

**INFLUENCE OF  
SOCIAL, ENVIRONMENTAL AND CULTURAL FACTORS  
ON HEALTH**

**By**

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**ABSTRACT**

INFLUENCE OF

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ON HEALTH

Thesis under the direction of Gary D. Miller, Ph.D., Associate Professor of  
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This thesis examines the factors of social, environmental and cultural areas of our lives and how they influence what we eat and our health. These three areas can not be separated easily when trying to determine why some people are healthier than others within the same neighborhood, or family, or why it seems that other people in different countries are healthier than we are in America when we have so many health advantages and medical assistance. In an effort to determine how best to educate people about nutritious food and healthy lifestyles, health educators and experts have to look at all three factors to create a successful intervention. We are in serious need of avenues to fight obesity in our country and others as obesity will eventually affects one's health.

# **Influence of social, environmental and cultural factors on food intake and health**

## **Introduction**

This paper will examine the influences of social, environmental and cultural factors on food intake and health. These determinants are frequently interrelated. Each of these areas will be specifically addressed, with the realization that these three factors are intertwined. Social is defined as of or having to do with humans and their living together and their interactions; environmental is defined as the surroundings which include circumstances, conditions and influences; and cultural is defined as the concepts, skills, arts, institutions in a given period by a given period (Webster's). Based on these definitions our surrounding environment is made of our cultural and social behaviors. Our culture is based on our environmental and social behaviors while our social behaviors are dictated by cultural and environmental forces. For example, if a person is born into an affluent family, his chances of attending a university and being a member of a fraternity are greater than if he is born into an ethnic minority whose parents are migrant workers. His opportunities or socioeconomic means are greater being born into an environment of wealth within a culture of education and a social environment made of fraternities. His friends will likely be from the same socioeconomic background. If a person grows up going to church with his family, the church environment will influence who he chooses as friends and who he interacts with socially. In addition, beliefs and attitudes play a role in social, cultural and environmental factors as well as marketing or demographic factors. One's environment is composed of many different factors and they are all somewhat interconnected.

Social and cultural factors play a major role in the health of an individual as well as the environment in which they live. If a person spends most of his time with people who are active, he will probably be active and aware of his food choices for energy. The list of factors is extensive and this paper will discuss the effects of areas related to the social influences that include our families, our friends, our peers and other organizations of which we may be a part. Just as social factors include our families, friends and peers, environmental factors also include our families, friends and peers, in addition to our housing and the location of our housing (Story, Neumark-Sztainer and French 2002). Climate also plays an important role in our environment. Formal education and life experiences fall into social, environmental and cultural factors. Our cultural influences come from our concepts of “being” which could include religion in addition to other family influences (Read xvii). Some families view education as an important part of life while others do not value education at all. This could be totally dependent upon the culture within their neighborhoods, their states, or even their countries (Coyne, Demian-Popescu and Friend, 2006). To achieve a healthy society, education and community intervention are critical steps to reach that goal.

Local programs and services can be instituted to increase the promise of better health, but the programs must be presented in a way that the people of the group will understand and adopt them (Read xiv). Often traditional methods of medical help are followed until a community understands that there are other ways, possibly better ways to approach treatment for their health. Health educators must have a plan for action when they try to influence communities.

Many social scientists have begun to understand the close links of social, cultural and environmental factors and how they shape our health. An American anthropologist, Dr. Lyle Saunders, addressed the idea as early as the 60s that public health is a social and cultural activity (Read xiv). When social scientists are trying to reach their targets for improvement of well-being, both they and the people being targeted are acting in a way that their behavior is motivated and oriented within the constraints of their own “socially-defined roles within their culturally determined ways” (qtd. in Read xv).

Dr. Mary Story (Story et al, 2002) discusses the factors that influence how adolescents choose their food based on the social cognitive theory and from an ecological perspective. This will be expanded on later in the paper as to how she breaks down the levels of influence of food intake behavior, particularly among adolescents.

Eating is a more complex human behavior than previously thought (World Health Report 2008). We all eat, but our reasons for eating are influenced in many different ways. The motivation for some of us to eat is because we need nutrition to function; whereas others eat whether they are hungry or not, such as in social situations or dealing with emotions. Eating accompanies celebrations, be it sad or happy occasions; some people eat to mask underlying psychological matters (Nauert 2007). We also have people who eat due to the biology/chemistry of their bodies. Whatever the reason for eating, it's impacted by our basic personalities, not necessarily our need to satisfy our hunger. This is shown in that many of us ignore the cues in our bodies that tell us when we are full and continue to over consume due to social cues (Nauert 2007).

As human society continues to face more challenges with the environment based on climate change and the effects climate change have on many factors that affect our health, more than one discipline is bound to try to understand the changes being made to our natural, physical and social environments and the diverse consequences they will have on human health (McMichael 2008). Researchers must collaborate to try to understand the complexity and the interactions of these systems (environmental, ecological and social) we depend. According to Richard Eckersley (2009), the challenge for interdisciplinary research is huge, but sometimes key issues are not agreed upon and it might be impossible to agree on how they disagree (Smith 2006).

This paper will discuss the necessity for social intervention to increase global awareness of the need for better nutrition and food choices. Primary health care (PHC) is in serious need of rehabilitation based on the demand of consumers for better services and meeting the needs and changes in society. Not only is it critical for local and community programs to intervene for the sake of society, the World Health Organization (WHO) is under scrutiny to respond to the challenges of societal change on an international level (World Health Report 2008).

The world has become a smaller place when it comes to modern living and technology. Contemporary lifestyles are affecting the entire world. Compared to 20 years ago, the world is fat (Popkin 2007).

## Chapter One

### Development of food preferences

How do food preferences develop? Is it based on what parents feed their children early in life or is it their parents' genes? Is it nature or nurture? There is much discussion among scientists as to whether we choose foods based on innate traits of our environment, or if we have a genetic predisposition to those food preferences (Birch 1999). The development of food preferences is basic: it is learned through our experiences with food. Today in the United States, we choose too many foods that are not healthy for us and we end up overweight or obese (Birch 1999). Our preferences are certainly out of sync with the dietary guidelines that our government has created (Birch 1999). People who need to restrict their food report that giving up their favorite foods is one of the reasons they choose to remain overweight. Eating is such a source of pleasure for them that it is not worth seeking a healthier diet. Understanding how food preferences are learned would make it easier to design intervention strategies to promote healthy diets.

While an infant is in utero and flavors are being transported from the mother, food preferences are likely to begin. When the infant is born and drinks mother's milk, the mother's diet is likely to affect the tastes of the infant. Once the child is old enough to make food choices, the foods that are available to the child will determine what kinds of foods the child will prefer (Birch 1999). This is an important time in life for parents to offer healthy foods. We have a genetic predisposition to like sweet and salty foods, as well as to prefer energy-dense foods (Birch 1999). Once an infant is introduced to solid foods, food preferences begin to influence their diet. To prevent infants from eating the

same foods, parents should introduce a variety of food to allow the child to learn different tastes. A variety of foods needs to be consumed in order to have proper nutrition.

Social factors such as eating with others are important in shaping the preference for foods as we grow. Older children seem to play a more effective role in shaping food choices than younger children. Your mother has more effect on your eating choices than a stranger. For older preschool children, ordinary adults have less of an impact than adults who are considered heroes to the children (Birch 1999).

Birch discusses the parent-child interactions of shaping the food choices of children. Whatever tactics parents use generally influence the food preferences the children have. If a parent offers a reward for eating foods that are more nutritious than tasty, the child will end up with a negative reaction about that food. The child may eat the food in the presence of his parents but when he has the autonomy to choose another food, he will. This practice of parents controlling a child's food consumption does not work. When foods are restricted or withheld from a child, those foods become more attractive to the child.

