

FUNDAMENTAL SOCIAL MOTIVES AND THEIR EFFECT ON FOOD SELECTION IN
UNDERGRADUATE PSYCHOLOGY STUDENTS

by

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Abstract

Social motives affect multiple aspects of our daily lives with and without conscious awareness of these effects. Fundamental social motives play an important role in impacting how people think, make decisions and act. This research was designed to investigate how situational factors and fundamental social motives interact to affect food selection via an in-person experiment.

Participants in this research were randomly assigned to complete the experiment in the presence of a same or opposite sex partner. Based on whether they were assigned to a “public” or “private” condition, they either disclosed to their partner what they would order at a restaurant, or they kept this information private by reporting the same information via a confidential form on their computer instead of to their partner. Following the food selection task, participants completed a series of questionnaires designed to measure social motives and tendencies to respond in particular ways during social interactions. Finally, they were asked to rate their partner based on factors such as friendliness and attractiveness. It was predicted that opposite-sex partners who are primarily or exclusively heterosexual and not involved in a committed romantic relationship will order fewer calorie meals in the presence of an opposite sex partner who they

deem to be more attractive if they are publicly reporting their order. Meal choices of heterosexual same-sex partners are not expected to be influenced by perceptions of partners.

1. Introduction

When invited on a dinner date, there are many decisions to be made before the night out. These choices include outfit options, what time to make the reservation, what restaurant to dine at, and the list continues. Once at the restaurant, you must now decide what to order as your meal. As you begin looking over the menu, what catches your eye the most? Is it the cost of each meal, how appetizing it seems, or the total calories? The meals that you choose to order can depend on multiple social and individual factors. These are but are not limited to: sex, age, hunger, familiarity, and partner attractiveness (Cruwys, Bevelander and Hermans, 2015). This research aims to test the hypothesis that a participant's relationship status and sexual orientation, alongside the perception of their dining partner, will influence food selection in a hypothetical dining situation.

It has been found in past research that sex plays a huge role in food selection. Compared to men, women respond differently to foods. Women tend to be more educated on food and nutrition, view themselves as needing to lose weight, and are more likely to start a diet (Manippa et al., 2017). Women have also been observed to change their eating habits in the presence of an opposite-sex partner. If a woman is eating in the presence of a male that she perceives to be attractive, she will likely change her eating habits to seem more desirable (Basow and Kobryniewicz, 2015). Women eat smaller portioned meals because it is considered to be more feminine and neater, compared to larger meals (Bock and Kanrek, 1995). A study conducted by Basow and Kobryniewicz found that women who eat smaller meals have increased social

desirability due to the effect of meal size on their perceived femininity (1993). Participants in this study rated females who ate the smallest “feminine” meal as being more socially appealing rather than those who ate a larger, “masculine” meal (Basow and Kobryniewicz, 2015). The idea that women have to eat less to be more desirable comes from the thin ideal. The thin ideal, according to Basow and Kobryniewicz, is a cultural value placed on thinness, which equates to success and attractiveness (2015). But this idea has not been observed across all cultures. In wealthier countries, such as the United States, thinner women are of preference. However, in countries with lower socioeconomic status, heavier women are preferred (Morrison and Nelson, 2005).

As stated previously, women order smaller portioned meals in the presence of an opposite-sex partner. Conversely, men order larger, more expensive meals in the presence of an opposite-sex partner, probably to seem more masculine and dominant (Baker, Fox & Strickland, 2018). Recent studies have shown that greater amount of food intake is associated with being more masculine (Timeo and Suitner, 2018). Although physical features are more important to men, women prefer men who are wealthier and dominant. So, it is believed that men eat larger portions and order more expensive meals to show their partner that they are more masculine and financially capable of providing (Baker, Fox & Strickland, 2018).

Meal selection can also change based on familiarity. People tend to eat more in the presence of someone they are comfortable with and have known for some time, compared to someone unfamiliar (Baker, Fox & Strickland, 2018). This familiarity lessens the idea that one needs to do things to appear more attractive. This can be seen in couples who are dating. In the first stages of dating, women may primarily order salads and water while dining out, and men order steaks and lobster. Women choose smaller, healthier meals to seem healthier and men order more expensive meals to show wealth. As time progresses and they become more familiar

with each other, women may choose to order things such as cheeseburgers and fries, and men may start to settle for a simple ribeye compared to filet mignon.

