Research on the influence of group identity on tourists' awareness of garbage classification

Bingbing Chen [1, *], Wanrou Wang [1] and Rongtao Yang [2]

[1] School of Economics and Management, Nanjing University of Science and Technology, Nanjing, China

[2] School of Mechanical Engineering, Nanjing University of Science and Technology, Nanjing, China

* Corresponding Author Email: 2252489486@qq.com

Abstract. Based on the questionnaire survey of tourists, the current knowledge and awareness of garbage classification of tourists were understood. The difference of garbage classification awareness was discussed by groups, and OLS model was further established to test the influence of group identity on tourists' garbage classification awareness. The results show that group identification has a significant positive impact on tourists' awareness of garbage classification. Tourists from the first batch of pilot cities have a higher awareness of garbage classification than those from non-pilot cities, and the scene has no significant impact on tourists' awareness of garbage classification.

Keywords: Tourists; garbage sorting awareness; questionnaire survey; group identity; garbage sorting pilot.

1. Introduction

Garbage sorting is not only a "trivial matter" for people's livelihood, but also a major event for green development. A number of cities across the country have started to carry out pilot garbage classification, household garbage classification is in an orderly way. In the context of garbage classification nationwide, it is worth noting that garbage classification in scenic spots is rarely mentioned. Garbage classification in scenic spots belongs to a special spatial field of household garbage classification. Because tourists stay in scenic spots for a short time, their play behaviors are different from their daily life behaviors, and it is difficult to supervise them. In addition, tourists' environmental awareness and garbage classification behaviors cannot be effectively changed in a short period of time. Therefore, it is difficult to solve the garbage problem in scenic spots [1]. At present, Chinese tourists have some understanding but not deep enough knowledge of garbage classification, and the classification awareness is generally not high [2]. Tourists' awareness of garbage classification cannot only reflect the implementation effect of the current garbage classification policy to a certain extent, but also relate to the popularity of garbage classification in the scenic spot in the future [3]. Therefore, enabling tourists to enrich their knowledge of garbage classification and improve their awareness of garbage classification plays a certain role in improving the existing problem of garbage classification in the scenic spot. It is of great significance to building a beautiful China.

The concept of group identity was put forward in the 1980s, and based on social identity theory, self-classification theory was further formed. Individuals will form targeted group identity under specific circumstances [4]. After entering the scenic spot, a single tourist will have the short-term and natural identity of the tourist group. Donzhuub et al. established the Logit model and concluded that group identification has a significant positive impact on household garbage classification behavior [5]. Li Jing et al. found that expanding the category of group representation and strengthening shared social identity can effectively cast a strong sense of community [6]. On this basis, if we can explore the influence of group identity on the awareness of garbage classification and effectively apply the group identity, so that tourists can increase the sense of group identity in the scenic spot, then the garbage classification work in the scenic spot will get twice the result with half the effort and get further optimization. In view of this, based on the theory of group identity, this study analyzes the

awareness of garbage classification in tourist scenic spots and explores the impact of group identity on the awareness of garbage classification in tourist scenic spots. Finally, the empirical test is carried out with the questionnaire survey data, in order to provide reference for the garbage classification of scenic spots.

2. Theoretical analysis and research hypothesis

2.1. Analysis of the awareness of garbage classification

Environmental awareness reflects the mutual relationship between people and the surrounding environment. It is a kind of knowledge, experience, judgment, emotional attitude and practical behavior about environmental protection that people gradually form in the process of interacting with the natural environment [7]. As an important value, environmental awareness reflects the value orientation of the public on environmental issues. The essence of this value orientation is the degree of emphasis on environmental protection [8]. This paper draws on the definition of environmental awareness to define the connotation of garbage classification awareness. Garbage classification awareness is people's understanding and evaluation of issues related to garbage classification, and it is people's basic stance and attitude when facing the conflict between garbage classification and life convenience. It reflects people's willingness to make contributions to garbage classification.

