

The Attractiveness of Replacing Delicious Meals with Health-Preserving Diets to Modern Consumers in Taiwan

Peiyu Chen^{1,a,*}, Jinsheng Cheng^{1,2,b}

¹The College of Innovation and Entrepreneurship, Shaoguan University, Shaoguan, Guangdong, 512005, China

²Zhuhai Jingwu Tech. Co. Ltd., Zhuhai, 519000, China

^apeiyu1103@139.com, ^bchengjs@sgu.edu.cn

*Corresponding author

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Abstract: By attaching great importance to their physical and mental health, the consumers are dedicated to high-quality ecology and healthy food supply that replace delicious meals with the concept of health-preserving diets. And continuously improve and enhance through internet sharing methods such as TikTok, Facebook, Twitter, Weibo, and mobile apps that are widely spread worldwide. In this study, consumers in Taiwan are taken as the study objects, consumers' values on their physical and mental health are taken as the independent variable, while the consumers' concept of health-preserving diets over delicious meals are taken as the dependent variable, not only discussing "the correlation between consumers' value on their physical and mental health and their preference for high-quality ecology & health-preserving food" but also "the influence of their preferences on the concept of health-preserving diets over delicious meals". The result is established through empirical analysis. It is found that the more consumers attach importance to their physical and mental health, the stronger their preference for high-quality ecology & health-preserving food. The stronger the consumer's preference for high-quality ecology & health-preserving food, the stronger their concept for health-preserving diets over delicious meals.

1. Introduction

The ecology of the living environment is closely related to the residents' physical and mental health. And the air, soil, water quality, and humanistic qualities of the living environment as a whole also impact ecological development directly. Over time, the residents' environmental cognition will affect their mood swings, changes in life patterns, and eating habits. A high-quality ecological environment starts with the protection of land, waters, and forests, the maintenance of fresh air, the legal spraying of environmental agents, and the strict control of toxic smoke and exhaust. Only with a high-quality ecological environment can we grow safe and health-preserving food, enable residents to live in peace and work in contentment, and allow residents to feel confident and happy with their sense of belonging and identity to their living environment.

Consumers' value on their physical and mental health is closely related to their preference for a

high-quality ecological environment, as to the fact that health-preserving food that is closely related to their physical and mental health can only be grown in a high-quality ecological environment. On the one hand, the eating habits of modern people are gradually facing the health challenges of high oil, high sugar, and high salt. On the other hand, modern people are even more aware of their living environment as well as their identification with health-preserving diets over delicious meals. Therefore, the health of consumers, the ecological environment in which they live, and the dietary concept that emphasizes health preservation over deliciousness are closely interconnected.

This article proposes research hypotheses and models before conducting an in-depth investigation and discussion of "The Attractiveness of Replacing Delicious Meals with Health-preserving Diets to Modern Consumers in Taiwan" through quantitative analysis.

2. Literature Review

2.1. Physical and mental health

Physical and mental health means that a person is in a good state of physical, mental, and social well-being. The World Health Organization proposed "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". Therefore, the health content of modern people includes: physical health, mental health, social health, intellectual health, moral health, environmental health, etc. In this study, however, the physical and mental health focuses on physical, mental, environmental, and dietary health.

2.2. High-quality Ecology and Health-preserving Food

As a part of TCM health preservation, environmental health preservation guides human beings to prevent diseases, strengthen physical fitness, and protect human health. The key is to explore the impact of the environment on human health from three aspects of "Natural Environment and Health", "Living Environment and Health", and "Indoor Environment and Health"[1]. In this study, however, the ecological environment focuses on the natural environment and the living environment. The high-quality ecological environment refers to the nature of the land and soil, the development of water quality, the maintenance of forest ecology, the control of industrial wastewater and waste gas, etc., all of which meet the needs of human health.

The treatment in accordance with three categories of etiological factors refers to the determination of appropriate treatment methods based on the differences in patient, season, and locality, namely, the treatment individualized to the patient, season and locality, in order to achieve the expected treatment result [2]. Since ancient times, there has been a theory of "medicine food homology" (MFH) in China. The principles of treatment individualized to patient, season and locality should be followed for making diagnosis and prescribing medication, and the same should be true of health-preserving food [2]. In this study, however, the health-preserving foods are grown in the high-quality ecological environment.

2.3. Delicious Meals and Health-preserving Diets

Since modern people attach great importance to exquisite cooking, the food cooking industry often uses hydrogenation or partial hydrogenation of trans fats to stabilize foods so that the application value of vegetable fats and oils can be further enhanced. Despite the fact that these changes can increase the melting point of fats and increase their flavor, trans fatty acids can have an adverse impact on physical health [3]. In this study, a delicious diet refers to a diet focusing on delicious food, while a health-preserving diet refers to a diet focusing on health-preserving food.

