

You are What you Eat?  
The Relationship between Self-Esteem, Materialism, and Eating Behavior

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## **Abstract**

Previous research has suggested that self-esteem and materialism may be related to people's preferences for things like food. The purpose of this study was to examine the relationship between candy and social life and how it correlates with self-esteem, self-efficacy, self-worth, and materialism. Students from The Neighborhood Academy in grades 9 and 11 responded to a questionnaire while taking as much candy as they would like from a communal bin. There were significant positive relationships between self-esteem, self-worth and materialism, and the amount of candy consumed, but not self-efficacy. Overall, people who are interested in investigating their eating habits should consider their personality traits when making decisions.

## **Introduction**

Typically, when we think of self-esteem we assume it is confidence in ourselves, but it serves more purposes than that. Self-esteem can serve as both an outcome of a relationship and a mediator, which can also be defined as a buffer (1). One of the ways self-esteem can be served as a buffer is by affecting one's materialistic attributes (2). Both materialism and self-esteem could play a role in mediating one's desire for objects, such as when eating food (3). Obesity is one of the detrimental consequences of overeating. In America, 12.2% of 12- to 19-year-olds are overweight. (4). This research is important because it may show adults and teenagers how to better aid others and carry out their own personal improvement. In this study, we investigated the effect self-esteem and materialism have on the candy eating habits of high school students.

### *Materialism*

Materialism is not just one definition; it has various aspects, depending on the author. Ahuvia and Wong reviewed the different ways materialism can be defined: a personality trait, a set of personal values, or a need. Belk views materialism as three traits: envy, nongenerosity, and possessiveness (3). Envy is when a person desires what another has. Nongenerosity is a lack of interest in giving, while possessiveness is an unwillingness to give up items (3). In contrast, Richins argues materialism is a set of values: happiness, centrality, and success. When a person gets objects, it brings them happiness, because those objects are meaningful and central to their lives. Getting these objects is a marker of success (3). Lastly, Inglehart argues materialism is based on an obsession with lower-order basic needs for one's life, as opposed to higher needs like relationships (3). All three types share a focus on objects as important to a person, yet they differ in their origins.

In addition to materialism being a personality trait, it is also correlated with other personality traits, which can affect spending behavior. Jackson and Scott looked at the relationship between adolescent materialism and personality attributes. According to the first theory, materialism is more likely to be associated with neurotic and extroverted individuals than with other qualities. In contrast to the other four traits that were also tested, only extroversion demonstrated a link to materialism, hence this claim was not entirely substantiated (5). The second assumption was that materialistic people would be more likely to base their decisions on what their peers were buying, getting promoted to, being happy with, and getting promoted by celebrities. This was fully supported, and it was discovered that peers have a significant influence on a person's actions (5). The third hypothesis proposed that people would spend more of an unexpected \$500 on themselves than on others (5). These materialists spend more money on themselves as opposed to non-materialistic people (3). This is important because it helps researchers and businesses realize there are differences between teens and adults. This is important because it connects to my food hypothesis that people with more options of food will be willing to take more for themselves as opposed to leaving more candy for others.

### *Self-Esteem*

Self-esteem is both an outcome of a relationship and a mediator. It is an essential part of relationships and buffers someone against the judgment of peers. This buffering might affect the choices people make. Cast interviewed 286 couples and studied how self-esteem is used. She argues self-esteem has two definitions: self-worth-based self-esteem and self-efficacy-based self-esteem. Self-worth is an understanding of knowing that a person is truly valuable (1). Self-efficacy is when people feel in control of their environment. They come together to help form a person's identity through self-verification, a

process of enhancing someone's identity when they interact with others in the process of identity building, which uses self-esteem. If the interaction is affirming of who someone may think they are, self-esteem grows as an outcome. If the interaction is bad, then someone may lose self-esteem (1). But opposed to that, people with high esteem can brush off the negative vibes, which serve as a buffer for a negative outcome (1). In the current study, if our participants have high self-esteem, we thought they would be more willing to take more candy when offered because they have a buffer against the judgment of their peers. But, if they have low esteem, they would take less candy because their self-esteem is lower so they might feel bad or ashamed.

