Available online: http://journal.ipb.ac.id/index.php/jgizipangan
ISSN 1978-1059 EISSN 2407-0920
J. Gizi Pangan, November 2024, 19(3):177-186
DOI: https://doi.org/10.25182/jgp.2024.19.3.177-186

Research Article

The Complexities of Social Dining: Investigating Role of Impression Management, External Eating, and Known Companion Towards Food Portion

Rere Deas Pramudea Reza*, Anna Undarwati
Department of Psychology, Faculty of Education and Psychology, Semarang State University, Semarang 50229, Indonesia

Article History:
Received *20-09-2024*
Revised *07-11-2024*
Accepted *27-11-2024*
Published *29-11-2024*

Keywords:
eating behavior, external eating, impression management, known peers, food portion

***Corresponding Author:**
tel: +6289516381441
email: reredeaspr.ptg@gmail.com

ABSTRACT

This study aims to investigate how dining with acquaintances or friends, the desire to manage others' impressions, external eating, and influence food portion sizes. The research employed a quasi-experimental design, involving 236 participants who were active students at Semarang State University, all of whom were not on a diet, did not have allergies, and non-vegetarians. A General Linear Model Univariate analysis reveals that individuals who ate alone had a bigger portion compared to when eating with a known companion ($F(1,228)=4.059$, $p=0.045$, partial $\eta 2=0.17$). Furthermore, the impression management or external cues influenced the individuals to take bigger portions when eating alone ($F(1,228)=5.290$, $p=0.022$, partial $\eta 2=0.023$; $F(1,228)=4110$, $p=0.044$). However, those with high impression management and external eating tendencies took larger portions when eating with a known companion ($F(1,228)=4.652$, $p=0.032$, partial $\eta 2=0.020$). Thus, the presence of a known companion had a less significant influence on overall portion sizes ($F(1,228)=4.059$, $p=0.045$, partial $\eta 2=0.17$). These findings suggest that known companions exert a complex effect on eating behaviors. Future research should provide clearer guidelines for the appropriate portion sizes companions should take, while emphasizing healthy food choices in social dining setting.

INTRODUCTION

Obesity and overweight have become increasingly significant issues in Indonesia, with excess fat accumulation in overweight and obese individuals leading to chronic diseases, as well as emotional, social, and economic challenges (Masrul 2018; Khotimah & Nainggolan 2019; Sumarni & Bangkele 2023). The prevalence of overweight and obesity among children and adolescents aged 5 to 19 years has increased drastically, from 4% in 1975 to over 18% ini 2016 (Dianah *et al.* 2022). Furthermore, The National Basic Health Research data (MoH RI 2018) indicates among individuals aged 20−24 years, 8.4% are overweight, and 12.1% are obese. As of 2023, the prevalence of overweight in Indonesia has risen to 8.6% and obesity at 13.4%. Among 19 years old, obesity prevalence stands at 8.5%, and overweight 6.2% (IHDPA 2023).The continued increase highlights the need for prevention strategies addressing the underlying causes.

Unhealthy eating habits, often associated with overweight and obesity, often rooted from a lack of nutritional knowledge (Khoirunnisa & Kurniasari 2022). Factors such as macronutrients intake, fiber consumption, breakfast habits, and individual eating patterns influence obesity level (Mulyani *et al.* 2020). Another significant factor is the increasing consumption of calorie and fat-dense fast food (Dianah *et al.* 2022). Food portion size are closely linked to the risk of weight gain (Livingstone & Pourshahidi 2014). Food portions that are not balanced with energy expenditure lead to excess body weight (Stroebe 2023). This demonstrates that consuming portions larger than needed contributes to weight gain. In addition, food choices are influenced by external factors, such as the presence of friends, and internal factors (Higgs & Thomas 2016).

Known companions, such as acquaintances or friend, can influence eating behavior. Previous research shows that people tend to eat similar amount with acquaintances and eat more while with close friend (Higgs *et al.* 2022). Friend's food choices and portions strongly influence others (Higgs 2015; van den Broek *et al.* 2022). This influence stems from social norms shaped by societal expectations or beliefs regarding consumption. For instance, women are often viewed more favorably when eating smaller portions (Higgs 2015; Robinson *et al.* 2014).