2.2. The influence of group identity on the awareness of garbage classification

Identity generally refers to "when an individual or group is known by a name, it can also be used to refer to distinguishable traits marked by a name or a set of cultural characteristics, which together constitute a larger reality, so that the individual or group is thus identified" [9]. Group identity is an important part of identity, which mainly refers to an individual's awareness of belonging to a certain group and the emotion and value shared by the group membership. A large number of social psychological studies have proved that group identity has a direct mobilization effect on an individual's group behavioral intention [10]. Tourists' group identity refers to their awareness of the collective identity, their psychological belonging to the collective and their affirmation of the collective shared value belief. Specifically, group identity will affect the willingness to participate in collective action through emotional efficacy [11], that is, group identity will affect tourists' awareness of garbage classification through emotional efficacy, and thus affect garbage classification behavior. CAI Yuanrong et al. conducted an empirical study on the investigated data and used the Logit model to analyze and conclude that group identity has a significant promoting influence on villagers' participation in human settlement environment governance [12]. When tourists have a higher degree of recognition of the group they are in, they will have a higher expectation of the result of collective action and identify with other participants, so they will be more inclined to act as a member of the group and do the behaviors that match the group identity, such as paying more attention to the garbage classification work of the scenic spot and taking the initiative to carry out garbage classification in the scenic spot. Based on this, it is proposed that group identification has a significant impact on tourists' awareness of garbage classification.

3. Theoretical analysis and research hypothesis

3.1. Data sources

This survey is aimed at tourists. Questionnaires are made and distributed on the Juanxing platform and filled out anonymously online and offline. The questionnaire consists of 25 questions, which are divided into two parts. In the first part, there are 13 single choice questions 2 multiple choice questions and 1 fill-in-the-blank question. In the second part, there are 10 connecting questions (small test).

Two questionnaire collection methods were adopted in this study -- offline distribution in scenic spots and online platform collection. In the offline survey, we took Confucius Temple in Nanjing as

the distribution point and distributed questionnaires in the scenic spot. 300 questionnaires were collected in the form of sampling survey, with a recovery rate of 90.9%, 258 effective questionnaires and an effective rate of 86%.

In the online data study, we used college students as subjects. As outsiders who came to the city and visited urban scenic spots have similar characteristics with tourists, college students can be regarded as tourists for investigation, and students are similar in age, occupation, educational background and other aspects, which can be artificially controlled variables. The online questionnaire was made by the Wenxing platform, and the questionnaire was distributed and recovered by the resources of students in the hometown of the team members. The questionnaires were collected by the Wenxing platform, and the team members manually screened the invalid questionnaires. A total of 295 online questionnaires were distributed and 258 valid questionnaires were collected, with an effective rate of 87.5%.

3.2. Variable selection

In this study, tourists' awareness of garbage classification was used as the explained variable. The awareness of garbage classification in scenic spots is the responsibility and obligation that people should fulfill for scenic spots while enjoying leisure in scenic spots. While feeling the surrounding environment, whether to classify garbage has become a feedback way. Based on consulting relevant documents and literature, the theoretical model of sports consciousness structure developed by scholar Qiao Yucheng is adopted [13]. The awareness of garbage classification in scenic spots is divided into the following four layers: 1) The basic cognition of whether the scenic spot conducts garbage classification, namely the cognition of garbage classification in scenic spots; 2) In the process of visiting the scenic spot, whether they will take the initiative to observe the psychological sense of belonging of the surrounding people to garbage classification and the affirmation of the collective value belief of tourists in the scenic spot, that is, the emotion of garbage classification in the scenic spot; 3) Whether they can feel the surrounding attitude towards garbage classification in a group, that is, the attitude of garbage classification in the scenic spot; 4) Whether to compare the recognition degree of garbage classification between the hometown and the scenic spot during the scenic spot visit, that is, the recognition of garbage classification in the scenic spot. Seven questions were set for this questionnaire (see Table 1) to measure tourists' awareness of garbage classification.