Financial status and materialism have a mediating role in self-esteem. Trzcinska and Seks held a survey using an online panel which was completed by 1,138 European adults ranging in age from 18 to 67. They studied the relationship between money and self-esteem and materialism. They found that money doesn't mean someone automatically likes things, which holds no relationship with financial status and materialism. They found that the more financially stable a person is, the more centrality plays a role in their materialism; these people tend to view objects as holding great value because they hold the experience of getting the objects as valuable to them Trzcinska and Seks. In contrast, financial status makes one less likely to experience happiness when they get the object. Lastly, self-esteem acts as a buffer between financial status and materialism. The higher a person's self-esteem is, the less money impacts one's materialism, but with less self-esteem, the greater the effect money has on one's materialistic personality Trzcinska and Seks. This is important to the current study, because one's self-esteem may affect how much one desires the candy in the study.

#### *Self- Esteem, Restraint, and Eating Behavior*

For dieting subjects, self-esteem is a moderating factor in food consumption. Heatherton and Herman held an experiment with 78 undergraduate students who took screenings as well as surveys to measure their restrained eating habits and self-esteem. Each participant was given an unlimited supply of ice cream, and the amount they ate was assessed. Half of the participants received a preload of a milkshake while the other half did not. People who drank a milkshake as well as ate ice cream were found to consume more than the non-preloaded participants. High self-esteem participants consumed roughly the same amount of food whether or not they were preloaded, but low self-esteem respondents consumed more food following the preload (6). This is important because it suggests people with low self-esteem will eat more junk food when appearing to be alone or unaware of the amount they are taking.

A similar experiment was conducted by Elfhag and Rasmussen. They had 1826 mothers and their children as participants. They surveyed self-esteem and eating behavior, and surveys about what they ate. They found that single mothers with low self-esteem tend to eat more junk food and have a lower intake of fruits and vegetables. Their daughters disproportionately are overweight or obese. Girls may be more vulnerable due to the lack of social support and harsher preconditions in single-parent families. They may also consume more soft drinks, have lower self-worth, and restrict their eating (diet) more. This is important to the current study because participants, especially girls, with lower self-esteem may have lower self-worth and be interested in eating more food in our experiment.

#### *Study Hypotheses*

Overall, research says self-esteem and materialism are related to each other (2) Self-esteem acts as a buffer in a relationship against outside negativity, while materialistic people make objects central to their lives to happiness, in place of relationships (2). Also, both high and low self-esteem might be related

to food consumption (1, 6, 7). This study is unique, as it attempted to link materialism and self-esteem to food consumption, which no other study has done. We used a survey that measures self-esteem and materialism and had high school students complete the survey while asking them if they want candy from a bowl. We secretly observed how much they took, to measure their food consumption.

We hypothesize that the higher a person's self-esteem is the more likely they are to take more candy than others. This is because research shows that people with higher esteem have a stronger buffer against negative judgment from peers (1). This is despite some research that says that people with low self-esteem tend to eat more junk food (6, 7). I chose not to change my hypothesis even though the studies said the opposite because their experiments didn't include social contact as our study does.

Second, we hypothesize that people with high self-efficacy will take as much candy as they would like without the cautiousness of others. This is because people with self-efficacy feel in control of their environment, which typically means since they feel in control, they would have no problem taking as much candy as they would like. Next, we hypothesize that people with high self-worth would take more candy than everyone else because they have enough confidence in themselves to do whatever they want. Lastly, we think people with high materialism will take more candy because research says materialistic people value objects over relationships, as the objects play a central role in their lives.

