The “Skinny” on Coffee Drinkers: Gender Differences in Healthy Beverage Choices

Rachel L. Osborne
Braden D. Ackley
Traci A. Giuliano
Southwestern University

The goal of the present study was to explore the relationship between gender and health-conscious beverage decisions. Based on the notion that females are generally more preoccupied with their health, it was hypothesized that females would be more likely than would males to order a healthy beverage than an unhealthy beverage. To explore this relationship, a naturalistic observational study was conducted in a popular coffee shop in Texas, and the drink orders of 96 patrons (34 males, 62 females) were classified as either healthy or unhealthy. As predicted, the results revealed a relationship between participants’ orders and their gender, such that females (relative to males) were significantly likely to order the healthy version of a beverage. These findings suggest that health-food advertising may be reaching a primarily female population.

From television commercials to self-help books and food packages to restaurant menus, the promotion of healthy or “diet friendly” food is endless making it evident that society is preoccupied with what it consumes. Although a majority of people still consider food consumption to be a source of enjoyment in their lives, research affirms that food also constitutes a major source of anxiety (Rozin, Bauer, & Catanese, 2003). This apprehension toward food consumption is largely influenced by the alleged impact of food on one’s health and weight (Aruguete, Yates, & Edman, 2006; Rozin et al., 2003). Indeed, research has shown that attitudes toward food vary a great deal between individuals (Rozin et al., 2003), and that such variation is mediated by a multitude of demographic characteristics, including race, ethnicity, religion, and even geographic location (Aruguete et al., 2006; Rozin et al., 2003). A vast amount of research concludes, however, that gender is the leading predictor of food perceptions and eating behavior (Aruguete et al., 2006; Rozin et al., 2003). Consequently, much empirical attention has been directed to gender differences in food perceptions, attitudes toward food, and food-related behaviors (e.g., Aruguete et al., 2006; Rozin et al., 2003; Wardle et al., 2004).

One fundamental source of variation between male and female individuals is health attitude (Rozin et al., 2003; Wardle et al., 2004). Specifically, many recent studies have confirmed that men place a lesser degree of importance on healthy eating than do women (Aruguete et al., 2006; Wardle et al., 2004). For instance, Wardle et al. (2004) reported that in comparison to women, men believe that consuming low-fat, reduced-sodium, and high-fiber food products is less important to their health. In other words, they found that men are less likely to acknowledge a relationship between their food consumption and physical health. In a similar vein, Rozin et al. (2003) reported that although both men and women seem to recognize a strong connection between diet and health (e.g., cancer and heart disease), women’s perception of the diet-health relationship is significantly stronger than is men’s.

Interestingly, the relative health concerns of men and women are evident in their food associations (Aruguete et al., 2006; Rozin et al., 2003). A particularly salient example is the Rozin et al. (2003) finding that women associate the stimulus term heavy cream with the word unhealthy, whereas men associate the term with the

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word *whipped. Thus, they found that women and men possess different manners of thinking about food, such that women are more likely than men to perceive food as determinant of their health. In other words, women tend to employ health schemas within the context of food (Rozin et al., 2003).

Most importantly, these gender differences in health attitude are manifested in male and female food consumption, specifically in the domains of dieting and restrictive eating (Aruguete et al., 2006; Wardle et al., 2004). For example, numerous empirical studies have concluded that dieting is more common among women than among men (Aruguete et al., 2006; Rozin et al., 2003). Men also eat more frequently at fast food restaurants, which are typical venues of unhealthy eating (Aruguete et al., 2006). Although it has been shown that both men and women consume diet products (such as foods low in fat, sugar, or salt), women exhibit a greater tendency to eat such products (Rozin et al., 2003). Wardle et al.’s (2004) finding that gender-related food consumption is present internationally further substantiates the universal difference between male and female eating behavior. This discrepancy between genders is logically explained by the aforementioned differences in health concerns. In fact, these factors are so strong that controlling for both dieting and health concerns dramatically decreases the difference in food consumption between men and women (Wardle et al., 2004).

