

Stigma and Health

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Online First Publication, June 3, 2021. <http://dx.doi.org/10.1037/sah0000322>

CITATION

Jordan, A. K., Dial, L. A., Barnhart, W. R., Studer-Perez, E. I., Kamath, S., & Musher-Eizenman, D. R. (2021, June 3). Fussy, Fad, and Frustrating?: Stigma Toward Picky Eaters and Popular Dieters by Peers. *Stigma and Health*. Advance online publication. <http://dx.doi.org/10.1037/sah0000322>

Fussy, Fad, and Frustrating?: Stigma Toward Picky Eaters and Popular Dieters by Peers

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Individuals commonly tailor their diets for reasons such as weight loss, health promotion, taste preferences, religious purposes, and to accommodate food allergies. Many individuals who adopt dietary changes, however, report experiencing significant social consequences such as stigma. This study explored stigma against various diet types and how one's own dietary patterns influence stigma toward others' eating behaviors. Participants ($N = 509$) completed an online survey assessing their own dietary patterns and stigma toward others' dietary patterns. On average, participants reported the greatest stigma toward picky eaters and people who follow popular diets. Five mixed analyses of variance (ANOVAs) were conducted to understand differences in stigma toward eating styles held by those who endorsed that eating style and those that did not. Men reported significantly more stigma toward eating styles than women; thus, gender was entered as a covariate for each ANOVA. Compared to non-picky eaters, picky eaters reported significantly lower stigma toward picky eating but significantly higher stigma toward all other eating styles except popular diets. There were no other significant differences in stigma reported between those who did or did not adhere to a given eating style. Future research should utilize more diverse samples and evaluate stigma experienced both by and toward others.

Keywords: stigma, picky eaters, popular dieters, vegetarianism and veganism, food sensitivity/allergies

A typical Western diet is rich in red meat, salt, dairy, refined sugars, alcohol, and processed foods like chips, bagels, candy, and condiments (Bloomfield et al., 2015; Cordain et al., 2005). However, diets are often altered either temporarily or permanently throughout the lifespan for ethical, religious, or health-based reasons. For instance, 49.1% of American adults attempted to lose weight between 2013 and 2016, and approximately 63% of those adults did so through dieting (Martin et al., 2018). These diets create a caloric deficit by manipulating macronutrient content (e.g., Paleo, ketogenic), restricting specific foods or food groups (e.g., plant-based, Mediterranean), or manipulating the timing of eating each day (e.g., intermittent fasting; Freire, 2020). Other diets stem from moral or ethical convictions about animal products and food production. Five to eight percent of Americans consider themselves vegetarian and 3% are vegan (Reinhart, 2018).

Others modify their diets in response to food allergies and sensitivities. For example, over 10% of American adults report a diagnosed food allergy, and nearly 20% suspect a food allergy (Gupta et al., 2019). Shellfish is the most commonly reported

food allergy, followed closely by milk, peanuts, and tree nuts (Gupta et al., 2019). Gluten is another commonly cited food allergen. Celiac disease, an immune-mediated disorder affecting the gastrointestinal tract that is typically managed through abstention from foods containing gluten, is estimated to affect 1% of people in Western countries (Lohi et al., 2007; Ludvigsson & Green, 2011). In addition to those diagnosed with Celiac disease, many without a diagnosis or medical recommendation elect to eat diets low in or free of gluten. Individuals with conditions such as phenylketonuria (PKU) and type I diabetes are also advised to modify their diets to prevent severe health risks or even death. Those with PKU, for instance, are instructed to limit or abstain from eating high-protein foods containing phenylalanine (an essential amino acid), such as egg, nuts, chicken, beef, fish, and most dairy products (Diesen et al., 2015).

Although modifying one's diet is common and may offer a variety of physical health benefits, dietary changes may also present significant social challenges. More specifically, anticipated stigma or judgment by peers may surface in the presence of such dietary changes. Vegetarian and vegan individuals have been the primary focus of literature regarding stigma directed toward eating styles, and findings suggest these individuals may be subject to negative evaluations from others. Thus, the present study examines previously neglected eating styles and aims to further this research by exploring how an individual's own dietary patterns influence stigma toward others' eating styles.

