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Feelings of uncertainty and powerlessness from Covid-19: Implications for advertising appeals in the restaurant industry

Abstract Are rational (emotional) advertising appeals more congruent with healthy (indulgent) products? Prior research shows inconsistent results on the congruency effect between appeal type and product category. This study sheds light on this topic by examining the moderating effect of two psychological states (i.e., feelings of uncertainty and powerlessness) caused by Covid-19 on the relative effectiveness of rational vs. emotional appeals in the context of food advertisements. The results suggest that people with low levels of uncertainty respond more favorably to rational (vs. emotional) appeals of a healthy food item, and this effect is attenuated among people with high levels of uncertainty. On the other hand, powerful people find emotional (vs. rational) appeals of an indulgent food item more attractive, and this effect is attenuated among powerless people. Theoretical and managerial implications are discussed.

Keywords: Covid-19; Pandemic; Advertising appeals; Uncertainty; Power

1. Introduction

The Covid-19 pandemic has exerted a detrimental influence on people's psychological states (Wang et al., 2020). For instance, people tend to feel highly uncertain about their health, work, finances, and socializing (Donthu and Gustafsson, 2020; Nicola et al., 2020). Moreover, the overload of information about Covid-19 induces feelings of uncertainty since people are unable to process all the information (Farooq et al., 2020). Another negative psychological consequence of Covid-19 is a sense of powerlessness due to an increasing number of confirmed cases and deaths, the lack of widespread distribution of Covid-19 vaccine, the fear of food shortages and the difficulty in acquiring accurate information (Dastagir, 2020; Enders and Uscinski, 2020; Kirk and Rifkin, 2020; Wiederhold, 2020). Recent research on Covid-19 suggests that feelings of uncertainty and powerlessness influence consumer spending and social distancing behaviors (Biddlestone et al., 2020; Leduc and Liu, 2020).

However, how feelings of uncertainty and powerlessness during the Covid-19 pandemic influence consumers' responses to advertising appeals remains unknown, especially in the restaurant context. This gap is vexing because the restaurant industry invests a tremendous amount of money in advertising campaigns (Hsu and Jang, 2008; Kim et al., 2019a). For instance, McDonald's and Domino's Pizza spent \$624 billion and \$467 billion on advertising in 2019, respectively (Statista, 2020). In 2020, many restaurant chains (e.g., McDonald's, Starbucks and Chipotle) ramped up advertising spending during the pandemic (Kalogeropoulos, 2020). Given these enormous advertising expenditures and increasingly more competitive business environment, it is essential for restaurant managers to understand how to increase advertising effectiveness (Hyun et al., 2011).

To address this knowledge gap, the present study draws on the advertising literature (Andreu et al., 2015; Zhang et al., 2014) and compares two types of message appeals (i.e., rational vs. emotional). Rational appeals communicate utilitarian benefits of products such as quality, performance, and value, while emotional appeals emphasize emotional or experiential benefits (Zhang et al., 2014). Both of these advertising appeals are commonly adopted in the restaurant industry. For example, Panera Bread uses rational appeals (e.g., "Our new low-fat all-natural chicken noodle soup") while Burger King utilizes emotional appeals (e.g., "Deliciously flame-

grilled”). Subway takes advantage of both types of advertising appeals (e.g., “Healthy and Best” and “Tastes Good. Feels Good”) to promote its sandwiches.

Previous literature has documented the congruency (matching) effect between appeal type and product category (Drolet et al., 2007; Johar and Sirgy, 1991; Kim et al., 2019b). Specifically, rational (emotional) appeals are more congruent with utilitarian (indulgent) products, and such a congruency drives advertising effectiveness (Johar and Sirgy, 1991; Kim et al., 2019b). However, a few studies fail to identify this congruency effect (Klein and Melnyk, 2016; Stafford and Day, 1995). In order to help reconcile these inconsistent findings, this paper aims to ascertain boundary conditions under which the congruency effect is attenuated. Specifically, the present study draws on prior research showing that uncertainty increases individuals’ attention to and reliance on emotional information (Faraji-Rad and Pham, 2017; Motoki et al., 2019) and that power influences people’s information processing strategies (Fischer et al., 2011; Fiske, 1993; Goodwin et al., 2000). We thus propose that feelings of uncertainty (Study 1) and powerlessness (Study 2) can serve as boundary conditions for the congruency effect.