### **Role of genetics regarding obesity and food intake**

Based on numerous studies and research, the World Health Report (2008) agrees that there is evidence that genetics do play a key role in our body weights and shapes. However, if we change our eating habits, our hormones, our environment and other variables, we can lose or gain weight. There is an internal sensor called a "set point" that will regulate our weight based on genetics (Levitsky 2002). The likelihood of identical twins weighing about the same, even if parted at birth, is stronger than them having the same weight as their adoptive parents. It is believed that the metabolism is slowed down

to require fewer calories, making the body more efficient when the fat levels fall below the “set point.” Because we can change enough factors to lose or gain weight, Levitsky disagreed with the “set point” in favor of a “settling zone” theory. He argued that within the biologically determined range of body weight that the actual body composition may “settle” at a value determined by behavior (Levitsky 2002). In addition, Levitsky argues that there are people who will have a wider “settling zone” than others and may have greater weight fluctuations than some (WHR 2008).

### **Social influences on food choices**

Geographical location of a friend in itself doesn't seem to make a difference in affecting the obesity status of a colleague. A friend who is 500 miles away seems to make as much a difference as a friend next door (qtd. in Nauert 2007). Social networks seem to play a major role in eating, weight and exercise (Christakis and Fowler 2007). Looking at the greater good of a large population should be a strong consideration of health educators when they are planning an intervention program. They may think they are helping one person lose weight when in actuality many people are being reached through social networks.

As adolescents we tend to eat what we need until we are full. As we grow, our family and friends as well as our network of peers begin to influence our eating patterns. We have learned that one social factor that affects how much we eat is based on the number of people present in the situation. If we are with people who don't eat much, we tend to follow their cue. The World Health Report (2008) states that we eat more as a “power function” of the number present. We don't want to miss out on food resources by allowing others to get to the food first. Another explanation would be that we tend to

ignore our satiety cues when we are distracted by the presence of people. The dinner party or other social functions lend themselves to overeating based on the quantity and variety of foods available (WHR 2008).

The World Health Report also indicates that there is evidence that our relationships with people (social facilitation effect) determine how we eat. Our eating behaviors are strongly influenced and modeled after those who are our companions. Even if we are very hungry, if we are with someone who doesn't eat much, we will follow his lead and also eat a small amount (WHR 2008). If we are with close companions we may eat dessert, whereas we may not indulge if we are with people we do not know well (WHR 2008). Interestingly, this idea does not reveal the same results with people who are overweight or restricting their food intake. Obese or overweight people eat less around others and tend to stuff themselves when they are alone, giving the appearance that they do try to eat healthily (WHR 2008).

According to a study done over a period of thirty-two years, it was concluded that if obesity is contagious, then thinness must be too (Christakis and Fowler 2007). Not only do our families impact what we eat, our social networks also influence how we eat. While we have been trying to blame obesity on our genes, this study indicates that our social lives may be more to blame (Christakis and Fowler 2007).

The following is from the Christakis and Fowler study:

Your colleague's husband's sister can make you fat, even if you don't know her.

A happy neighbor has more impact on your happiness than a happy spouse.

Emotions are contagious, health behaviors spread: in fact, our social networks influence our ideas, emotions, health, relationships, politics and every aspect of

our lives. We don't live in groups, we live in networks: as proven through research ranging from bank runs to suicide prevention, from nut allergies in schoolchildren to epidemics in virtual worlds, from the spread of happiness to the spread of voting.

Despite the fact that our genetics can make some difference, it seems that the most influential effect on eating habits is among friends (Christakis and Fowler 2007). Whether or not we realize it, we tend to eat very similarly to those around us. Christakis and Fowler found that our chance of becoming obese goes up 57 percent if we consider someone a friend who is obese. If we have mutual friends who are obese, our chances of becoming obese increase to 171 percent (Christakis and Fowler 2007). This study also indicates that our families, our spouses and siblings, have less of an impact on what we eat and what our body image is than our friends. If our siblings are obese, our chances increase 40 percent, and if our spouses are obese, it is only 37 percent (Christakis and Fowler 2007).

The rise of obesity in the United States has frequently been associated with poverty, but recent data show that obesity is occurring in all income levels. With societal changes of eating more fatty foods and exercising less, the disparities in weight gain are not as broad as they once were. There is an increase of obesity across all income levels, particularly among the highest paid black males and females (Chang and Lauderdale 2002). The prevalence of obesity has increased from 23% to 31% over the recent past in the United States, and 66% of adults are overweight (Change and Lauderdale 2002).

In the past twenty years, overnutrition has grown more than undernutrition. Not only is the United States fat, Third World countries have become fat (Popkin 2007). One

in four adults is overweight in almost all of the Latin American countries and most of the Middle East and North Africa. The spread of obesity is blamed on governments and industries providing the availability of cheap sweeteners, oils and meats (Popkin 2007). Not only are people eating poorly, they are more sedentary than they were a decade ago. Modern infrastructures of roads, factories, media access and many other technological trends are enabling poorer people to work less laboriously than they have in the past, thereby making everyone fat (Popkin 2007).

Obesity is a serious problem that needs support for many avenues to eradicate it. Governments, researchers, development experts, mega-stores, agricultural subsidies to promote vegetables and fruits as well as taxes on high calorie foods, especially soft drinks, are all working to solve the epidemic (Popkin 2007). The one thing that would help is educating people about the causes of obesity and encouraging lifestyle changes in behavior. When examining the interrelatedness of societal, cultural and environmentally related factors, it is the success of changing those behaviors to a more consistent health-consciousness that could gain accomplishments for a healthier world.

Whether we are aware of it or not, we look for permission from others as to how much to eat, how much to exercise and how much to weigh (WHR 2008). This is strong information for analysts and politicians to take into account when they are setting guidelines for improving the health of society. Knowing your target group is imperative to be able to reach them and convince them to change their eating behavior.

### **Cultural influences**

Empirical research has concluded that culture can have a profound impact on health behaviors. It is imperative that medical personnel and health behaviorists learn the culture of an area to be successful in meeting the needs of a group of people. The need to understand the diversity of people is critical to being successful in promoting health behaviors through local programs (Read xiv).

Based on cultural traditions, there are many different ideas about diseases and health. There are many cultures that rely on western medicine; some that rely on different kinds of “specialists” depending on the illness and those that use terminology such as “country medicine” and “doctor medicine”. Some societies categorize the symptoms of illnesses based on the regions of the body where the symptoms are located. In Latin American cultures, such as Peru and Chile, the beliefs of today are not extremely different from the traditions of their ancestors studied by O.G. Simmons in 1955 (Read 25).

In the Latin American cultures, Simmons studied the concept of ‘hot and cold’ diseases related to diet and learned that these ideas were present in other cultures. The ‘hot and cold’ concept was considered an imbalance in the human body, which could be alleviated by using hot and cold diets. Another category of disease was caused by fallen internal organs. Some diseases were considered to be reflective of magic, an ‘evil eye’ when someone envied another person’s child or ‘bad air’ which caused facial distortions. A different category was responsible for the “loss of the soul” based on emotions (Read 25). All societies have adopted their own belief systems and methods of dealing with their existence; thus, this can be a barrier to their understanding and communicating with one another.

### **Environmental and cultural factors affect longevity**

Your geographic location can determine the food you consume and the status of your health. Yiannis Karimalis, a Greek immigrant, lived in Pennsylvania in 1970 when he was diagnosed with abdominal cancer and told he had a year to live. Karimalis was 40 years old at the time so he decided to quit his job and return to his native Greek island of Ikaria to spend his last days. Fortunately, Karimalis is still alive today at the age of 79 telling his story (Buettner 20). Did leaving the United States and moving to Ikaria cure him of the cancer?

