

Running head: STUDIES RELATED TO THE CAUSES OF CHILDHOOD OBESITY
IN ELEMENTARY SCHOOL CHILDREN.

Studies related to childhood obesity

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Causes of Childhood Obesity

The purpose of this Literature Review is to research the studies related to the causes of obesity in elementary school children. Recent studies have shown that obesity in young children has been increasing over the past decade, which includes about twenty-five percent of children in the United States (French et al., 2001).

According to Davidson and Knafl (2006), it is considered to be a global health care problem, from which was a conclusion after conducting a study using twenty papers from different fields such as nursing, medicine and sociology. The study was conducted as a dimensional analysis and was concluded was that the culture an individual plays a role in obesity.

As Davidson and Knafl (2006) states that the current problem with obesity is largely caused by the environment. The intake of unnecessary food and lack of physical activity are the two most common reasons. There is no single ethnic group that is immune to this problem (Mahoney et al., 2005). Therefore, it is important to teach young children and show them the importance of how to control their weight, in order for them to lead healthier lives.

There are several methods that can be used to control their weight which would include eating the correct foods with the appropriate portions amounts and maintaining a routine exercise program (Edwards et al., 2006). Edwards et al. (2006) conclusion came from the study which had thirty-seven students from the age of eight to thirteen years old, who had type two diabetics. These participants had been monitored to detect nay change in their lifestyles as well as the amount of physical activity performed. Their foods were put into categories with the colors of red (stop); yellow (caution) and green (go), to make it easier for them to follow. As the study concluded, the participants that had remained in the program reduce their weight.

However, according to Duerksen et al (2007), linking restaurant food to overweight children has not been proven, even though there have been some restaurants accused of having an effect on weight conditions. Duerksen et al (2007) had conducted a study in order to find out the link between eating out and obesity.

The study had used five elementary schools in Chula Vista, CA. The children were between the grades of Kindergarten and second grade. The study had a total of 246 children and one care giver for each child, in which were enrolled in the study

during August 2003 through January 2004. The caregivers were asked information regarding their demographics, level of physical activity for the child as well as for the caregiver and which restaurants they go to the most. This study had concluded by acknowledging that there is still very little information on the different types of restaurants and the types of menu choices available to children (Duerksen et al., 2007).

However, Davidson and Knafl (2006) concluded that when eating properly and following an exercise routine, children would find themselves feeling healthier and stronger. Their self-esteem improves as well as their feeling of being socially accepted. Starting a healthier lifestyle at an early age will help children have a healthier life and decrease their health risks in their adult lives (Davidson & Knafl, 2006). This also gives the children an opportunity to learn and become accustomed to a healthier way of life.

As society moves to a more technological savvy environment, there are some disadvantages as well as some advantages, unfortunately they end up affecting the amount of weight a child may gain. There are several new gadgets and technology tools that can be used to overcome a weight problem. Such gadgets would include a pedometer, exercise equipment and a pump it up dance machine or the Nintendo Wii. The disadvantages would be

inactivity and lack of exercise it uses when using the easy access to technology provides for convenience.

How technology affects obesity in Elementary children.

There are several reasons why so many children are obese in the United States. Technology plays a roll on affecting children to both become obese and to lose their weight (French et al., 2001). Nonetheless, with the introduction of computers children are finding themselves glued to the computer. They tend to want to chat online with their fiends or play computer games instead of exercising (French et al., 2001).

However, technology has also provided some gadgets that can be used to monitor and guide our weight loss. A new trend has begun with the pump it up dance machine or the Nintendo Wii and more children want to participate and dance. Hence, there are exercising are burning some calories. Furthermore, there are several gadgets that can also guide with weight loss such as a digital pedometer, a walkman, I pod, and a zune mp3 players to name a few.

The use of video games and television

Alongside technology came an increase on technological products such as Atari games, Nintendo 64, play stations, and

Xbox. Moreover, the amount of hours required to practice also increased in order to master the game and win. Children sit idly in front of a television set for several hours to play games (Mahoney et al., 2005).

