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ABSTRACT

Excessive consumption leads to 7 trends of crises, including destruction of the atmosphere, energy crisis, social decline and conflicts. Over consumption also deteriorates human health. To reduce excessive consumption not only can improve health, it can also secure home safety and less energy consumption. The reducing over consumption can benefit human health and environmental protection. This motivates us to devise an innovative smart home App (SHA). After a survey to potential users, it reveals that the new features can help reduce the excessive consumption and deterioration of the human health as well as the transportation, healthcare and destruction of earth environment. Enterprises can also achieve their social responsibility through the implementation and popularization of the SHA as soon as possible.

Keywords: electronic commerce, IOT, smart home, bracelet, Consumption, Health, Remote control appliances

INTRODUCTION

There is an excessive consumption which leads to 7 trends of crises, including destruction of the atmosphere, energy crisis, social decline and conflicts [1]. Over consumption also deteriorates human health. To reduce deteriorated health due to excessive consumption, smart bracelet has become a hot topic; more and more people focus on healthy diet habit.

Research on how mobility and social connectivity combine to produce new knowledge, business practices, and social implications is likely to become the fourth era of m-commerce in the near future [3]. One of the significant developments in wireless sensor networks (WSN)-based smart homes is the injection of IOTs (the internet of things). The ubiquitous connectivity and distributed intelligence of the IOTs with wireless sensing technology are becoming the center point of upbeat remote monitoring and control. However, safety against gas and fire and health due to food consumption, exercise and sleep are few discussed in general motivations. This motivates us to study the related social demand.

In reality, people are easy to purchase things that they do not need because little understanding of their needs. It leads to overconsumption and related health deterioration. That is a good opportunity to do a survey of potential users of SHA and devise a new one to satisfy possible need. To have an understanding of the market on the demand of SHA and its effect on our designed SHA, it motivated this study. Besides, we want to study if we can be inspired from related IOT smart product and study the adherence of users to our SHA.

LITERATURE REVIEW

Digitization, networking and information is the era characteristic of the 21st century, with the rapid increase of mobile users e-commerce is irresistible momentum worldwide popularity and development, it provides the global trade environment, greatly improve the speed of communication, save the link of the management costs, and reduce the enterprise cost. Under this background, the companies are better to find effective methods to meet the need of market through e-commerce.

Some survey shows that expectations of accuracy, security, network speed, user-friendliness, user involvement and convenience were the most important quality attributes underlying perceived usefulness. Regression discovered that willingness to use depended significantly on the first five factors, allowing the inter-dependencies or marginal rates of substitution between them to be estimated. Some results draw attention to demand-side changes in explaining the recent slowdown in Internet applications, like e-retail banking, and may also be useful for development planning and marketing [4][5].

Nowadays, healthy problems become more and more serious. Thus, how to keep fit is a hot topic in the world. In 1987, John Robbins published Diet for a New America, which was an early version of the book started for food revolution. He continues to work tirelessly to promote conscious food choices more than 20 years. To be a vegan can not only help reduce consumption in grains by livestock, it can alleviate the trends of crises like diminishing land, diminishing water, water pollution, green gas effect, deforestation, biological extinction, and so on. The social impact to the application of IOT and its related App is little studied. It motivated us to expand the study of smart home to safety and food consumption.

RESEARCH METHOD

Research Method

The data formed the two charts of Table 2of Appendix are from the National Bureau of Statistics of the People's Republic of China. It is about the proportion of the total population of heart disease in the country. Over the past five years, the survey data from city shows that heart disease has become the leading cause of death, especially in women. In research, users valued two things most: notification, especially in connection with high mobility; and support for simple activities like tracking [2]. It is

expected that people like smart products with notification and tracking for health status, exercise and sleep.

Thus, it motivated us to innovate a new product-SW which can effectively prevent heart disease through getting people's heart rate, heart rhythm, blood pressure, sleep time and analyzing the data from the users.

Heart rate is the number of beats per minute in a quiet state of a normal person. It also called quiet heart rate which is generally beats 60 to 100 times per minute.

Studies have found that heart rate can reflect a lot of health information, including:
The length of life, the risk of heart disease, indicating the prognosis of heart disease, tips exercise fitness, to guess whether the work is too hard.

Adequate sleep, balanced diet and appropriate exercise are recognized by the international community as three health standards. Thus, the function of the SW is essential to detect the sleep.

With the help of the IOT network, the network can collect and analyze the data of the users without revealing the user's privacy, and carry out the tracking analysis, which will help scientists to better collect data and draw useful and reliable information for scientific research, for the benefit of human health.

Around us, there are a lot of people have little or no hospital physical examination because of certain objective or subjective reasons, the SW can help us to better observe their health, prevent diseases in a timely manner. This is a stylish and healthy product which can prevent heart disease and another disease.