Across the two studies, a quasi-experimental design was employed. Appeal type was manipulated while feelings of uncertainty and powerlessness were measured. Previous research suggests that quasi-experimental designs have a higher level of scientific validity than non-experimental designs (Thompson and Panacek, 2006). We did not use a true experimental design because it is difficult to manipulate participants’ feelings of uncertainty and powerlessness during the Covid-19 pandemic. Study 1 indicates that individuals with low levels of uncertainty find rational (vs. emotional) appeals of a healthy food item more attractive, whereas individuals with high levels of uncertainty do not show such a tendency. Study 2 suggests that powerful people respond more favorably to emotional (vs. rational) appeals of an indulgent food item, while powerless people show no preference.

2. Literature review

2.1. Advertising appeals: rational vs. emotional

An advertising appeal is regarded as a persuasive argument, serving as the basis for attracting consumers’ attention and affecting their purchase intention (Holmes and Crocker, 1987; Leonidou and Leonidou, 2009). Two types of message appeals (i.e., rational and emotional) are commonly used in advertising goods and services (Leonidou and Leonidou, 2009; Zhang et al., 2014). Specifically, characterized by factual and objective information, rational appeals are linked to consumers’ safety and informational needs (Andreu et al., 2015; Grigaliunaite and Pileliene, 2016; Zhang et al., 2014). Rational appeals emphasize utilitarian benefits of products/services such as quality, performance and value (Albers-Miller and Stafford, 1999; Zhang et al., 2014). In contrast, featuring subjective information, emotional appeals focus on esthetic and hedonic benefits (Andreu et al., 2015; Zhang et al., 2014).

Many studies have compared the effectiveness of rational vs. emotional appeals, but the findings are inconsistent (Aaker and Norris, 1982; Goldberg and Gorn, 1987; Golden and Johnson, 1983; Gong and Cummins, 2020; Grigaliunaite and Pileliene, 2016; Holbrook, 1978; Lee and Heere, 2018; Mattila, 2001; Stafford and Day, 1995; Wanninayake and Chovancová, 2019; Xiang et al., 2019). For instance, Wanninayake and Chovancová (2019) examine the relative effectiveness of the two advertising appeals in the commercial banking industry, and find that rational advertising has a greater impact on brand loyalty. Focusing on advertising appeals in the crowdfunding context,

Xiang et al. (2019) suggest that rational appeals exert a stronger persuasive influence on consumers than emotional appeals. On the contrary, Grigaliunaite and Pileliene (2016) indicate that emotional (vs. rational) appeals result in a more favorable attitude toward the brand. Lee and Heere (2018) reveal that compared with rational advertising, emotional advertising leads to a higher purchase intention. Gong and Cummins (2020) show that emotional advertisements elicit better message recall than rational advertisements.

To reconcile such conflicting findings, scholars have identified boundary conditions such as product involvement (Holmes and Crocker, 1987), processing style (Ruiz and Sicilia, 2004), self-regulatory focus (Cornelis et al., 2012) and social norms (Zanon and Teichmann, 2016). For example, Holmes and Crocker (1987) examine how product involvement influences customer responses to advertising appeals. Their results suggest that for high involvement products (e.g., Mazda sports cars), rational appeals lead to a more favorable attitude toward the brand, while for low involvement products (e.g., Diet Pepsi), emotional appeals result in a more affirmative attitude toward the brand. Zanon and Teichmann (2016) investigate the role of message strategies in influencing consumers' intention to book eco-friendly accommodations, and their results indicate that descriptive (injunctive) norms should be paired with rational (emotional) appeals, thus leading to a higher purchase intention. In addition, a few studies have demonstrated the moderating effect of product type (Drolet et al., 2007; Johar and Sirgy, 1991; Kim et al., 2019b; Lin et al., 2014). Specifically, relying on the cognitive fit theory, prior research suggests that when a message fits the recipient's motivational, cognitive or affective states, its persuasiveness is enhanced (Cesario et al., 2004; Zanon and Teichmann, 2016). Since consumers exhibit problem-solving (desire-fulfilling) needs for utilitarian (indulgent) products, rational (emotional) appeals have a better fit for such products (Babin et al., 1994; Zanon and Teichmann, 2016). Previous research demonstrates that such a congruency effect enhances US consumers' recall of the advertisement (Drolet et al., 2007), Korean consumers' attitude toward the advertisement (Kim et al., 2019b) and Belgian consumers' attitude toward the brand (Geuens et al., 2011).