## **Methods and Materials**

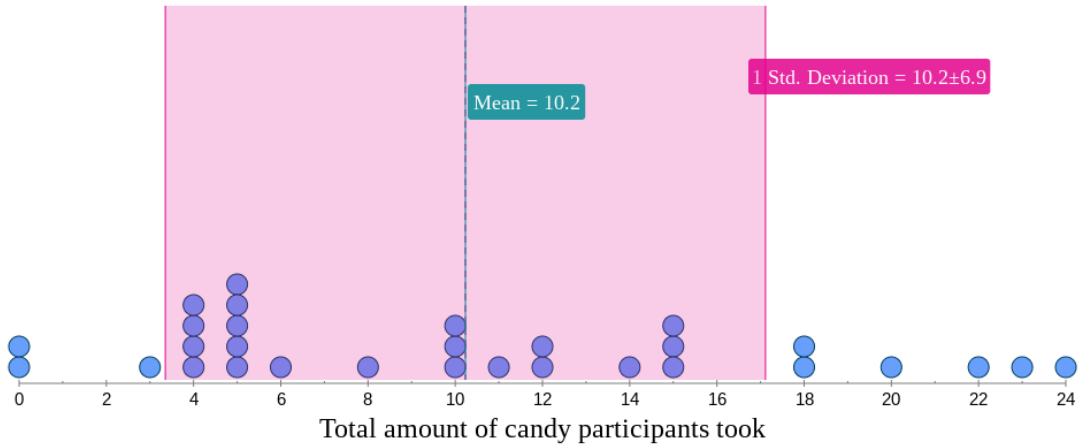
Eleventh and ninth grade students from The Neighborhood Academy were randomly selected to participate in the study. These students ranged in age from ages 13 to 17 and 18 of the participants were male and 14 were female; all self-identified as Black. Students participated in their Art class periods.

We used the Youth Materialism Scale, which is based on an obsession for lower-order basic needs and is scored from 10 items, each with 7 choices, from strongly disagree to strongly agree (8). The Rosenberg self-esteem questionnaire, together with Cast's self-efficacy (9 items) and self-worth scales (9 items), were also utilized to produce the survey (1,9). Both the self-efficacy and self-worth scales overlapped with the Rosenberg Self-Esteem Scale, which had 10 items, with 4 choices ranging from strongly agree to disagree.

The primary author made an introduction as soon as she entered the classroom. She then informed them that she would like them to complete a survey. Next, she told them that they could come up and grab as much candy as they wanted. She offered various pieces of small candy, like hard candies and fun-sized chocolate bars. They then filled out the survey and were asked to note on the back how much candy they have taken. Once they filled out their survey, the researcher acknowledged her gratitude for their participation and left. Two students did not take any candy, when asked later, they indicated they didn't want candy, and it was recorded as a zero.