Beyond social norms, friends can encourage individuals to align their behavior with their companions, acting as role models in eating habits (Cruwys *et al.* 2015). Studies also show that the presence of friends at meals increases food intake as individuals tend to prepare more pre-meals, leading to larger portions being available. Additionaly, eating with friends also extend meal duration, which can prompt increased consumption (Ruddock *et al.* 2021). There is conflicting evidence regarding the influence of known companions on eating behaviour. Previous studies involving students in Semarang found that social factors, such as the influence of friends or family, did not directly affect food choices. Social factors can have an impact if other factors, such as personal conditions or consumer behavior, are involved in the process (Ramadhani *et al.* 2024). However, other research has found no significant influence of peers on individual eating habits (Jauziyah *et al.* 2021; Lindawati 2019; Muna & Mardiana 2019). These inconsistencies suggest that additional factors, such as individual impression management, may also play a role in eating behavior.

Impression management is one of the factor that influences changes in food portions. In social interactions, individuals often adjust their behavior to shape other's perceptions and present themselves favorably (Bolino *et al.* 2016; Huang *et al.* 2014; Otterbring *et al.* 2023). This conscious modification of actions to desired impression, is known as impression management (Goffman 2023). Moreover, impression management becomes active under two conditions: when individuals regularly monitor their impact on others, and are motivated to measure and control other people's perceptions (Leary & Kowalski 1990). Eating behavior, including adjusting portion sizes, is one way individuals practice impression management (Folwarczny *et al.* 2023). Self-presentation serves three functions: interpersonal influence, identity construction and self-esteem maintenance, and the enhancement of positive emotions (Leary 2019). Conforming to others' food preferences fulfils one of these functions, as it is often considered as emotionally positive (Higgs & Thomas 2016).

In addition to impression management, external eating also affects meal portions. External eating refers to eating behavior triggered by environmental stimuli, such as the smell, appearance, or taste of food, which can increase food intake and lead to larger portion size (Polivy and Herman 2015; Zarychta *et al.* 2019). These external cues often stimulate the urge to eat, overriding satiety. External eaters are more influenced by environmental conditions than by internal signals of hunger or fullness (Hendrikse *et al.* 2015). Visual and olfactory stimuli, such as the sight or smell of food, can trigger eating behavior (Boswell and Kober 2016). Food cues may increase cravings and motivate individuals to seek specific foods (Maxwell *et al.* 2017). External influences can diminish the role of satiety, leading to excessive food consumptions (Boswell & Kober 2016; Schneider-Worthington *et al.* 2022). Additionally, a study indicates that external eating is closely related to obesity, as overweight individuals are particularly vulnerable to environmental cues, such as the availability, variety, and palatability (Benbaibeche *et al.* 2023).

A review of previous research reveals inconsistencies in the influence of known companions on eating behavior and highlights other factors affecting meal portions. Previous studies relied on questionnaires to assess behavior, which can introduce bias, as individuals tend to choose answers that reflect ideal conditions rather than their actual behavior. This study uses a fake food buffet to measure behavior more accurately, as participants' food choices are likely to reflect their genuine preferences. There is also limited research on the influence of friends on food choices and meal portions among students at universities in Semarang.

Therefore, this study aim to determine the influence of known companions on meal portions using different methods such as behavioral measurement. This study provides novelty by examining the interaction between known companions, impression management, and external eating behavior in relation to

individual meal portions. Furthermore, this study employed behavioural measurement through a fake food buffet during data collection process. The research results are expected to enhance knowledge and inform strategies for promoting healthier eating behaviors. However, this study is limited to active students at Semarang State University.

METHODS

Design, location, and time

This study utilized a quasi-experimental design, incorporating both self-reported and behavioral measurements. The research was conducted with students at Semarang State University in December 2023. This study received ethical clearance from the Health Ethics Committee of Semarang State University (approval number 444/KEPK/EC/2023).

The study procedure involved dividing participants into two groups: the experimental group and the control group. The experimental group consisted of participants who made their food choices in the presence of a known companion, while the control group made their food choices without being accompanied. Known companion is determined from random active students in Semarang State University, who introduced themselves to the participants to ensure familiarity. The research was conducted for approximately 8 days, with 3 days for the control group and 5 days for the experimental group. The study was conducted in a laboratory setting, divided into two sessions. Participants in the first session were assigned to the control group, while those in the second session were placed in the experimental group.