However, Stafford and Day (1995) and Klein and Melnyk (2016) suggest that the match between appeal type and product category only benefits utilitarian products/services. In order to ascertain boundary conditions under which the congruency effect is attenuated, this study focuses on two individual-level factors, i.e., state of uncertainty and sense of power.

2.2. State of uncertainty as a boundary condition for utilitarian products

Uncertainty is often expressed via probability distribution in the economics and decision-making literature (Armstrong, 1948; Edwards, 1954; Tintner, 1941; Tversky and Fox, 1995). In contrast, psychology and marketing scholars define uncertainty as an individual's psychological state, which stems from not having sufficient information about an event - whether, when, where, why, and how it has happened or will happen (Bar-Anan et al., 2009; Faraji-Rad and Pham, 2017; van der Wal et al., 2018). This state of uncertainty is aversive in nature, involving psychological discomfort and serving as a threat to the self (Faraji-Rad and Pham, 2017; Hogg, 2007; Van den Bos, 2009). For instance, Hogg (2007) points out that the state of uncertainty challenges an individual's confidence in his/her thoughts, feelings and behaviors. Previous research demonstrates that a common response to the state of uncertainty is to reaffirm the self, thus motivating people to pay greater attention to the self (Faraji-Rad and Pham, 2017; McGregor et al., 2008; Steele and Liu, 1983).

Prior research indicates that affect (i.e., feelings, emotions and moods) is closely related to the self (Gorn et al., 2001; Silvia et al., 2006; Zajonc, 1980). Since feelings and emotions are experienced from the first-person viewpoint, they contain extensive information about the self (Silvia et al., 2006). As uncertainty leads people to focus on the self, uncertainty should increase an individual's reliance on affective inputs in the decision-making process. Through a series of experiments, Faraji-Rad and Pham (2017) reveal that the pleasantness of a musical soundtrack increases intention to purchase a book in the uncertainty-prime condition, and this effect is attenuated in the certainty-prime condition.

According to the appraisal-tendency framework (Lerner and Keltner, 2000; Tiedens and Linton, 2001), emotions can be differentiated by a set of appraisal dimensions, one of which is uncertainty. The experience of anxiety, fear, surprise and hope is accompanied by feelings of uncertainty, while certainty-associated emotions include anger, disgust, contentment and happiness (Gino et al., 2012; Tiedens and Linton, 2001). Previous research shows that anxiety results in increased attention to emotional information (MacLeod et al., 1986; Motoki et al., 2019). For example, Motoki et al. (2019) reveal that anxiety increases people's visual attention to information regarding hedonic (vs. healthy) food and that this effect disappears in the anger and neutral emotion conditions. Motoki et al. (2019) posit that anxiety directs an individual's focus to affective information due to its uncertainty appraisal dimension.

Based on the above findings, we argue that while the congruency effect suggests that rational (vs. emotional) appeals are more effective for utilitarian products (e.g., healthy foods), this effect may not hold among people with a high level of uncertainty. People feeling uncertain tend to attend to and rely on emotional information in their decisions (Faraji-Rad and Pham, 2017; Motoki et al., 2019), and therefore, they are likely to pay relatively less attention to rational information and discount its importance, thus undermining the matching effect between rational appeals and utilitarian products.

Thus, we propose the following:

H1: For healthy foods, rational (vs. emotional) appeals are more effective among people with low levels of uncertainty, and this effect will be attenuated among people with high levels of uncertainty.

2.3. Sense of power as a boundary condition for indulgent products

Power refers to one's capability to influence other people, which stems from control over valued resources (Anderson and Galinsky, 2006; Keltner et al., 2003). Resources can take the form of money, intellectual capital, legitimate authority, or leverage to reward and punish others (Rucker et al., 2012). This stream of literature demonstrates that power influences people's information processing strategies (Fischer et al., 2011; Guinote, 2007; Smith and Trope, 2006; Smith et al., 2008).