Ikaria is a mountainous, 99-square-mile island whose residents outlive most everyone else in the world. It is considered one of earth's Blue Zones: places where an extraordinarily high proportion of natives live past 90. Along with Buettner, a team of demographic and medical researchers found that one in three Ikarians reaches 90. The United States Census Bureau reports that one in nine baby boomers will reach 90. Ikarians suffer 20 percent fewer cases of cancer than Americans and have about half our rate of heart disease, and one-ninth our rate of diabetes. Alzheimer's disease and other forms of dementia are almost non-existent in Ikaria. More than 40 percent of Americans over 90 experience some form of dementia (Buettner 20). These statistics are indicative of the stress levels in Americans. Obviously, many areas in America are more stressful than Ikaria. Our contemporary lifestyles are making us sick, filled with daily stress rushing from one place to another. The higher our income, the more "stuff" we seem to have; thus we need to work more to pay for our material possessions. Is there any wonder why Americans live such stressful lives?

Historically, Ikaria was a health destination with hot springs believed to relieve pain, cure skin ailments and joint pain. This island has basically been ignored through time. The people moved from the coastline into the mountains to avert pirates from destroying their homes. With no progress from outside influences, the natives of the island grew to be very optimistic about life and enjoyed partying. Both optimism and partying reduce stress. The Ikarians go to bed well after midnight, but sleep late, and nap daily which also tends to reduce stress (Tennant 2005). Science shows that regular 30-minute naps reduce the risk of heart attack (Tennant 2005).

Dan Buettner decided to learn what about the Ikarians' culture explained their longevity. After interviewing Ikarians who were 100 years old, they set out to learn the chemical composition of herbal teas. Other than drinking herbal teas, there were 13 factors that likely promote their longevity (Buettner 21).

Their diets of wild greens that grow on Ikaria have more than ten times the level of antioxidants than red wine (Dolson 2008). Sipping herbal teas lowers blood pressure which reduces heart disease risk and dementia (Jegtvig 2009). Watches are not used so work is done when it gets done. This reduction of stress prevents most any type of illness (Tennant 2005). Walking everywhere gives you a workout every time you leave your home. Strong social connections for families and friends are proven to lower depression, mortality and reduce weight (Tennant 2005).

Goat's milk has been and is the drink of most Ikarians who are over 90. Laced with tryptophan, a blood-pressure-lowering hormone, and being rich in antibacterial compounds promotes longevity (Buettner 22).

According to studies of health conditions in the arid region of Somali, located in the northeast of Africa, milk alone is believed to sustain their lives. The people live in harsh surroundings but have adapted their lifestyles to benefit from their ancient customs. There is little food for the people, but there is always milk. Due to the need of pasture and water for their herds, they lead nomadic lives. A report on a study done by the World Health Organization in 1963 was used by doctors to try to establish a relationship between their diet (which was mostly camel's milk) and the phenomenon of extremely rare cases of arthrosclerosis. Despite the rough conditions surrounding them, they learned to live simply with their basic needs being met. They organized themselves in small groups so they didn't have to search for food and water in unlimited areas. Finally, they accepted their lives with the idea of living harmoniously within their environment as their ancestors had done through established customs (Read 4). The acceptance of a traditional lifestyle that has been adapted to its surroundings offers emotional balance and freedom from modern day tension (Read 4).

Ikarians maintain a Mediterranean diet, a diet rich in whole grains, fruits, vegetables, olive oil, and fish which enables people to outlive those who don't follow this diet by about six years. (Buettner 2009). Because the Ikarians live in the mountains of the island, they eat more potatoes than grain and with the sea being a day away, they eat more meat than fish. There are at least sixteen countries that border the Mediterranean Sea so diets vary among the countries and within the regions of the countries. Within these sixteen countries, there are many different cultures, religions, ethnicities and economies. The agricultural production of each country varies greatly. According to the American Heart Association, there is no "one typical Mediterranean diet", but there are a

few common dietary habits “considered” part of the Mediterranean diet listed below (Lyon Diet Heart Study):

- Eat lots of fruits, vegetables, bread and other cereals, potatoes, beans, nuts and seeds
- Include olive oil as an important source of monounsaturated fat
- Consume dairy products, fish and poultry in low to moderate amounts with little red meat
- Consume eggs zero to four times weekly
- Consume wine in low to moderate amounts

Residents of Ikaria consume more olive oil than most any other area in the world. Drizzling antioxidant-rich extra-virgin olive oil over food after it is cooked is the secret due to healthful properties being destroyed by heat (Better Health Channel 1999/2010). Greek honey contains antibacterial, anticancer and anti-inflammatory properties. Fresh fruits and vegetables are eaten just after picking while the compounds that decrease the risk of cancer and heart disease are higher. Regular attendance to any religious service has been linked to longer lives and the Ikarians observe Greek Orthodox rituals (Stibish 2008). Finally, the sourdough bread baked on Ikaria is rich in complex carbohydrates which may improve glucose metabolism and prevent diabetes (Buettner 2009).

While we can adhere to some of the suggestions for longevity of the Ikarians, it is not possible to enjoy all of their contributing factors. The location of the island with its calm pace being conducive to growing and catching food seem to all work together to produce the many positive factors.

Totally opposite to Ikaria's life expectancy is the life expectancy of the women of the subcontinent of India. India is the only area where women have a lower life expectancy than men (Beckett 1994). With the oppressive cultural forces of India, women are not allowed adequate resources nor do they have many role opportunities. The deprivation they experience creates a widespread stress for the women of India. This is one of many areas of the world where women could use international support agencies for assistance in investigating and finding solutions to their problems.

Being the world's largest democratic country, India still has many corrupt politicians who jeopardize their democracy (Bawaskar and Bawaskar 2004). Rather than spending money on the health of the people of the country, they are spending their money on defending their country. If they could gain peace with their neighbors, they would have money to spend somewhere other than for protection. To remain in leadership positions, the politicians pay members of their own caste to vote for them and keep them in office. Once the politicians are in office, they have a "payback" to their voters and that means there is no money left for any long-term benefits to the public. Education, hospitals, irrigation, and industries all suffer because there is no money to invest in the promise of a better future for many of the people of India (Bawaskar and Bawaskar 2004).

With approximately 1.88 million HIV positive women in India, it is critical to get help for them (Chatterjee 2004). Many of the women have no recourse due to the culture of silence and the low status of women. How can they protect themselves? An increase in feminization is occurring and women are becoming proactive about the rise of HIV-positive. They have formed a network to assist these women (and men), although most of them are widows and married women. Most of them have been shamed and thrown

out of their homes by their husbands who are usually the culprits in transferring the AIDS to their mostly monogamous wives. Reaching the people of India is a real challenge for the newly formed network because people do not want to listen to HIV/AIDS information. The villagers are the most at risk because they do not understand the use of most technical terms. In order to reach all of the people, not just the poor or rural, this group must first discuss health issues that are related to diseases other than HIV/AIDS. Gradually they get around to discussing sexually transmitted diseases and finally HIV/AIDS (Chatterjee 2004).

### **Cultural factors with social influence**

A focus group from West Virginia University studied the social and cultural factors of sixty-one adults from the southern West Virginia's Appalachian region. The outcome indicated that the values and beliefs of the Appalachian culture seem to be the rationale for their poor health as their social ties are possibly a protective factor (Coyne, Demian-Popescu and Friend 2006).

This study took place within a five county area of southern West Virginia's coalfields. From this group of people, core characteristics of West Virginians were described as being kind, outgoing, openhearted and helpful. Strengths were described as spiritual beliefs or faith in God and family values. Other strengths were good moral values, a sense of community, commitment and dedication to work, mutual respect, hospitality, and pride. The participants noted that West Virginians were proud of their roots and heritage.

