

Abstract

The objective of this study was to investigate mood states and their effects on food intake. Six men and ten women responded to several questions such as their views on relationships and their effects on appetite, whether meals were skipped while feeling anxious, and how often they gave in to food cravings. Forty percent of males and 60% of females agree that a person's relationships, has an effect on ones appetite. These results are concurrent with the notion that women are socialized to be more sensitive of others' thoughts and feelings, according to the Human Ecological Theory. Naturally, most of the respondents agreed that their emotional state dictates the amount of food that is consumed; however, the average of skipping meals while feeling anxious was quite low for both men and women. As a result, this study demonstrates that one's mood has an effect on their food intake.

Introduction

Have you ever wondered why some people always seem to be in a bad mood? Or why others are always so positive after eating that ice cream that they were craving? This paper will investigate how food choices affect mood states, both positively and negatively. One must also consider a person's environment and surroundings and how these relationships weigh on a person's appetite. The question that arises is, are we really *solely* responsible for our food intake and choices? This paper will address all of these concerns and provide some explanation and insight regarding food and mood.

This topic has always been of great interest to me because I have a very strong belief that one's diet is of the utmost importance throughout his or her lifetime. A plethora of health conditions and mood states can be affected by the types of foods that one consumes. I also think that with more research, a more holistic approach can be taken towards treating medical conditions rather than relying solely on medications and prescription drugs.

Review of Literature

Men's and Women's Feelings after Indulging in a Food Craving

Is there really a difference in how men feel after eating junk food versus how women feel? One wouldn't think so but the fact is there is a significant contrast between the two. There are three main feelings or emotions associated with succumbing to a food craving, depression, boredom, and fatigue (Chua, Touyz, & Hill, 2004; Lafay, *et al.*, 2001;). This applies to both men and women, however it is more often cited by women as their current mood state. More commonly, men seem to be happy and relaxed after indulging in a food craving (Lafay, *et al.*, 2001). Gold, MacLeod, Frier, and Deary, (1995) have found that Thayer's mood model also provides a correlation between mood and food intake. Whereas the glucose level in the Lafay study was at a normal level and caused feelings of depression in subjects, particularly in female subjects, Gold's study indicates that hypoglycemia (low blood glucose levels) causes depression. Perhaps to counteract the feelings of depression, those who are hypoglycemic or succumb to cravings may want to consume more carbohydrates according to the study conducted by Wallus, Martz, and Huelsman. They have found that consuming more carbohydrates decreases the negative effects on mood. (Wallus, Martz, Huelsman, & Michael, 2005).

Anxiety and Food Intake

Everyone experiences anxiety to some degree, some feel it to a greater extent than others, but it is an emotion shared by everyone at one time or another. It has been determined that a person's anxiety level, especially that of an elderly person's, has a direct impact on their appetite. If the elderly person is feeling anxious and insecure about his or her relationship with friends and family, their mood and consequently their appetite is affected negatively. That person eats much

less, if at all, in comparison to someone of the same age who is in a positive mood (Wikby & Fagerskiold, 2004). This phenomenon seems to explain an elderly person's eating habits but it is not universal to all age groups. For example, forty year old females who were in a negative mood ate more than those of the same age who were in a neutral to positive mood (Chua, *et al.*, 2004; Cools, *et al.*, 1992).

Human Ecological Theory

The Human Ecological Theory is very useful in examining mood and food intake. A person's environment is fundamental and has an enormous impact on mood and all that contributes to one's mood state. Wikby and Fagerskiold (2004) have found that the determining factor in an elderly person's appetite is their mood regarding their relationships with other family members and friends. Participants in the study have reported that feeling peaceful and secure gave them an appetite. Another example of systems' pressure and influence comes from the macrosystem and how its messages affect women. The media is constantly telling women that thin is beautiful so when women indulge in food cravings, their immediate mood state is described as depressed or sad (Lafay, *et al.*, 2001).

Methods

The Kim Study on Mood and Food Intake

Considering that most Southern Californians want to uphold an image of health and fitness, this study will investigate how one's mood affects his or her food choices and vice versa. The opinions of friends and family will also be considered regarding how their relationships affect their appetites.

Operationalization of Variables

For the purposes of this study, the three demographic variables are age, sex, and religion. Some religions play a dynamic role in a person's food choices, especially during religious holidays. The respondents will be asked to provide a detailed description of how they feel after indulging in a food craving. In addition to this, three questions which are quantitative in nature will be asked; the first asking how often the respondents give in to a craving. And finally, the second and third quantitative questions will address the influence of friends and family on appetite and how often each respondent has skipped a meal while feeling anxious respectively.

Sample Selection

A convenience sample will be used. I will ask friends, family, and co-workers if they would like to participate in the study.

Analyses

For the purposes of this study, quantitative and qualitative analyses will be used.

Food, Mood, and You

The purpose of this anonymous and confidential survey is to investigate how your mood influences your food choices in addition to how those food choices affect your mood state.

Please fill in or choose the appropriate responses.

1. Age: _____

2. Sex:

Female []

Male []

3. Religion:

Catholic [] Muslim [] Jewish [] Christian [] Other: _____

4. On average, how many times in a one week period, do you give in to a food craving? _____

5. How much would you agree that a person's relationship with friends and family has an impact on his or her appetite?

Agree [] Slightly Agree [] Slightly Disagree [] Disagree []

6. How often do you skip meals while feeling anxious?

Very Often [] Often [] Not Very Often [] Rarely []

7. In as much detail as possible, describe how you feel after indulging in a food craving. For example, do you feel happy, satisfied, depressed, tired, etc.