Table 1. Questionnaire survey on tourists' awareness of garbage classification and variable operation.

variable	investigative question	Answer options
Recognition of garbage classification in scenic spots	A1 Do you know the classification marks on garbage cans in scenic spots	Three-level scale (Right - wrong)
	A2 Whether the site of the scenic spot implements garbage classification	Three-level scale (Yes - No)
	A3 Quiz score	Five-level Scale (A-E)
Emotion of garbage classification in scenic spots	B1 When you throw rubbish in the scenic spot, you will pay attention to whether there is someone beside you to pay attention to whether you do garbage sorting	Three level scale (often - No)
Attitude towards garbage classification in scenic spots	C1 Have you seen other tourists not sorting their garbage	Three-level scale (often - none)
	C2 Do you agree that it is normal for tourists not to be classified	Three-level scale (Agree - disagree)
Identification of garbage classification in scenic spots	D1 whether you are satisfied with the current garbage sorting work in the scenic spot	Three level scale (Satisfied - dissatisfied)

This paper takes group identity as explanatory variable to investigate the impact of group identity on tourists' awareness of garbage classification. Sociology usually externalizes "identity" into a social category closely related to social order, but only when individuals and groups practice and establish identity for social classification can the relationship between classification and order be stabilized [14]. The identity of tourists' changes because of the change of their environment, and their group affiliation appears transient and dynamic. This paper uses the questionnaire survey method summarized by Wang Chunchao and other scholars to stimulate tourists' group identity [15]. In this study, different groups are taken as indicators to measure the objective group identity, and tourists are grouped according to the source information obtained in the questionnaire. They were divided into "first batch of garbage classification pilot cities + offline survey" group, "non-first batch of garbage classification pilot cities + offline survey" group, "first batch of garbage classification pilot cities + online survey" group and "non-first batch of garbage classification pilot cities + online survey" group (hereinafter referred to as Group 1, Group 2, Group 3 and Group 4). Group 4 was taken as the control group, and the other groups were taken as the implementation group. The fuzzy evaluation method is used to measure the group identity of tourists. In addition, other relevant studies have shown that social structure factors (including gender, age, nature of employment unit, etc.) and cultural factors (such as educational background) also have different degrees of influence on public environmental awareness. For this purpose, this article uses these variables as control variables. The above variable operations are shown in Table 2 and Table 3.

Table 2. Group identity measurement indicators setting description.

variable	index	Questionnaire item	Answer options
Garbage sorting knowledge	A1 Garbage sorting knowledge test results		Five-level Scale (A-E)
Group identification	B1 The awareness of other identities	Whether or not you notice when you throw the trash and whether or not someone notices if you sort it	Three-level scale (often - none)
	B2 A psychological sense of belonging to a group	Have you noticed that other tourists have not sorted their garbage	Three-level scale (often - none)
	B3 Identification with group value beliefs	Do you agree that it is right not to classify tourists	Three-level scale (Agree -disagree)

Table 3. Variable operations.

variable	nature	explain
Group grouping	nominal	Group1, Group2, Group3, Group4
gender	nominal	Female =0, Male =1
age cohorts	nominal	young people (post-90s), middle-aged people (70-80s), elderly people (post-60s and before)
degree of education	nominal	high school or below, vocational college, college, bachelor, master or above
Nature of employment unit	nominal	enterprises, government agencies and public institutions, freelance, retired, school students

3.3. Reliability and validity analysis of the questionnaire

SPSS was used to test the reliability and validity of the questionnaire. After the test, the Cronbach's α coefficient of the total volume table was 0.641, indicating acceptable reliability, and the measured data were suitable for statistical analysis. KMO test and Bartlett's sphericity test were used to conduct structural reliability analysis. After the test, KMO value was 0.762, indicating that the questionnaire

had good structural validity. In addition, the P value of Bartlett's sphericity test was lower than the significance level, that is, the validity was also acceptable.

3.4. Descriptive statistical analysis of the questionnaire

3.4.1. Demographic statistics

This survey adopted a combination of offline and online surveys, and a total of 516 valid samples were selected. The demographic characteristics of the surveyed samples are shown in Table 4.