Some participants suggested that there was distrust for medical personnel, and that they also questioned the quality of their care. Many West Virginians will only seek

medical personnel help when nothing else seems to work. They fear that specialists will prescribe medications that could cause them to become addicted, or that their family privacy will become public knowledge.

Another concern of these participants was that many of their physicians were not American and they felt the doctors could not understand their culture. Many of the physicians did not remain in the area long to build relationships of trust between the locals and the physicians.

The religious beliefs of West Virginians are important to them when they are facing sickness. While many West Virginians believe that God will heal them, others turn to medical help in addition to prayer. While they generally consult a physician as a last resort, they do believe that God gives doctors knowledge to help them heal people.

Other barriers for West Virginians are the lack of health insurance or restrictions that prevent access to that care. Living in a rural area could mean long distances to travel for care so the lack of convenience of medical facilities makes them less likely to seek help. This is when they rely on God, each other, and traditional methods of their culture. Their economic and social demands have necessitated that husband and wife make decisions together because many of the men have lost their traditional mining jobs in the area and more women are working.

With the information from the participants, this study confirmed that their health beliefs are strongly related to their religious beliefs. They tend to have little medical knowledge and justify not discussing their mental or physical health to others as a result of their lack of knowledge. They recognized that they have a lot of health problems because they like to eat and they don't exercise.

## **Dietary Change**

Shepherd (1999) discusses trying to understand the social determinants of food choice by studying attitudes. Looking at the possibilities for lack of effectiveness to assist people in dietary change, he discusses another theory called optimistic bias. This is when individuals underestimate a risk to themselves from a variety of hazards relative to others (Weinstein 1987, 1989). These studies have shown that people who exhibit optimistic bias feel that they are in control, and that feeling of control reduces a perceived risk which is called an 'illusion of control' (Mckenna 1993). Frewer, Shepherd and Sparks (1994) conducted a study with questions related to hazards, analyzing the relationship between perceived risk and perceived control. All of the participants felt they were more likely to have control over their lifestyles than other individuals. Optimistic bias and greater perceived knowledge could explain why public programs do not work so well. Individuals generally feel that the "target audience" is the individuals who are less knowledgeable than themselves. An additional study done by Sparks et al, (1995) studied 612 individuals with questions related to putting on weight, having heart disease and not being healthy due to a high-fat diet. The responses from those participants revealed that they felt they all had a 'less than average' chance (than others) in the likelihood of having heart disease, putting on weight and being unhealthy due to eating too much fat.

Clearly, the question remains, "does optimistic bias influence their behavior when it comes to choosing healthy food?" Many of the individuals may judge their risks with an inappropriate group of people. For example, if asked about the risk of drugs they may

compare the risks to themselves with risks to drug addicts, rather than comparing themselves with an average person (Weinstein 1984).

Ambivalence seems to be a major reason for individuals who don't have success in changing their diet to choose healthy food. Even though one might want to eat healthy foods, when it comes to making that decision, it seems that they have a less clear understanding between attitudes and intentions. Motivational factors have an impact on attitudes and it appears that not only do social and cultural factors influence food choices, but attitude also plays a role. Shepherd (1999) feels this theory needs to be further studied to learn more about implementation of dietary changes.

In the United States, much of our diet consists of processed food and sixty percent of our population is considered obese (Brownlee 2003, Martindale 2003). The best way to reduce our chances for obesity and other health issues may be to eat fresh food from our community or locale when it is possible. Obviously, not everyone has access to fresh foods but that seems to be our best chance of eating more nutritiously. Our foods are shipped from all over the country and other parts of the world, so we do not know what has happened to them along the way; even the fresh foods. Since foods are bred for monocultural growing conditions, we expect them to be perfect looking even though they may not taste good. Most vitamins are gradually lost when harvested and by the time they reach us, they may be several weeks old, with little nutrition left (Norberg-Hodge, Merrifield and Gorelick 2002).

## Chapter Two

### **Environmental influences with individual persuasion for eating behavior of adolescents**

Based on the individual and environmental influences of an adolescent, Story et al, (S40-S50) describes four broad levels that alter eating behavior and choices of food.

The first level of influence is the individual or intrapersonal influence which includes psychosocial and biological perspectives (Story 2002). Food preferences can be one of the strongest predictors of what we eat and those preferences are formed based on early experiences with food, whether it was a good experience or a bad experience. Some people have inherited sensitivities that influence what they eat (Birch 1999). The taste of the food and often the way food appears are strong influences of eating decisions. When the body needs fueling, people tend to eat what is available to satisfy their hunger.

Story's paper discusses the second influence as the social environmental impact. The effect of social environment is based on interpersonal factors, which are family, friends and peer networks. These interpersonal relationships are affected through modeling behaviors, social support of friends, and what one perceives as normal.

The physical environment is the third level to change eating choices in Story's article. This level includes community effects such as community settings including church, school, worksites, and restaurants. Access and availability of foods will determine what people choose to eat. Vending machines and fast food restaurants, even shopping malls encourage poor eating choices when a person is hungry and in a hurry.

The macrosystem is the fourth determinant Story et al discusses. It consists of societal traps. These forces are based on marketing and advertising in the mass media, including social and cultural norms. Not only are adolescents big consumers, but they are persuaded easier than adults when making food choices. Food advertising plays a major inspiration on the choices consumers make.

These levels of influence that Story et al discusses are very interactive and are useful in explaining the eating behaviors of adolescents in particular. However, the adult behavior of those adolescents may be the same if they never learn to make wise food choices. The multiple levels explain how an adolescent might behave. For example, they may act through an individual level or intrapersonal level by choosing a soft drink and a cookie because they like the way they taste. On the other hand, that adolescent's friends might choose those foods. When she follows their lead, she is acting on a social and physical environmental level. Her friends choose "junk food" because that is what is available to them at school. Finally, the mass media has advertised these unhealthy foods to adolescents, thus encouraging them to eat unhealthily, if at all.

Skipping meals seems to be a familiar act among adolescents, particularly girls (Story et al 2002). Whether it is missing breakfast so they can sleep longer or trying to stay thin, skipping meals is not uncommon. Adolescence is a period of time when many changes are taking place not only in the physical sense, but social changes and developmental changes are being affected by what is eaten. Poor nutrition can possibly affect growth and delay puberty. The growth pace at this point demands more energy and nutrients for strong bones. If a poor diet is chosen by adolescents, there is the possibility of other health problems. Iron deficiency and obesity as well as under eating can wreak

havoc on a growing body and mind. Learning to eat well by choosing nutritious foods as a young person will influence eating patterns as an adult. Adolescence is the perfect time to teach health nutrition and healthy behavior by participating in physical activity (Story et al 2002). Later in life we learn that our health habits have not been beneficial when we learn that our high fat intake increased our risk for heart disease. Equally, a low calcium intake during our youth can leave us with the increased risk of osteoporosis as we age (Story et al 2002).

As stated earlier, Mary Story (2002) discusses the eating behaviors of adolescents through the social cognitive theory (SCT) and from an ecological perspective. This framework focuses on the integration of many factors within and across many levels that may influence eating choices. Behavior and environment can go both ways in that the environment shapes, maintains, and constrains behavior, but people can create and change their environment (Story et al 2002).