3. Research Hypotheses and Models

3.1. Research Hypotheses

3.1.1. Consumers' value on their physical and mental health and their preferences for high-quality ecological and health-preserving food

(1) Understanding high-quality ecology from the perspective of cognitive psychology is a prerequisite for health

The relationship between attention and learning is very close. Without attention, there is no recognition, learning, and memory [4]. Since physical and mental health is important and noteworthy for every consumer, they will be more concerned about the living ecological environment closely related to their health. Only with attention and concern can there be the driving force for active learning. And only through this kind of learning can we generate cognition, understand that a high-quality ecological environment is good for health, and develop good food for health preservation.

(2) The ecological environment under the exploitation of modern civilization makes consumers pay more attention to health and wellness

The agricultural ecological environment is closely related to food safety, and a poor agricultural ecological environment is prone to produce pollutants that are harmful to food safety [5]. With the continuous acceleration of the urbanization, the problems of environmental pollution and ecological destruction have appeared in cities across the country to varying degrees [6]. Modern industry and agriculture have also caused the soil to be artificially polluted by mercury. Due to the large-scale use of coal, the mercury released into the air increases the mercury content in the soil through dry and wet deposition [7]. All these show that the development of modern civilization not only destroys and pollutes the ecological environment, but also affects the food safety and the cultivation of health-preserving food of high quality. Based on the review and analysis of the literature above, this study puts forward the following hypotheses:

H1: The more consumers attach importance to their physical and mental health, the stronger their preference for high-quality ecology and health-preserving food.

3.1.2. The Preference of High-quality Ecology and Health-preserving Diets and the Concept of Health-preserving Diets over Delicious Meals

(1) Consumers' emotional psychology connects high-quality ecology with healthy diet

"Excitation" and "transmission" are the two main functions of neurons. The former is stimulated by the sensory organs, which immediately causes excitation of neurons. The latter quickly transmits nerve impulses to another adjacent neuron to complete the function of nerve conduction [8]. Consumers' sensory organs receive the health benefits of high-quality ecology and health-preserving foods, which causes excitation. The impulse of health-preserving diet is quickly transmitted, gradually forming a dietary concept that emphasizes health-preserving diets over delicious meals.

(2) Healthy and delicious diet highlights consumers' awareness of ecology and food

The exploration and practice of health-preserving theories reflect the civilization of society to a large extent: the more civilized and advanced the society, the more people attach importance to spiritual needs and material enjoyment beyond survival [9]. A civilized society also brings destruction of the ecological environment. However, its cognitive ability has fostered the formation of high-quality ecology, created the health-preserving foods, and gradually developed the habit of health-preserving diet. Many consumers have to admit that it is indeed contradictory when weighing

their health over the delicious meals they want [10] as to the fact that there has been a long history regarding the correlation between thyroid disease and delicious meals [11]. Therefore, the recognition and persistence of health preservation over delicious diets depend on the cognition and preference of high-quality ecology and health-preserving food. Based on the review and analysis of the literature above, this study puts forward the following hypotheses:

H2: The stronger the consumers' preference for high-quality ecological and health-preserving ingredients, the stronger the dietary concept for focusing on health preservation over delicious meals.

3.2. Research model

Based on the relationship between variables and the research hypothesis, the framework of this research is shown in Figure 1.

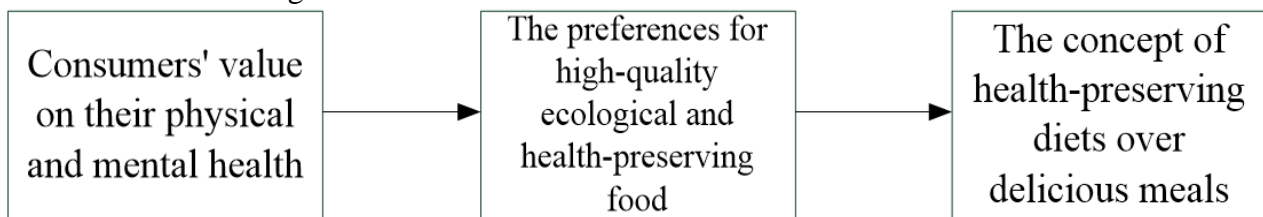


Figure 1: Research model.

3.3. Research method

There are 4 questions regarding the "importance that consumers attach to their physical and mental health": including paying attention to whether the air, water quality, soil and trees of the living ecological environment are good for health; whether residents who value the living environment can protect environmental sanitation and maintain natural ecology; whether the discharge and cleaning waste of factories and shops in the residential environment do not pollute the ecological environment; the ecological impact of the types and distribution of wild animals in the residential environment.

There are 4 questions regarding the "preferences for high-quality ecology and health-preserving diets": including preferring a living environment with good air, water and soil quality; a living environment with complete ecological planning; an ecological environment that is suitable for growing food beneficial for health; a lifestyle in which the food can prolong life.

There are 3 questions regarding the "concept of health-preserving diets over delicious meals": including more steaming and less frying; food over seasoning; and balanced diets over eating too much meat in daily diets.