Table 4. Demographic characteristics of garbage classification in tourist attractions (n=516).

variable	Group1		Group2		Group3		Group4	
	number	frequency	number	frequency	number	frequency	number	frequency
gender								
male	96	54.5%	46	56%	48	63.1%	90	49.4%
female	80	45.5%	36	44%	28	36.9%	92	50.6%
age								
<30 years old	145	82.4%	61	74.3%	76	100%	182	100%
⩾30~<50 years old	27	15.4%	18	24.1%	0	0	0	0
⩾50 years old	4	2.2%	3	3.6%	0	0	0	0
education background								
senior high school and below	17	9.7%	16	19.5%	0	0	0	0
higher vocational school	5	2.9%	4	4.8 %	0	0	0	0
junior college	26	14.7%	17	20.7%	0	0	0	0
undergraduate college	113	64.2%	38	46.3%	76	100%	182	100%
master's degree and above	15	8.5%	7	8.5%	0	0	0	0
Nature of employment unit								
enterprise	44	25%	16	19.5%	0	0	0	0
government organs and public institutions	20	11.4%	10	12.2%	0	0	0	0
freelance work	20	11.4%	12	14.6%	0	0	0	0
retirement	6	3.4%	2	2.5%	0	0	0	0
student	86	48.8%	42	51.2%	76	100%	182	100%

As can be seen from Table 4, the proportion of male and female respondents in the sample group of this survey is relatively balanced. Since the offline questionnaire is distributed in the scenic spot, the samples collected are of various ages. More than half of the tourists under 30 years old are in line with the current tourist flow situation in the scenic spot. Therefore, all online samples are under 30 years old. The sample of this survey is younger.

3.4.2. Intergroup difference

The comparison between groups was to compare whether there was a significant difference in garbage classification awareness between the experimental group and the control group. The explained variable "garbage classification awareness score" is a continuous variable, so the independent sample t test was adopted for analysis. Through the T-test of the experimental group and the control group (see Table 5), we found that, except for the T-test of Group 2 and Group 4, the significance of the other groups passed the 95% confidence interval. Therefore, we preliminarily concluded that tourists' awareness of garbage classification was not affected by the scene (online and offline). Therefore, group 1 and Group 3 were compared between groups, and it was also found that the significance at the 95% confidence level did not pass, verifying the above inference.

Table 5. Comparison between groups.

contrast group	t value	P value
Group 1 + Group 4	-5.862	0.000
Group 2 + Group 4	-0.895	0.372
Group 3 + Group 4	-3.731	0.000
Group 1 + Group 3	-0.681	0.497

In this paper, the groups mentioned above are classified again according to the control variables, and only one or two categories of the artificial control variables are selected for comparative analysis, and then inter-group comparison is conducted again (see Table 6 and Table 7). Through comparison, it is found that experimental group 1 and 3 and control group 4 both pass the significance test at the 95% confidence level under the condition of artificial control variables. Therefore, we can further explain that there are significant differences in the awareness of garbage classification among groups under the influence of group identity.

Table 6. Comparative analysis between Group 1 and Group 4.

variable	n		consciousness score ($\bar{x}\pm SD$)		t value
	experimental group	control group	experimental group	control group	
gender					
male	96	90	76.31 12.19	68.68 13.73	-3.995***
female	80	92	74.94 12.67	66.53 13.53	-4.193***
age					
the generation after 90s	145	182	74.74 12.59	67.59 13.67	-4.851***
education background					
undergraduate	145	182	72.83 12.79	67.59 13.67	-4.851***
Nature of employment unit					
student	87	182	73.79 12.47	67.59 13.67	-4.851***

Note: *** indicates a significance level of 5%

Table 7. Comparative analysis of Group 3 and Group 4.

variable	n		consciousness score ($\bar{x}\pm SD$)		t value
	experimental group	control group	experimental group	control group	
gender					
male	48	90	74.56 14.21	68.68 13.73	-2.349**
female	28	92	74.46 11.37	66.53 13.53	-2.790***
age					
the generation after 90s	76	182	74.52 13.23	67.59 13.67	-3.731***
education background					
undergraduate	76	182	74.52 13.23	67.59 13.67	-3.731***
Nature of employment unit					
student	76	182	74.52 13.23	67.59 13.67	-3.731***

Note: ** and *** represent 5% and 2% significance levels respectively

3.4.3. Quiz score statistics

The test results were divided into five levels of ABCDF from high to low, so as to measure the degree of tourists' mastery of garbage classification knowledge. The statistical results are shown in Table 8.

Table 8. List of test results of tourists (n=516).

