic bags?	2.23
Total	——	2.56

5. Research on Countermeasures to Promote Low Carbon Consumption Behavior of College Students

Currently, we are faced with many obstacles to improve the low carbon consumption behavior of college students. Only by coordinating and cooperating with the government, schools and students themselves, and performing their own duties, can the embarrassment of restricting college students' low carbon consumption be fundamentally removed and the rapid development of low carbon economy be promoted.

5.1. Government perspective

To solve the problem of low carbon consumption in rural areas, the government should attach great importance to it. Therefore, the government should strengthen the publicity and popularization of low carbon consumption knowledge, increase the support for relevant enterprises, expand the coverage of wireless network, gradually narrow the gap between urban and rural areas, and provide college students with the same access to low carbon consumption knowledge.

5.2. Colleges and universities perspective

5.2.1. Set up low carbon environmental protection related courses, strengthen low carbon awareness.

As a holy place of education, colleges and universities should give full play to their advantages, set low carbon curriculum as a compulsory course, popularize low carbon life knowledge, let students systematically understand the connotation, significance and optimization path of low carbon consumption, understand the serious problems existing in our environment, so as to enhance the awareness of low carbon consumption and consciously adopt a low carbon lifestyle.

5.2.2. *Strengthen the practical activities of low carbon consumption.* Only theoretical study can not enable students to truly understand and practice low carbon consumption. College educational departments should arrange low carbon theoretical study and extracurricular practice activities as a whole, guide students to carry out ecological environment research, community environmental protection and other activities, provide close contact with the external environment, guide them to experience environmental problems personally, constantly enhance their awareness and awareness of low carbon consumption, and improve their participation. With the enthusiasm and initiative of low carbon consumption.

5.2.3. *Promoting low carbon consumption in the form of debate competition.* Colleges and universities

should organize relevant departments to launch debates on low carbon consumption, and organize and invite students to participate actively in the way of class--major--college--school. It can not only activate the campus atmosphere and exercise students' eloquence, but also carry out low carbon consumption propaganda in the whole school, so as to make it imperceptible and popular.

5.2.4. Share knowledge about low carbon consumption by using wechat, microblo and other network platforms. Today's society is in the information age, college students are usually not willing to communicate with teachers and classmates when they encounter problems, and prefer to use baidu search. Daily study and life cannot be separated from the mobile phone, computer, often use QQ, wechat, microblo and other communication tools to express their feelings, views. Colleges and universities should pay attention to this phenomenon, and share articles about low carbon consumption through wechat and microblo, so as to exert a subtle influence on college students' consumption ideas.

5.3. College students' perspective

College students should consciously and continuously improve their awareness and intention of low carbon consumption, and urge each other to become the leading force of low carbon consumption. First of all, college students should actively cooperate with the school's low carbon teaching arrangements, earnestly and in-depth study of low carbon knowledge, and constantly strengthen their awareness of low carbon. Secondly, college students should start from small things in their study and life, improve their low carbon consumption behavior, and make it a habit of life. For example, college students need to list the necessities before shopping, try to eat in the canteen, reduce the use of plastic bags and so on. Finally, college students should supervise each other, create a strong atmosphere of low carbon consumption, and dare to say no to the phenomenon of high carbon consumption, so as to promote the formation of College Students' low carbon consumption concept.

6. Conclusion

The global greenhouse effect has caused many catastrophic breakdowns, and the fundamental reason is that carbon dioxide emissions exceed the standard seriously, so it is urgent to protect the environment and carry out low carbon consumption. In order to effectively promote the overall expansion of low carbon consumption, this study takes college students in Changqing university town of Jinan as the research sample, and then analyzes their low carbon consumption cognition and behavior. The results show that the situation of low carbon consumption of college students is not ideal, their living habits lack of low carbon environmental protection, and their awareness and awareness are inadequate. From the perspective of the three main bodies of responsibility, colleges and universities and college students themselves put forward relevant countermeasures to promote low carbon consumption behavior, with a view to taking this as a breakthrough and promoting the active participation of the whole social population in low carbon consumption activities.

Acknowledgments

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