

Recommended Citation

White, Rebecca (2012) "Examining the Effect of SES on Access to Nutritional Food," *Perspectives*: Vol. 4 , Article 15.

Available at: <https://scholars.unh.edu/perspectives/vol4/iss1/15>

This Article is brought to you for free and open access by the Student Journals and Publications at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in *Perspectives* by an authorized editor of University of New Hampshire Scholars' Repository. For more information, please contact Scholarly.Communication@unh.edu.

Perspectives

Volume 4 Spring 2012

Article 15

5-1-2012

Examining the Effect of SES on Access to Nutritional Food

Rebecca White

University of New Hampshire, Durham

Follow this and additional works at: <https://scholars.unh.edu/perspectives>

Examining the Effect of Socioeconomic Status on Access to Nutritional Food

Rebecca White

ABSTRACT

America has recently seen an increasing epidemic of diet related diseases in people of all backgrounds. However, the brunt of these health risks, especially those stemming from obesity, seem to disproportionately fall on those of lower socioeconomic status. One contributing factor is that those of lower social status simply do not have the geographic access to food stores whose products are nutritionally healthy. Instead, convenience store food, as well as fast food, is more readily available, leaving these people to not only consume too little of the right foods, but too much of the wrong foods. It is also apparent that individuals who are at a socioeconomic disadvantage are less informed about their choices, and continues to choose less nutritious food even when it is within their financial means. A wide variety of components, including, race, class, education level, occupation, and domestic location all have an impact on this issue, which makes it extremely complicated to work towards a solution.

INTRODUCTION

While nutrition is a vital element of a healthy lifestyle, nutritious food is not equally available to all. The significance of this inequality is that a healthy diet greatly reduces the chances of diseases and medical conditions that can shorten and lower the quality of life. When differences in diet can be attributed to socioeconomic factors, it can be reasonably assumed that differences in lifespan and instances of disease can also be attributed to socioeconomic factors when access to nutrition is considered. When dissected, this can contribute to research seeking to understand disparities in health and lifespan of varying socioeconomic statuses, including factors such as race, income level, class, education level, occupation, and domestic location. This paper will review the literature on how these socioeconomic factors affect the following varying aspects of access to nutritional food: food store access, fast food consumption, and overall nutritional value of foods consumed. A correlation is visible which shows that those who exhibit characteristics of low socioeconomic status have the poorest access to sources of nutritiously healthy food, and therefore consume the least nutritious diets. On the contrary, those who exhibit characteristics of high socioeconomic status consume diets which are much more nutritious, and have a greater access to sources of nutritious food (Dubois and Girard 2001). This clearly illustrates how socioeconomic factors shape life chances, and specifically reviewed in this paper, access to nutritious food.

FOOD STORE ACCESS

Geographic proximity to various types of food stores plays a pivotal role in determining what types of foods are available to residents of different neighborhoods. Chain supermarkets, followed by non-chain supermarkets, grocery stores and, finally convenience stores are more likely to have nutritionally valuable and freshly prepared food (Powell et al. 2004). Referring to the suburbanization of supermarkets in a study conducted in London, Ontario, Larsen and Gilliland (2008) express that “While more and more large-format supermarkets are erected on suburban lands, smaller grocers in older central-city neighborhoods seem to be rapidly disappearing, leaving potential food deserts in their wake” (p. 1). This is a change from a comparison study conducted by Larsen and Gilliland in 1961, which showed that at the time, more supermarkets were located in the inner city, in areas of higher socioeconomic distress. Since then, supermarkets have decentralized and convenience stores and fast food restaurants have taken their place. This is in part due to the decentralization of the population, which is happening in many major cities. A small customer base consisting of consumers of low socioeconomic status in central urban areas drives larger, more expensive supermarkets to relocate to suburban areas of more wealth in order to create a customer base of people who have more money to spend on food (Larsen and Gilliland 2008).