The theoretical framework of the SCT provides explanation that helps understand the behavior of individuals and how external forces impact that behavior, particularly that of adolescence (Story et al 2002). Key concepts of SCT are:

- Self-efficacy (self-confidence to change behavior)
- Observational learning (modeling)
- Reciprocal determinism (bidirectional influences)
- Behavioral capability (knowledge and skills to change behavior)
- Expectations (beliefs about likely results of action)
- Functional meanings (personal meaning attached to behavior)
- Reinforcement (response to a person's behavior that increase or

decrease the chances of its recurrence)

From the ecological perspective, the models consider the interaction and interrelatedness of people and their environments. Multiple factors will influence the behavior of our eating habits (Story et al 2002). The ecological model discusses the environmental influences of our behavior in four interacting levels:

- Microsystems (most closely related to an individual which includes family, peers, and school)
- Mesosystems (interrelationships within the various settings a person is active, including family, school, peer groups, or church)
- Exosystem (forces within the larger social system such as media and community influences)
- Macrosystem (consists of culturally based belief systems, economic systems, and political systems)

One area of foremost concern is the influence of mass media and advertising on food choices, particularly among the young. Since television viewing in children and adolescents is high (Story et al 2002), this is one of the best avenues to take to encourage healthy choices of food. There are dozens of television channels and radio stations, Websites, printed publications and videos that children have access to every day. The use of these media is becoming more of an “individual act” rather than family time (Story et al 2002). Interventions and policies instituted by health educators are critical to reach the young. For the future of their health, these media routes seem to be the perfect place to begin.

## Chapter Three

### **Environmental effects related to changes in climate**

According to the United States Environmental Protection Agency (USEPA), our health is strongly affected by social, political, economic, environmental and technological factors, including urbanization, affluence, scientific developments, individual behavior and individual vulnerability (e.g., genetic makeup, nutritional status, emotional well-being, age, gender and economic status). This is a long list, but it doesn't include climate changes around the world. Based on the number of factors that affect our health, one can see why it is so important to have a goal of achieving balance in our lives to protect our health. Some of these factors we can control, but climate/weather we can not change without moving to a different region. Since weather is always changing we must learn to adapt and cope with the changes.

Local climate makes a huge impact on our health. When there are extreme temperatures, hot or cold, there can be loss of lives. Warm temperatures tend to create air and water pollution by an increase in infective parasites as well as changes in the range of parasites (USEPA 2009). They cause more diseases and a broader spread of those diseases, possibly being detrimental to our health. These kinds of diseases are more common in humid climates.

Disturbance of ecological systems through climate changes can pose more threats of serious infectious diseases (USEPA 2009). In addition to ecosystems being impacted by changing climates, the quality and quantity of our food may change. Drought and floods alike can be very harmful to the agriculture and the economy of a region. All

regions are potentially harmed when the area they are dependent upon has agricultural disasters.

The Intergovernmental Panel on Climate Change (IPCC 2007) fears that the effects of future changing weather patterns may be extreme globally, in all regions and countries. Trying to assess the impact of climate change to our health is a very difficult challenge to us. During this century, it is believed that there will be more negative outcomes than positive outcomes through warming climates, even though there will be a reduction in the number of deaths due to freezing temperatures (IPCC 2007). In contrast, there are many people who are more vulnerable than others to the extreme heat. The homeless will suffer; people with heart or asthma problems will suffer; and the very young and the very old will equally suffer. Trying to determine a public health program to assist with local weather changes can be quite daunting.

No doubt global climate change is disrupting Earth's life-support and endangering population health (McMichael 2008). Diseases that are more climate-sensitive may increase during this century (IPCC 2007). Not only will there be more risk in warm regions where polluted waters harbor mosquitoes and other insects that carry vector-borne diseases such as yellow fever, encephalitis and malaria, disease transmission seasons may be prolonged in some areas (IPCC 2007). High humidity and perfect temperatures for ticks that carry Lyme disease may increase the survival rate of ticks, allowing more opportunity for Lyme disease to exist. The IPCC (2007) has noted that the global population at risk from vector-borne malaria will increase between 220 million and 400 million in the next century. While most of the increase is predicted to occur in Africa, some increased risk is projected in Britain, Australia, India and Portugal (IPCC

2007). It is believed that tick-borne Lyme disease may also expand its range in Canada. With the expectation of global and United States average temperatures rising, public health systems may be the answer to reduce the potential for an increase in the spread of diseases (WHO 2003). Public health assistance may play a major role in containing the spread of water-borne diseases in the regions where the air and water temperatures rise (IPCC 2007).

The IPCC states that the climatic changes will probably create air quality problems. People with respiratory ailments may become sicker due to an increase in smog and “particulate” air pollution. Particulate matter (PM) is another pollutant being observed cautiously. Particulate matter causes the haze we see over cities and parks. The complex mixture of very small particles and liquid droplets can be very dangerous when breathed into the lungs. PM is created naturally through wildfires and dust from dry soil, which is beneficial to the environment. There is little known about whether or not the affect of climate change creates additional pollution that is considered dangerous to our health (IPCC 2007). Over time, global temperatures are expected to continue rising due to the heat-trapping gases such as carbon dioxide, methane, nitrous oxide and other gases caused by human activities. The ground-level ozone (which is smog) can damage lungs and is harmful to people with asthma and other chronic lung disease (IPCC 2007). As the climate warms with higher temperatures and bright sunlight, it creates a strong concentration of ground-level ozone which has unknown effects when combined with other pollutants (IPCC 2007).

We have already seen glaciers thawing, permafrost thawing, later freezing in the season with earlier melting of ice on rivers and lakes. This loss of ice has already

disturbed traditional living, hunting and eating patterns in the Inuit communities of northern Canada. A decline in physical activity and reliance on imported energy-dense processed foods will result in a greater possibility of adverse health consequences for these people. Inactivity especially will promote obesity, cardiovascular disease and the occurrences of diabetes (McMichael 2008).

Warmer temperatures have increased the length of growing seasons. Trees and flowers are blooming earlier than normal and animal behaviors have changed since the global temperatures have risen (IPCC 2007). An additional concern of The Intergovernmental Panel on Climate Change (IPCC) is the expectancy of rising costs, depending on the regions and the various impacts the climate change may make. Depending on the location, many areas will see beneficial changes and others will see destructive impacts in their environment (IPCC 2007).

In India, a delicate balance of rain is necessary for the crops and livestock to survive (Douglas 2006). It seems that global warming trends for the past 50 years have changed the quantity and severity of monsoons, particularly the last few decades (Douglas 2006). Records indicate that lighter rainfall has declined while heavier rains have increased. When there is too much rain at once, it increases the potential for floods and other natural disasters. The amounts of rain ranged from nearly 23 inches in one day to no rain at all, with an average of less than a quarter-inch for a single day (Douglas 2006). While the rain is needed for nourishing themselves and crops, too much rain can destroy crops and livestock, creating disaster for the survival of the people.

Even in America, we are faced with hazards from weather, but we are not as dependent on other areas as many areas of the world. Isolation, poverty and lack of

knowledge are serious hazards in less developed parts of the world (Read xvii). We have plenty of food in our country as well as water. Even if we have a water shortage due to lack of rain in some parts of America, other parts will be relied on for their crops. If one area of America has disasters that ruin crops due to drought, too much rain or insects and vermin, we simply eat the food from another part of our country or we have it shipped from another part of the world. We have roads and modern transportation for supplying our food from other sources. Due to scientists and engineers we can sanitize our water through different processes so we don't have to bathe, drink and wash our clothes in the same water without purification chemicals that treat the water (Read 1966). Many parts of the world do not have means to purify their water nor do they have a strong economy that will enable them to purchase it from another country. Many parts of the world have diseases that are not controlled with vaccinations. In addition to weather fluctuations, they have no recourse when their crops are infested with insects or other pests that might ruin their food supply (Read 1966).