Stigma is the negative perception of individuals with "undesirable" characteristics or statuses (Goffman, 1963). Healthy eating, for example, is met with both positive and negative evaluations. People who eat low-fat diets are described as physically fit, attractive, and intelligent, while also thought to be self-centered and high-strung (Barker et al., 1999; Fries & Croyle, 1993). These evaluations may

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be further complicated by factors like gender roles associated with eating styles, such as individuals who eat healthier and smaller meals being seen as more feminine than those who eat larger, more unhealthy meals (Vartanian et al., 2007).

Vegetarians and vegans may also face negative stereotypes regarding their diets. Vegetarians report microaggressive comments and questions about their diets that may be interpreted as attempts to intimidate them or insult their character (LeRette, 2014). In particular, female vegetarians reported significant hostility from male family members (Merriman, 2010). Vegetarians may also deviate from their diets to avoid uncomfortable social situations. In a recent sample of vegetarians, over a third reported eating meat to keep from disrupting social dynamics, especially at family gatherings, holidays centered around food, or on romantic dates. A smaller percentage of the same sample reported eating meat because a family member, romantic partner, friend, or coworker explicitly pressured them to do so (Rosenfeld & Tomiyama, 2019). Vegans are frequently described as oversensitive and weak (Potts & Parry, 2010) and are viewed more negatively than their vegetarian peers (MacInnis & Hodson, 2017). Even vegetarians, whose diets overlap somewhat with vegans, similarly share negative views of vegans compared to their reported views of omnivores (Markowski & Roxburgh, 2019). Qualitative research suggests that vegan stigma serves as a significant barrier to adopting a vegan diet (Markowski & Roxburgh, 2019).

Though research is sparse, there is some evidence that stigma toward diets related to health conditions is also common. In a large sample of adults with Celiac disease, 67% reported that adherence to a gluten-free diet negatively impacted their family life, and 41% thought it negatively impacted their careers (Lee & Newman, 2003). Similarly, both adolescents and adults with Celiac disease report feeling isolated in social situations where food is involved (White et al., 2016). Unfortunately, research indicates that these feelings may be warranted given people without such dietary restrictions reported negative perceptions of gluten-free individuals. For example, participants who were surveyed about their interest in a potential romantic partner expressed hesitation when the partner followed a gluten-free diet and in turn, viewed them as picky, demanding, and judgmental (Aloni et al., 2019).

Even when dietary changes are recommended by physicians for diagnosed medical conditions such as Celiac disease, type I diabetes, or PKU, social stigma may impede progress or be associated with emotional distress. In one sample of adults with Celiac disease, 30% of those who sometimes or frequently ate foods containing gluten did so to better socialize and feel more “normal” (do Nascimento et al., 2014). Individuals with PKU risk eventual brain damage and intellectual disability by not adhering to a strict low-phenylalanine diet, yet many cite stigma from strangers and loved ones as a reason for deviating from dietary guidelines (Diesen et al., 2015). Those who follow the diet closely may claim they are vegetarian, vegan, or have a food allergy to avoid questioning or criticism (Diesen et al., 2015).

In sum, researchers have demonstrated the presence and potential impact of anticipated and experienced diet stigma, as well as self-reported stigma toward individuals pursuing a variety of alternative diets. However, no study has compared stigma toward all of these dietary patterns, and little or no research has examined stigma toward diets grounded in ethical or religious beliefs, picky eating, or fad diets. Further, it remains unclear how one’s own dietary patterns are related to stigma toward other dietary patterns. To help

address this gap in the literature, the present study examined relationships between self-reported eating styles and stigma toward a wide range of eating styles, including those that were previously unexamined, through an exploratory lens.