Trends show that higher income areas with more Caucasian residents currently have more chain supermarkets and fewer convenience stores, while lower income areas with less Caucasian residents currently have more convenience stores. Specifically, African American neighborhoods have access to only half the amount of chain supermarkets as their white counterparts in America (Powell et al. 2004). However, many studies suggest that this substantial difference in access based on socioeconomic deprivation is visible only in America (Pearce et al. 2007). For example, a study done by Pearce, Blakely, Witten, and Barley in 2007 notes that “With the exception of a few local studies, there is little evidence outside of North America to suggest that more deprived neighborhoods have less geographic access to shops selling healthy food. In fact, in New Zealand, the results at the national level suggest that access to supermarkets and other shops potentially selling healthy food is better in more deprived neighborhoods”(p. 6).

Convenience stores are more prevalent among areas lacking supermarkets and are more likely to have less nutritionally valuable food. Instead, these stores typically sell packaged food containing high levels of sodium and refined sugars (Powell et al. 2004). Since the 1980’s, dietary guidelines have suggested a lowered intake of both sugar and salt, along with saturated fats (Mennell et al. 1992). Shoppers who mainly buy food from convenience stores are less likely to meet their recommended daily nutrient values because they are simply consuming the wrong foods. However, foods made with ingredients such as sugar and salt are cheaper and more available to those within close proximity to convenience stores. Despite discouragement from dietitians, these are the foods that are ultimately consumed more frequently. Immediate availability within budget certainly serves as a strong predictor of consumption.

Trends suggest that food stores typically set prices at levels affordable to residents of nearby neighborhoods. Neighborhoods whose residents display characteristics of medium to high socioeconomic status tend to have greater access to supermarkets and stores with a slightly greater variety of fresh fruits and vegetables (Ball, Timperio, and Crawford 2008). However, prices of the same fruits and vegetables sold at nearly all food stores were shown to be significantly higher in these stores. Supermarkets within close proximity to neighborhoods of high socioeconomic status also showed a slightly greater variety in the fruits and vegetables available, meaning that more exotic, rare produce was more likely to be found at these supermarkets rather than at convenience stores or small grocery stores (Ball et al. 2008).

Such poor access to supermarkets and the nutritious food sold in them means that inevitably, other food suppliers will move into neighborhoods of deprivation. These suppliers are more frequently becoming fast food establishments, whose food not only lacks the nutrition found at supermarkets, but adds in additional fat, sodium and sugar.

FAST FOOD CONSUMPTION

In contrast to the limited availability of supermarkets to socioeconomically deprived areas, fast food establishments follow the opposite pattern; fast food restaurants are more likely to be found in less affluent neighborhoods. In areas of high socioeconomic status, travel distance to fast food establishments has been found to equal twice as much as the travel distance for areas of low socioeconomic status (Pearce et al. 2007).

It has also been noted that among schools where the students were of lower socioeconomic status, there is closer geographic access to fast food restaurants. This trend was particularly visible among schools with high percentages of black students. The same study also noted that in New York City, fast food restaurants were actually most concentrated around predominantly black high schools of high income much more so than predominantly black high schools of low income (Kwaate and Low 2010). This could indicate that race is just as powerful as economic status, and that socioeconomic status is a multi-faceted indicator.

Education is another major factor that influences nutritional decisions. Those with a higher level of education, particularly greater than a grade school education are more likely to have been exposed to information regarding nutritional requirements. It is also likely that in this case, education is also independently associated with economic status. This increases the likelihood that those with a higher education also have more money, meaning they have access to healthier foods. A study conducted by Thornton, Bentley, and Kavanagh in 2010, showed results that "In models adjusted for confounders, having either vocational education or no post-school qualifications were both significantly associated with an increased likelihood of purchasing fast food monthly." (P. 875). "Blue collar" workers were also substantially more likely to consume fast food weekly than those whose occupations were considered "professional." This comparison remained valid even when all other indicators of socioeconomic status were considered (Thornton 2010).

