Introduction

- Obesity [body mass index (BMI) > 30 kg/m²] is a significant health concern and may be particularly problematic for first-year college women due to development of lifelong eating habits as freshman that may contribute to continued obesity or weight gain (BMI between 25-29.9 kg/m²) in later life.

- First year of college is a high risk period for weight gain, especially first-year women who are developing obesity or overweight (BMI between 25-29.9 kg/m²) in later life.

- Social Norms Approach suggests eating behavior can be influenced based on norms set by others' consumption.

- Neither theory sufficiently explains social eating and the impact of weight status on consumption in the current literature.

- Present experimental study attempted to resolve conflicting theoretical perspectives of Social Facilitation Theory and Norms Matching Approach by investigating if first-year college women’s palatable food intake adjusted to match researcher-set consumption norms while in groups of 2 or in 2 possible alone conditions (videotaped vs. not), and whether the weight status of participants affected adherence to these norms. Fifty-five women completed a survey on their interests alone, alone and videotaped, or with a partner, and were provided cookies purportedly as a snack during the survey. Normative consumption was set by a research assistant who stated how many cookies most participants ate and caloric consumption was measured.

- Neither norm condition nor BMI weight status were found to be alone but told they were being observed by a video camera decreased their consumption by about 107-116 calories compared to those participants who were alone and unobserved after controlling for hunger, sociability and dietary restraint. Paired individuals also decreased consumption but to a lesser extent than those alone but observed by video camera, about 65 calories, indicating social evaluative threat may be a factor of importance in addition to the mere presence of others. These preliminary findings provide implications for future social eating model evaluations, particularly those comparing eating alone to eating in groups.

Methods

Participants

- Fifty-five, first-time college women attending a large publicly-funded institution located in the southeastern United States.

- Procedure:

- Male mass Index
- Caloric Consumption
- Familiarity
- Sociability
- Subjective Hunger

- Three Factor Eating Questionnaire – Restraint Subscale

Statistical Analyses

- Correlations were analyzed for multicollinearity among predictors

- Sociability was found to be associated with observation condition (r=23, p=04) and therefore was entered into the first step of the regressions.

- Regression A: Subjective hunger, dietary restraint and sociability entered as step one, observation condition as step two and norm condition as step three with caloric consumption as the criterion variable.

- Regression B: Subjective hunger, dietary restraint, and BMI entered as step one, observation condition as step two and norm condition as step three with caloric consumption as the criterion variable.

Discussion

- Alone and “observed” participants’ consumption decreased ~107-116 calories vs. alone and unobserved participants after controlling for hunger, sociability and dietary restraint.

- Contrary to predictions, paired individuals also decreased consumption but to a lesser extent than those alone but observed by video camera (~65 calories).

- Consistent with expectations, consumption increased about 63-67 calories per unit increase in subjective hunger.

- Model did not support hypothesis that norms set by the RA affected consumption.

- Lack of evidence for social facilitation theory may be related to perceptions of evaluative threat depending on the source of the observation (video vs. peer) than to norm adherence.

- Health promotion efforts should consider social eating augmentation and inhibition in college women.

Future Areas of Research

- Larger sample (sufficient power) for multiple regressions

- Explore potential role of perceived weight status in future norm matching studies.

- Larger samples of overweight individuals to analyze possibility of an overweight-observed overweight paired effect of augmented consumption patterns.

- Explore impact of emotional valence of stimulus on norm matching, and if stimulus neutrality may negatively impact matching, as suggested in recent literature.

- Clarify evaluative threat role consumption and norms matching with regard to observation by a peer vs. video taping

- New model of social eating to include group size, social evaluative processes and interactions with moderators like weight status, dietary restraint, sociability and moderators not measured here, like emotional context.

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Results

- Measured mean BMI for the sample: 26.6 kg/m² (SD = 4.32)

- High norm condition negatively associated with manipulation check (65 vs. 02), indicating that participants receiving higher norm more likely to fail the manipulation check.

- BMI positively associated with dietary restraint (r=.31, p<.01).

- Social eating augmentation (SD) of 9.35 (5.83) for restraint is high relative to peer samples.

- All regressions including those not reported, norm condition did not account for a significant proportion of variance in consumption, contrary to expectations.

- The way analysis of variance combined to significantly influence norm consumption does not

- Descriptive statistics and correlations are presented in Table 1.

Limitations

- BMI positively associated with levels of dietary restraint, likely affecting consumption

- Those receiving the highest norm manipulation were more likely to fail the manipulation check, indicating questionable efficacy of the manipulation in those cases.

- Possibility that perception of permanent recording of consumption triggered decreased consumption response to the social evaluative threat.

- Study included sample of only first-year, first-time women, limiting generalizability of findings to men, older adults, women in other developmental stages, and mixed gender groups.

- Sample size likely insufficient to provide enough power to find certain factors.

References


- Weight gain in first-year college students is of particular concern in the development of lifelong overweight or obesity. Guided by social norm and social facilitation theories, the present experimental study investigated whether first-year college women’s palatable food intake was adjusted to match researcher-set consumption norms while in groups of 2 or in 2 possible alone conditions (videotaped vs. not), and whether the weight status of participants affected adherence to these norms. Fifty-five women completed a survey on their interests alone, alone and videotaped, or with a partner, and were provided cookies purportedly as a snack during the survey. Normative consumption was set by a research assistant who stated how many cookies most participants ate and caloric consumption was measured. Neither norm condition nor BMI weight status were found to be alone but told they were being observed by a video camera decreased their consumption by about 107-116 calories compared to those participants who were alone and unobserved after controlling for hunger, sociability and dietary restraint. Paired individuals also decreased consumption but to a lesser extent than those alone but observed by video camera, about 65 calories, indicating social evaluative threat may be a factor of importance in addition to the mere presence of others. These preliminary findings provide implications for future social eating model evaluations, particularly those comparing eating alone to eating in groups.