Method

Participants

Participants were undergraduate students from a large Midwestern university. Undergraduate participants recruited their parents to complete a similar survey packet, but only student responses were used in the present study. In total, 579 undergraduate participants were recruited for the present study; however, 70 participants were excluded because they completed 75% or less of the survey ($n = 42$), completed the survey multiple times ($n = 17$), and/or failed to meet quality data collection standards (i.e., failed two attention checks; $n = 11$). Thus, the final sample size was 509. Participants’ age ranged from 18 to 25 years ($M = 19.96$, $SD = 2.93$) with 76.3% ($n = 390$) identifying as women. The sample was primarily White ($n = 438$; 85.7%), overweight [BMI = 25.20(5.67)], heterosexual ($n = 436$; 85.3%), and middle class ($n = 270$; 52.5%). Approximately 6.3% and 2% self-reported past and current eating disorder diagnosis, respectively. Furthermore, participants self-identified as picky eaters ($n = 201$; 39.3%), vegetarians ($n = 33$; 6.5%), vegans ($n = 6$; 1.2%), having a food sensitivity or food allergy ($n = 70$; 13.7%), dietary patterns based on religious reasons ($n = 1$; 0.2%), weight loss or health improvement ($n = 160$; 31.3%), and popular dieters (e.g., paleo, keto, Atkins, juicing; $n = 33$; 6.5%). See Barnhart et al. (2021) for more information on participant characteristics.

Measure

Demographics

Participants self-reported demographic variables. Data were also collected on current/past eating disorder diagnosis, and current/past picky eating style. Participants also reported if they adhered to one or more of the following eating styles: vegetarian, vegan, food sensitivity or food allergy, religious reasons, weight loss or health improvement, and popular eating style. Examples of each eating style are provided below.

Stigma Toward People With Various Eating Styles

The researchers created a measure of stigma given the absence of measures in the literature that assess stigma toward people endorsing various eating styles. Stigma phrases were generated through review of qualitative literature on stigma toward eating styles (e.g., Aloni et al., 2019). Participants were presented with seven eating styles including examples or subtypes within these eating styles: (a) picky eaters (e.g., eat a limited variety of food); (b) vegetarian (e.g., lacto-ovo, pescatarian); (c) vegan (e.g., do not consume any animal products); (d) food sensitivity or food allergy (e.g., gluten-free, lactose-free, peanuts); (e) religious reasons (e.g., kosher, no beef); (f) weight loss or health improvement (e.g., diet targeting weight loss or improving heart health); and (g) popular eating style (e.g., paleo, keto, Atkins, juicing). Participants rated four stigma phrases (e.g., beliefs that people are uninformed, annoyed with, just being

difficult, and are self-righteous) per eating style (for a total of 28 items), each phrase worded the same with the eating style changed.

Stigma Phrase: Beliefs That People Are Uninformed. Participants responded to the seven items modified per eating style to fit the stigma phrase. For example, “I think that picky eaters are uninformed.” or “I think that vegetarians are uninformed.”

Stigma Phrase: Annoyed With. Participants responded to the seven items modified per eating style to fit the stigma phrase. For example, “I would be annoyed to eat with a picky eater.” or “I would be annoyed to eat with a vegetarian.”

Stigma Phrase: Just Being Difficult. Participants responded to the seven items modified per eating style to fit the stigma phrase. For example, “I think picky eaters are just being difficult.” or “I think vegetarians are just being difficult.”

Stigma Phrase: Self-Righteous. Participants responded to the seven items modified per eating style to fit the stigma phrase. For example, “I think picky eaters are self-righteous.” or “I think vegetarians are self-righteous.”

If participants identified as a member of one or more of the following groups, they were told to think about other people from that eating style when rating the stigma phrases. Responses ranged from 0 to 4 (*Strongly disagree* to *Strongly agree*). Internal consistencies for stigma toward eating styles were high for picky eaters ($\alpha = .84$), vegetarians ($\alpha = .88$), vegans ($\alpha = .88$), food sensitivities ($\alpha = .85$), religious reasons ($\alpha = .87$), weight loss/health improvement ($\alpha = .86$), and popular eating styles ($\alpha = .87$). Thus, items for each eating style were averaged for analyses for parsimony. Higher scores indicated greater stigma toward that eating style.