The strongest indicator shown was income. The same study conducted by Thornton, Bentley and Kavanagh (2010) showed that “In adjusted models, we found that income was more strongly related to the purchasing of fast food weekly. Compared with the highest income earners, those in the lowest income households were over four times more likely to purchase fast food frequently.” (P.875) In essence, this can be interpreted as those who earn the least consume four times as much fast food as those who earn the most. The study did note that this observation might be partially attributed to the increased likelihood of “blue collar” workers working irregular hours and overtime hours. And therefore, more expensive sit-down restaurants were not always an option. Instead, workers opt for quick and inexpensive fast food that can be obtained and consumed quickly on breaks and before or after a long shift, when fast food establishments may be the only ones open (Thornton 2010). This validates the meaning of the terms “fast food” and “convenience store”; their purpose is not to provide nourishment, but rather to serve quickly and conveniently.

All of these indicators independently point towards the same trend of increased consumption of fast food by those whose socioeconomic status is categorized as low. This improves the validity of the findings because it can be assured that while the various factors of socioeconomic status certainly affect each other, this does not account for visible trends. Ultimately, these factors discussed lead to increased or decreased consumption of nutritious food from larger supermarkets, processed food from smaller food stores and fast food.

NUTRITION ADEQUACY

The point of measuring frequency of consumption of the various food providers is to assess overall nutritional value of the diets of people of varying socioeconomic status. A study conducted by Dubois and Girard (2001) showed that levels of nutrient intake were negatively graded with social status. This study looked at four different indicators of socioeconomic status to further assess whether results varied from when these indicators were assessed individually versus when they were combined. These four indicators were relative education, income level, working class status and a global socioeconomic status scale.

All the factors were found to individually show a negative gradient with nutrient intake, but all the factors work in different ways. “For example education level is important for the comprehension of the information regarding the relationship between diet and health on a long-term basis. Family income plays a direct role in food expenditures in stores and restaurants, while the type and place of work could relate to food availability at lunch time and time allowed for meal preparation and consumption.” (P. 380). This illustrates that different factors can more directly or indirectly play a role in access. While income immediately dictates what can and cannot be bought, education affects what is known about certain foods, and increases the likelihood of these foods being purchased (Dubois and Girard 2001).

In the instances of malnutrition among those of low socioeconomic status, it is interesting to note that most of the malnutrition was not due to inadequate food supply or starvation. It is difficult to measure true malnutrition, because it takes various forms, and nutritional needs vary greatly from person to person. It is reasonable to assume that most people do not achieve perfect levels of every recommended nutrient, but true imbalances often result in health issues. In developing countries, these health issues generally stem from hunger and lack of vital nutrients. By contrast, malnutrition in developed countries more often stems from an overabundance of the types of food that are suggested to be eaten only in moderation. While developing countries simply do not have enough to eat, some developed countries eat too much of the wrong foods, leaving no room for the right foods. In both cases, the vital nutrients are not consumed (Church 2007).

Race has also been found to be a telling factor of overall nutritional intake. A study conducted in metropolitan Detroit by Fahlman, McCaughtry, Martin, and Shen (2010) compared nutritional knowledge and the actual diets of black students of low socioeconomic status versus white students of higher socioeconomic status. As a part of their public education, these students had received between two and three weeks of nutritional education at school. The results support the notion that increased consumption of nutritious food decreases consumption of less nutritious food, and vice versa. The black students of low socioeconomic status were not as likely as the white students to meet the daily recommended levels of nutrients. They were however, more likely to consume “empty-calorie food, meat, and fried food and less likely to eat fruit, vegetables, dairy products, and grains.” (P. 13). The results of the tests assessing nutritional knowledge may partially account for why these variations in diet exist. Black students were far less knowledgeable about nutrition in general, and scored lower on tests asking how much of certain food groups are to be eaten daily, and which food groups are the most vital. These students also could not as easily draw the connections between diet and disease. The latter point is perhaps the most important because the entire point of a healthy diet is a healthy life.

