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Engaged Learning Final Report
The Allure and Impact of Fast Food in China

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Abstract:
This project involves surveying university students in China, using the Newest Vital Sign (NVS) – a commonly accepted nutrition literacy test, in order to analyze their nutrition literacy and dietary choices, specifically their attitude towards American fast food. A colleague, Jeffrey He, will investigate the cultural implications of fast food in China. The ultimate goal is to understand Chinese youth’s opinions of fast food as well as provide health and nutritional information to help students in China make informed dietary decisions.

Introduction:
Fast food registers thoughts of burgers, fries, and other fatty foods in the minds of most Americans. However, the industry has, in recent years, expanded far beyond American borders. Entrepreneurship and the global market have brought fast food chains – Kentucky Fried Chicken, McDonalds, Burger King, and Pizza Hut – en masse to rapidly developing nations such as China. This expansion leads to economic growth for these countries, but not without consequence – including damaging competition to local restaurants and social rifts between the older, traditional generation and the modernized youth.

Furthermore, the accelerated addition of fast food chains in Chinese cities presents a substantial nutrition literacy disparity – the people are exposed to elevated amounts unhealthy food, but may lack the knowledge to make healthy nutrition decisions. Nutrition literacy is the understanding an individual has that dictates his or her eating decisions and habits. It falls under the umbrella of health literacy, which is a “stronger predictor of a person's health than age, income, employment status, education level, and race”. In the United States, our citizens and culture have had long time exposure to fast food, and there have been ample studies on the health hazards of consuming fast food. In fact, nearly all food chains in the U.S. are attempting to promote healthy alternatives on their menus – salads, low calorie meals, juice and fruit with kid’s meals. In China, however, there is quite the opposite. The recent and hurried spread of these chains has not allowed for regulations to pressure fast food giants, and so there is no incentive for them to offer expanded, healthier menu choices.

Despite the importance of nutrition literacy, a recent overview of PubMed databases reveals that less than one percent of all articles pertaining to health and nutrition literacy mentioned Chinese populations. The high importance of nutrition literacy raises the question of why is there insufficient research on this topic. Such a shortage of information prompted action to be taken in order to research and improve the nutrition literacy of individuals in China. As a college student with considerable background in
research, specifically health literacy, I proposed an exploratory project to survey Chinese populations to analyze their nutrition literacy.

Within the current perspective of China and its citizens, there is an incomplete understanding of the link between their affinity for western fast food chains, and their lack of nutrition literacy. This research has broadened this understanding by including the investigation of the nutrition literacy and nutrition choices of Chinese students and relating this relationship back to the affinity or animosity towards fast food. Ultimately, the purpose of this Engaged Learning project was to explore this connection by analyzing the nutrition literacy of a specifically defined Chinese population.

**Background:**

In America, nutrition literacy is taught as a requirement in many elementary schools in states such as California and Washington. In China, however, there is no such regulation or teaching. Nutrition literacy is commonly assessed through knowledge of basic nutrient facts, such as reading a food label. However, nutrition literacy extends beyond the basic reading skills because often, complex information is presented and hidden from the individual. Presently, one should have skills to research nutritional facts to supplement their nutrition literacy as an increasingly amount of these facts are distributed via the Internet.

I proposed to assess nutritional literacy by using a commonly accepted method—a nutrition literacy questionnaire with contents of basic nutrition labels, as well as

supplementing a series of short questions encompassing education level, economic status, age, and frequency of fast food consumption; these additional queries will add depth and comprehensiveness to the research, and most importantly, allow for my research to be expanded upon later on.

The history of China is not one marked by constant changes, but rather by sweeping waves of reform. After the Mao Zedong era and the fall of China’s ally, Communist Russia, China opened its doors to the rest of the world. Immediately, businessmen, employers, capitalists, and entrepreneurs flocked to its borders, spearheading the transition to an openly accessible, worldwide economy. Although the Chinese government has strict control over economic aspects of the country, businesses and businesses owners have thrived.

The sheer size of the Chinese population, or over-population, in major cities has created huge markets where businesses, such as fast food chains can be fiscally successful. This, along with the lack of diet awareness and nutrition literacy have created many problems for the Chinese citizens, who frequent the fast food establishments without realizing the dangers to their health. To exacerbate the problem, the Chinese government has yet to impose regulations for healthier menu items, nor has it set guidelines for the full disclosure of nutritional facts for the items sold by fast food chains. One can speculate why these protocols are not in place; perhaps it is because the government has its focus elsewhere, or more likely, China has not had enough exposure to these fast food
establishments to instigate such directive. Conversely, the U.S. has these guidelines because here, we are far more familiar with fast food, since we have had it for decades.