Procedure

The present study received Institutional Review Board approval prior to data collection (IRB protocol #1530232). Online consent was received at the start of the online survey, and on average, the survey took approximately 27 min to complete. Participants were debriefed and given contact information upon conclusion of the survey. Course credit or extra credit was received for participation.

Analytic Plan

The study’s analytical plan and analyses were pre-registered in Open Science Framework, Research question 4: <https://osf.io/g4cha>. The pre-registered analytical plan stated that repeated measures analyses of variance (ANOVAs) would be utilized. However, after identifying additional gaps in the literature, the researchers decided to

instead use mixed ANOVAs in order to incorporate participants’ own reported eating styles (e.g., picky eaters compared to non-picky eaters) in the analyses. Five mixed ANOVAs compared stigma toward various eating styles. For cases in which Mauchly’s test of sphericity was significant, the Greenhouse–Geisser correction was used for parameter estimates. Three independent samples *t*-tests with gender (male, female), current eating disorder diagnosis (yes, no), and race (white, BIPOC) and one correlation (with BMI) were conducted to examine potential relationships between demographic variables and overall stigma (mean of seven stigma scores). There were significant differences between men and women in their stigma scores, $t(494) = 3.75, p < .001$. Men reported significantly higher stigma toward eating styles; thus, gender was entered as a covariate in each mixed ANOVA. No other significant relationships were found.

Results

Descriptives

Participants reported moderate stigma toward eating styles overall ($M = 1.88, SD = .75$ on a 0–4 scale). On average, participants reported the strongest stigma toward picky eaters ($M = 2.11, SD = .94$) followed by popular dieters ($M = 2.06, SD = .93$), vegans ($M = 1.98, SD = .95$), vegetarians ($M = 1.85, SD = .87$), eating for weight loss ($M = 1.82, SD = .81$), religious preferences ($M = 1.68, SD = .79$), and food allergies ($M = 1.62, SD = .75$). Stigma scores for all eating styles were significantly, positively correlated with each other (r ranged from .57 to .89; see Table 1).

Stigma and Eating Styles

The following analyses were conducted to explore stigma toward various eating styles by participants’ self-identified eating style. Five mixed ANOVAs were conducted to compare participants who identified as picky eaters, vegetarians, having food allergies, eating for weight loss, and following a popular diet to participants who did not identify with that particular eating style. Note that group comparisons were not conducted for vegans and participants who adhere to a special diet for religious reasons because there were not enough participants in these groups for a meaningful comparison. For each analysis, stigma scores were entered as the within-subjects variable (stigma score: picky eating, vegetarian, vegan, food allergies, religious preferences, weight loss, popular diets). Stigma scores were created by averaging items across each eating style (e.g., stigma toward picky eaters, stigma toward vegetarians). Participant’s eating style was entered as the between-subjects variable

Table 1
Stigma Toward Eating Styles

| Eating styles | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----------------------|----------|-----------|-------|-------|-------|-------|-------|-------|---|
| 1. Picky eating | 2.10 | .94 | — | | | | | | |
| 2. Vegetarian | 1.85 | .87 | .66** | — | | | | | |
| 3. Vegan | 1.97 | .95 | .69** | .89** | — | | | | |
| 4. Food allergies | 1.62 | .74 | .57** | .75** | .66** | — | | | |
| 5. Religious reasons | 1.68 | .79 | .61** | .76** | .71** | .86** | — | | |
| 6. Weight loss | 1.81 | .81 | .67** | .78** | .73** | .80** | .81** | — | |
| 7. Popular diet | 2.05 | .93 | .71** | .72** | .76** | .61** | .66** | .75** | — |

Note. $N = 514$.

** $p < .01$.

(e.g., picky eaters vs. non-picky eaters) for each mixed ANOVA.