The laboratory was divided into three rooms. In the first room, participants completed informed consent forms and questionnaires. In the second room, they selected food, and in the third room, they received debriefs. Participants began in the first room by signing the informed consent form, ensuring mutual agreements on the research terms. Next, participants completed demographic forms, a hunger scale, and questionnaires (Impression management scale and DEBQ 33). The hunger scale assessed variations in the participants hunger levels. In the experimental group, the companion was instructed to establish familiarity with the participant to ensure they knew each other before proceeding to the next phase. Both groups then proceeded to the second room to select food from the fake food buffet. A fake food buffet was arrange on a large table alongside with smaller table with cutlery (trays, spoons, forks, plates and glasses). Before taking the food, the researcher explained the process of taking the food. Participants then selected food according to the menu and their current appetite, taking as much as they desired and placing it on their plate. For drinks, participants selected from the available options and decided whether they would use sugar or not. There were no limits on the quantity of food taken. Control group participants chose their food alone, while the experimental group made their choices alongside with a companion, with whom they were allowed to converse. After completing the procedure, participants received debriefing about the experiment. Upon completing the study, participants were given a reward.

Sampling

The study population consisted of active students from Semarang State University. Voluntary quota sampling was employed with specific inclusion criteria: partcipants had to be an active student, and are not vegetarian, do not have food allergies, or be on a diet program. Sample size analysis was conducted using G*Power 3.1.9.4 with t-test, assuming an effect size of d 0.5, alpha=0.5, and power of 0.90, resulting in a minimum sample size of 231 participants with a medium a priori effect size. The study ultimately recruited 236 participants, comprising 116 in the control group (eating alone) and 120 in the experimental group (eating with known companion).

Recruitment involved distributing pamphlets online, through platforms such as WhatsApp and Instagram, as well as direct brochures distribution. Participants received souvenirs as a token of appreciation. Companion in this study is an active student who is well known and involved in students union (e.g. BEM). Prior to the experiment, companions greeted and conversed with the participants to build rapport.

Data collection

The study hypothesized that known companions, impression management, and external eating would influence meal portions. The hypothesis also included interaction effects between known companions and impression

management or external eating, impression management and external eating, as well as the combined effect of all three factors. To measure individual food portions, this study utilized a fake food buffet, developed by Tamara Butcher in 2011. The fake food buffet consist of a buffet of food replica for participants to choose from. Butcher's research indicates that the overall reliability of the menu was high (M=4.81, SD=0.83). The results from using fake food buffet showed a strong correlation with the results from real food buffets (r=0.76) (Bucher *et al.* 2012). The fake food buffet was selected from its hygienic advantages, practicality, and efficiency compared to using real food. The menu consisted of 24 items, including grilled chicken, meatballs, white rice, boiled potatoes, boiled carrots, boiled cauliflower, apples, bananas, fried chicken, fried beef sausages, fried rice, chips, fried carrots, fried cauliflower, cakes, and fries. Beverages offered included mineral water, juice, soda, Sprite, sweet tea, plain tea, sweet coffee, and plain coffee. The buffet setup included utensils such as plates, spoons, and trays. The fake food dishes was served individually on each plate. For example, fried chicken and fried cabbage were placed on separate plates. Meanwhile, beverage such as Coca-Cola, Sprite, coffee, tea and bottled mineral water were placed directly on the table. The layout arranged drinks and dessert placed next to each other with the main course positioned in front.

Participants completed a hunger scale using a 1−5 likert scale with 1 indicating not hungry and 5 indicating very hungry. Impression management was measured using Bolio and Turnley's 1999 impression management scale, which assesses self-promotion, ingratiation, exemplification, intimidation and supplication. This scale also employed a Likert scale from 1 (strongly disagree) to 5 (strongly agree) (Karam *et al.* 2016). External eating behavior was measured using the DEBQ-33 questionnaire (Van Strien *et al.* 1986), which covers restrained eating, emotional eating, and external eating. For this study, only the external eating data from the 10-item DEBQ-33 questionnaire was used. This contain question on how external cues impact food portion (e.g. If foods smells and looks good, do you eat more than usual?). It uses Likert scale from 1 to 5, where 1 indicates for never and 5 indicates very often. At the end of the section, to assess the familiarity with companion, participantes were responded to a scale from 1 (do not know the companion) to 5 (familiar with the companion).

Data analysis

Questionnaire data were scored according to each specific measures used in the study. Hunger scale data were analyzed using frequency analysis in SPSS, with each hunger level (range between 1: extremily not hungry and 5: extremily hungry) calculated as a percentage of the total number of participants. Similarly, the level of acquaintance with companions in the experimental group was also analyzed to determine the percentage distribution accross each category of level of acquaintance. Portion data from the fake food buffet were manually counted by summing the total number of items selected by each participant. For instance, if a participant chose one serving of plain rice, two serving of fried chicken and one mineral water, so the total item would be four items.

The data from fake food buffet, DEBQ for External Eating, and IM Questionnaire were analyzed using the General Linear Model (GLM) Univariate analysis in BMI SPSS 25.0, with a significance threshold of $p<0.05$. The GLM Univariate approach examined the relationship between the dependent variable and one or more independent variables (portion size, or the total number of food items selected). The independent variables: impression management, known companion, and external eating. Statistical significance was determined with $p<0.05$.