Specifically, by possessing more resources, powerful (vs. powerless) people depend less on others, thus feeling more socially distant from other people (Lammers et al., 2012; Magee and Smith, 2013). Drawing upon the construal level theory (Trope and Liberman, 2010), Smith and Trope (2006) indicate that the increased social distance predisposes powerholders to form high-level construals of available information and engage in more abstract thinking (i.e., focusing on primary information and intercorrelations between parts of a whole). In contrast, powerless individuals

have lower-level construals and process information in a more concrete way (i.e., focusing on concrete and peripheral details at the expense of global features; Guinote, 2007; Magee et al., 2010; Smith and Trope, 2006). Given the difference in thinking styles, Wyer et al. (2015) show that high-construals (vs. low-construals) contribute to a stronger congruency effect in a composite face-matching task. Zhang (2014) suggests that people with a high-level construal prefer information with high (vs. low) processing fluency, while people with a low-level construal do not show such a tendency.

Furthermore, previous research indicates that high (vs. low) power individuals tend to engage in more confirmatory information processing (Erber and Fiske, 1984; Fischer et al., 2011; Fiske, 1993; Goodwin et al., 2000). For instance, Goodwin et al. (2000) show that power predisposes people to attend to stereotype-consistent information and to ignore stereotype-inconsistent information. Erber and Fiske (1984) reveal that, due to greater dependence on others, powerless individuals attend to information that is inconsistent with their expectations to enhance their sense of control.

Building on the aforementioned findings, we argue that although emotional (vs. rational) appeals are more effective for indulgent products, this congruency effect may only hold among powerful people. According to the cognitive fit theory, individuals tend to have a desire-fulfilling need for indulgent products and emotional (vs. rational) messages have a better fit for such a need (Babin et al., 1994; Zanon and Teichmann, 2016). Thus, when faced with an advertisement of indulgent foods, people tend to expect emotional appeals. Since powerful (powerless) individuals focus on information that is consistent (inconsistent) with stereotypes and expectations (Erber and Fiske, 1984; Goodwin et al., 2000), the congruity between emotional appeals and indulgent foods should be easily (unlikely) identified.

Thus, we propose the following:

H2: For indulgent foods, emotional (vs. rational) appeals are more effective among powerful people, and this effect will be attenuated among powerless people.

Our conceptual framework is presented in Figure 1.

[Insert Figure 1 here]

3. Study 1

3.1. Method

3.1.1. Sampling and design

An appeal type (emotional vs. rational) \times state of uncertainty quasi-experimental design was adopted to test H1. Appeal type was manipulated and uncertainty was measured. Participants ($n=187$) were US consumers recruited from Amazon Mechanical Turk (MTurk). MTurk is a crowd-sourced online consumer panel. Previous research demonstrates that the data from MTurk meet the psychometric standards established by the data from other sources such as student sample (Buhrmester et al., 2011). Participants were randomly assigned to one of the two experimental conditions (see Table 1 for cell sizes). To reduce hypothesis guessing, participants were instructed to complete two unrelated studies pooled out of convenience. The first part was titled

“Understanding the effect of Covid-19 on people’s emotions”. Participants indicated their feelings of uncertainty with some filler emotions, such as sadness, anger, guilt and enthusiasm.

[Insert Table 1 here]

The second part of the survey was titled, “Restaurant experience”. Participants were exposed to a chicken sandwich advertisement of a local restaurant’s delivery service (see Appendix). Chicken sandwich was chosen because it is generally considered as a healthy food (Horgen and Brownell, 2002; Hwang and Lorenzen, 2008; Lee-Kwan et al., 2015). Previous research shows that rational appeals in the food domain reflect food quality, nutritional benefits and healthfulness, whereas emotional appeals focus on tastiness, indulgence and pleasure (Cian et al., 2015; Dube and Cantin, 2000; Zhang et al., 2014). Accordingly, in the emotional appeal condition, “feel like enjoying delectable food” and “wake up your taste buds” were used as tag lines. In the rational appeal condition, the tag lines were “think about getting some quality food” and “maintain your healthy lifestyle”. In addition, several adjectives were used to describe the ingredients of the sandwich (e.g., creamy avocado vs. nutritious avocado).