Results

Univariate Demographic Analyses

This study contained a quarter more females (62%) than males (37%) (see Table 1). The respondents are representative of a wide range of age groups and the median age was 24 years. I chose to use the median due to the fact that the data are somewhat skewed. While the men were either Catholic (83%) or Jewish (16%), the women were a little more diverse with 20% reporting to be Catholic, 40% claimed other, and the remaining 40% reporting to be Christian.

Table 1: Univariate Analysis of Demographic Variables, N=16.

	N	%
Sex Male	6	37
Female	10	62
Age (in median years)		24
Religion		
Male Catholic		83
Jewish		16
Female Catholic		20
Other		40
Christian		40

Univariate Research Analyses

This study focused on the respondents eating habits and their emotional state. The mean number of times the respondents gave in to a food craving was 3.93 (see Table 2). On average, with a score of 3.50, the respondents agreed that a person's relationships had a significant impact on his or her appetite, with 1=disagree and 4=agree. Basically, most of those surveys did in fact

agree with the question. Despite this, most did not skip meals while feeling anxious with a mean score of 2.19, with 4=very often and 1=rarely. Overall, most of those surveyed did acknowledge that emotional state does indeed have an impact on food intake.

Table 2: Univariate Analysis of Research Variables, N=16.

	Mean
Number of Times a Food Craving was Satisfied	3.93
Believes that Relationships with Friends and Family has an Impact on Appetite	3.50
Skipped Meals While Feeling Anxious	2.19

Bivariate Analyses

In order to investigate the possible relationship between religion and sex, a Chi square calculation was completed. A Chi square value of 6.278 was found with 3 degrees of freedom (df) and a critical value of 7.815, indicating that these results are not significant. This suggests that there is no relationship between sex and religion.

I performed a t-test to determine whether there was a difference between the food cravings of men and women. The result was a t value of -1.091 with degrees of freedom (df) equal to 14 and a critical value of 2.145. Again, this test proved that the data is not significant proving that there is no difference between the number of times either sex indulges in food cravings.

A correlation of age and feelings about relationships and their impact on appetite was performed. This yielded a result of correlation (r) equal to -.472, degrees of freedom (df) of 14 and a critical value of .497. Once again, this data is not significant and there is no sort of

correlation between age and relationships affects on appetite.

Another t-test was completed on sex and whether those surveyed were skipping meals while feeling anxious. A t value of $-.5028$ was obtained, with degrees of freedom (df) equal to 14, and a critical value of 2.145 suggesting that the data is not significant and therefore, there is no difference between how often males and females skipped meals while feeling anxious.

When I crosstabulate sex and the effects of relationships and ones appetite, I find that of those who agree, 40% are male while of the total females surveyed, 60% agree.

Note: The student had a scatter plot here, but it didn't copy over so just imagine one here.

Figure 1. Correlation of the impact of relationships on appetite by age, N=16.

Qualitative Analysis

For this study, the respondents were also asked one qualitative question which asked, in as much detail as possible, to describe his or her feelings after succumbing to a food craving. There were a few key themes that were repeated by some of the respondents. These include feelings of satisfaction followed by some sort of guilt feeling(s). Also, the majority of the respondents answered that, regardless of what they ate, they always felt very satisfied and that by indulging in a craving, they were propelled to go and exercise, which most of the respondents were happy about.

Conclusions

This study of mood and how it affects one's food choices and intake was conducted using a random sample of respondents who were representative of a wide range of age groups. The results of this study support the research done by Lafay (2001) in that the female respondents reported feeling guilty and somewhat depressed after eating a food that they were craving. This is contrary to what men report feeling, which is mostly satisfaction and happiness and the male respondents in this study attested to that fact. The most logical question following these results would be why is there such a difference between the mood and feeling of men and women after eating that ice cream? Being the young adult that I am, I have been immersed in the pop culture of sex on television and in the magazines. I strongly believe that this idea of "sex sells" is a dominant factor in how men and women feel after indulging in a food craving. If a woman eats a food that can be categorized as "junk", then she feels she will gain weight and will not be viewed as attractive by society's standards.

Another factor that, according to this study, seems to be affecting ones' food intake are the relationships with friends and family. Most of the respondents agreed that if there is a strong relationship present, his or her appetite is free from negative effect. These results are supported by the study entitle *The Willingness to Eat* by Wikby and Fagerskiold (2004). They found that elderly peoples' appetite was reduced when their respondents felt insecure about their relationships with their families mostly. I think that not only family and friend relationships are important, but a person's overall mental well being is a key component in his or her appetite. I believe that if a person is generally happy and content with his or her life, they will always have some sort of a regular appetite.

In addition to ones' relationships and how it affects the appetite, the third research variable in this study asked how often each respondent skipped meals while feeling anxious. My research found that most of the respondents in this sample would not skip a meal while feeling anxious. This is quite interesting considering that most of these same people agreed to the fact that relationships have an impact on ones' appetite. I can attribute this to the fact that most of the respondents who participated in my study were between the ages of eighteen and twenty nine years old with only four people in their fifties and sixties. This is important because according to Chua (2004) and Cools (2002), the phenomenon explained by the Wikby (2004) study is not universal to all age groups. Chua (2004) and Cools (2002) found that being in a negative mood increased food intake whereas being in a neutral mood had no effect on food intake.

Judging from the results of my research, it appears that mood definitely has a significant effect on food intake and choices and vice versa. Women are more influenced than men when it comes to the media's image of the perfect physique and that is why they feel more depressed and guilty after eating something that is considered decadent. And while elderly people are more affected by outside relationships, as well as, interfamilial relationships, those who are in the younger age group may agree that these relationships have an effect but do not readily succumb to feelings of insecurity.

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