To explore stigma toward various eating styles between picky eaters and non-picky eaters, a mixed ANOVA was conducted with picky eating (picky eating: picky eater, non-picky eater) as the between-subjects variable and stigma scores as the within-subjects variable (stigma score: picky eating, vegetarian, vegan, food allergies, religious preferences, weight loss, popular diets). There was no main effect for picky eating, $F(1, 496) = 3.58, p = .06, \eta_p^2 = .01$. There was a significant main effect for stigma scores, $F(4.36, 2163.13) = 24.97, p < .001, \eta_p^2 = .05$. Stigma toward picky eaters was the highest ($M = 2.12, SD = .94$) and significantly different from all stigma scores except for stigma toward vegans and those who follow popular diets. Stigma toward people with food allergies was significantly lower ($M = 1.62, SD = .75$) than all other stigma scores. There was a significant interaction, $F(4.36, 2163.13) = 14.63, p < .001, \eta_p^2 = .03$ (see Figure 1). Post hoc one-way ANCOVAs revealed significant differences between picky eaters and non-picky eaters regarding stigma toward picky eating, $F(1, 496) = 5.63, p = .02, \eta_p^2 = .01$, vegetarians, $F(1, 496) = 4.08, p = .04, \eta_p^2 = .01$, vegans, $F(1, 496) = 5.59, p = .02, \eta_p^2 = .01$, food allergies, $F(1, 496) = 6.98, p < .001, \eta_p^2 = .03$, and religious preferences, $F(1, 496) = 15.93, p < .001, \eta_p^2 = .03$. Picky eaters reported significantly lower stigma toward picky eating than non-picky eaters but significantly higher stigma toward vegetarians, vegans, people with food allergies, and people adhering to a special diet due to religious preferences. All means and standard deviations can be found in Table 2.

Three mixed ANOVAs were conducted for vegetarianism (vegetarians, non-vegetarians), people with food allergies (food allergy, no food allergy), and eating for weight loss (weight loss, not eating for weight loss) to examine stigma (stigma: picky eating, vegetarian, vegan, food allergies, religious preferences, weight loss, popular diets) toward various eating styles between each of these groups. In all three cases, there was no significant main effect for the between-subjects variable (vegetarianism, people with food allergies, eating for weight loss) and no interaction between stigma scores and the between-subjects variable.

To explore stigma toward various eating styles between participants following a popular diet and those not following a popular

Table 2

Means of Picky Eaters' and Non-Picky Eaters' Stigma Toward Different Eating Styles by Eating Styles

| Eating styles | Stigma toward different eating styles | | |
|---------------|---------------------------------------|---------------|------------------|
| | Total | Picky-eating | Non-picky eating |
| | <i>M (SD)</i> | <i>M (SD)</i> | <i>M (SD)</i> |
| Picky eating | 2.11 (0.94) | 1.98 (0.86) | 2.20 (0.98) |
| Vegetarian | 1.85 (0.87) | 1.93 (0.89) | 1.80 (0.86) |
| Vegan | 1.98 (0.95) | 2.09 (1.00) | 1.91 (0.91) |
| Allergy | 1.62 (0.75) | 1.76 (0.79) | 1.53 (0.70) |
| Religion | 1.68 (0.79) | 1.84 (0.82) | 1.58 (0.76) |
| Weight loss | 1.82 (0.81) | 1.90 (0.84) | 1.76 (0.79) |
| Popular diet | 2.06 (0.93) | 2.09 (0.96) | 2.04 (0.92) |

diet, a mixed ANOVA was conducted with following a popular diet (popular diet, no popular diet) as the between-subjects variable, and stigma was entered as the within-subjects variable (stigma: picky eating, vegetarian, vegan, food allergies, religious preferences, weight loss, popular diets). There was no main effect for popular diet, $F(1, 496) = 0.24, p = .63, \eta_p^2 = .001$. There was a significant main effect for stigma scores, $F(4.29, 2125.57) = 16.52, p < .001, \eta_p^2 = .03$, and there was a significant interaction between stigma scores and popular diet, $F(4.29, 2125.57) = 2.65, p = .03, \eta_p^2 = .01$ (see Figure 2). However, post hoc one-way ANOVAs did not reveal any significant differences between participants following a popular diet and those not following a popular diet regarding stigma scores toward any of the eating styles. All means and standard deviations can be found in Table 3.