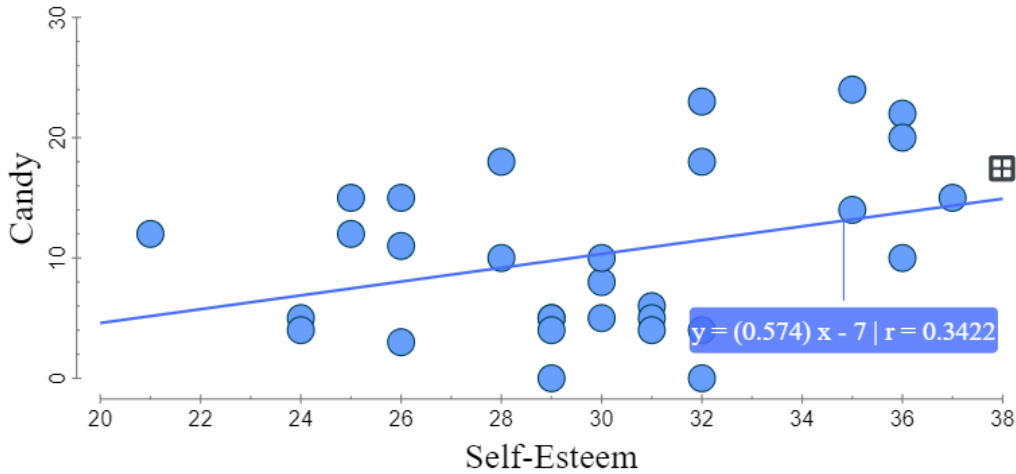
## Results

To determine 11th and 9th graders' self-esteem, materialism, self-worth, and self-efficacy levels, the primary researcher gave out various surveys based on the Youth Materialism Scale, the Rosenberg self-esteem questionnaire, and Cast's self-efficacy and self-worth scales (1, 8, 9). Students were also offered how much candy they would like from a bin and we recorded how much they took. We anticipate that people who score high on any of the three types of self-esteem or materialism will consume more candy.



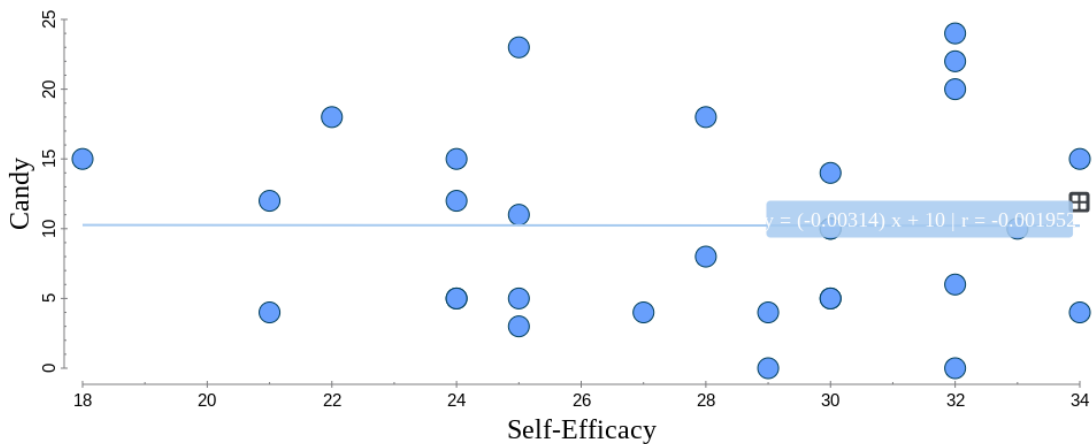
**Figure 1. The total amount of candy each participant took.** The mean amount of candy the students took was 10.2 and the standard deviation was 6.9. The data is approximately mound shaped with only two students who took no candy. A typical student has between 4 and 17 pieces of candy.

First, we hypothesized that self-esteem would be positively related to the amount of candy a person consumed during the experiment. Self-esteem was measured using the Rosenberg scale, and students were allowed to take as much candy as they wanted. A Pearson correlation coefficient test found a significant, positive relationship between self-esteem scores and the amount of candy a person took during the project. ( $r(28)=0.34, p=0.03$ ). This suggests that people who consumed a large amount of candy in a group setting have higher self-esteem than those who did not.



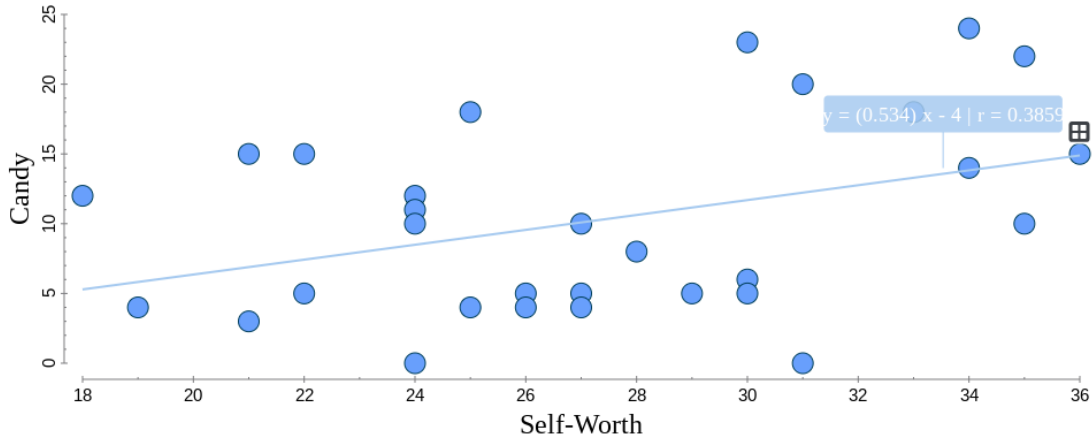
**Figure 2. The positive relationship between participant self-esteem and pieces of candy taken.** Participants' self-esteem scores are on the horizontal axis (10-40), and the amount of candy they took from the bin is on the vertical axis (0-24). The relationship was statistically significant ( $p < 0.05$ ).