RESULTS AND DISCUSSION

Participants' characteristics including gender, age, Body Mass Index (BMI), and hunger scale. presented at Table 1. Female comprised 60.0% of the sample, and males made up 40.0%. In term of age, 46.2% of participants were between 17 to 19 years old, while 53.8% were aged 20 to 25 years. Regarding BMI, the majority (49.6%) had an ideal body weight, while 22.4% were underweight. The percentages of overweight was 13.6%. Followed by obese I around 10.6% and obese II around 3.8% among the participants. Hunger scale results varied; with 51.3% of participants reported low hunger, 30.1% reported medium hunger, and 18.7% reported very hungry. The companion was a well-known, active students in university union (e.g. BEM).

Table 1. Participant characteristics

Characteristics	n	%
Gender		
Female	141	60.0%
Male	95	40.0%
Age (years)		
17−19	109	46.2%
20−25	127	53.8%
Body mass index (kg/m^2)		
Underweight (<18.5)	53	22.4%
Ideal (18.5–22.9)	117	49.6%
Overweight (23–24.9)	32	13.6%
Obese I (25–29.9)	25	10.6%
Obese II (30 or more)	9	3.8%
Hunger level		
Low hunger/Not hungry	121	51.3%
Medium hunger	71	30.1%
Hungry/Very hungry	44	18.7%
Familiarity to the acquaintance scale		
Had known	75	62.5%
Quite familiar	29	24.2%
Familiar	16	13.3%
Total	120	100.0%

Analysis of Table 1 shows that 62.5% of the 120 experimental group participants reported that they had known the companion (acquaintance) in one way or another, while 24.2% reported quite familiar with the companion, and 13.3% felt familiar with the companion. This data indicates that all participants were at least somewhat acquainted with the companion. The portion size represented by the number of items taken by participants. The average around 10.08 or approximately 10 items. The minimum number of items taken was 2, while the maximum was 36, with mode of 7. The measurement of external eating was conducted using the scores from 10 questions in the DEBQ-33 questionnaire, with participants' minimum score being 14 and maximum score 47. The average score obtained was 31, with the following distribution: 3% of the total participants had the average score, while 25.4% scored between 14−31, and 71% scored between 32–47. Meanwhile, the measurement of impression management used Bolio and Turnley's 1999 scale. The minimum score recorded among participants was 22, while the maximum score reached 105. The average score fell within the range of 59−60, with the distribution as follows: 5.1% of the total participants had the average score, 44.9% scored between 22–58 and 50% scored between 61–105.

Table 2 shows that individuals who ate alone (M=11.40, SD=4.18) consumed larger portion compare to those who accompanied by a known companion (M=8.72, SD=3.42), this suggests that eating with a known companion reduces portion size. The average External Eating score was 31.14 with a standard deviation of 5.64 indicating that most data points close to the average score. Meanwhile, Impression Management (M=59.73, SD=12.74) is evenly distributed. This suggest that some food preferences among participants vary, which are influenced by their impression management and other less affected.

Table 3 presents the results of the univariate GLM analysis indicating that individual who eat alone showed positive association with the portion of food taken, $F(1,228)=4.059$, $p=0.045$, $\partial\eta 2=0.017$. Individuals who eat alone tend to eat bigger portion compared to those who eat in the presence of known peers. While External eating and Impression management alone as moderators did not show significant influence toward portion taken (IM ($F(1,228)=0.791$, $p=0.375$, $\partial\eta 2=0.003$) and external behavior ($F(1,228)=0.403$, $p=0.526$, $\partial\eta 2=0.002$)). However, the interaction between the presence of Known Companion (KC) and Impression Management (IM) is significant in influencing meal portions, $F(1,228=5.290$,

Table 2. Descriptive statistic of portion

Variables	Mean±SD	n
Group		
Alone	11.40±4.18	120
Known companion	8.72±3.42	116
Total	10.08±4.04	236
External eating	31.14±5.64	236
Impression management	59.73±12.74	236

SD: Standard Deviation

Table 3. General linear model univariate details

Effect	Variable	F	Sig	Partial eta square
Main				
	Group	4.059	0.045*	0.017
	EXT	0.791	0.405	0.003
	IM	0.403	0.220	0.007
Interaction				
	Group*EXT	4.110	0.044*	0.018
	Group*IM	5.290	0.022*	0.023
	EXT*IM	0.172	0.206	0.007
	Group*EXT*IM	4.652	0.032*	0.020