The studies reviewed thus far indicate that women consume healthier food than do men and that the difference can be explained by women’s greater concern for improving health and managing weight (Alexander & Tupper, 1995). Unfortunately, most of the findings in this area are limited in their generalizability, with participant groups consisting of college students or individuals of high socioeconomic status (e.g., Aruguete et al., 2006; Wardle et al., 2004). As such, further investigation is needed before these conclusions about gender-related food consumption can be extended to all individuals. Importantly, the bulk of recent literature also focuses primarily on the consumption of solid food items (e.g., fruit, vegetables, bread, candy bars), but the realm of drinks to date has received little empirical attention (Rozin et al., 2003; Wardle et al., 2004). Moreover, most of the previous research has relied on self-report methods to measure the behavior and thoughts of participants, and thus the participants were susceptible to a social desirability response bias. In response to the lack of direct empirical observations, the present study pursued a naturalistic observational approach to data collection. Additionally, past research has typically not explored food consumption within a public dining environment, such as a restaurant (Rozin et al., 2003; Wardle et al., 2004). We assumed that a public setting would be a more valid measure of the consumption habits of men and women given that a public environment should reinforce females’ health concerns and their tendencies to order a healthy item.

The goal of the present study was to explore the relationship between gender and health-conscious behavior. A naturalistic observational approach was used to investigate male and female beverage choices at a popular coffee shop in a Texas community. This venue offered many of its regular menu items in healthier versions that incorporated nonfat milk, sugar-free syrup, or simply a lighter recipe. Based on the research to date (e.g., Aruguete et al., 2006; Rozin et al., 2003; Wardle et al., 2004), it was predicted that there would be a significant relationship between gender and healthy consumption. Specifically, it was hypothesized that females would have a greater tendency than would males to order a healthy version of a drink rather than the unhealthy version.

**Method**

**Participants**

Participants included 34 male and 62 female patrons who were unobtrusively observed at a popular coffee shop in central Texas. Participants were approximately 15 years of age and older. Other demographic characteristics (e.g., socioeconomic status, race, and ethnicity) were not taken into account due to the difficulty of making accurate judgments based on observation alone.

**Design**

As part of a 2 x 2 categorical design, patrons of a coffee shop were observed while placing a drink order, and each individual’s gender and beverage order was recorded. Beverage orders were classified as either healthy or unhealthy. A “healthy” beverage was one that contained at least one healthy modifier, such as the substitution of nonfat milk for regular milk or the substitution of sugar-free syrup for regular syrup (e.g., a nonfat mocha latte or a sugar-free cappuccino). Additionally, any menu item that was ordered in an overall lighter version (e.g., a light caramel frappuccino) was defined as healthy. In the coffee shop, all modified drinks were identified by their respective labels: nonfat, sugar-free, and light. Note that any drink order containing more than one modifier (e.g., a nonfat sugar-free latte) also received the designation of healthy. An “unhealthy” beverage was one that was offered in a healthier version but that was ordered without any of the modifiers.

**Procedure**

The 96 observations were made in a single Texas coffee shop on two different days. On both days the observa-
tions occurred during the late hours of the morning
due to the high influx of patrons at this time of day.
Participants were observed from a dining table inside
the restaurant, and the table was closest in proximity
to the stations where customers placed and retrieved
orders. The observation of a participant began when
he or she stepped up to the cashier’s counter to place
an order. First, the gender of the patron was recorded.
Next, after listening to the patron verbalize his or her
drink order to an employee at the cashier’s station, the
drink order was recorded as either healthy or unhealthy.
However, if the verbal order was inaudible or unclear,
the identity of the order was later determined by
observing the drink-retrieval station. Here, the barista
verbally announced the patron’s order and the order
was recorded. Only those orders that were clearly heard
and discernable were included in the study; all others
were excluded to prevent the loss of reliability caused
by inaccurate recording of patrons’ orders.

Several other criteria warranted the exclusion of a
patron and his or her order from being recorded. First,
because the current study was concerned only with
beverage orders, all orders that lacked a beverage item
were excluded. Next, all patrons were excluded from
observation whose beverage orders were not offered in
a healthy version. For example, all coffee orders were
excluded because a healthy version of coffee was not
available. Finally, in order to avoid the ambiguity of who
a drink was intended for, only those individuals who
ordered a single beverage item were included in the
observations (i.e., a customer ordering more than one
beverage may have intended one for a family or friend).
Overall, these exclusions served to eliminate sources of
error variance that could have potentially masked the
relationship between gender and beverage choice.

In the present study, no formal steps were taken
to ensure and to measure the reliability of the observa-
tions. The observations were made by a single
researcher, and due to the unobtrusive nature of the
study, the customers and employees of the coffee shop
were not asked to identify the orders. Despite the
absence of a formal procedure for maintaining reli-
ability, several steps were taken to increase the reliability
of the observations1. For instance, prior to beginning
the study, the researchers spent several hours making
and recording preliminary observations on a variety of
variables related to customer’s orders, which included
the variables of the current study: customer gender and
healthiness of the customer’s beverage. After this period
of practice observations, it was decided that the most
effective and reliable method of recording healthy and
unhealthy beverage orders was the method used here.
Additionally, all observations were double-checked
prior to being recorded, and the majority of the bev-
erage orders were confirmed by listening to both the
patron and the barista verbalize the order.