### **Environmental influences on health**

Not only are citizens at risk by eating chemically laden foods from all over the world, agribusiness farmers and farm workers are also at risk. They are in daily contact with pesticides and other harmful chemicals. The United States uses many more chemicals to grow foods than most any other country. Atrazine, an herbicide known as a carcinogen, has been banned in seven European countries, but we use it on fields all over our country (Norberg-Hodge et al 2002). According to a United Nations study, 20,000 to 40,000 farm workers die each year from pesticide exposure, not to mention the 300,000

American farm workers who suffer illnesses from chemical exposure (Norberg-Hodge et al 2002).

One other area of concern is food poisoning from industrial processing of foods. Unsanitary conditions in large-scale facilities along with the poor cleaning and the possibility of meat being tainted with animal waste from filthy slaughter-house practices is quite disturbing. The United States has been granted the approval of irradiation to sterilize meat and other food products that might be suspect for contamination (Norberg-Hodge et al 2002), but three-fourths of the United States public is not interested in eating foods that have been irradiated. More problems may arise from this practice as it is a new procedure and the hazards to human health are unknown at this time.

Unlike the Pilgrims and many others through the centuries who struggled for survival, the technology we have, the health programs available to us and contemporary lifestyles we lead have afforded us more options for food than ever before. We can manipulate plants to our advantage, put additives in our food to enhance the vitamin potency of it and we can store or preserve food for a longer shelf life (Schlosser 3). We don't have to depend on daily shopping or hunting for our food (Pollan 2006). Because our technology has provided us with new techniques for survival doesn't mean we are healthier than we used to be. In some ways, our knowledge has put us at the opposite end of the spectrum wondering if what we are eating is really healthy at all. With more opportunities, more choices and more decisions to make about what we eat, and how we manage to stay healthy has become a problem for many people. The American economy is one that allows us many poor food choices which will not keep us healthy. For the last

three decades, Americans have become less healthy and obese, and fast food purchases are part to blame (Schlosser 2001).

### **Fast food**

Fast food has become big business and it seems that it is available to us on nearly every corner. Fast food commanded \$6 billion of American money in 1970. In 2001 more than \$110 billion was spent on fast food. It is available at restaurants, high school, drive-throughs, stadiums, airports, zoos, elementary schools, universities, cruise ships, trains and airplanes, K-Marts, Wal-Marts, gas stations and even at hospital cafeterias (Schlosser 3). Is there any wonder why Americans are overweight? We don't have to think about what we want because food is there, everywhere, and the choices are generally very unhealthy. We spend more money on fast food than higher education, personal computers, computer software or new cars. We spend more on fast food than on movies, books, magazines, newspapers, videos, and recorded music – combined (Schlosser 3). The typical American now consumes approximately three hamburgers and four orders of french fries every week (Schlosser 6).

The contemporary American lifestyle that has been created is a culture that puts our population at great risk for continuing the obesity trend. Our children watch about twenty-one hours of television each week filled with hours of ads for junk food (Schlosser 46). In 1978, the Federal Trades Commission tried to ban ads that were targeting children under the age of seven, but the proposal was blocked in 1981. Even now, more than two decades later, there are more ads than ever advertising fast food to children on the cable networks that are aimed toward children. The United States is not

the only country with the problem of eating too much junk food. The fast food craze stormed America and moved on to other countries where the American lifestyle was envied.

As recent as 2007, the United Kingdom put a ban on junk food advertising, purporting that children under ten years old see too many advertisements describing junk food as healthy (Gutierrez 1). Their definition of junk food is defined by the United Kingdom's government using a rating system approved by the Food Standards Agency. Proponents argued that the ban was not as far reaching as it should be. Stations that were geared to children only and programs for children only, under the age of sixteen were included. Additionally, the use of cartoon heroes and celebrities in junk food advertising is being considered for banning in the more than 10,000 ads that children see on television each year. Children's health advocates continue to ask for stricter rules, banning junk food advertising on these networks for children before 9:00 p.m. Despite the fact that these rules were put in place with the health of children in mind, the financial health of their broadcasters was also considered.

### **Can fast food alter your brain?**

A number of scientists think eating fast food can be addictive (Martindale 2003). This could be great news or very bad news, depending upon your body chemistry. It is being professed that fats and simple sugars can act on the brain the same way as nicotine and heroin. According to new findings, the effects of eating too much fat give pause for some who are obese. It doesn't seem that eating too much is due only to lack of self-control from overeating. Michael Schwartz, an endocrinologist at the University of Washington in Seattle, explains that leptin is produced by the body to tell you that you

are full. The research of physiologist Luciano Rossetti suggests that it only takes a few fatty meals to lose the ability to respond to leptin (New Scientist 2003). Eating fast food, (fatty foods) can fool the physiological functions that are in place to respond to fat. Being overweight can make your body develop resistance to the power of leptin as you continue to eat aimlessly, always feeling hungry (Martindale 2003). The hypothalamus becomes insensitive to the production of leptin and eventually remains at a high level, fooling the body's ability to get full (Martindale 2003). The good news is that the effects of leptin can be reversed, but the fatter you become, the harder it is.

Evidence that eating fast food reconfigures the body's hormonal system, wanting more fat is being produced by Sarah Leibowitz (Martindale 2003). She found that feeding young rats a high-fat diet invariably makes them obese later in life. This finding suggests that early exposure to fatty food could reconfigure a child's body so that it always wants high fat foods (Martindale 2003).

Further evidence uncovered by Ann Kelley showed that the release of opioids in the nucleus accumbens tells your brain to keep eating. If the opioid receptors are over stimulated, a rat eats up to six times the amount of fat he normally consumes. Intake of sweet, salty and alcohol-containing foods are elevated due to over stimulation of the opioid receptors. This overindulgence shows long-lasting changes in the body chemistry similar to the changes caused by morphine or heroin use. Kelley states, "This says the mere exposure to pleasurable, tasty foods is enough to change gene expression, and that suggests that you could be addicted to food" (New Scientist 2003).

Obesity has become a serious health issue for individuals and a serious issue for our health-care system in America. The growing trend of American obesity is swamping

our health-care system. More than 60 percent of American adults are considered overweight or obese and children and adolescents weigh in at 13 percent overweight or obese (Martindale 2003). Caesar Barber, a 56-year old diabetic and double heart-attack victim/janitor from Brooklyn sued McDonald's, Burger King, Kentucky Fried Chicken and Wendy's after having two heart attacks. His premise was that he had never been told that fast food could cause adverse effects to his health. Fast food had been his diet for years (Martindale 2003).

Winning a lawsuit as a result of eating fast food for years, and having poor health as a result, could create potential problems for fast food businesses (New Scientist 2003). Could legal battles end the trend of American obesity? Will legal battles save our health-care system? John Banzhaf masterminded the Big Tobacco crusade and he is now looking at the fast food industry (Martindale 2003). He feels he could convince a jury that a client is not totally responsible for his health, that fast food companies share the blame. He feels he has all of the support and documentation to win with one exception. Having fast food labeled as "addictive" could be the closing argument to get his win.

### **Economics of fast food**

When fast food became big business, it had a certain group of loyal customers. Usually, they were single males who didn't want to cook and didn't care about the taste. They just wanted cheap, quick food (Brownlee 2003). When Taco Bell dropped prices in 1983, customers added another item to their meals and within seven days of initiating the test, the average check was the same as it had been. Other competitors followed Taco Bell's lead by dropping prices. Cutting prices not only kept loyal customers, but a new following of people who were looking for an economical meal started eating fast food

(Brownlee 2003). With no drop in revenue per customer, Taco Bell saw a dramatic increase in patrons.

After making prices as low as possible in order to continue showing a profit, a new marketing technique for fast food restaurants appeared. It was the late '80s and time for the super-sizing of items. All of the fast food restaurants were wagering in on the new deal of more portions. That's when the obesity epidemic was apparent in the United States (Brownlee 2003).