*: General linear model univariate analysis test significantly at $p<0.05$; Group: Participants who eat alone vs with a known companion; IM: Impression Management; EXT:External Eating

p=0.022, ∂η2=0.023. Additionally, the interaction effect between KC and External Eating (EXT) behavior is also significant in influencing meal portions, F(1,228)=4.110, p=0.044, ∂η2=0.018. Subsequently, the total effect of interaction between KC, IM, and EXT showed significant influences on meal portions, F(1,228)=4.652, p=0.032, ∂η2=0.020. As predicted, the interaction effect between impression management and external eating behaviour is not significant on meal portions F(1,228)=0.172, p=0.678, ∂η2=0.001).

However, the effect size of the model is relatively small by looking the partial eta square of the independence variables (i.e., Group: 0.017; Group*Impression management: 0.023; Group*External eating: 0.018; Group*Impression management*External eating: 0.020) were between small to medium (0.01−0.06) (ASC 2024). These indicate that all independence variables have significant influence on the food portion even though others variables might have stronger impact.

These results support the hypothesis that the interaction of known companions, impression management, and external eating influences individual food portions. Specifically, while the interaction effect of eating with a known companion, impression management, and external eating can lead to an increase in individual food portions. Participants who eat alone tend to take larger portions than when with a known companion. Individuals who eat alone tend to take bigger portions of food when having impression management or when having external eating behaviors compared to when accompanied. Another hypothesis, which states that impression management and external eating, as well as their interaction, affect food portions, is rejected. This may be because both variables cannot exert their influence without the presence of other individuals in the process. Despite the statistical significance of known companions and their interactions with other variables, the effect size suggests a weak influence on the outcome. This could be attributed to the impact of other factors.

Although participants have a desire to manage their image in front of others, they tend to take a larger portion when eating alone compared to eating with a known companion. Overall, individuals are motivated to present themselves favourable, as the image they project impacts how others perceive and treat them, as well as their own self-perception. In social interactions, self-monitoring often leads to impression management (Wang *et al.* 2020). Impression management becomes active when individuals are conscious of an audience whose impressions they want to control, this could explain participants' behavior that eating large portions when alone compared when with a known companion. The presence of an identity threat can reduce individual food portions. For instance, a good impression of femininity in women is often associated with taking smaller portions of food. The influence of impression management in a social context is less about the eating behavior of what companions eat and more about adhering to the norms of smaller portion sizes, as demonstrated in Vartanian's research (Vartanian *et al.* 2017). This explanation aligns with the tendency to mimic the behaviors or

thoughts of others to gain acceptance in a desired social group (Li *et al.* 2023). Such evidence supports the idea that impression management can be strategically employed to influence and alter eating behavior (Folwarczny *et al.* 2023).

Another aspect that drives individuals to consume larger portions is their tendency toward external eating. External eaters are influenced by environmental cues like taste and aroma in their food selection process (Nurdiani *et al.* 2023). This behavior is often associated with unhealthy eating habits, as it stimulates cravings for sweet, high-fat, or high-carbohydrate foods (Boswell & Kober 2016; Dakin *et al.* 2023). External eaters also tend to disregard feelings of fullness, leading to the consumption of larger (Schneider-Worthington *et al.* 2022). Compared to eating with a known companion, a lack of self control encourages participants to eat more when dining alone. The presence of a known companion introduces a new factor that impacts portion size, such as social modelling. Social modelling requires individuals to observe and imitate the behavior of others regarding food choices and portion sizes (Liu & Higgs 2019). For instance, when eating with individuals who takes small portions, they tend to take smaller portions as well, and vice versa (Vartanian 2015). The presence of known peers during food selection influences individuals to align their portions with what they observe.

Portion size increases when known companions, impression management, and external eating behavior interact, potentially due to distractions during the food selection process. In the experiment, the companion was instructed to engage participants in conversation or encourage them to get to know each other. The pressure to create a friendly impression via impression management may cause individuals to become more socially engaged while selecting food. This interaction between individuals and confederates as peers create distractions in taking food process. Any distraction results in reduced self-monitoring while eating, therefore they tend to take larger portions of food (van Meer *et al.* 2022). These distractions, caused by the communication process between participants and companions, highlight the impact of known companions during food selection.