Computers and play stations are not the only culprits for lounging around the house, but also the amount of time children spend in front of the television has increased (Robinson, 1999). Since the price of a television set is so low; households have more than one television sets in their homes. Children are spending on an average of four hours a day during the week watching television. During the time that children are watching television, they tend to eat some snacks that are full of fat such as popcorn and potato chips. However, the programs available can be both educational and beneficial to the viewers in which once can view shows on FitTv and workout with the stars.

Technological devices

Another technological device that both can prevent and/or contributes to obesity in young children is the computer. Nowadays, lap tops are used more often than their predecessor, the desktop. The actual impact of the amount of leisure-time is not clear if the use of computers whether a desktop or lap

top would contribute in the increase of obesity in children. In using a computer children tend to go online and chat with their friends, create an account on myspace.com, checking their email or play online games.

However, computers can be more than just being used for unproductive activities. There are more than millions of websites around that can be both educational and helpful (Owaimrin & Steinbeck, 2006). Such educational programs can assist in academic progress as well as with research on various subjects including weight loss and weight control. Some of the websites that are available would be Jenny Craig, and weight watchers just to name a few. These websites can help one monitor your calorie intake, and give advice on how to lose weight.

Owaimrin and Steinbeck (2006), conducted a study in which sought how effective the internet was in managing weight control. The study had made a web search and used the first ten sites that were displayed. A total of ninety websites were used in this study. It was concluded that the at least thirty of those websites did pertain to childhood obesity. This study concluded that using the internet to help manage a child's weight can be used.

Environmental Factors:

There are several environmental factors that have an effect on weight loss and on weight gain, but pinpointing a specific environmental cause would be difficult. According French, Story, and Jeffery (2001) the epidemic of obesity is caused by the environment, which is promoting the excessive eating with little to no physical activity.

Furthermore, there are also several other environmental factors such as eating out, television advertising and physical activity. Not to mention several illnesses related to childhood obesity which would include sleep apnea, type 2 diabetics, gallbladder disease, Osteoarthritis, high cholesterol, and cardiovascular diseases and other types of diseases to name a few(Coon et al., 2001).

There are also some environmental barriers when choosing to lose weight such as lack of lighting in bike trail, marketing of food in television, and in school lunches (French et al., 2001) to mention a few. However, one barrier is the amount of eating out to restraints instead of cooking.

Physical Activity

There are several exercise programs that can be used to lose weight for young children. An exercise program would include nutritional intervention with the combination of exercise could increase the success rate (French et al., 2001). It is important that a program is set up and followed daily. The entire family could participate in this program. However, it is also very important that the physical activities chosen are the age appropriate.

Preschool children ages of four to six years old would have different standards than a second grade student. There are some activities that toddlers can perform such as walking in the park, zoo or around the neighborhood with their parents. Also any other type of free play that can be played outdoors (Schreiner 2005).

However, for a preschool child's age group some age appropriate activities may include walking, running, swimming, and tumbling, throwing and catching with family members. Elementary school age children of six to nine years old children would improve their motor skills, and balance. These children should be encouraged to walk, dance or jump rope and may enjoy miniature golf. Also, organized sports such as soccer and baseball could be played but with flexible rules and a short

instruction time, since these children are still very limited in team strategies.

In the elementary schools, these activities are structured and students are required to participate in more activities during class. Physical Education coaches need to develop a lesson plan on what activities the class will be doing (Mahoney et al., 2005). The lessons need to be age appropriate for the ages and grade of the child.

Mahoney et al. (2005) had conducted a study on the effectiveness of after school programs. The participants had included 818 students that had been enrolled in the first to third grade and reside in economically disadvantaged neighborhoods. The participants would take a physical exam by a medical doctor two years prior to beginning the study in which their body mass index would be recorded. The participants were then re-examined and again recorded their body mass index. After the follow-up exam children that were obese before were had continued to be obese and an increase of twenty-nine percent. The study concluded by there was a relation between poverty and being a minority.