3.1.2. Measures

Feelings of uncertainty were measured with one item (“When thinking of the impact of Covid-19 in my community, I feel uncertain”; 1=not at all, 7=very much) adapted from Faraji-Rad and Pham, 2017). Attractiveness of the advertisement was measured with five items on a 7-point scale (1 = unattractive, 7 = attractive; 1 = unappealing, 7 = appealing; 1 = not valuable, 7 = valuable; 1 = irrelevant, 7 = relevant; 1 = uninteresting, 7 = interesting; $\alpha = 0.94$) adapted from Gierl and Huetl (2010) and Zaichkowsky (1985). In addition, we controlled for experiential thinking style which was measured with five items (“Using my gut feelings usually works well for me in figuring out problems in my life,” “I believe in trusting my instincts,” “I tend to use my feelings to guide my actions”, “I often go by my instincts when deciding on a course of action”, and “When it comes to trusting people, I can usually rely on my gut feelings”; $\alpha = 0.94$; Marks et al., 2008). Experiential thinking refers to individuals’ reliance on affect and intuition in processing information, and it leads to automatic and preconscious processing (Marks et al., 2008). Converging evidence suggests that experiential thinking style influences consumer responses to advertising appeals (Chaoying et al., 2011; LaBarbera et al., 1998; McKay-Nesbitt et al., 2011; Ruiz and Sicilia, 2004). Thus, we included it as a covariate to better capture the effect of feelings of uncertainty and power on the congruency effect. Scenario realism was captured with two items on a 7-point scale (“The scenario was realistic” and “It was easy to project myself in the scenario”; $r = 0.68$, $p < .01$). The manipulation of advertising appeals was assessed with a 9-point bipolar scale (i.e., logical/emotional, objective/subjective and factual/nonfactual; $\alpha = 0.90$; Andreu et al., 2015).

3.2. Results

3.2.1. Pretest

Two pretests were conducted to ensure that the food stimuli were perceived as healthy and that the manipulation of appeal type was effective. Specifically, in the first pretest, 39 participants were

recruited from MTurk and indicated perceived healthiness of the chicken sandwich on a 9-point scale (1 = not healthy at all, 9 = very healthy). On average, they perceived the sandwich as healthy ($M = 6.85$, $SD = 1.68$) and the one-sample t-test showed that this mean rating was significantly higher than the mid-point ($t(38) = 6.87$, $p < .01$). In the second pretest, 64 participants were recruited and randomly assigned to one of the two appeal type conditions. Appeal type manipulations were assessed with the three items used in our main study ($\alpha = 0.94$). An independent samples t-test showed that participants in the rational (vs. emotional) appeal condition perceived the food advertisement to be more rational ($M_{\text{rational}} = 3.44$, $M_{\text{emotional}} = 6.07$, $t(62) = 5.13$, $p < .01$). In addition, scenario realism was evaluated with the two items used in our main study ($r = 0.76$, $p < .01$). Overall, participants perceived the scenario as realistic ($M = 6.07$, $SD = 1.16$) and an independent samples t-test showed that the realism rating did not differ across the two appeal type conditions ($M_{\text{rational}} = 5.89$, $M_{\text{emotional}} = 6.25$, $t(62) = 1.25$, $p > .1$). Thus, our manipulations were deemed effective.

3.2.2. Demographics

For the main study, on average, participants were 38 years old ($SD = 10$). Fifty-seven percent of our participants were males, 49 percent had a college degree, 28 percent earned between \$40,000 and \$59,999 annually, and 75 percent were Caucasian (see Table 2).

[Insert Table 2 here]

3.2.3. Hypothesis testing

To test H1, a regression model was run via PROCESS (Model 1; X = appeal type, W = uncertainty, Y = attractiveness of the advisement; Hayes, 2013; see Table 3). The overall model was significant ($F(4, 182) = 4.50$, $p < .01$). Experiential thinking was a significant control variable (b [unstandardized coefficient] = 0.24 $t(182) = 3.62$, $p < .01$). The main effect of appeal type was significant ($b = -1.31$, $t(182) = -2.18$, $p < .05$) while the main effect of uncertainty was insignificant ($b = 0.00$, $t(182) = 0.01$, $p > .1$). However, the main effect of appeal type was qualified by the interaction between appeal type and uncertainty ($b = 0.23$, $t(182) = 2.00$, $p < .05$). To better understand this interaction, a spotlight analysis following Spiller et al. (2013) was conducted (see Figure 2). For participants high in uncertainty (1 standard deviation above the mean = 6.64), attractiveness of the advertisement did not differ across the two appeal type conditions (Effect = 0.21, $t(182) = 0.81$, $p > .1$). For participants low in uncertainty (1 standard deviation below the mean = 3.26), attractiveness of the advertisement was greater for rational (vs. emotional) appeals (Effect = -0.56, $t(182) = -2.05$, $p < .05$). Thus, H1 is supported.