Discussion

People choose to adhere to diverse dietary patterns for multiple reasons, such as attempting to lose weight, food allergies, preferences, or ethical and religious grounds. These dietary changes, including those imposed by circumstances outside one's control, may be met with serious stigma. In this study, participants expressed the greatest stigma toward picky eaters and the least stigma toward those with food allergies. A potential explanation for the elevated stigma toward

Figure 1
Stigma Toward Eating Styles by Picky Eating Status

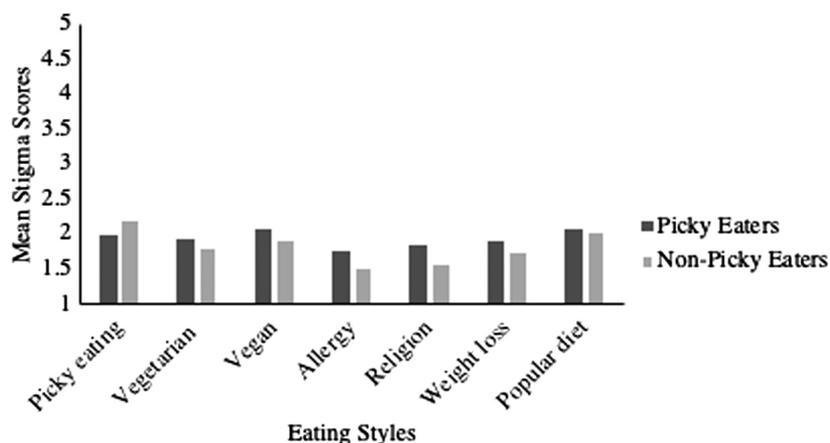
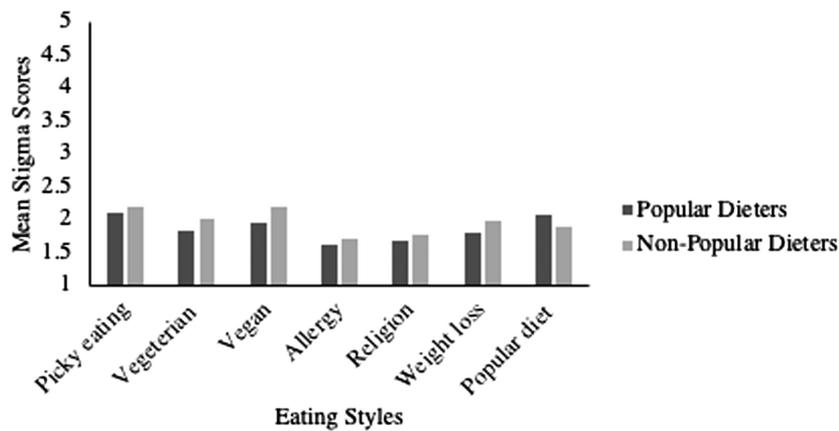


Figure 2
Stigma Toward Eating Styles by Popular Dieting Status



picky eaters and those following fad diets may be the extent to which observers believe those individuals control their eating patterns. If picky eaters and people following fad diets are believed to be in control of their eating patterns, they may experience more negative judgment than individuals with food allergies who have relatively little control of their dietary restrictions. Research has linked stigma with perceived locus of control in other contexts (e.g., obesity, mental illness), so future research that explores this possible link in regard to eating styles could be highly informative (DeJong, 1980; James, 2020; Stone & Werner, 2012).

It is also noteworthy that in this study, individuals belonging to stigmatized groups still reported stigma toward other eating styles and in many cases toward their own eating style. Picky eaters reported significantly lower stigma toward other picky eaters, but significantly higher stigma toward almost all other eating styles. This suggests that picky eaters understand the challenges experienced by other picky eaters and perhaps view their own eating behaviors differently than other eating styles. For instance, these individuals may see the fear and impairment that is associated with picky eating and feel protective of those that are like them (Crocker & Luhtanen, 1990; Markowski & Roxburgh, 2019). In contrast, members of other stigmatized groups (e.g., vegetarians) did not report less stigma toward their own eating style. More

research is needed to explore why only picky eaters exhibited this in-group bias and why people who follow certain restrictive eating patterns express bias toward those who follow other patterns.