There are several assessment tools that can be used to monitor the progress of your exercises activities. One helpful tool is the pedometer. Pedometers provide a simple and an

objective way to measure exercise activities. They are also very inexpensive and they tend to appeal to children. It is recommended that the girls have about eleven thousand steps a day and the boys would have about twelve thousand steps per day (La Vine & Cortney, 2006).

According to La Vine and Cortney (2006), a study was conducted to see if pedometers would make a difference on the level of physical activity. The study used seventeen first and second year physical education majors. They were given a pedometer for the duration of thirty days during a long term semester. Two studies were compared one for the fall and the other for the spring.

The students would use an online reporting tool called the Step Tracker to enter their information. These students would also have a pre-test as well as a post-test. The students were also interviewed for about forty-five minutes and had their conversations recorded for analysis. The results had shown that the fall semester students did not increase their physical activity.

However, the spring semester students did increase the amount of physical exercise (La Vine & Cortney, 2006). There are many children that may exercise during Physical Education class

but then eat the wrong type of meals or cease to exercise for the rest of the day.

Dietary factors

Environmental factors affect dietary decisions and are influenced by food advertising, promotions, education and eating away from home (French et al., 2001). However, Vartanian et al. (2007) conducted a study on how soft drinks relate to health problems. The study was a meta-analysis totaling in eighty-eight studies. Twelve studies were used to determine the difference between the amount of soft drink consumed and the amount of energy. Ten of those studies had reported a change, while one reported a mix of results and one with no change. However, it was concluded that the data had shown an association between the amounts of soft drink consumption with the increase of energy.

According to French et al. (2001), the food environment has changed in that it has increased the availability of food not to mention the food consumption. The study indicates that the television and radio commercials influence the audience on what choices to make when deciding what to meals to eat (French et al., 2001).

The amount of time children spend in front of a television set has always been a concern because of the type of influence it has to their audience (Jordan et al., 2006). Television is one of the largest single media sources of messages about food. Children have also been exposed to several of verbal and nonverbal messages about food from their parents, peers and teachers (Coon et al., 2001). These messages shape children's outlook of what symbolizes appropriate foods in different type of settings and at different times.

Illnesses

Unfortunately, there are also several health risks that are associated with obesity in children such as hypertension, sleep apnea, type 2 diabetics, gallbladder disease, Osteoarthritis, high cholesterol, and cardiovascular diseases (Coon et al., 2001).

According to Edwards et al. (2006), study suggests that hypertension is one of the most frequent conditions in obese children than in non obese. Edwards et al. (2006) conducted his study using thirty-three families with obese children within the age of eight to thirteen years old. During the study several possible health risks were mentioned such as sleep apnea, which

occurs when a subject repeatedly wakes up choking and can cause has several respiratory complications due to obesity.

It has been estimated that about forty million Americans have some type of sleep disorder and that the vast majority of these patients have not been diagnosed (Coon et al., 2001). Even though there are some treatments available for sleep apnea, losing weight in obese patients would be one of the best methods.

Edwards et al. (2006) study continues on that some obese children have been diagnosed with type 2 diabetic which is also another health risk associated with obesity. Children diagnosed with type 2 diabetics would need to inject themselves daily with insulin. The study measured the moods of the participants and on how it affects their eating habits. The study had concluded that there had not been changed on the concern for food. However, there was an improvement on depression and self-esteem factors of the participants (Edwards et al., 2006).

Media Influences:

There are several media types that will influence obesity. Such types would include television, radio and billboards to name a few. A qualitative study conducted by Jordan et al. (2006), indicates that in an average home, there are four

television sets with the most popular location being the parents bedroom and the child's bedroom. However, the study also indicates that there are television sets in areas where eating will be taking place.

During this study the parents were asked on the amount of hours their children would spend on three different types of media's (television, video games and computers). In this study the parents (mean 116 minutes) watched less television per day than their children (mean 189 minutes). Thus, reinforcing the data in this study to suggests that children are spending more than the two hours a day watching television.