Secondly, we hypothesized that a person's self-efficacy would be positively correlated with the quantity of sweets individuals ate throughout the trial. The self-efficacy scale was used to measure students' self-efficacy, and they were free to consume as much candy as they wanted. A Pearson correlation coefficient test did not find a significant relationship between self-efficacy scores and the amount of candy a person took during the project. ( $r(28) = -0.002$ ,  $p = 0.5$ ). This suggests that people who consumed a large amount of candy in a group setting did not have higher self-efficacy than those who did not.



**Figure 3. The negative relationship between participant self-efficacy and pieces of candy taken.** Participants' self-efficacy scores are on the horizontal axis (9-36), and the amount of candy they took from the bin is on the vertical axis (0-24). The relationship was not statistically significant ( $p > 0.05$ ).

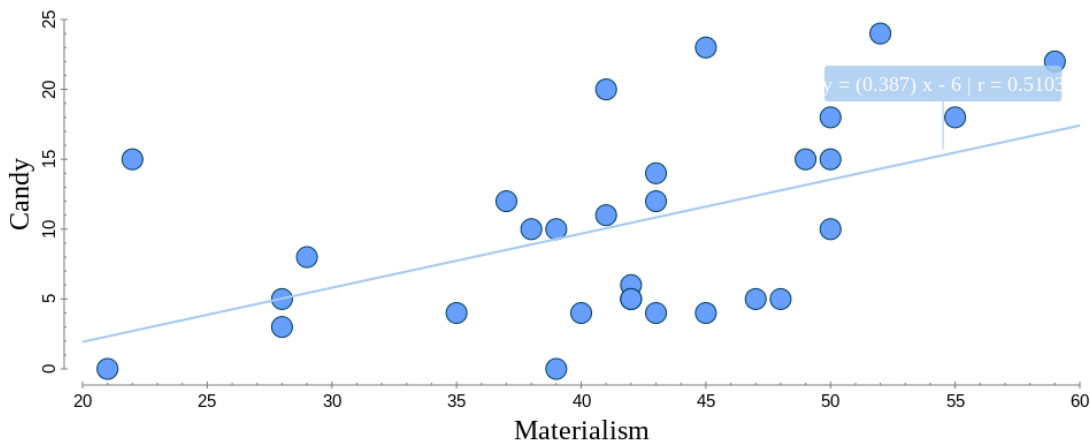
Next, we hypothesized that a person's self-worth would be positively correlated with the quantity of sweets individuals ate throughout the trial. Students were allowed to eat as much candy as they wanted, and their self-worth was assessed using the self-worth scale. A Pearson correlation coefficient test found a significant, positive relationship between self-worth scores and the amount of candy a person took during the project. ( $r(28)=0.38, p=0.01$ ). This suggests that the higher someone's self-worth is the more candy someone ate.



**Figure 4. The positive relationship between participant self-worth and pieces of candy taken.** Participants' self-esteem scores are on the horizontal axis (10-40), and the amount of candy they took from the bin is on the vertical axis (0-24). The relationship was statistically significant ( $p<0.05$ ).