The overall results of this study show that the presence of known companion can influence eating behavior through the roles of social norms and modelling. Peers involved in the process create conditions that align with appropriate behavioral norms, encouraging individuals take smaller portions of food to maintain a favorable impression (Higgs 2015; Vartanian 2015). This triggers the emergence of role modeling for other individuals present at that time. Individuals tend to follow the eating behaviours of other people who are present at the same time. For instance, if peers take smaller portions, the individual will likely do the same (Cruwys *et al.* 2015; Liu & Higgs 2019). Another finding from this study shows that, as moderators, impression management and external eating, as well as the interaction between the two, are not significant in influencing individual food portions since both factors require the presence of other people to have an effect.

This study reveals the complexity of the influence of known companions on food portions, which vary depending on internal and environmental conditions at the time of food selection. The findings of this study have practical applications for daily life. To prevent overeating, individuals can be encouraged to eat with known companions; such as family or friends. In addition, people can prevent taking excessive portions by limiting distractions, such as engaging in conversation while eating. Furthermore, the results of this study provide new insights into how adjusting social conditions, such as eating with known peers, can help reduce portion sizes and address issues like obesity in Indonesia. The presence of known companions can effectively reduce food intake, especially when individuals have external eating or motivated to impress others. A notable strength of this study is its use of behavioral measurement techniques, which ensures that the results reflect actual behaviors. However, a limitation of this study is the lack of an ideal standard for the portion sizes taken by confederates and the hunger scale was only used to ensure variation among participants. Future research should establish standardized portions size for confederates. Another limitation is the limited exploration of the hunger scale's influence on food portions. Researcher also could examine the hunger scale as an independent variable, including analyzing its interactions with other relevant factors. Additionally, future studies could focus more specifically on healthy food choices, rather than solely on portion sizes. This would help expand the scope of research in this area.

CONCLUSION

The interaction between known companions, impression management, and external eating behavior can lead to increased food portions. Participants with a tendency for external eating behavior or those who desire to manage their self impression in front of others tend to consume a larger portion when eating alone compared to when accompanied by a known companion. The desire to create a positive impression encourages people to eat less only active when there is other people around them. While individuals with external eating habits often model their behavior based on social cues from their peers. However, when all three factors—known companions, impression management, and external eating—interact simultaneously, distractions may arise, leading to larger food portions being consumed. This study provides valuable insights for developing communication strategies aimed at behavior change, which can be utilizd to reduce or prevent obesity.

ACKNOWLEDGMENT

The authors would like to thank the eating behavior team for the support and to the participants who have contributed in this study.

DECLARATION OF CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

[ASC] Academic Success Center. 2024. Partial eta square. https://resources.nu.edu/statsresources/eta [Accessed 23th November 2024].

Benbaibeche H, Saidi H, Bounihi A, Koceir EA. 2023. Emotional and external eating styles associated with obesity. J Eat Disord 11(1):67. https://doi.org/https://doi.org/10.1186/s40337-023-00797-w

Bolino M, Long D, Turnley W. 2016. Impression management in organizations: Critical questions, answers, and areas for future research. Annu Rev Organ 3(1):377–406. https://doi.org/10.1146/annurev-orgpsych-041015-062337

Boswell RG, Kober H. 2016. Food cue reactivity and craving predict eating and weight gain: a meta-analytic review. Obes Rev an Off J Int Assoc Study Obes 17(2):159–177. https://doi.org/10.1111/obr.1235

Bucher T, van der Horst K, Siegrist M. 2012. The fake food buffet - a new method in nutrition behaviour research. Br Nutr 107(10):1553–1560. https://doi.org/10.1017/S000711451100465X

Cruwys T, Bevelander KE, Hermans RCJ. 2015. Social modeling of eating: A review of when and why social influence affects food intake and choice. Appetite 86:3–18. https://doi.org/10.1016/j.appet.2014.08.035

Dakin C, Beaulieu K, Hopkins M, Gibbons C, Finlayson G, Stubbs RJ. 2023. Do eating behavior traits predict energy intake and body mass index? A systematic review and meta-analysis. Obes Rev an Off J Int Assoc Study Obes 24(1):e13515. https://doi.org/10.1111/obr.13515

Dianah R, Andari EA, Putri EA, Dwinanti CC, Nafisah DN. 2022. Penyuluhan cara mencegah obesitas pada remaja dengan pola makan yang sehat Jurnal Sains dan Teknologi 3(3):41–50. https://doi.org/10.47841/saintek.v3i3.220

Folwarczny M, Otterbring T, Ares G. 2023. Sustainable food choices as an impression management strategy. Curr Opin Food Sci 49:100969. https://doi.org/10.1016/j.cofs.2022.100969

Goffman E. 2023. The presentation of self in everyday life, social theory re-wired. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003320609-59/presentation-self-everyday-life-erving-goffman [Accessed 27th September 2024].