	Group1		Group2		Group3		Group4	
grade	number	frequency	number	frequency	number	frequency	number	frequency
A	8	4.55%	2	2.44%	3	3.95%	7	3.85%
B	25	14.20%	7	8.54%	10	13.16%	16	8.79%
C	39	22.16%	28	34.15%	32	42.11%	74	40.66%
D	67	38.07%	37	45.12%	24	31.58%	62	34.07%
E	33	18.75%	8	9.76%	7	9.21%	23	12.64%

As can be seen from Table 8, the current level of tourists' mastery of garbage classification knowledge is still at the lower than medium level, and their learning of garbage classification knowledge needs to be further improved.

4. Empirical analysis

4.1. Model construction

SPSS software was used to find the relationship between tourist classification awareness and tourist group identification. Firstly, the correlation analysis is made on tourists' classification awareness score and tourists' group identification score, as shown in Figure 1. The results show that tourists' classification awareness and tourists' group identification are significantly correlated at the level of 0.01, with a correlation coefficient of 0.89. The scatter diagram of tourist classification awareness and tourist group identification is made, as shown in Figure 2. It is observed that there is a linear correlation between variables.

group identity	Pearson Correlation	.898**	1
	Sig. (2-tailed)	.000	
	N	516	516

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 1. Correlation coefficient of research variables.

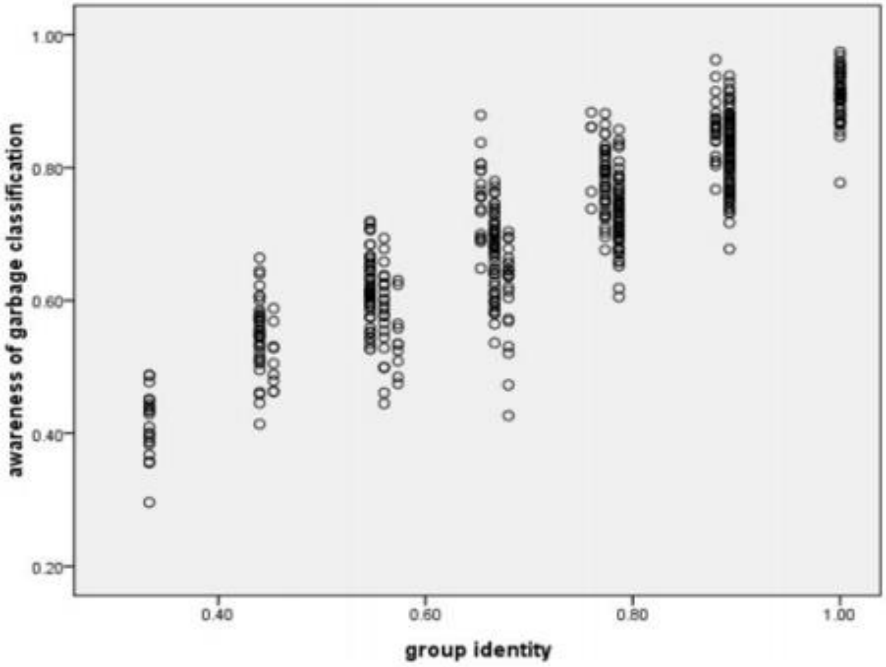

Figure 2. Scatter diagram of tourists' categorical awareness and group identification.

Therefore, in this study, tourists' awareness of garbage classification was taken as explained variables, and tourists' group identification score and living place were taken as explanatory variables, among which living place was dummy variable, from the first batch of garbage classification pilot cities =1, from the non-first batch of garbage classification pilot cities =0. The following regression model was established:

$$Yi=\beta 0+\beta 1Xi+\beta 2Di+\mu \quad (1)$$

In the model, Y represents the rating of tourist classification awareness, X represents the rating of tourist group identity, and D represents the living place, μ it is a random Error term.

4.2. Regression analysis and result analysis

In this paper, unitary linear regression is used to describe the specific relationship between tourist classification consciousness and group identity. In Figure 3, R2 is 0.809, and the model has a good fit, so the regression model is established and has statistical significance. Figure 4 shows the regression results.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.900[a]	.809	.808	.06134

a. Predictors: (Constant), living place, group identity

Figure 3. Model fitting coefficient.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.220	.011		19.874	.000
	group identity	.680	.016	.884	43.623	.000
	living place	.013	.006	.047	2.312	.021

a. Dependent Variable: awareness of garbage classification

Figure 4. Results of regression analysis.