Results
A chi-square test of independence revealed a signifi-
cant relationship between gender and drink choice,
χ² (1, N = 96) = 10.60, p < .05. As predicted, males
were more likely to order the standard, unhealthy
version of a drink (86.50%) than the healthy version
(13.50%), whereas females were somewhat more likely
to order the healthy version (51.61%) compared to
the unhealthy version (48.39%). Figure 1 shows the
frequencies of healthy and unhealthy drinks ordered
by participants. As shown in the figure, the proportion
of males ordering an unhealthy beverage dramatically
overshadowed the proportion ordering a healthy bev-
erage, and females had a slight tendency to order the
healthy rather than the unhealthy beverage.

Discussion
The findings of the current study substantiate the origi-
nal hypothesis that gender is related to the healthiness
of one’s beverage choice. In fact, the gender difference
was pronounced, with females being nearly three times
more likely than males to order a healthy alternative
of a beverage. Thus, our study confirms that relative to
males, females tend to be healthier consumers and to
make healthier decisions. This marked gender differ-
ence in healthy consumption is strongly supported by
the findings of previous research. For instance, research
has confirmed that men eat at fast food restaurants
more often than women (Aruguete et al., 2006). Males
are also less prone to incorporate reduced-fat products
into their diets (Alexander & Tepper, 1995). More
importantly, the current study not only substantiated

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1 Due to the nature of the study, the observations of customer’s beverage orders were not made according to formal measures
of reliability. The observations were made by two different researchers at various times of day, in which each researcher was
unaccompanied by the other during the time of observation. As such, the accuracy of each researcher’s observation was not able
to be verified by comparing the observation to that of the other researcher. However, the two researchers making observations
had completed several hours of preliminary observation of customers’ behavior in the coffee shop. After observing and
recording information about several variables, the authors decided to investigate the variables in the current study. Following
this preliminary period of observation, the researchers devised a set of criteria that determined which beverages were to be
included in the observations, and most importantly, how to classify the beverages as unhealthy or healthy. For instance, all
healthy beverages were those that were specified by the customer to be “light,” “nonfat,” or “sugar-free,” and unhealthy beverages
included all beverages that did not contain this healthy modifier. Each observation was double-checked by the researcher to ensure
reliability, and the identity of many beverages was confirmed by both listening to the customer verbalize the order at the cashier’s
station and by listening to the barista announce the order at the beverage retrieval station.
other research but also expanded previous findings about the gender-health relationship. That is, whereas the bulk of past research primarily investigated solid food products (Rozin et al., 2003; Wardle et al., 2004), the current study confirms that gender-related food consumption generalizes to the realm of beverages. Surprisingly, although women’s beverage choices were healthier than those of men, women did not strongly favor a particular type of beverage; that is, they were almost equally likely to order a healthy and unhealthy beverage. This interesting finding may indicate that about half of women are not concerned with eating healthy, or at least are not concerned with presenting themselves as health conscious individuals. Perhaps the presence of acquaintances in the coffee shop was a contributing factor to women’s beverage choice. For instance, women who came to the shop with female friends or coworkers may have felt inclined to present themselves as health or body conscious and therefore ordered the healthy version of the beverage; on the other hand, it seems plausible that women who came to the shop alone or with one or more men may have felt less pressure to appear health conscious and thus opted for the traditional, unhealthy version of a beverage. As another explanation, it seems likely that a number of the women (perhaps half) were unaware that the regular beverages were offered in a healthier, diet-friendly version.

The apparent relationship between gender and consumption habits may be accounted for by men’s and women’s health concerns. Specifically, a large body of research affirms that more women than men believe in a link between food consumption and health (Rozin et al., 2003; Wardle et al., 2004). This difference between male and female health perceptions may explain females’ tendency to choose a healthy beverage. Consistent with Rozin et al. (2003), it is plausible that the female participants were more likely to associate a beverage with its health implications than its culinary properties, and thus invoked health schemas in their decisions. That is, perhaps the female participants believed that a healthy item would be more beneficial, or at least less detrimental, to their health than the standard option. By contrast, males—who are less likely to perceive the health consequences of their food consumption (Wardle et al., 2004)—were presumably less prone to make health-conscious drink choices.

