

SOCIAL MEDIA AND DINING BEHAVIOR

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### Abstract

Adolescents and young adults seek attention as well as approval from their peers by creating an idealized version of themselves through their posts on social media sites, and consequently receive both positive and negative feedback based on the content they share. In order to examine whether or not individuals would receive similar reactions for the types of meals they chose to eat, 11 males and 13 females were asked to take a picture of their meal at dinnertime for fourteen days. For seven of those days, they were asked to post the picture on Instagram (public condition) and for the other seven days were asked to take a picture but not to post it on Instagram (private condition). The participants were later asked to complete a questionnaire including sections from the Fundamental Social Motives Inventory, Social Physique Anxiety, and Self-Monitoring Scale. Paired samples t-tests and an ANCOVA were performed. The results of this study were not statistically significant; however, an exploratory analysis of the relationship between the individual difference measures and the public/private manipulation on each of the dependent measures (meal healthiness and happiness with the meal) yielded an interaction between the breakup concern subscale of the FSMI and happiness. In spite of the fact that the current formulation of this research failed to find significant results, it is still a topic that is deserving of further study.

### Social Media and Dining Behavior

Over the past two decades, social media has come to play an increasingly larger role in the lives of young adults. Adolescents and young adults seek attention as well as approval from their peers through their posts on social media sites. There are many factors that affect what sorts of content people choose to share and they consistently receive both positive and negative feedback from their peers based on the nature of the content they share. Young adults who partake in “online social exploration” and “risky online self-presentation” frequently tend to receive more negative feedback from their peers (Koutamanis et al., 2015). On the other hand, college freshmen are more likely to post authentic information about themselves on Facebook after perceived support from their audience, which, in turn, contributes to higher self-esteem (Yang & Brown, 2015). This feedback has been shown to have an impact on psychological well being (Koutamanis et al., 2015). Some studies have shown that use of social media has had a negative impact on people in that it has produced outcomes such as negative affect, loneliness, depression, decreased life satisfaction, and poor self-evaluations (Burke, Marlow, & Lento, 2010; Feinstein et al., 2013; Haferkamp & Kramer, 2011; Kross et al., 2013; Sagioglou & Greitemeyer, 2014; Tandoc, Ferrucci, & Duffy, 2015), as cited in a review by Vogel, et al., 2014. Contrarily, other studies have shown that social media usage can have positive effects, such as increased life satisfaction, perceived social support, and high self-esteem (Ellison, Steinfield, & Lampe, 2007; Gentile, Twenge, Freeman, & Campbell, 2012; Gonzales & Hancock, 2011; Kim & Lee, 2011; Manago, Taylor, & Greenfield,

2012; Nabi, Prestin, & So, 2013; Nadkarni & Hofmann, 2012; Wilcox & Stephen, 2013).

Use of social media may be driven by a desire for self-presentation. Self-presentation has been defined as “behavior that attempts to convey some information about oneself or some image of oneself to other people.” (Baumeister & Hutton, 1987). In other words, self-presentation is a “subset of impression management” where individuals’ identities and roles in society are developed by gaining social rewards through their interactions with other people (see Brown, 2007, for a review). People often construct an idealized version of themselves on social networking sites in an effort to share a positive self-image with their peers (Nadkarni & Hoffman, 2012). Adolescents with a less stable sense of self experiment with online self-presentation more regularly, presenting an idealized version of themselves and a preference for presenting themselves on social networking sites (Fullwood & Chen-Wilson, 2016). Conversely, adolescents with a more stable concept of self present an online self that is more consistent with their offline self-presentation. This suggests that adolescents with less self-confidence are more likely to portray themselves on social media in a manner that they believe will lead them to be liked and praised by their peers.

A wide range of behaviors can be presented via social media in an attempt to influence the way that one is perceived by others. People can share news of accomplishments, such as winning awards, or seek sympathy by sharing their struggles and sources of anxiety with others. It is also fairly common for users of social media to share seemingly mundane details about their daily lives, such as a