Experiences with stigma can be influential enough to force people to conform to the pressure of popular culture or the pressure of those around them (MacInnis & Hodson, 2017; Markowski & Roxburgh, 2019). Indeed, research has shown those even those with life-threatening food allergies will eat outside their recommended diets in order to avoid negative judgment (do Nascimento et al., 2014). As we learn more about the stigma toward various eating styles, understanding the consequences of this stigma is very important. For example, some research indicates that factors such as perceived tastiness and healthfulness of vegetarian food are better predictors of transitioning to a vegetarian diet than anticipated stigma (Rosenfeld & Tomiyama, 2020). Knowing the factors that influence people to adhere and deviate from diets gives insight into the impact of stigma that they internalize and attribute toward other groups.

Limitations and Future Directions

The present study is not without limitations and presents several opportunities for future research. First, the cross-sectional study design prevents attributions of causality across study variables. Future research using experimental and longitudinal paradigms could shed light on the consequences of stigma toward various eating styles, as well as potential change in attitudes as people adopt new eating styles. Second, the present study did not measure stigma experienced by people from various eating styles. Rather, these data represent stigma reported toward people with various eating styles. While these data are important in adding information to the scant evidence based on peers' perceptions of people with various eating styles, future research collecting information on stigma experienced by people with various eating styles could add more complete information. Third, while the present analyses did include adequate sample size overall and across some eating styles (e.g., picky eaters), other eating styles were underpowered (e.g., vegans) and thus interpretation of results should be treated with caution. For example, examining relationships with people adhering

Table 3
Means of Popular Diet Eaters' and Non-Popular Diet Eaters' Stigma Toward Different Eating Styles by Eating Styles

| Eating styles | Stigma toward different eating styles | | |
|---------------|---------------------------------------|---------------|------------------|
| | Total | Picky-eating | Non-picky eating |
| | <i>M (SD)</i> | <i>M (SD)</i> | <i>M (SD)</i> |
| Picky eating | 2.11 (0.94) | 2.11 (0.94) | 2.19 (0.89) |
| Vegetarian | 1.85 (0.87) | 1.84 (0.86) | 2.03 (0.97) |
| Vegan | 1.98 (0.95) | 1.97 (0.95) | 2.20 (0.93) |
| Allergy | 1.62 (0.75) | 1.61 (0.74) | 1.73 (0.72) |
| Religion | 1.68 (0.79) | 1.68 (0.80) | 1.78 (0.70) |
| Weight loss | 1.82 (0.81) | 1.81 (0.81) | 1.98 (0.78) |
| Popular diet | 2.06 (0.93) | 2.07 (0.95) | 1.89 (0.68) |

to a gluten-free diet was not possible due to the small sample size of people endorsing this eating style. Moreover, the measure looking at various diets did not provide an opportunity for an explanation of why the participant or the target of the stigma measure was abstaining from gluten. Restricting gluten intake because of preference, sensitivity, or allergy may change the results for the category or for the reported stigma. Finally, the sample for the present analyses was primarily WEIRD: White, Education, Industrialized, Rich, and Democratic (Henrich et al., 2010). Thus, results from the present study should map onto this population and not be generalized to other populations, illustrating an important area for future research to test the constraints on generality of these findings (Simons et al., 2017).

Conclusion

In this study, college age students endorsed the strongest stigma toward picky eaters and popular dieters (Atkins, keto, etc.) and the lowest stigma toward people with food allergies. There was also a significant in-group and out-group bias for those that identified as picky eaters such that picky eaters reported significantly lower stigma toward other picky eaters compared to almost all other eating styles. This same interaction was not seen for those who adhere to other types of diets. More research needs to be done to investigate the effects of stigma on different eating styles and patterns in adults. This can provide insight into aiding these individuals in living a healthier life and provide interventions to mitigate the negative outcomes resulting from judgment of these eating styles.

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Received October 8, 2020

Revision received February 5, 2021

Accepted March 30, 2021 ■