CONCLUSION

This paper has reviewed the literature on how socioeconomic factors affect the following varying aspects of access to nutritional food: food store access, fast food consumption, overall nutritional adequacy of foods consumed. Access to various types of grocery stores is mainly impacted by geographic location of neighborhood, and determines the type of food that will be offered at available food stores and how much it will cost. Fast food consumption often replaces nutritional food when nutritious food is either not geographically close enough or too expensive. Overall nutritional quality of foods consumed has been shown to follow a positive gradient which illustrates that higher socioeconomic status means greater likelihood of access to nutritional food, and consequently a nutritious diet (Dubois and Girard 2001). The three aspects assessed are extremely interconnected, as are the factors of socioeconomic status. The research and literature in this subject area is very clear because it has been shown that each factor of socioeconomic status independently supports very similar

findings. This is important because the term “socioeconomic status” refers to a wide spectrum of factors, each of which must be assessed individually to ensure validity in findings.

Varying classes, races, education levels, occupations and geographic domestic locations have all shown independent correlations with access to nutritional food, as well as combined correlations. Therefore, each factor of socioeconomic status has its own effects, as well as interconnectedness with the other factors. It is clear that a higher socioeconomic status greatly improves the chances of receiving a nutritious, healthy diet.

REFERENCES

- Church, S. M. 2007. "Diet and nutrition in low-income households - key findings of a national survey... Nelson M, Erens B, Bates B et al. eds (2007) Low Income Diet and Nutrition Survey. Vols 1 DS3. TSO: London." *Nutrition Bulletin* 32(3):287-294.
- Dubois, L. and Girard M. 2001. "Social position and nutrition: a gradient relationship in Canada and the USA." *European journal of clinical nutrition* 55(5):366-373.
- Fahlman, Mariane M., Nate McCaughtry, Jeffrey Martin and Bo Shen. 2010. "Racial and Socioeconomic Disparities in Nutrition Behaviors: Targeted Interventions Needed." *Journal of Nutrition Education and Behavior* 42(1):10-16.
- Kwate, Naa O. A. and Ji M. Loh. 2010. "Separate and unequal: The influence of neighborhood and school characteristics on spatial proximity between fast food and schools." *Preventive medicine* 51(2):153-156.
- Larsen, Kristian and Jason Gilliland. 2008. "Mapping the evolution of 'food deserts' in a Canadian city: Supermarket accessibility in London, Ontario, 1961-2005." *International Journal of Health Geographics* 7:1-16.
- Pearce, Jamie, Tony Blakely, Karen Witten and Phil Bartie. 2007. "Neighborhood Deprivation and Access to Fast-Food Retailing: A National Study." *American Journal of Preventive Medicine* 32(5):375-382.
- Powell, Lisa M., Sandy Slater, Donka Mirtcheva, Yanjun Bao and Frank J. Chaloupka. 2007. "Food store availability and neighborhood characteristics in the United States." *Preventive medicine* 44(3):189-195.
- Smoyer-Tomic, Karen E., John C. Spence, Kim D. Raine, Carl Amrhein, Nairne Cameron, Vladimir Yasenovskiy, Nicoleta Cutumisu, Eric Hemphill and Julia Healy. 2008. "The association between neighborhood socioeconomic status and exposure to supermarkets and fast food outlets." *Health & place* 14(4):740-754.

Thornton, Lukar, E., Rebecca Bentley J. and Anne Kavanagh M. 2011. "Individual and area-level socioeconomic associations with fast food purchasing." *Journal of Epidemiology & Community Health* 65(10):873-880.

Timperio, Anna, Kylie Ball, Rebecca Roberts, Karen Campbell, Nick Andrianopoulos and David Crawford. 2008. "Children's fruit and vegetable intake: associations with the neighbourhood food environment." *Preventive medicine* 46(4):331-335.