song that one finds enjoyable or observations about recreational activities in an attempt to seek approval from others. The current study will focus on the behavior of sharing one specific mundane yet universal detail of daily life: food selection. There are a number of social factors that affect food selection and dining behavior among adolescents i.e. if the person is more inclined to choose a healthier food option in the presence of peers and the amount of food the person chooses to consume. In a study conducted on 23 overweight and 42 nonoverweight youths, it was found that the participants ate more food when they were in the presence of their friends as opposed to when they were in the presence of an unfamiliar peer (Salvy et al., 2009). Furthermore, it was revealed that overweight participants consumed more food when eating with an overweight partner compared to a nonoverweight partner. This suggests that peers can have quite a bit of influence on the dining behaviors of a person as they feel more comfortable eating more food in the presence of friends they know will not judge them as well as in the presence of people who have the same body size/type as they do. Similarly, overweight children have been found to eat substantially more food when they are alone than when they are in the presence of another child, and the presence of peers can influence healthier food selection in both overweight and normal-weight children (Salvy et al., 2008). These findings could potentially hold true for people in the virtual presence of their peers via their social media accounts.

Although there is some research that has been done on the influence of social factors and peers on food selection in the physical presence of peers, there has not yet been a study that has looked at the impact of self-presentation on social

networking sites on people's meal choices. Social media is important when it comes to interpersonal influences because just like people seek approval for their beauty, body size/structure, etc. it is possible that they could also expect similar reactions toward the kinds of foods they are eating. If meal choices are revealed to the public, they might receive either a positive or a negative response from peers towards their eating habits based on the types of foods they chose. The current study sought to determine whether public sharing of information about one's meals via social media impacts the nutritional value of the food that people choose to consume at said meals. I hypothesize that if individuals know that a wide audience of friends and family members will be viewing their meals, they will choose to eat healthier meals than if the content of the meals is kept private.

### Methods

#### Participants

There were a total of 24 participants in this study (54.55% female). Participants were college students between the age of 18 and 24, recruited from introductory psychology courses at East Carolina University. They volunteered to participate by choosing the study from a list of available research opportunities on a website maintained by the psychology department. They were offered credit that would be applied toward the completion of a course research requirement as an incentive to take part in the study. The department of psychology provided alternative assignments to students who did not wish to participate in research.

#### Materials

Participants were required to have a smartphone with a data plan in order to participate in the study. They were asked to complete a 'Meal Photo Upload and Rating Form' via a secure web-based interface using Qualtrics survey software for the duration of the study. Using this form, participants uploaded a picture and provided a description of their meal, and rated how healthy they thought their meal was and how happy they were eating it on a scale of 1-7 (1 being 'Not At All' and 7 being 'Extremely'). After completing their part of the study, participants also completed additional questionnaires via the Qualtrics system that gathered their demographic information, including biological sex, gender, age, ethnicity, race, sexual orientation, current relationship status, parental status, and duration of their relationship. Finally, participants completed the Fundamental Social Motives Inventory (Neel et al., 2015), Social Physique Anxiety (Hart et al., 1989), and Self-Monitoring Scale (Snyder, 1974).

### Procedure

This study employed a within-subjects design. Participants were asked to attend a meeting with the researcher at the initial session of the experiment. After providing informed consent, participants were given all of the information they would need to successfully complete the study. They were asked to use their smartphones to take a photo and provide a brief description of their meal for dinner every night for a period of fourteen days. Before starting the experiment, the participants were placed in one of two groups: "public-private" or "private-public". During the "public" condition, they were asked to share the photo and description of each meal via their personal public Instagram account as well as upload the photo

and description via the private Qualtrics survey for seven of the fourteen days. During the “private” condition, they were asked to upload the photo and description of their meal via a private Qualtrics survey created by the researcher for the other seven days. The order of the two conditions was counterbalanced across participants. After the fourteen days were over, the participants were asked to attend a second meeting with the researcher during which they completed the questionnaires on Qualtrics and were finally debriefed regarding the purpose of the experiment. They were then asked to keep the photos and descriptions on their Instagram accounts for one week after they completed their study in order for the researcher to finish collecting data.

### Results

The two dependent measures were the perceived healthiness of each meal by participants and the self-reported happiness with each meal. These were calculated by computing the average healthiness and happiness ratings submitted by participants when they were assigned to share a photo of their meals on Instagram and when they were instructed not to post a photo of their meal. A total of 25 sets of responses were received from the participants, with the public condition having a mean of 5.80 and a standard deviation of 1.80, and the private condition having a mean of 5.56 and a standard deviation of 1.94.