According to the Jordan et al.(2006)from the American Academy of Pediatrics, children that are over the age of two years old should spend no more than two hours a day with any type of screen media (Jordan et al., 2006). The study was conducted by gathering the household information on an individual interview as well as in small group interviews of a total of one-hundred eighty parents and children.

The children's ages range was from six to thirteen years old. This study had concluded that most of the children were spending more than the suggested maximum amount of less than two hours. They were spending three hours per day watching television. Therefore, the children in this study showed that

they were more at risk to become obese due to the lack of physical activity. They spend more time sitting in front of a television set instead of going outside and enjoying physical activity.

Advertising:

Television is the one of the most used advertising medium; also it represents about ninety-eight percent of the households (French et al., 2001). According to Robinson, (1999), studies have found that among the amount of hours that the children are viewing television; the food advertisements have affected their snack choices and their amount of consumption. Robinson (1999), also states that these children are now gaining more weight due to the lack of physical activity as well as the increase of food intake.

Advertising and promotions have also been attributed to the trends in the food supply, on the amount of times a family is eating out and on the amount of physical activity a child has complete each day. Fast-food restaurants have spent over ninety-five percent of their advertising budgets on television advertisements and fast-food accounts for twenty-eight percent of the total mass media advertising dollars (French et al., 2001).

Unfortunately, products such as snacks, soft drinks, and convenience foods are the types of foods that are greatly advertised compared to foods that contain high nutritional level such as fruits and vegetables. According to French et al. (2001), more studies should be conducted to examine association between television viewing and dietary intake. Also included in this study, the amount of exposure a person has to advertising media on certain foods when snacking in front of the television set.

Television meals:

Media is creating a social norm on the eating habits of their viewers. As with the creation of television, more people are now eating in front of a television set than before French et al. (2001). The frozen TV dinners have been created for the consumer to enjoy in front of their television sets while watching their favorite programs. The convenience that this provides does not contribute to a healthy meal. Therefore, it does relate to a healthier diet.

As with French (2001), Coon (2001) has conducted a study to measure the relationship between viewing television during a meal and with food consumption patterns in children. This study by Coon et al. (2001) was conducted using ninety-one parent-

child pairs from the Washington DC area. These children were between the grades of fourth through six grades.

However, as this study concludes the average intake which was about six percent more than their total energy intake was on meats. This study also shows that more than five percent came from pizza, salty snacks and soda. In this study the conclusion was that there was an association between television and the consumption of high calorie snacks in children. The dietary patterns from this study indicates that the families television viewing is a normal part of their meal routine, which unfortunately includes less fruits and vegetables and more pizza, snacks and sodas.

Dining:

The amounts of families eating out at restaurants have increased. More families are spending less time preparing healthy homemade meals (French 2001). The increase of eating out is a reflection on how society has changed. There are more women in the workforce which allows them less time to prepare a healthy meal. According to French, women spent an average of forty-four hours per week in preparing meals and housing cleaning. Additionally, since the creation of microwaves, ninety percent of the households have microwaves so therefore

fewer hours are devoted in the preparation of a meal. With society's fast paced lifestyle, it is much easier and convenient to prepare a TV dinner or stop at a fast food restaurant instead of preparing a healthily homemade meal.

Conclusion:

Using technology can help in controlling a child's weight. A computer can be used to increase the persons knowledge in how can be done to lose or maintain their weight. Technology is useful whether it is a computer or different types of gadgets, they can help in controlling a child's weight.

In the study that was conducted by La Vine and Cortney (2006), shows that pedometers can be used to see the number of steps taken and to keep a record of a person's physical activity. However, the study uses physical education majors in a college setting, which would differ from using elementary students. The study also suggested that the participants need to be more physically fit, which changes the results of the study.

However, in the study conducted by Duerksen et al. (2007), was only limited to the use of the primary restaurant, which was the restaurant first mentioned. It still lacked data on how often the participants had eaten out as well as what types of

restaurant they had eaten at for example if it was a buffet,
Mexican, American or Asian restaurants.

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