[Insert Table 3 here]

[Insert Figure 2 here]

4. Study 2

4.1. Method

4.1.1. Sampling and design

An appeal type (emotional vs. rational) \times sense of power quasi-experimental design was adopted to test H2. Appeal type was manipulated as in Study 1 and power was measured. Participants ($n=188$) were US consumers recruited from MTurk and were randomly assigned to one of the two experimental conditions (see Table 1 for cell size). Similar to Study 1, participants were instructed to complete two unrelated studies pooled out of convenience. The first part was titled “Understanding the effect of Covid-19 on people’s emotions”. Participants indicated their feelings of power with some filler emotions.

The second part of the survey was titled, “Restaurant experience”. Participants were exposed to a chicken pasta advertisement of a local restaurant’s delivery service (see Appendix). Pasta was chosen because it is generally considered as an indulgent food (Caporale et al., 2009). The manipulation of appeal type was very similar to that in Study 1. Accordingly, in the emotional appeal condition, “feel like enjoying delectable food” and “wake up your taste buds” were used. In the rational appeal condition, “think about getting some quality food” and “maintain your healthy lifestyle” were used. In addition, several adjectives were used to describe the ingredients of the pasta dish (e.g., juicy tomatoes vs. high-quality tomatoes). Participants then indicated their willingness to pay for the chicken pasta dish and answered a series of questions such as manipulation checks, experiential thinking and demographic questions.

4.1.2. Measures

Sense of power was measured with two items (“These days, I feel 1=powerless, 7=powerful; 1 = lacking control, 7 = in control”; $r = 0.80, p < .01$; Choi et al., 2017). Willingness to pay for the chicken pasta dish was measured on a sliding scale from USD 1 to USD 20. The manipulation of appeal type was assessed with one item on a 9-point scale (“Does this advertisement 1 = contain a lot of rational information, 9 = have a very strong appeal to my emotions; Zhang et al., 2014). As in Study 1, scenario realism was assessed with the same two items ($r = 0.75, p < .01$) and experiential thinking was measured as a control variable ($\alpha = 0.93$).

4.2. Results

4.2.1. Pretest

A pretest was conducted to ensure that our food stimuli were perceived as indulgent. Forty-eight participants were recruited from MTurk and they rated the chicken pasta dish on a 9-point scale (1 = not indulgent at all, 9 = very indulgent). On average, they perceived the pasta dish as indulgent ($M = 7.69, SD = 0.99$). An independent samples t-test showed that this mean rating was significantly higher than the mid-point ($t(47) = 18.76, p < .01$).

4.2.2. Demographics

For the main study, on average, participants were 38 years old ($SD = 11$). Fifty-eight percent of our participants were males, 57 percent had a college degree, 23 percent earned between \$40,000 and \$59,999 annually, and 80 percent were Caucasian (see Table 2).

4.2.3. Realism and manipulation checks

Participants perceived our scenarios as realistic ($M = 5.89$, $SD = 1.22$). An independent samples t -test showed that the realism rating did not differ across the two appeal type conditions ($M_{\text{rational}} = 5.90$, $M_{\text{emotional}} = 5.88$, $t(186) = 0.07$, $p > .1$). Moreover, participants in the emotional (rational) appeal condition perceived that the advertisement evoked more feelings (thoughts) ($M_{\text{emotional}} = 6.29$, $M_{\text{rational}} = 4.69$, $t(183) = 5.35$, $p < .01$). Thus, our manipulations were deemed effective.

4.2.4. Hypothesis testing

To test H2, a regression model was run via PROCESS (Model 1; $X =$ appeal type, $W =$ power, $Y =$ willingness to pay; Hayes, 2013; see Table 4). The overall model was significant ($F(4, 183) = 5.98$, $p < .01$). Experiential thinking was a significant control variable ($b = 0.41$, $t(183) = 2.37$, $p < .05$). The main effects of appeal type ($b = -2.90$, $t(183) = -1.53$, $p > .1$) and power ($b = 0.03$, $t(183) = 0.10$, $p > .1$) were insignificant. However, the two-way interaction was significant ($b = 0.86$, $t(183) = 2.14$, $p < .05$). To better understand this interaction, a spotlight analysis was conducted (see Figure 3). For participants low in power (1 standard deviation below the mean = 3.39), willingness to pay did not differ across the two appeal type conditions (Effect = 0.03, $t(183) = 0.04$, $p > .1$). For participants high in power (1 standard deviation above the mean = 5.73), willingness to pay was higher for emotional (vs. rational) appeals (Effect = 2.05, $t(183) = 3.06$, $p < .01$). Thus, H2 is supported.