It can be concluded from the table that the relationship between tourists' classification consciousness, group identity and living place is as follows:

$$Y=0.22+0.680X+0.013D \quad (2)$$

The regression results (see Figure 4) show that group identity and the group of the first garbage classification pilot cities of the living place have a significant impact on tourists' classification awareness at the significance level of 5%, and the coefficient is positive. The higher the sense of group identity is, the higher the sense of classification will be. Therefore, the hypothesis can be verified. Moreover, tourists in pilot cities have higher sense of classification than those in non-pilot cities, which may be related to their higher group identity from pilot cities. As the degree of identity deepens, the connotation of identity changes from the first level of identity in the narrow sense of cognition and emotion to the second level of identity in the content of social identity, including the value and goal represented by the identity. When people are playing in a tourist group and identify with their role as tourists, they will share the values and goals of this group with the deepening of identification. Garbage classification is a common value shared by tourists. When tourists have a higher degree of recognition of the group and the pilot city of living place, the value of garbage classification will have a greater impact on tourists.

4.3. Robustness test

In order to further verify the accuracy of the above research conclusions, this paper adopts other sample grouping methods for robustness test [16]. Considering the thinking patterns of men and women, the influence of garbage classification policy and the form of data collection, this paper groups the samples according to gender and living place, and further discusses the influence of group identity on tourists' awareness of garbage classification. The living place refers to whether the samples belong to pilot or non-pilot cities of garbage classification.

Table 9. Robustness test of tourists' classification consciousness and group identity.

		Classification consciousness					
	variable	gender		age	education background	source address	
Group identification		female	male	the generation after 90s	bachelor degree or above	pilot city	Non-pilot city
	constant	0.219*** (0.016)	0.218*** (0.016)	0.222** (0.012)	0.220** (0.012)	0.243*** (0.019)	0.212** (0.014)
	coefficient	0.683*** (0.021)	0.696*** (0.021)	0.685** (0.016)	0.687** (0.016)	0.666*** (0.023)	0.691** (0.021)

Note: (1) ** indicates significant at the 5% level; (2) Standard error in brackets

As can be seen from Table 9, group identification has a positive and significant impact on classification consciousness among grouped samples. This is basically consistent with the previous research conclusions, except for the changes in the coefficient and significance of explanatory variables, which indicates the robustness of the measurement results above.

5. Summary and suggestions

Based on the survey data of tourist garbage classification in scenic spots and the theory of group identity, this paper analyzes the influence of group identity on tourist garbage classification consciousness, and further explores the relationship between different groups' classification consciousness and group identity through grouping regression. The results show that: first, group identity has a positive effect on garbage classification, the higher the group identity, the stronger the garbage classification awareness; Secondly, the scene has no significant impact on tourists' awareness of garbage classification; Finally, tourists from the first batch of pilot cities of garbage classification are more likely to have a sense of identity and are more sensitive to the impact of garbage classification awareness. The above conclusions reveal the influence of tourists' group identity on tourists' awareness of garbage classification, and also describe the possible factors affecting the group identity.

In order to better implement the garbage classification policy and solve the problem of garbage classification in scenic spots, this paper puts forward the following suggestions: Scenic spots should strengthen the publicity of garbage classification, enrich the form and content of publicity, combine graphics and text, enhance the visual effect, publicize the importance of garbage classification, and popularize the relevant classification knowledge, set up a publicity area next to the trash can, set up classified slogans in the scenic spot, arrange the location of the trash can reasonably, and further strengthen the identity of the tourist group in the daily management of the scenic spot. To enhance the sense of belonging and responsibility of tourists, guide tourists to raise their identification degree to the level of behavior, improve the classification regulations, and strengthen the supervision system. The garbage sorting policy should not only be strictly implemented in residential areas, but also be gradually implemented in scenic spots. Relevant systems should be perfected, and knowledge and supervision personnel should be arranged in scenic spots to better encourage tourists to take the initiative and correctly carry out garbage sorting.