4. Empirical analysis

4.1. Questionnaire Distribution

In Mid-March of 2020, a total 50 questionnaires have been distributed for the pre-test. After reliability and validity analysis, the study is approved to be carried out officially. For the second time, 250 copies were issued through one-to-one distribution making 250 valid questionnaires in total. Population sample the respondents as shown in Table 1.

Table 1: Population sample the respondents.

Variables	Demographic factors	Frequency	Percent (%)
Age	16-19	56	22.4
	20-39	69	27.6
	40-59	69	27.6
	Above 60	56	22.4
Gender	Male	126	50.4
	Female	124	49.6
Place of residence	Rural	124	49.6
	Suburbs	120	48.0
	City	6	2.4
Education degree	Below elementary school	11	4.4
	Junior higher school	51	20.4
	Higher school	63	25.2
	University	73	29.2
	Above Master	52	20.8
Occupation	Student	50	20.0
	Salary class	57	22.8
	Freedom	52	20.8
	House-hold	35	14.0
	Retiree	48	19.2
	Other	8	3.2

4.2. Statistical Analysis

4.2.1. Reliability Analysis

The Cronbach's alpha (α) of each latent variable ranges from 0.907 to 0.939, showing that the internal consistency between the item and scale of each latent variable is high.

4.2.2. Validity (Factor) Analysis

Use "stratified factor analysis" of "direct oblimin rotation" for continuity items. Factor analysis as shown in Table 2.

Table 2: Factor analysis.

Latent variable	Consumers' value on their physical and mental health	The preferences for high-quality ecological and health-preserving food	The concept of health-preserving diets over delicious meals
Factor loadings	0.858-0.941	0.906-0.956	0.869-0.915
Communality	0.738-0.888	0.820-0.919	0.761-0.842
Eigenvalue	3.273	2.643	3.987
Cumulative the explanation of variance	82.003%	88.038%	81.007%
KMO	0.847	0.735	0.839
Bartlett's test: Chi-sq test	727.005***	598.989***	1050.002***
Df	6	3	10
Sign.	0.000	0.000	0.000

Since all the factors above are extracted by principal components analysis while only one common factor is extracted as a result (eigenvalues greater than 1), all items are retained. Because

only one common factor is extracted, the solution cannot be rotated and there is no rotated component matrix. According to the value of factor loadings, these items are all important in their common factor. Since the commonality is high, showing that there are many measurable common characteristics of each variable and other variables, the importance of these items is also significant. Last but not least, the analysis of latent variables shows that there are common factors among the variables, which is suitable for factor analysis.

4.2.3. Regression Analysis

From the literature review and analysis, we know that the "importance consumers attach to their physical and mental health" is closely related to the "preferences for high-quality ecology and health-preserving food", and their preferences are also closely related to the "concept of health-preserving diets over delicious meals". After the above continuous variables are centralized, regression analysis is used directly. The regression analysis of hypotheses 1 and 2 is shown in Table 3.

Table 3: Regression analysis.

Variable	Independent variable	R ²	F	Beta	t	Sign
The preferences for high-quality ecological and health-preserving food	Consumers' value on their physical and mental health	0.859	713.589 (P=0.000)	0.883	27.102	0.000
The concept of health-preserving diets over delicious meals	The preferences for high-quality ecological and health-preserving food	0.875	1087.392 (P=0.000)	0.899	32.979	0.000

The coefficient of determination R² in the above table shows that the independent variable can explain the variance of the dependent variable from 85.9% to 87.5%; The predictor variable has significant explanatory power for the dependent variable (Beta values are all positively correlated, p are all less than 0.05, t values = 27.102, 32.979). Therefore, hypotheses 1 and 2 are established.

5. Conclusion

A high-quality ecological environment is a prerequisite for the health of residents, and it is also the cradle for nurturing the health-preserving food. Since the health of consumers is closely related to the high-quality ecological environment, health-preserving foods, and the concept of health-preserving diet, the maintenance of the living ecological environment requires residents to exercise morality to promote the sustainable development of the ecological environment.

The maintenance of high-quality ecology and the adoption of health-preserving diets are all indicators of modern national health, of which relevant government agencies should pay attention to and help them promote, and should be included in teaching materials so that the people can learn and practice. The government should clearly stipulate the detailed plans and incentives for the promotion of high-quality ecology and the advocating of health-preserving diets so that the population as a whole can work together. In this regard, advanced network devices and portable mobile phones (including related apps) can be used to collect, plan, record and optimization of relevant information, so as to regularly modify it as needed to achieve perfection and durability.

The results of this study are worthy of reference for relevant government departments to plan and educate the people, not only to create a healthy and green ecological environment with future development, but also to cultivate healthy citizens with prolonged lives.

6. Future Research Direction

In this study, the number and the area of samples taken are insufficient due to restricted funding and the consideration of the scale preparation is incomplete. Therefore, in the future, the number of samples and the sampling area will be expanded to facilitate better analysis and comparison. We will explore the relevant literature in a more comprehensive way, contribute our efforts to plan the health-preserving food materials cultivated in the high-quality ecology, develop more appropriate variable models, and hope that the research results will make substantial contributions.

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