Choosing healthier foods in the presence of an opposite-sex partner you find attractive is a self-presentation method that we use to enhance someone else's perception of us and make a good impression (Mori, Chaiken & Pliner 1990; Otterbring, 2020). Although most research agrees that people tend to order healthier meals in the presence of an opposite-sex partner to make themselves look desirable, one researcher found something different. According to research conducted by Tobias Otterbring on attractive faces and food selection, participants that were exposed to attractive opposite-sex faces chose unhealthier food options. When people, especially men, in particular, were exposed to food choices in a domain that was associated with sex, they became more reward-seeking (Otterbring, 2020). This reward-seeking motivation caused them to choose unhealthier food options. Otterbring also argues that "sex sells" and companies could potentially increase their sales of sweet, fatty, and unhealthy food options by putting attractive faces on their products, similarly to how clothing brands operate.

The current study hopes to take previous research on how social factors as well as partner attractiveness affect food selection and expand upon it. We used a between-subject design where participants were asked to choose what they would order if they were dining with their randomly selected partner. We predict that opposite-sex partners who are primarily or exclusively heterosexual and not involved in a romantic relationship will order fewer calorie meals in the presence of an opposite-sex partner whom they deem more attractive if they are publicly reporting their order. Meal choices of heterosexual same-sex partners are not expected to be influenced by perceptions of partners.

2. Method

2.1 Participants

Two hundred eight undergraduate students at East Carolina University participated in this research study. Participants received research activity credit for their Intro to Psychology course after completion. Of these 208 research participants, 104 (50%) were men and 104 (50%) were women. The mean age of participants was 19.1 years with a median of 19 years. Participant's ages ranged from 18 to 36 with a standard deviation of 2.01.

2.2 Materials and Procedure

Participants were able to register for this experiment via the Department of Psychology Experimentrak. Before continuing with the research, participants completed an online consent document. Participants were randomly assigned a partner condition (FF, MM, FM) and told by the researcher if they would be reporting to their partner or privately. Partners spent five minutes talking to each other as an icebreaker while the researcher waited in the hall. They then were given a restaurant menu and instructed to look over it and decide what they would order in a real-life dining scenario. If in the private condition, they did not tell their partner their menu choice. Instead, they would enter their food selection into their computer. Those in the "to partner" condition told their partner what they would order from this restaurant and entered their partner's order instead of their own.

Next, they completed a series of questionnaires beginning with the Fundamental Social Motives Inventory, a sixty-six social motives questionnaire that uses a seven-point Likert-type

scale (Neel, White & Neuberg, 2016). This inventory asked questions about things such as self-protection, disease avoidance, mate-seeking, mate retention (general and breakup concern), and kin care (family).

Following was the Brief Fear of Negative Evaluation Scale consisting of twelve-character statements using a five-point Likert-type scale (Carleton, Collimore & Asmundson, 2007). The Self-Monitoring and Social Interaction Anxiety Scale required the participants to respond to multiple questions using a Likert-type scale (Mattick & Clark, 1998; O’Cass, 2000). Participants then rated their partner using a seven-point Likert-type scale based on the following: friendliness, nervousness, fearfulness, attractiveness, and how caring, rude, and dominant they were.

Demographic questions were asked in the final portion of the survey. Participants were asked basic information about their race, ethnicity, current relationship status, biological sex, gender, and sexual orientation. After participants had completed the surveys, the researcher gave a debriefing and explained the purpose of the current research, as well as some hypotheses. They were thanked for their time and participation, then dismissed.

Due to the global pandemic, COVID-19 concerns, and social distancing requirements, changes were implemented in the lab. Researchers and participants were required to wear a face-covering, maintain a six-foot distance, and computer and desk surfaces were thoroughly disinfected. If a participant had any COVID-19 symptoms or had a possible exposure, they were asked to inform the researcher beforehand, and the session was canceled.

3. Results

A multiple regression analysis was conducted in order to test our hypothesis that opposite-sex partners who are primarily or exclusively heterosexual and not involved in a

romantic relationship will order fewer calorie meals in the presence of an opposite sex partner who they deem more attractive if they are publicly reporting their order. Relationship status (single or in a committed relationship), partner sex (same or opposite), perceived partner attractiveness and partner condition (public or private) were the independent predictor variables and total calories ordered was the continuous dependent variable. The multiple regression analysis showed no correlation between males, sex of their partners, perceived partner attractiveness and calories ordered ($F(3,83) = 2.89, p = .040, R^2 = 0.095$). There was also no correlation between females, sex of their partners, perceived attractiveness and total calories ordered, ($F(3,83) = 2.39, p = .074, R^2 = 0.080$). The 2-way interaction between partner sex and partner attractiveness in males was significant ($b = -1.377, t(86) = -2.872, p = 0.005$). There were no other significant interactions found.