A paired samples t-test was conducted to test the hypothesis that individuals will choose to eat healthier meals when randomly assigned to post a picture of their meal via Instagram than if the content of the meals is kept private. There was no significant difference in participants’ health ratings for meals that were publicly

posted ( $M=4.4$ ,  $SD=1.15$ ) and health ratings for meals that were private ( $M=4.04$ ,  $SD=1.22$ );  $t(23)=1.14$ ,  $p = 0.171$ . (See Figure 1).

A second paired samples t-test was conducted to compare participants' self-reported level of happiness while eating their meal under public and private conditions. There was no significant difference in the happiness scores for public ( $M=5.67$ ,  $SD=0.83$ ) and private ( $M=5.31$ ,  $SD=1.07$ ) conditions;  $t(23)=1.71$ ,  $p = 0.100$ . See Figure 2.

The public vs. private meal photo posting manipulation did not interact with any of the measured individual differences (FSMI subscales, Self-monitoring, Social Physique Anxiety) to influence meal healthiness ratings. An ANCOVA was conducted in order to perform an exploratory analysis of the relationship between the individual difference measures and the public/private manipulation on each of the dependent measures (meal healthiness and happiness with the meal). This analysis revealed no significant interactions with one exception: the breakup concern subscale of the FSMI interacted with the public vs. private posting manipulation to influence meal happiness ratings ( $F(1,10) = 6.394$ ,  $p = .03$ ). When participants were instructed to publicly post a picture of their meals, those with higher levels of breakup concern tended to be happier with their meals ( $r(12) = .406$ ,  $p = .191$ ). Conversely, when participants were asked to keep their meal contents private, those with higher levels of breakup concern tended to be less happy with their meals ( $r(12) = -.276$ ,  $p = .385$ ). Due to the exploratory nature of this analysis and the limited sample size, this result should be interpreted with caution.

Figure 1:

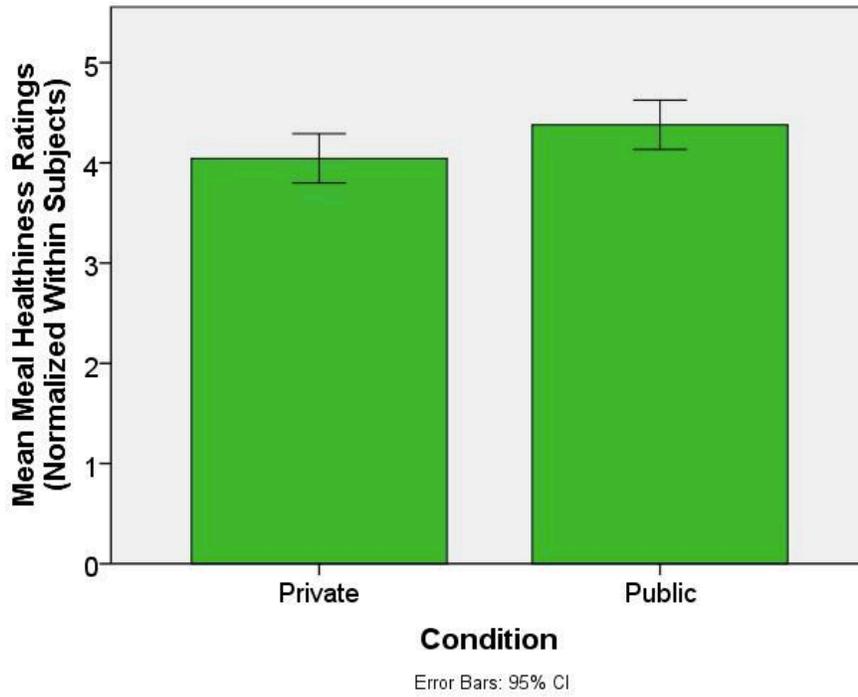
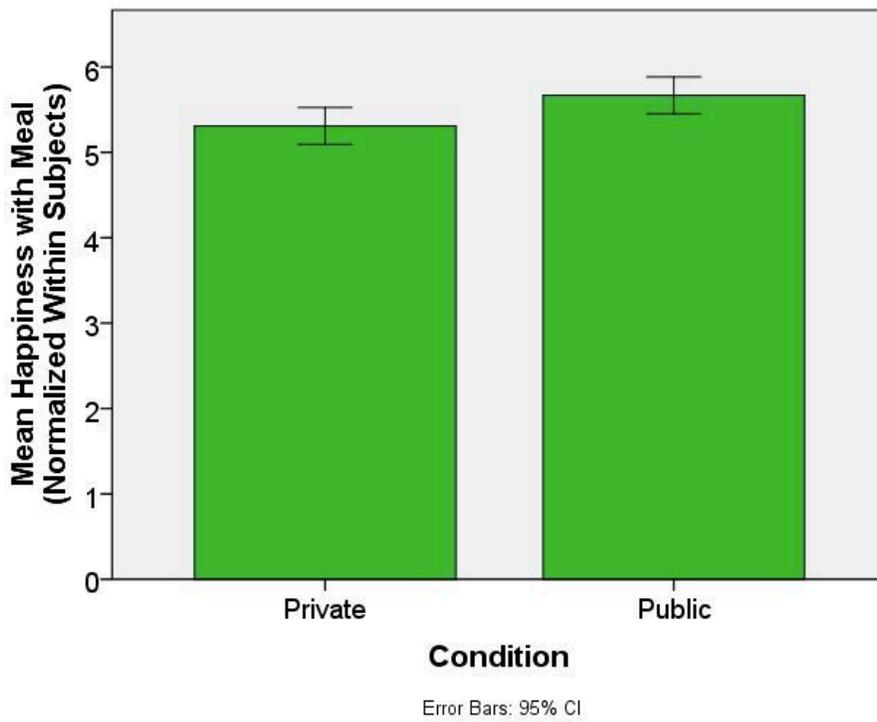