McDonald's introduced the large-size fries as early as 1972. Sizes of portions had already been increasing and by 1972, the large fry was 3.5 ounces, which was smaller than the medium fry is today. Food in a fast food meal is amazingly cheap. By increasing the size of portions the customer gets, it only costs the restaurant a few cents. Brownlee argues that for every dollar a quick-service franchiser spends to produce a food item, roughly only 20 cents goes toward food. The rest covers expenses such as salaries, packaging, electric bills, insurance, and advertising. This is the 20 percent rule.

Where will it go? Will it end? Fast food restaurateurs laugh at lawsuits like the one filed by Caesar Barber. Yes, ultimately, an adult is responsible for what he puts in his mouth. But, it seems that the strategy of fast food establishments of beating out each other may cost them in the long run. In 2002, McDonald's suffered its first quarterly loss since it went public forty-seven years ago (Brownlee 2002).

## Chapter Four

### Struggles of rural living and developing countries

When a group of scientists is trying to promote a health program for the wellbeing of a developing country, it is imperative that they seek the help of someone the local people will trust (Read xiv). Social scientists and health educators are considered outsiders by villagers and are viewed as a threat to the people in the village. In many geographical locations, people are unreachable by road and when outsiders show up, villagers become suspicious of their presence. Living in a remote area basically cut off from “civilization” brings an insecure feeling to villagers when strangers show up. When new developments occur in cities, the people in rural areas are left out of the program until much later, or they may be altogether forgotten.

People who live in rural areas must rely on themselves for their resources regarding sickness and other situations that may occur in their surrounding environment. They learn to adapt to their geographical environment by knowing what to expect (Read xiv). Some areas are more susceptible to floods, droughts and soil erosion than others. Living in one of these situations presents the issue of providing or finding food. The people must learn to deal with their vulnerability to weather changes in order to survive.

Predators such as wild animals, or attacks from insects and other vermin may also threaten crops, as well as the health of the people. If their health is not affected by the loss of crops, it could be compromised by attacks from predators. Margaret Read (1966) discusses the ‘delicate balance’ that rural areas and developing countries face in supplying their basic needs for food, water, fuel and remedies to cure illnesses (Read xiv).

Her discussion is based on 1960s information, but is still very relevant today due to the basic patterns in the life cycle and its surroundings.

Realizing the challenges they face, health workers have asked for the help of social scientists in understanding the behavior of people's reactions to health programs. American anthropologist, Dr. Lyle Saunders worked with the health problems in Latin America in the 1960s (Read xiv). He wrote about two fundamental aspects of the nature of health and the activities of public health. One aspect is the importance social and cultural behaviors play in the etiology, prevalence, and distribution of diseases. Some of the most influential determinants of individual and collective health are how people live, what they eat, what they believe, what they value and what technology they use (qtd. in Read xiv). The other aspect Saunders (1962) points out is that public health is both a social and cultural factor in our behavior. Our actions and behaviors are defined and motivated by the social and cultural contexts we experience based on "socially-defined roles in culturally determined ways" (qtd. in Read xiv). Additionally, social and cultural factors create constraints on our behavior. These basic behaviors of humans have not changed through the decades.

More research is needed to determine how the changes that occur will impact the culture of a society when a public health program is instituted. Dr. Hamed Ammar (1960), an Egyptian sociologist, addresses researching and observing current resources to assess the needs of a community. He notes that goals and objectives must be planned to target specific desires within a specified timeframe. If the plans don't work out as expected, more meetings and redirection is discussed. "Comprehensive planning requires the preparation of all social forces to be encountered or anticipated. Health programs

have to be seen in their perspective as related to economic conditions, educational factors, population problems, family patterns, and material and human resources” (qtd. in Read xv). When all social factors are considered during continuous research, the planning of new health programs must combine the social and economic activities to be successful. To achieve results from sound planning, the national and local levels must also be researched. Social research must be organized and considered as an integral part of the public health programs (Read xv).

Ammar (1960) also says that people who live in underdeveloped countries adhering to their traditional cultural views often do not understand the new changes that are being presented to them. New ideas don't make sense to them so they are viewed as being stubborn and resistant to change. It can be a challenge for health educators to present the health programs to them in a way they can understand.

### **Are we speaking the same language? Are we communicating?**

Language can be a barrier that can hinder successful health programs in rural communities. If health educators are going into an area that does not speak their language, there will be an impediment to their reaching the people. If speaking the same language is not researched and planned for by having an interpreter, their efforts may not be worthwhile (Read xiv). It is not always just the language we speak that is a barrier for health educators. It can also be the lack of understanding a society's traditions and culture, as well as approaching them with respect (Read xvi).

By forcing changes on rural or developing countries, social scientists can impose great stress upon the individuals and their society. Dr. Luis Saber, a Sudanese

anthropologist, discusses that the lack of continuity with their traditional pattern of life can potentially be very confusing to them (Read xvi). His ideas strongly correlate with those of Ammar, believing that those societies they are trying to develop have a transition period in which it is difficult to understand and accept the new ideas of a modern lifestyle. Their strong ties to their ancestral traditions make it difficult for them to accept new ways related to medicine, health and treatment of illnesses (Read xvi).

Understanding the traditional background of people in rural communities is a concern of Dr. F.V. Tentori's, a Mexican physician (Read xvi). He states that we don't always recognize the economic situation or the interests, the needs or wishes, or the problems that communities face when medical scientists are trying to change their way of thinking (qtd. in Read xvi). These underdeveloped areas do not have the same knowledge that the individual or the group has who are trying to convince them to try new methods to improve their health. Our knowledge and attitudes are based on academic training that we acquired at school, from the first grade to university, and we tend to forget that they have not had the same background and preparation. Their years of experiences come from their knowledge of situations in life, unlike our academic based knowledge from books and conferences (Read xvi).

### **Tackling social and economic factors that influence health**

In a Wales study to improve health and the well-being of their people, Gwynedd County did an analysis and plan for bettering the social and economic factors for their social-care needs. The Health, Social Care & Well-Being Partnership understood the needs to reduce the level of inequalities and their aim was to make their level of health and well-being one of the best that is comparable to any in Europe. Of the social and

economic factors influencing health, rural living was one of their major targets to improve. Believing that there are close ties between a person's health and his environment, it is a high quality environment that enables people to live longer and in good health. Lack of access to health services and choices tend to be major issues to address. The handling of pollution is also a concern in promoting mental and physical health in rural areas. Analyzing the status of health can be complicated by the different indicators that are used to measure the quality of life (Gwynedd et al, 22).

When we think of social and economic factors that influence our health, generally we think about obvious ones like social care, housing, economic development, education, and transportation. We don't think about things like street cleaning, refuse disposal and building regulations that can also affect people's health. Where and how we live plays a major role in our health and well-being. Homeless people and those with poor housing are at a greater risk to suffer worse health than the rest of the population. In addition, they have greater difficulty in accessing health services.

Mental health can be just as debilitating as physical health. Circumstances of debt and poverty not only impact physical health, but stress, anxiety and depression can occur. According to the World Health Organization (WHO), social disadvantage and poverty are the main underlying factors that explain the differences in individual health. These factors create consequences such as exclusion. Not only is poverty viewed as a symptom of exclusion and a cause of low income, it also gives people little access to health and educational services. People who are poverty stricken are not within reach of facilities such as leisure centers, work opportunities and good quality housing. This is where health programs can play a significant role in "rescuing" people from the cycle of poverty.

Cities are more likely to have these opportunities for the poverty stricken within the city than for poverty stricken people in isolated communities. Living in a rural area can be a strong disadvantage to receiving aid of any kind (Gwynedd et al, 23).

