

LETTER TO THE EDITOR**A Longitudinal Model of Eco-environmental Vegetation Destruction by Hiking Camping**

Tao He*

Ministry of Public Sports, Jingchu University of Technology, Jingmen 448000, China

*Email: hanjun_123hj@163.com

Hiking has gradually become the mainstream of public fitness, and it has a very broad development prospects. But the rise of this sport also brings about environmental impacts. White pollution caused by the random discarding of beverage bottles and food bags, fire and air pollution caused by field camping and picnic, development of road sites and destruction of vegetation, etc. will restrict the development prospects of hiking.

Hiking; Environmental Protection; Sustainable Development; Leisure Sports

I INTRODUCTION

Hiking has gradually become a popular outdoor sport, but the participants lack awareness of environmental protection, which can easily lead to white pollution. Only few participants have strong awareness of environmental protection. A large part of the participants only pay attention to the spiritual needs and physical exercise brought about by hiking. They have not dealt with the waste produced by hiking reasonably. Most of the items carried during the hiking are disposable articles, and most of the packaging or containers used are not degradable naturally. Participants discard garbage at will, causing great damage to the environment, leaving a large amount of domestic garbage such as mineral water bottles, food packaging bags, disposable foamed plastic lunch boxes and so on. So how to solve the domestic waste is the primary task to be solved in the hiking.

Yi-Ju Chen published an article entitled "Evaluation of Welfare Effectiveness on Age-Friendly Ecological Walking Environment" in Ekoloji's Issue 106 of 2018, which studied the rapid growth of population aging and the practice of industrial social pension system, making the elderly an important group (Chen 2018). Therefore, it has become the most important issue for the government and citizens to face the aging society. In response to the changing demographic structure, an accessible and suitable ecological environment for the elderly should be established within the community to implement the concept of elderly services, especially to provide adequate public facilities for the elderly to meet the needs of the elderly society. Taking Fuzhou City in Fujian Province as the research object, the variables used in this study were obtained from public statistical data. In this study, data envelopment analysis (DEA) was used to evaluate its effectiveness. The results showed that one decision-making unit has strong efficiency, five decision-making units have marginal efficiency, seven decision-making units have obvious efficiency, and two decision-making units have obvious efficiency. By using Malmquist productivity index analysis, the improvement of two-stage change in each county and city was obtained. Finally, according to the results of the study, some suggestions were put forward to provide reference for local governments to plan

ecological and environmental welfare facilities suitable for the elderly in the future.

Hiking has gradually become the mainstream of public fitness, and it has a very broad development prospects (Lin and Du 2016). However, the rise of this sport will also bring about environmental impact, white pollution caused by the random discarding of various beverage bottles and food packaging bags, fire and air pollution caused by field camping and picnic, and the destruction of vegetation caused by the development of road sites (Fonge et al. 2019). It will restrict the development prospects of hiking. Experiments show that this method has high accuracy, but the accuracy of data extraction of this algorithm is not high. In literature (Chen et al. 2019), how to promote global development through pioneer tourism product development was studied. Tourism industry has always been a very concerned issue (Chien 2017). This paper used in-depth interviews and participatory observation method to observe and analyze the development of outdoor sports in Zhangjiajie. The process and mechanism of knowledge spillover of “key individuals” in pioneer tourism products were explored, and the mechanism of knowledge spillover among individuals in the process of tourism products’ development from point to area was explored. It is found that the process of knowledge spillover of outdoor sports was generated in the interaction between individuals and organizations. The transformation of explicit knowledge and tacit knowledge is not the evolution of “one-way continuous” model described by SECI model, but discontinuous. In this process, key individuals take the lead in promoting the “group” of tacit knowledge, actively promoting the “externalization” of tacit knowledge to explicit knowledge and effectively deepening the “integration” of explicit knowledge, which has certain continuity and inheritance, and may interweave with each other at different stages. The development of Zhangjiajie outdoor sports benefits from the promotion of key individuals, experiencing the era of exploration, riding and hiking. The basic model of “innovation – investment – innovation – imitation – competition – innovation – upgrading – perfection” was finally formed, which promoted the overall development of outdoor sports products through knowledge spillovers among individuals. The accuracy of ecological environment identification was high, but the research efficiency of this method was low. In view of the above problems, this paper proposes a longitudinal model to study if hiking could destroy the preparation of ecological environment.