Hendrikse JJ, Cachia RL, Kothe EJ, Mcphie S, Skouteris H, Hayden MJ. 2015. Attentional Biases for food cues in overweight and individuals with obesity: A systematic review of the literature. Obes Rev 16(5):424–432. https://doi.org/10.1111/obr.12265

Higgs S. 2015. Social norms and their influence on eating behaviours. Appetite 86:38–44. https://doi.org/10.1016/j.appet.2014.10.021

Higgs S, Bouguettaya A, Ruddock H. 2022. Awareness of Social influences on eating is dependent on familiarity with imagined dining partners and type of eating occasion.

Front Psychol 13:841422. https://doi.org/10.3389/fpsyg.2022.84142

Higgs S, Thomas J. 2016. Social influences on eating. Curr Opin Behav Sci 9:1–6. https://doi.org/10.1016/j.cobeha.2015.10.005

Huang MCJ, Wu HC, Chuang SC, Lin WH. 2014. Who gets to decide your complaint intentions? The influence of other companions on reaction to service failures. Int J Hosp Manag 37:180–189. https://doi.org/https://doi.org/10.1016/j.ijhm.2013.10.008

[IHDPA] Indonesian Health Development Policy Agency. 2023. Survey Kesehatan Indonesia 2023. Central Jakarta (ID): IHDPA

Jauziyah S, Nuryanto N, Tsani AFA, Purwanti R. 2021. Pengetahuan gizi dan cara mendapatkan makanan yang berhubungan dengan kebiasaan makan mahasiswa di Universitas Diponegoro. J Nutr Coll Vol 10(1). https://doi.org/10.14710/jnc.v10i1.30428

Karam CNA, Sekaja L, Geldenhuys M. 2016. Validation of the Bolino and Turnley Impression Management Scale. South African J Psychol 46(4):530–541. https://doi.org/10.1177/0081246316640205

Khoirunnisa T, Kurniasari R. 2022. Pengaruh edukasi melalui media pada kejadian overwight dan obesitas : Literature review. Jurnal Kesehatan Masyarakat 6(2):1212–1217. https://doi.org/10.31004/prepotif.v6i2.4338

Khotimah EN, Nainggolan O. 2019. Relationship between central obesity with emotional mental disorder in the productive age. Media Litbangkes 29(3):225–234. https://doi.org/10.22435/mpk.v29i3.501

Leary MR. 2019. Self-Presentation: Impression Management And Interpersonal Behavior. New York (USA): Routledge

Leary MR, Kowalski RM. 1990. Impression management: A literature review and two-component model. Psychol Bull 107(1):34–47. https://doi.org/10.1037/0033-2909.107.1.34

Li M, Krisyani JK, Herianto DNP, Azkiyah NS. 2023. Psychoanalytic study of Carl Gustav Jung: persona in the character Tang Xin in the Drama 'Nǐ Hǎo, Shénqiāngshǒu' episodes 1–15 by Danton Nabilla Putri Herianto. Ijcis 1(1):47–58. https://doi.org/10.26740/ijcis.v1i1.25238

Lindawati L. 2019. Pengaruh teman sebaya terhadap perilaku jajan sehat anak di SDN Karangsari 2, Tangerang. J Media Informasi Kesehatan 6(1):61–68. http://jurnal.poltekkesbanten.ac.id/Medikes/article/view/159

Liu J, Higgs S. 2019. Social modeling of food intake: No evidence for moderation by identification with the norm referent group. Front Psychol 10:159. https://doi.org/10.3389/fpsyg.2019.00159

Livingstone, MBE, Pourshahidi LK. 2014. Portion size and obesity. Adv Nutr 5(6):829–834. https://doi.org/10.3945/an.114.007104

[MoH RI] Ministry of Health Republic of Indonesia. 2018. Laporan Riskesdas 2018 Nasional. Jakarta (ID): Lembaga Penerbit Balitbangkes

Masrul M. 2018. Epidemi obesitas dan dampaknya terhadap status kesehatan masyarakat serta sosial ekonomi bangsa. Maj Kedokt Andalas 41(3):152–162. https://doi.org/10.25077/mka.v41.i3.p152-162.2018

Maxwell AL, Loxton NJ, Hennegan JM. 2017. Exposure to food cues moderates the indirect effect of reward sensitivity and external eating via implicit eating expectancies. Appetite 111:135–141. https://doi.org/10.1016/j.appet.2016.12.037