Next, an ANOVA was conducted separately among male and female participants using sex of their partner, and the participant's perceived attractiveness of their partner as predictor variables and total calories ordered as the dependent variable. There were main effects of partner sex and partner attractiveness. There was also a significant interaction between partner sex and partner attractiveness. Men order more calories when they perceive their same sex partner to be more attractive ($F(3,83) = 2.898, p = .040; R^2 = 0.062$) and they order fewer calories the more attractive they find their opposite sex partner to be. No similar relationship was found in women.

An independent sample t-test was used to test for a sex difference among men and women with a same or opposite sex partner. It was found that people order fewer calories in the presence of a same-sex partner ($M = 1213, SD = 576$) than they do with an opposite sex-partner ($M = 1247, SD = 7.69$), $t(85) = .296, p = 0.126, d = 0.513$. We believe that this affect was driven by women because when looking at the two groups individually, no affect was observed in men.

Another independent sample t-test indicated that prior to COVID-19 and the global pandemic ($M = 1302$, $SD=491.7$), $t(190) = 6.64$, $p = 0.000$, $d = 0.97$, people ordered a significantly higher number of calories compared to now ($M = 707.6$, $SD = 702.5$).

Finally, one last independent sample t-test was conducted to test for calorie differences when a participant was in the private condition, versus the public condition. The t-test indicated that there was no significant difference in calorie county whether the participants reported their meal choice privately or publicly ($M = 1231$, $SD = 1333$); ($M = 1536$, $SD = 1560$), $t(202) = 1.49$, $p = 0.913$, $d = 0.21$. A multiple regression analysis was included as a variable but there was still no significance found.

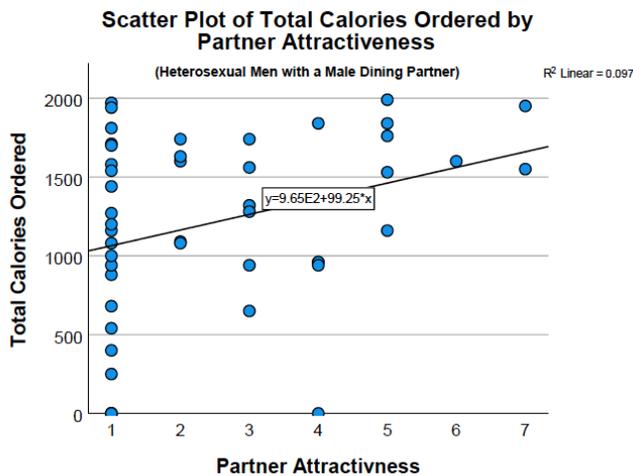


Fig 1. Heterosexual men with a male partner rated those who ordered more calories more attractive.



Fig 2. Heterosexual men with a female partner rated those who ordered less calories more attractive.

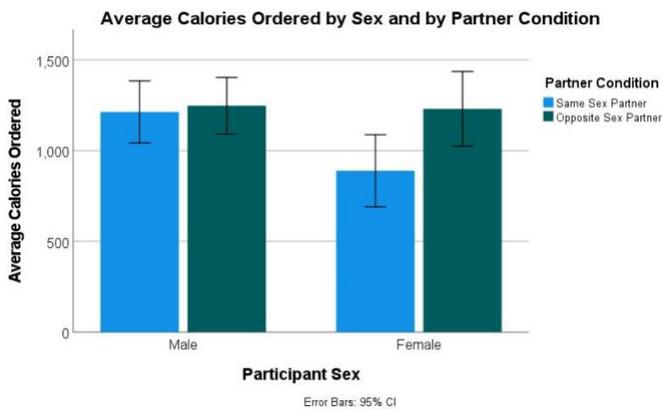


Fig 3. Women order far more calories with an opposite sex partner compared to men.