II IDEA DESCRIPTION

2.1 Documentation Method

The main contents of the data are related to the literature of recreation and leisure, tourism, outdoor sports, safety management, risk management, environmental protection and so on.

2.2 Interview Method

By visiting experts, scholars and hikers and talking with them face to face, the author gives detailed answers to questions about the potential impact of hiking on the environment, and obtains a lot of important information (Liu et al. 2014; Dai et al. 2017).

2.3 Field Observation

After field visits, as well as visits to outdoor sports development centers, follow the participants to participate in hiking, the problems found in the process of participation are recorded.

2.4 Environmental Damage Caused by Cutting Down Trees during Hiking

The impact of the number of participants on the environment is also different (Wu and Wang 2017; Dinan 2017). For some people, their physical fitness is relatively good, and have a light desire to challenge and take risks. They often like to go hiking in unfamiliar environments, and choose a relatively remote route, such as hiking in the sparse environment of mountains, grasslands, deserts, glaciers and so on. Because hiking in these places is very dangerous,

participants will join a group for hiking. Vegetation in these areas is relatively weak to withstand damage from the outside world, and the environmental changes on the way are complex. For the environmental conditions in these remote areas, participants do not have enough understanding due to the lack of field observation. To pass through the area, they need to cut off branches from trees as crutches to drive away animals and so on, and build tents when camping with branches as a supplementary tool. Thus, they cut down trees at will, directly causing damage to the environment (Qi et al. 2017).

2.5 Environmental Damage Caused by Fire from Picnic

In order to increase the fun of hiking, participants will have a picnic or a bonfire party. When traveling, participants may carry fire sources, such as lighters, matches and so on. Conditionally, camping gas stoves and gas tanks may be carried. Although the area chosen to make a fire in a camp is very spacious, the wind may be very strong, and the surface vegetation is very thick. If there is no necessary awareness of prevention, it is easy to cause a fire. After the activity, neglecting the fire after burning will be a great potential safety hazard. These behaviors may lead to a very serious fire (Chen and Wu 2018).

2.6 Enhancing the Environmental Awareness of Hikers and Reducing Environmental Pollution Fundamentally

In order to protect the environment on which human beings depend for their survival and make outdoor hiking sustainable, the relevant departments and outdoor organizations that organize outdoor hiking must strengthen the publicity of outdoor environmental protection, actively educate outdoor hiking groups, so as to achieve “alarm bells ringing long and prevent accidents before they occur”. Strengthening environmental protection education, so that awareness of environmental protection is deeply rooted in the hearts of the people, and formulation of appropriate punishment measures to strengthen supervision. This can improve the environmental awareness of participants, prompt them to properly handle domestic waste, and bring disposable household goods as little as possible, and bury residual food and degradable packaging waste for decomposition. In addition, non-degradable packaging waste should be taken away. As the ability of mountain villages to deal with garbage is limited, people lives in the mountain are weak in environmental awareness, and often throw garbage to rivers and valleys. Dumping at will directly pollutes rivers and indirectly pollutes soil, so it’s necessary for hikers to take garbage to large-scale cities and towns for reprocessing (Liang 2017).

2.7 Protect Flowers, Plants and Trees and Prohibit Deforestation

Through propaganda to protect rare vegetation, plants and trees, and prohibit deforestation, and warning signs can be set up in some areas to remind hikers not to destroy the environment on which we live because of their actions. At the same time, we should mobilize local people to supervise and report, set up supervisory posts in popular hiking areas, impose certain penalties on unconscious participants, effectively protect the environment. Educating people with environmental protection idea before hiking to fundamentally eliminate environmental damage and encourage participants to actively publicize and protect the environment, and make contributions to environmental protection.