Figure 2:



### Discussion

The results of this study did not support the original hypothesis. The data failed to provide support for the prediction that if individuals know a wide audience of friends and family members will be viewing their meals, they will choose to eat healthier meals than if the content of the meals is kept private. Specifically, the results of the first and second paired samples t-tests suggested that neither one's level of happiness while eating a meal nor the healthiness of the meal was affected by sharing an image of the meal via social media. It is possible that the failure to find significant results for this study could be considered a Type II error resulting from a lack of statistical power. As for the interaction between the breakup concern subscale of the FSMI and the private vs. public posting manipulation, it could potentially be explained by the fact that those with higher levels of breakup concern were happier when publicly posting their meal than keeping it private because making any type of social media-related post increases opportunities for social connection with friends and possible new romantic partners, which may serve to alleviate anxiety resulting from breakup concern, which could have manifested as increased happiness in this condition. As mentioned previously, this finding was the result of exploratory analysis and the proposed explanation is speculative and should be interpreted with caution.

In addition, there were several limitations of this study. The sample size was rather small due to participants registering for the study but not completing all parts of it, resulting in missing data, which reduced the sample size and, consequentially, the level of statistical power. Additionally, the sample size was

restricted to college students of age 18-24, a group that may not be wholly representative of the general population. Yet another limitation was the fact that the dependent variable for meal healthiness was based solely on the participants' perceptions of the healthiness of their own meals, which may have been biased. Lastly, the participants were specifically instructed to post photos of their meal on social media. This is not something that naturally occurs in real life situations, and therefore it reduced the mundane realism of the study as well as the degree of external validity. However, this was necessary to maintain internal validity since allowing participants to choose whether or not to post photos of a particular meal would have introduced participation selection bias, in that they may have chosen to post healthier meals or chosen not to post unhealthy meals.

Regarding future directions for this study, supplemental processing of the collected data will be conducted. The meal photographs and descriptions will be coded for healthiness by independent raters who are blind to whether the meal photo was publicly posted or kept private. Additionally, future studies examining the hypothesized phenomenon should aim to recruit a larger sample. The sample size should be increased to at least 60 participants so as to acquire data that would provide sufficient statistical power to detect significant effects. The type of sample should also be expanded to include adults up to the age of 40 as well as teenagers between the ages of 12 and 17. Doing so could help provide insight on how these groups of people use and perceive themselves on social media differently. Lastly, researchers should conduct a more in-depth examination of the relationship

between meal satisfaction and breakup concern in order to better understand the statistical interaction discovered in this study.

In conclusion, the lack of results found in this study is inconsistent with previous research that has been conducted on similar topics. Other studies have shown that people create an idealized version of themselves on social media sites and have been found to receive positive or negative feedback based on the content they share. This research study sought to determine whether or not followers would react similarly towards an individual who possibly created an idealized version of his or herself through the types of meals they chose to eat and post pictures of. However, the results of this study did not portray this outcome. In spite of the fact that the current formulation of this research failed to find significant results, it is still a topic that is deserving of further study.

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