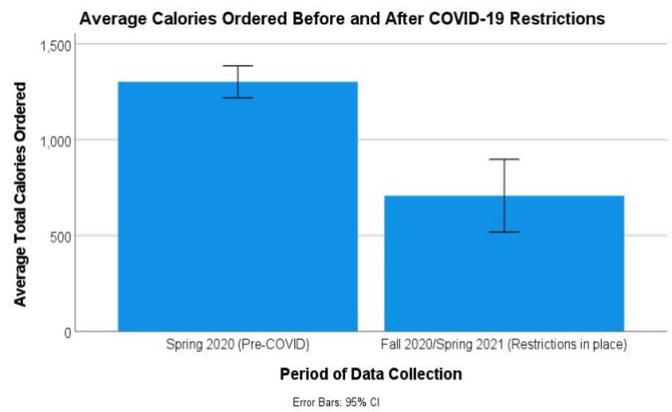


Fig 4. Participants ordered more calories during Spring 2020 (pre-COVID) compared to current data.

4. Discussion

There are many factors that affect what someone will choose to order at a restaurant such as the social environment that they are in as well as the individuals' personal preferences and motives (Baker, Fox & Strickland, 2018). This current study used a multiple regression analysis, however no correlation as found between males or females, sex of their partners, perceived partner attractiveness and calories ordered ($R^2= 0.095^2$; $R^2=0.080$). There were main effects found using an ANOVA between partner-sex and partner attractiveness in men, as men order more calories when they perceive their same sex partner to be more attractive, and less calories the more attractive they find their opposite-sex partner. People order fewer calories in the presence of a same-sex partner than they do with an opposite-sex partner, and there was no significant difference in calorie count whether the participants reported their meal choice privately or publicly. Our findings were not consistent with our hypothesis.

The finding that men ate fewer calories in the presence of a same-sex partner who they find more attractive is somewhat consistent with a finding in previous research. According to Mori, Pliner and Chaiken, when men found their opposite-sex partner to be more desirable, they consumed a smaller quantity of food (1987). Although Mori focused on the amount of food

consumption, our current research only focused on the number of calories ordered. However, we can assume that the smaller quantity of food eaten, the less caloric intake.

Since the rise of COVID-19, people have changed their eating habits in many ways. An independent t-test found that prior to COVID-19 and the global pandemic, people ordered significantly higher number of calories compared to current times. Research conducted on the dietary and lifestyle changes during COVID-19 among Polish adults found that people had an increased intake of unhealthy foods such as fast-food and ice cream, and a decreased intake of fruits and vegetables (Magdalena et al., 2020). More research is needed to see what kind of event global pandemics have on food selection and dietary changes.

The current work of this study provides more understanding on the relationship between social motives, sex differences and their effect on food selection. Although previous research has found that people order fewer calories in the presence of an opposite-sex who they find to be more attractive, this research did not find that. A larger sample size and more data are needed to see if this finding could be significant, or if it is due to some type of error in the research.

One limitation to the current research is the limited sample size that we had. This low sample size is one possible reason why the research failed to find evidence of any affect. This small sample size also increased the likelihood that there would be an error that could skew the results and decrease the statistical power of this study. The second limitation is the limited age range of the participants. All of the participants were undergraduate students, with a median age of 19. This limits the amount of representation in the study, and the current findings may not be indicative of all adults. Finally, the rise of COVID-19 played a huge factor in the amount of data that was able to be collected during the duration of this study. Once the state was placed on lockdown restrictions, the university where this study was conducted was switched to an online

format. This reduced the number of participants that signed up for our research drastically. When students did return back to campus, facial coverings and social distancing guidelines were implemented. The use of facial coverings could affect how one perceives their partner, so partner ratings may have decreased, which could have affected food selection.

Future research on this study should continue to examine how social motives such as sex and partner attractiveness, affect food selection and food consumption. There are many unanswered questions about this topic such as why people order less when in the presence of a same-sex partner, and what other factors could affect food selection. Another way this topic could be studied is by using the general public instead of generalizing it to only college students. If the general public is used, more data can be collected, and the research can be expanded upon. The findings of future research can be applied in many ways. Nutritionists and healthcare professionals can use this research to let people know how food selection can change in the presence of different people without our conscious awareness and help educate to improve their health outcome.

Food selection and intake can depend on many social and individual factors such as sex, familiarity and perceived partner attractiveness (Cruwys, Bevelander and Hermans, 2015), and the food that people order in the presence of a same-sex or opposite-sex partner can change depending on how they view their partner. It is important for future research to keep studying what motivates someone, and what factor affects food selection most. It has been found multiple times that women order smaller portioned meals with less calories in order to make themselves seem more attractive, while men order larger, more expensive meals to show dominance and wealth. In countries where resources are scarce, men prefer heavier women. Understanding

what motivates people the most will help further our understanding on why people choose certain meals.

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