In addition to relative health concerns, body image may be another underlying explanation of the gender differences in beverage choice. A wealth research and common experience attests to gender differences in body image (Fallon & Rozin, 1985). For instance, a vast amount of literature confirms that a woman’s degree of satisfaction with her figure is strikingly lower than is a man’s satisfaction (Fallon & Rozin, 1985; Tiggeman, 2006). Fallon and Rozin (1985) attributed this difference to the fact that women’s ideal physiques are smaller than what they actually possess, whereas men’s optimal figures closely coincide with those they already possess. This desire for women to be thinner may arise from societal messages equating thinness to physical attraction and overall beauty in women (Fallon & Rozin, 1985; Tiggeman, 2006); therefore, it is no surprise that attaining a slender figure is a woman’s prime means of attracting the opposite sex (Fallon & Rozin, 1985). Although physical beauty standards indeed exist for males as well as females, males generally do not respond to these societal pressures in the same manner as do females (Aruguete et al., 2006). For instance, Aruguete et al. (2006) reported that women’s internalization of thin ideals is greater than is men’s. As a result, they concluded that women impose these standards on themselves, whereas men direct these standards outward and utilize them to form opinions of others. Consequently, it can be argued that females’ poor body image was manifested in their behavior in the present study. In this case, perhaps a societal compulsion to lose weight and to attain an ideal figure partially accounted for the drink choice of female participants.

Although a strong connection was found between gender and beverage choice, several limitations of the current study must be acknowledged. First, due to the naturalistic observational design of the study, no causal relationship between gender and drink order can be inferred. Next, the setting of the observation study, although ideal for reducing reactivity, was not the most conducive location for discerning a customer’s order. It is likely that some measurement error in the form of coding mistakes resulted from the inability to clearly hear an order. In addition, it was not always possible
to determine who the ordered drink was intended for because some patrons may have ordered the drink for a friend or family member. This source of error variance could have potentially masked the true nature of the relationship between gender and beverage choice. Furthermore, the patrons’ knowledge of the menu was not controlled for. Out of the possible modifiers, only the light beverages were prominently displayed on the restaurant menu; all other modifiers were indicated by a small side note with low visibility to patrons. This factor potentially introduces an element of bias in the study, in that patrons’ drink orders may have been explained more by their being unaware of healthy alternatives than by their respective gender. Finally, only one coffee shop was observed, and the study did not control for demographic components other than gender. Therefore, our findings may not be generalizable to individuals in other locations or of other races.

The relationship between gender and food consumption is a provocative area of study with great relevance to society, and a number of avenues warrant further exploration. For example, one viable extension of this study would be an investigation of gender differences across ethnicities, races, religions, and geographic locations. Research confirms that food behavior and health beliefs vary by ethnicity and region of the United States (Granner, Sargent, Calderon, Hussey, Evans, & Watkins, 2004), and it is reasonable to expect that these demographic characteristics might potentially moderate the gender differences observed here. The influence of peers on one’s food behavior is another potentially fruitful avenue for future investigation. For instance, perhaps women’s tendency to order the healthy alternative is related to the presence of friends, colleagues, members of the opposite sex, or the complete absence of other individuals. Furthermore, recent research has investigated a variety of environmental cues—other than the presence of other people—that may influence one’s consumption habits (Gorg, Wansink, & Inman, 2007; Wansink & Van Ittersum, 2003) For instance, Gorg et al. (2007) found that people consume more hedonic foods such as popcorn when they are in a sad rather than a happy mood; however, the influence of one’s emotional state is minimized when nutritional information is included with the food item. Finally, in order to gain deeper insight into the nature, explanations, and underlying causes of variations in beverage choice, it would be beneficial to employ multiple research methods. In addition to observations, both surveys and experiments could contribute to further understanding the relationship between gender and food consumption.

In sum, the present study confirms and expands the findings of a long line of research on gender and food consumption. It appears as though males and females indeed differ in the healthiness of their choices, with females tending to make healthier decisions. The findings of the present study have potentially important implications in the sales and marketing of food. Specifically, it seems plausible that health-food advertisements and self-help nutrition books are reaching a predominantly female population. Perhaps the food industry should be aware of its capacity to attract different individuals and should take advantage of gender-related eating habits. In short, further exploration of male and female food perceptions will provide insight into the role that food plays in maintaining gender identity and adhering to gender roles, and consequently, will reveal more about society’s fixation with food consumption.

**References**