**Significance:**

The significance of nutrition literacy is vast and well reflected in its implications: nutritional literacy plays a large role in an individual’s self-reported health status. Furthermore, nutrition literacy strongly correlates with health literacy, which is the prime indicator of an individual’s health. Nutrition literacy mirrors an individual’s daily nourishment intake, indicating that someone who has high nutrition literacy will eat well-balanced, healthy meals frequently, while someone who has poor literacy simply will not.

One pivotal point that many states in the U.S. address is that teaching nutrition literacy early on, in elementary school, is highly beneficial because it will lead to improved diet habits later on. This fact remains true for all individuals, especially children.

An additional aspect greatly affected by nutrition literacy is allergies. Many individuals have various food allergies, peanuts, fish, and citrus, and continue to suffer from these allergies, resulting in severe symptoms or even death. They succumb to their allergies because often they are not sufficiently nutrition literate; someone with peanut allergies may not recognize the small print on food packaging that states “warning: this product was made in a warehouse that also produces peanut products.”

Nutrition literacy also extensively influences people with chronic conditions ranging from cardiovascular, blood pressure, and cholesterol issues to diabetes and obesity. Suppression and treatment of these conditions require the individual to have proper dieting habits, and to do so requires nutrition literacy.

The facets affected by nutrition literacy provide insight on just how important it is, as all of the listed factors contribute to increased annual hospital visits and increased hospital waiting time, which amounts to rising health costs. Thus, improving nutrition literacy will have a two-fold effect: it will benefit the individuals’ health and well being, as well as decrease health related expenses while improving efficiency.

**Methodology:**

**Preface**

The research called for surveying a set of Chinese college students in the city of Hangzhou. The subjects surveyed will be random.

**Setting**

The project site chosen was Hangzhou, China. This particular city was selected for its rich culture and established university. Furthermore, Hangzhou is a developed, modernized metropolis with ample fast food chains – 26 KFCs, 10 Pizza Huts, 10 McDonalds, and 1 Burger King. All of these chains are mentioned specifically because they are popular, quintessential, and unhealthy fast food staples in China and the rest of the world.

**Design**

The nutrition literacy survey attached, is an encompassing indicator of nutrition literacy. It will consist of a Chinese nutrition label commonly found in China and my supplemental
questionnaire. To ensure the validity of the research, and to prevent confusing between testing for language or nutritional literacy, I offered to read aloud my supplemental portion of the survey in Chinese. Upon completion of a survey, the administrator thanked the participant and provided a nutrition literacy booklet that details the benefits of good nutrition literacy. The goal is to provide a service that gives back and teaches those in the community to develop their nutrition literacy, thereby improving their health. To maintain anonymity of the surveyed individuals and eliminate bias, I did not inquire names, but instead tracked each survey and individual with initials and an assigned number according to birth date, to ensure no survey is repeated.

Additional Information

Along with measures of nutrition literacy, my survey also allowed me to collect demographical data such as age, gender, education level, and how well informed one is of the current health and nutritional related issues. Doing so adds a greater degree of perspective to the study, and oral narratives may be collected to reflect citizens’ concerns and thoughts on the fast food industry, which will supplement Jeffrey’s research and contribute to the overall project. These additional parameters enrich the research by providing an intimate perspective that sheds light on the complexities of the economic growth in China.

Results:

The participants scored very well on the NVS, indicating their adequate nutritional literacy. Out of 100 students surveyed, the mean score was 5.2 out of 7, significantly higher than the average deemed nutritionally literate – 4.5. There were no scores below 4 and only 12 perfect scores of 7, which speaks to the difficulty and reliability of the NVS survey.

Conclusion:

The primary goal of this research project was to assess nutrition literacy of college students in Hangzhou, China. The original hypothesis was that college students in China had sufficient nutrition literacy and ate fast food for other reasons such as its taste, convenience, and social appeal. After analyzing the NVS surveys, the average score of 100 Chinese college students was 5.2, which means they are nutritionally literate and well aware of the food they were eating. Furthermore, in my interviews, many participants provided their perspective on fast food, saying that it was expensive and modern, clean to eat, yet unhealthy, the restaurants were popular venues to hang out in, and the food was convenient and provided a variety to their diet. This research aimed to help Chinese citizens understand the consequences of nutrition literacy as well as help us understand how American fast food is perceived in other countries. Further implications for policy can be administered to improve the quality of fast food abroad such as offering healthier salad or alternative menu items. The research is limited by its population sample, as future queries could include a wider range of people to better represent a country’s population. Moreover, a comparative study could be done involving Americans and our perspective on fast food.
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