The safety of a community is important for people to have a good feeling of well-being, which impacts a person's health. If there is a lot of crime and disorder within a community, people are not going to feel safe. Disturbances from domestic violence, youth offenses or the misuse of drugs and alcohol all create an environment that can have a detrimental affect on the health of a person (Gwynedd et al, 22).

Not only does the environment of a community need to feel safe and free from harm done by other individuals, the control of general nuisances such as pollution, smoke, or the enforcement of food safety are also important. To assure communities of their feeling of well-being, rules and regulations must be put in place by public assistance bodies to enforce safety for the community (Gwynedd et al, 24).

## Chapter Five

### Inequalities in health services

We continue to see inequalities in health everywhere in our society. Ongoing research suggests that inequalities in our health are strongly affected by the economic and social conditions of life (Robert 2002). Robert's review looks at not only individual characteristics that affect health, but the characteristics of an individual's contexts, their social networks and communities (Robert 2002). Even if access to health care could be equalized, people with lower income and education, as well as racial/ethnic minorities would have worse health and earlier deaths. Having access to quality health care still does not prevent or correct the many disparities that exist based on economic and social conditions (Robert 2002).

An example of disparities we see in America is shown in a study done by University of California San Francisco. A map of the Washington, D.C. metropolitan area was distributed and data was collected within the area. The study revealed that the life expectancy in Washington, D.C. is 72 years. In a wealthier area only nine miles from Washington, D.C., the average life expectancy of Montgomery County, Maryland is 81.3 years (Zwillich 2008). Underlying factors as simple as grocery stores in poor neighborhoods not having good selections of produce, or workplace attitudes discourage exercise and encourage stress. The Robert Wood Johnson Foundation wants to inspect these kinds of real life issues that seem to affect Americans' health (Zwillich 2008).

This commission is also trying to learn why there are so many racial and economic health disparities. The mystery that even Americans with good health

coverage have worse health than people in other countries is also being addressed (Zwillich 2008). They already know that non-medical factors like income, support from friends, education level, and where you live have a big impact on how healthy you are. According to Mark McClellan, MD, a fellow at the Brookings Institution who also directed both Medicare and Medicaid in addition to the FDA, says that “all of these factors have a bigger impact on whether we stay healthy than visits to the doctor” (Zwillich 2008).

The socioeconomic status of a person is often measured by his income, assets, education level, occupation, or a combination of these factors (Robert 2002). However, education and income have combined effects on health as well as separate effects. If a person is educated, generally he has the knowledge to eat nutritious foods and exercise regularly. A person’s level of education also affects his income which means he is more likely to have access and be able to afford health care and the other resources available to promote good health. Regardless of income or knowledge, there are many people who do not practice healthy behaviors. This fact makes it vitally important that health educators and programs to improve the health of a population consider various aspects of socioeconomic measures.

### **Income and inequities**

According to Richard Wilkinson and Kate Pickett (2009), more equal societies almost always do better. They feel that inequality is bad for everyone, individually and socially (Wilkinson and Pickett 2009). They have data to show it very clearly, that more equal societies really are better for everyone, even the disadvantaged. So, why is there

such stratification in our societies? Would we all be better off as egalitarian societies? So, it seems to them.

For centuries we have been raising our living standards with “stuff” that gives us more time and more freedom to do the things we enjoy. We are learning that material things really aren’t what make us happy. Rates of depression and anxiety have risen over the last fifty years and we are supposed to be in the most developed country in the world, having everything we need to make us happy. And having “stuff” makes us happy, does it not? It doesn’t seem so. Once we have all of our necessities, what more do we need? Wilkinson and Pickett (2009) argue that societies with larger income differences have more problems and more stressful lifestyles based on larger consumerism and lack of social mobility. There is less trust among the people as well, due to rivalry in always striving to “get ahead” of others. In addition, we (United States and United Kingdom) have much more violence than countries with smaller income differences (Wilkinson and Pickett 2009).

According to Wilkinson and Pickett who purport that the economic growth in rich countries has ceased to bring the social benefits it once brought (and continue to bring in poorer countries). It has started threatening the planet. We are the first generation who needs to improve and find new ways to achieve a better quality of life. Our consumerism creates more social problems and social inequalities. As a more equal society there would be a greater sense of responsibility for the planet as well as others. Our aim to improve the quality of life does not hinge on economic growth. Economic growth does not create greater equality, but it does make societies richer and more materialistic,

creating more problems for our environment and real quality of life. It is time to focus on social environmental problems rather than increasing our wealth.

## Chapter Six

### **Is one factor more influential than another?**

The arguments of the many factors determining health cover a broader range of determinants than this paper covers. Across the disciplines there is evidence to argue that materialism and individualism (cultural characteristics) have a detrimental impact on health and well-being based on psychosocial factors such as personal control and social support (Eckersley 2005). These factors can have just as important an impact as the inequalities in socioeconomics. The cultures of societies have been underestimated factors of the health and well-being of their people. Understanding the broader sense of the meaning of culture can be more difficult than looking at the one dimension of socioeconomic status.

When we underestimate the role of culture and its impact on people, we forget that a person's personal circumstances and temperament are specific influences in their health (Eckersley 2006). Changes affect people differently; some people are unable to tolerate changes while others feel no impact. As noted earlier, the many areas of health influences include different disciplines. Eckersley argues primarily from the sociological, psychological and epidemiological literatures. His focus on materialism and individualism points out that even within a society such as the United States, some communities will exhibit these qualities more than others. These influences can be individually based or population based. However viewed, there is still a great need for more research and understanding among the multiple disciplines.

## Chapter Seven

### Conclusion

As a person considers the determinants of his health through culture, social and environmental factors, it is difficult not to conclude that almost everything around us affects our health. Culture, social and environmental factors are so intertwined with one another that it is not totally possible to determine which factor is most influential. Since everyone has different personalities and habits, their decisions are based on a combination of their physical location and their surroundings such as their family, their friends, and co-workers. Food choices are based on what is easily accessible. Religious traditions often influence what a person eats. The physical environment of a community can determine the health of its citizens as much as the location of his social contacts. Factors affecting our health are endless.

Of the three factors discussed, social, environmental and cultural, there are parts of each one that you can not change. Anywhere you live there will be a neighborhood culture. It may be different from the culture you knew growing up, but you still are in a community culture. Socialization can continue to occur throughout one's life. Just because it happens for the first time during the formative years of growth does not mean that it will not happen again should you change your physical surroundings. If a person's well-being is to be positive, adapting to one's surroundings is a must. And finally, our physical environment can also be changed if necessary. None of these factors has to remain the same throughout a person's life. These factors do remain consistent for some people, but they change for most people in our society of mobility. Finally, our best

defense to better nutrition and health is to promote and eat foods from our locale, and possibly from people we know. Community programs of intervention are a good place to begin to make positive changes in our food intake and our health.

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## VITA

Born July 23, 1954 in Winston-Salem, North Carolina, Sherry Wood Long has been a life long learner. Sherry grew up in Tobaccoville, just northwest of Winston-Salem. After marrying and moving around the country with her husband for a number of years she attended numerous colleges. When she returned to Winston-Salem, she graduated from Salem College in 1999 where she earned a Bachelor of Science in Business Administration with a concentration in accounting. Sherry's career has been colorful working in several different fields which include banking, law, owning a restaurant with her husband and finally the field of education, spending the last fifteen years at Wake Forest University. Based on her love of learning and many interests in different cultures and disciplines, Sherry began the Master of Arts in Liberal Studies program in the fall of 2005. Sherry lives in Winston-Salem with her husband, Bill, who is a two-time Wake Forest graduate and her daughter, Jessica, is also a Wake Forest graduate.