2.8 Preventing Environmental Damage Caused by Fire from Picnic

Everyone should foster the awareness of “forest fire prevention” and never forget forest fire prevention. Especially during the period of forest fire prevention, it is forbidden to use fire in the field in forest areas. If fire is needed under special circumstances, it must be used after examination and approval in accordance with the relevant provisions of the Forest Fire Protection Regulations. It should not be used blindly for picnic. It should be avoided as far as possible during hiking. If it is necessary for picnic activities, it is necessary to carefully select the place for picnic, to be far away from the place where there are plenty of trees and vegetation, and to be as close as possible

to the place where there are plenty of water sources. People need to pay attention to the changes in the surrounding environment, and make a good judgement that picnics should be banned if the wind is strong, since the wind is easy to blow sparkles away. After the end of the picnic, careful inspection should be carried out to determine that the source of fire has been completely extinguished before leaving, as far as possible to reduce the number of cooking stoves, the fewer the easier to manage, the picnic needs to be arranged by people with a certain professional knowledge.

III RESULTS

In order to verify the performance of the longitudinal model of ecological environment, a test was needed. Through the hiking and camping test, the real ecological environment data sets were selected in the test.

The algorithm proposed by Yi-Ju Chen et al. is a better way of data extraction among the existing methods, and has obtained better research results. The data extraction accuracy of the proposed algorithm was compared with that of the algorithm proposed by Yi-Ju Chen et al.

In the process of extracting large data from the longitudinal model of ecological environment, with the increase of data volume, the accuracy of data extraction presented a fast rising trend. The accuracy of extracting longitudinal model of ecological environment preparation in this method was rising rapidly. The accuracy of data extraction presented by Yi-Ju Chen and others slowly showed an upward trend. It is necessary to establish barrier-free and suitable data extraction in the community. The ecological environment in which the elderly live is designed to implement the concept of service for the elderly, especially by providing them with adequate public facilities to meet the needs of the elderly community. However, the extraction accuracy of the longitudinal model of ecological environment preparation in this method was about 98%, which was obviously higher than the algorithm proposed by Yi-Ju Chen et al. It can be clearly seen that this method has good performance and can accurately extract the longitudinal model of ecological environment preparation.

To further verify the performance of the proposed algorithm, the data extraction efficiency of the proposed algorithm was compared with that of the algorithm proposed by Yi-Ju Chen and others under the condition of changing data increments. The test results showed that with the constant change of data increment, the extraction efficiency of the algorithm proposed by Yi-Ju Chen et al. fluctuated greatly, and the extraction efficiency was low, while the stability of the algorithm in this paper was better and the extraction efficiency was higher.

IV DISCUSSION

Sports has attracted extensive attention of modern people. In the information age, it is necessary to use Internet technology to analyze the longitudinal model of ecological environment. In this paper, the incremental data extraction of ecological environment was studied in cloud computing environment, and the superiority of the proposed algorithm was verified by experiments. The experimental results show that:

- (1) The data extraction accuracy of this algorithm is higher than that of Yi-Ju Chen et al. This is because the calculation steps of the algorithm proposed by Yi-Ju Chen et al. are complex. It requires standardization of ecological information data, clustering of information data, exponential analysis and normalization of pollution index weights to complete data extraction. Therefore, more data need to be used, and the accuracy of data extraction can reach a higher level, and the value is much lower than that of the method proposed in this paper.
- (2) Compared with the algorithm proposed by Yi-Ju Chen and others, the method proposed in this paper has higher stability in extracting longitudinal model of ecological environment. This is because in the process of data

extraction, the operation of ecological environment source database is classified and aggregated by comparison, and then the incremental data extraction is realized, which improves the extraction efficiency of the algorithm.

V CONCLUSION

Hiking is a new way of tourism for tourists, a new way of tourism development for tourist destinations, and a new management mode for managers. But now the key is to advocate environmental protection, strengthen people's awareness of environmental protection, and protect the environment on which we live, so as to achieve sustainable development. Reasonable disposal of white garbage, strictly prohibit cutting down trees, random trampling on the lawn need to be advocated in the process of hiking. It is everyone's responsibility to protect the environment. We have gained a lot of spiritual experience and physical exercise from hiking. We can rationally exploit and utilize natural resources, create a good environment for the development of hiking and promote social harmony and prosperity.

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