Designed Features
Specific functions are as follows: Solar charging: light, heat and electricity conversion method is using energy from solar radiation or people's movement to generate current.

Recording sleeping quality, intelligent alarm clock function, emergency phone: The watch is a great invention which can reduce mortality effectively.

Questionnaire
Questionnaire survey is the most extensive and most popular method for field data collection, which is feasible and effective, and has advantages of low cost and short time. In order to be able to effectively verify the hypothesis of the study, this study followed the general principles and methods of empirical research, using the questionnaire survey method to test the theoretical construction.

With the questionnaires finished by the masses who were investigated, we can get the latest information .The questionnaire contains many aspects, including the understanding of the App, the acceptable menu of the App, the necessity of making diet according to individual healthy situation, the reason they accept vegetarian diet can alleviate the destruction of earth's environment, with SHA how attitudes do people change, as well.

RESULTS

Data Collection
This study used a questionnaire survey to collect data. Because of the limit of time and energy, a sample survey is conducted. The research is to study the development prospect of SHA, using online survey to get the data mostly among the young people in China.

To prevent the sense of tension and familiarity is brought to them, and ensure the accuracy of the data through the online survey, there is no limitation of time for answering.

Sample Description
A total of 160 questionnaires are distributed, and 160 questionnaires are collected. The specific contents can be found from the following tables.

Table1. A formal investigation of the personal information of the sample

Variable	Sort	Frequency	Percent (%)	Cumulative percent (%)
Gender	Male	66	41.25%	41.25%
	Female	94	58.75%	100%
	Under 18	1	0.63%	0.63%
	18~25	33	20.63%	21.25%
	26~35	106	66.25%	87.5%

Age	36~45	20	12.5%	100%
	46~60	0	0%	100%
	Above 60	0	0%	100%
Occupation	Student	10	6.25%	6.25%
	Office worker	137	85.63%	91.88%
	Housewife	2	1.25%	93.13%
	Private business employer	4	2.5%	95.63%
	Free professional	6	3.75%	99.37%
	Others	1	0.63%	100%

There are 66 males and 41.25% females in the sample, and 94 in 58.75%. Most of the subjects are aged from 26 to 35 years, with a total of 106. The sample is generally from office workers, to reflect the problem of their own views.

The answers for questions are as follows: all surveyed participants have ever used App; 72.5% of the participants will follow the suggested alarm to exercise; 63.8% of those will follow the suggested alarm to sleep according to individual sleep status; 76.9% of those think the reported status of individual health is helpful; 76.25% and 75% of those think the SHA is helpful in giving alarms to fire and gas in use. 93.8% of those think it is necessary to eat following a recipe according to personal health status; 88% of those think to be a vegan can save a lot of healthcare resources; 75.63% of those think to be a vegan can transfer grain from livestock to hungers to save more people. It reveals people care safety than less energy consumption. It is also interesting that people care exercise more than sleep toward a good health.

CONCLUSION

With the rapid IoT development, smart home is a hot topic. So an App based on users' individual health situation in smart home is feasible. This article is mainly to discuss the development prospect of SHA. The following is the conclusion of the paper.

First, there is a good potential growth for the SHA users among available smart phone users. Second, since there is few available App support functions like the SHA and especially most surveyed users think the alarms to exercise, sleep and health status are helpful, it shows there is urgent need for SHA.

Social Implication

Economy, environment and community are three respects for an enterprise's social responsibility. Since the popularization of SHA, less food and energy can be achieved with accompanying less environmental destruction, improved community welfare, and the enterprise's social image. Enterprises can also achieve their social responsibility through the implementation and popularization of the SHA.

Limitation of this paper

This article adopts a research method of statistical survey, only one-way study rather than from several aspects about all possibilities of SHA. In the meanwhile, object is mainly to one than other professional or age groups without more layers and data. If students live in dormitories than homes without their own kitchens, they may not adapt SHA's suggestion so much to cook for themselves. Thus, alternative survey on a different career can help reduce the bias. Furthermore, poor medical adherence from lower memory or mental disorder is not included in this study.

To reduce unnecessary food and energy consumption and provide adequate protection for human health as well as less home and environment can be achieved if this innovative human technology can be implemented and popularized as soon as possible.

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Appendix

Table 2.
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The number of the Chinese died from heart disease which accounts for the total quantity of dead people

22.75	23.12	23.66	24.22	24.38
20.77	20.88	21.3	21.45	21.6
19.24	19.25	19.51	19.42	19.6
2009	2010	2011	2012	2013

The number of Chinese died from heart disease over the total quantity of dead people

The number of Chinese man died from heart disease over the total quantity of dead people

The number of Chinese woman died from heart disease over the total quantity of dead people