Mulyani NS, Arnisam A, Fitri, SH, Ardiansyah A. 2020. Faktor penyebab obesitas pada remaja putri di Aceh besar. J Ris Gizi 8(1):44–47. https://doi.org/10.31983/jrg.v8i1.5472

Muna NI, Mardiana M. 2019. Faktor-faktor yang berhubungan dengan konsumsi buah dan sayur pada remaja. Sport Nutr J 1(1):1–11. https://doi.org/10.15294/spnj.v1i1.31187

Nurdiani R, Rahman NA, Madanijah S. 2023. Perilaku makan tipe emotional, external dan restrained kaitannya dengan indeks massa tubuh mahasiswa. J Ilmu Gizi Dan Dietetik 2(1):59–65. https://doi.org/10.25182/jigd.2023.2.1.59-65

Otterbring T, Gasiorowska A, Folwarczny M. 2023. Editorial: Impression management strategies and environmental cues as focal factors in food research. Front Nutr 10:1254856. https://doi.org/10.3389/fnut.2023.1254856

Polivy J, Herman CP. 2015. Eating in Response to External Cues in Managing and Preventing

Obesity: Behavioural Factors and Dietary Interventions. United Kingdom (UK): Woodhead Publishing Limited.

Ramadhani CJ, Fadilah LT, Zahira MR, Riyanto Z, Lutfiatun N, Carisa NY, Fatimah RN, Sirfefa W. 2024. Analisis faktor yang mempengaruhi keputusan dalam memilih menu makanan pada mahasiswa program studi gizi Universitas Negeri Semarang 2023. J Anal 3(2):177–194.

Robinson E, Thomas J, Aveyard P, Higgs S. 2014. What everyone else is eating: A systematic review and meta-analysis of the effect of informational eating norms on eating behavior. J Acad Nutr Diet 114(3):414–429. https://doi.org/https://doi.org/10.1016/j.jand.2013.11.009

Ruddock HK, Long EV, Brunstrom JM, Vartanian LR, Higgs S. 2021. People serve themselves larger portions before a social meal. Sci Rep 240:113539. https://doi.org/10.1016/j.physbeh.2021.113539

Schneider-Worthington CR, Smith KE, Roemmich JN, Salvy S-J. 2022. External food cue responsiveness and emotional eating in adolescents: A multimethod study. Appetite 168:105789. https://doi.org/https://doi.org/10.1016/j.appet.2021.105789

Stroebe W. 2023. Is the energy balance explanation of the obesity epidemic wrong? Appetite 188:106614. https://doi.org/10.1016/j.appet.2023.106614

Sumarni S, Bangkele EY. 2023. Persepsi orang tua, guru dan tenaga kesehatan tentang obesitas pada anak dan remaja. Heal Tadulako J 9(1):58–64. https://doi.org/10.22487/htj.v9i1.658

van den Broek N, de la Haye K, Veldhuis L, Verhagen M, Larsen JK, Vink JM, Burk WJ. 2022. Examining food intake similarities in adolescent best friend dyads using longitudinal Actor-Partner Interdependence Models. Appetite 175:106072. https://doi.org/https://doi.org/10.1016/j.appet.2022.106072

van Meer F, de Vos F, Hermans RCJ, Peeters PA, van Dillen, LF. 2022. Daily distracted consumption patterns and their relationship with BMI. Appetite 176:106136. https://doi.org/https://doi.org/10.1016/j.appet.2022.106136

Van Strien T, Frijters JE, Bergers GP, Defares PB. 1986. The Dutch Eating Behavior Questionnaire (DEBQ) for asessment of restrained, emotional, and external eating behavior. Int J Eat Dis 5(2):295–315. https://doi.org/10.1002/1098-108X(198602)5:2%3C295::AID-EAT2260050209%3E3.0.CO;2-T

Vartanian LR. 2015. Impression management and food intake. Current directions in research. Appetite 86:74–80. https://doi.org/10.1016/j.appet.2014.08.021

Vartanian LR, Spanos S, Herman CP, Polivy J. 2017. Conflicting internal and external eating cues: Impact on food intake and attributions. Heal Psychol 36(4):365. https://doi.org/10.1037/hea0000447

Wang W, Zhou K, Yu Z, Li J. 2020. The cost of impression management to life satisfaction: Sense of control and loneliness as mediators. Psychol Res Behav Manag 2020:407–417. https://doi.org/10.2147/PRBM.S23834

Zarychta K, Kulis E, Gan Y, Chan CKY, Horodyska K, Luszczynska A. 2019. Why are you eating, mom? Maternal emotional, restrained, and external eating explaining children's eating styles. Appetite 141:104335. https://doi.org/10.1016/j.appet.2019.104335