Last we, hypothesized that the number of candy people consumed throughout the study would then be positively connected with materialism. A Pearson correlation coefficient test found a significant, positive relationship between self-efficacy scores and the amount of candy a person consumed during the project. ( $r(28)= 0.51, p=0.001$ ). This suggests that people who consumed a large amount of candy in a group setting have higher materialism than those who did not.





*Figure 5. The positive relationship between participant materialism and pieces of candy taken. Participants' materialism scores are on the horizontal axis (10-60), and the amount of candy they took from the bin is on the vertical axis (0-24). The relationship was statistically significant ( $p < 0.05$ ).*

## Discussion

In this study, we sought to investigate the relationship link to materialism and self-esteem in food consumption. Our first hypothesis was that self-esteem would be positively related to the amount of candy a person consumed during the experiment. This was a positive relationship and is supported by (Figure 2). Secondly, we hypothesized that a person's self-efficacy would be positively correlated with the quantity of sweets individuals ate throughout the trial. This relationship was proven to be not supported because we found no relationship when we expected a positive correlation this is shown in (Figure 3). Next, we hypothesized that a person's self-worth would be positively correlated with the number of sweets individuals ate throughout the trial. This was a positive relationship and is supported by (Figure 4). Lastly, the number of candy people consumed throughout the study would be positively connected with materialism. This relationship was a positive relationship and is supported by (Figure 5).

In our experiment, we found the studies to be partially consistent with our findings on self-esteem and candy. In Cast's experiment, she argued that people with high self-esteem will be immune to judgment by others therefore self-esteem will be the buffer of judgment in relationships. In our study, we found people with high self-esteem agree with this idea. High self-esteem subjects were found to take more candy than low self-esteem subjects. This is opposed to Heatherton and Elfhag, who found that low self-esteem subjects ate more ice cream than high self-esteem subjects. Therefore, there seems to be some disagreement with self-esteem's relationship with food. In contrast, the environment where these experiments took place may have been a factor in why the research may have been conflicted. Due to social context, there may have been peer pressure among the subjects, which caused the people with low self-esteem to take less because they were afraid of judgment, as opposed to high self-esteem subjects, who didn't care about others' opinions on their decisions. Based on my findings, self-esteem seems to be the mediator between the social pressure that TNA students face and the actions they choose to take.

No one has ever carried out a food study that correlates with self-efficacy in the manner that we did in our trial, but Cast's research would suggest that people would be less resistant to doing what they wanted if their self-efficacy were greater. It turns out that in our trial, self-efficacy had no bearing on the outcome because it was unrelated to how much candy they consumed. This makes sense because if they already possess all the authority they desire, they wouldn't be concerned with what other people think. In contrast, self-worth predictions correlated with Cast's findings because if the participant didn't feel like they were worthy, they didn't take a portion of candy.

Our materialism hypothesis was found to be consistent with Jackson and Scott's findings on materialism and spending habits. These two are linked because in my case, even if they knew there was a limited amount of candy left, they took as much as they would like knowing others may not have any. In Jackson and Scott, every hypothetical dollar they spent on themselves was a dollar they couldn't spend on someone else. Therefore, adolescent materialism may be an independent variable that explains teens selfish and unselfish decision making. It remains to be seen whether materialistic people are selfish because of self-esteem or because they have high self-esteem because they are materialistic.

Our project had a number of limitations. Some participants didn't like candy. As a result, they were recorded as zeroes. Another limitation was when in one of the groups, the popular candy options were already taken by those who participated previously before them, which discouraged other participants from taking as much candy because the popular food options weren't accessible. Future researchers may use other food choices to test out similar hypotheses.

In conclusion, our research suggests that self-esteem is likely to influence someone's eating habits. Based on this we recommend that if someone wants to analyze their eating habits, it is important to think about their personality, specifically their self-esteem and materialistic habits. We conclude that individuals' food choices are about so much more than basic cravings and in fact, it depends a lot on who they are as a person.

### **Acknowledgments**

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