Acknowledgements

This paper is funded by the National Undergraduate Training Program for Innovation and Entrepreneurship. Item number: 202210288101

References

[1] Lin X H. Investigation and analysis of tourists' garbage classification awareness and influencing factors in Xiamen [J]. Comprehensive Utilization of Resources in China, 201, 39(11):52-55.

[2] Zhang Jing, He Nuntiing. A survey on the garbage classification awareness and behavior of tourists in the Transnational Waterfall Scenic spot in Germany [J]. Tourism Overview,2021(11):23-26

[3] Qiu Chengmei, Su Jian, Zhang Yuxi. Does environmental education improve college students' garbage sorting awareness and behavior? Empirical analysis based on randomized controlled experiment [J]. Journal of Arid Land Resources and Environment,202,36(5):33-39

[4] Ding Jifeng, Luo LAN. Research on the Application of Group Identity in College Student Management [C]// China Tao Xingzhi Research Society. The fourth academic BBS on life education. [Publisher unknown], 2022:3. DOI: 10.26914 / Arthur c. nkihy. 2022.046145.

[5] Donzhuub, Li Xiaoling, Zhang Lin, Song Lianjiu. Study on the Effect of Environmental Cognition and group Identity on Household Garbage sorting Behavior: Based on the questionnaire of 602 households in Xizang Province [J]. Plateau Agriculture, 201, 5(6):621-628.

[6] Li Jing, Jian Jian. A Study on Fostering Chinese Nation's Sense of Community from the perspective of Common In-group Identity [J]. Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition), 2021, 42(10):1-8.

[7] Zhang C. The impact and analysis of environmental awareness on the development and protection behavior of tourism resources and environment -- based on the research of Guilin University of Technology [J]. Heilongjiang Environmental Bulletin, 201, 34(04):22-25+28.

[8] Hu Jianguo, Pei Yu. The Change of public environmental awareness in China and its Influencing Factors: A Study based on post-materialism theory [J]. Jinyang journal, 2019 (03): 101-107. The DOI: 10.16392 / j.carol carroll nki. 14-1057 / c. 2019.03.012.

[9] Zhang Miaorong, Yang Jun. From Group Psychology to Identity Construction: A Review of Research on Identity from Multidisciplinary Perspective [J]. Guangdong Social Sciences, 2022(02):202-214.

[10] Li H. Driving factors and micro-mechanism of public participation intention in anti-terrorism: An empirical study based on planned behavior theory and group identity Theory [J]. Journal of People's Public Security University of China (Social Sciences Edition), 2017, 33(01):17-27.

[11] Xue Ting, Chen Hao, Le Guoan et al. The role of Social Identity on Collective Action: Group Emotion and efficacy Pathways [J]. Acta Psychologica Sinica, 2013, 45(08):899-920.

[12] CAI Yuanrong, Huang Xiang, Yang Changlin, Liu Feixiang. Social supervision, group identification and Villagers' Participation in Human Settlement environment governance Behavior: Based on the analysis of the questionnaire survey in Jinjiang City, Fujian Province [J]. Journal of Yunnan Agricultural University: Social Science Edition,202,16(5):25-33

[13] Qiao Yucheng. Chinese citizen sports awareness survey (2018) [J]. Journal of wuhan sports college, does 2019 (10): 19 to 27, DOI: 10.15930 / j.carol carroll nki WTXB. 2019.10.003.

[14] Chen Yue-liu. Classification and order: the behavior of the group identification basis and modern predicament [J]. Journal of south-central university for nationalities (humanities and social science edition), 2020, 40 (04): 46-51. DOI: 10.19898 / j.carol carroll nki. 42-1704 / c. 2020.04.008.

[15] Wang Chunchao, Sun Shutao. Research Progress of experimental economics on Social identity and discrimination [J]. Economics Review, 2019 (07):123-137. (in Chinese)

[16] Cheng Zhonghua, Yu Binbin. Industrial agglomeration and Regional wage Gap: A Spatial econometric analysis based on urban Data in China [J]. Contemporary Economic Science, 2014, 36(06):86-94+125.