[Insert Table 4 here]

[Insert Figure 3 here]

5. Conclusion and discussion

The findings from Study 1 indicate that the congruency effect between rational appeals and healthy foods occurs among people with low levels of uncertainty, whereas this effect is not observed among people with high levels of uncertainty. The proposed underlying mechanism is that uncertainty increases people's attention to and reliance on emotional information in their information processing and decision-making (Faraji-Rad and Pham, 2017). Thus, people feeling high levels of uncertainty may not pay adequate attention to rational messages, thus undermining the congruency between rational appeals and healthy foods. These findings are also in line with a recent study, which uses eye-tracking technology and reveals that anxiety (i.e., an uncertainty-related emotion) increases people's visual attention to emotional information (Motoki et al., 2019). Given that only healthy food was used in Study 1, an interesting question is how might uncertainty influence the matching effect between emotional appeals and indulgent foods. We conducted a study to examine such a possibility, and our results suggest that uncertainty makes no difference regarding the congruency effect in the context of indulgent foods. This null finding is congruent with prior research. According to the cognitive fit theory, individuals tend to have a desire-fulfilling need for indulgent products and emotional (vs. rational) messages have a better fit for such a need (Babin et al., 1994; Zanon and Teichmann, 2016). Thus, people tend to attend to and process emotional appeals when faced with indulgent foods, regardless of whether they feel high levels of uncertainty.

The findings from Study 2 reveal that the matching effect between emotional appeals and indulgent menu items holds among powerful individuals, while this effect disappears among powerless individuals. This finding can be explained by different information processing strategies among powerful and powerless individuals. Specifically, high power induces people's attention to and liking of stereotype-consistent messages, but low power leads people to focus on information that is inconsistent with their expectations (Erber and Fiske, 1984; Goodwin et al., 2000). Thus, the powerful are able to easily identify the congruity between emotional appeals and indulgent foods, whereas the powerless may have difficulty in realizing the congruency effect. Prior research suggests that powerful and powerless people use different information processing strategies to form impressions of other people (Erber and Fiske, 1984; Goodwin et al., 2000). This study shows that such a difference remains when powerful and powerless individuals process advertising messages of indulgent foods.

5.1. Theoretical contributions

The present study advances our understanding of the congruency effect in advertising. While the majority of previous research documents the positive impact of the congruity between appeal type and product category in driving advertising effectiveness (Drolet et al., 2007; Johar and Sirgy, 1991; Kim et al., 2019b), a few studies fail to show the congruency effect (Klein and Melnyk, 2016; Stafford and Day, 1995). Given these inconsistent findings, this study sheds light on this issue by identifying two important psychological states (i.e., state of uncertainty and sense of power) as boundary conditions for the congruency effect. Recent research shows when faced with a rational advertisement with low personal relevance, people tend to withdraw cognitive resources to process the advertisement, thus undermining the advertising effectiveness (Gong and Cummins, 2020). However, since emotional advertisements are arousing and elicit automatic allocation of cognitive resources to message processing, the effect of low personal relevance is attenuated (Gong and Cummins, 2020). The current research adds to this stream of literature by showing that uncertainty increases people's attention to and reliance on emotional appeals of an advertisement in their judgments at the expense of rational messages. In addition, previous advertising literature on congruency effect suggests that the positive effect of picture-text congruence and spokesperson-product congruence is attenuated among people with low need for cognition (Illicic et al., 2015; Van Rompay et al., 2010). This study adds to this stream of literature by revealing that the congruity between product type and appeal type disappears among powerless individuals.

Moreover, the present study adds to the literature examining how disasters influence consumer behavior. Prior research has documented the impact of natural disasters (e.g., hurricanes, earthquakes and wildfires) and man-made disasters (e.g., wars and terrorist attacks) on consumers' shopping behaviors (Larson and Shin, 2018), hedonic consumption (Kemp et al., 2014), utilitarian consumption (Forbes, 2017) and impulse buying (Sneath et al., 2009). Drawing upon the emotion regulation theory, the above research indicates that disasters alter consumer behavior because people need to escape or reduce disaster-induced fear (Larson and Shin, 2018), depression (Sneath et al., 2009) and anxiety (Kemp et al., 2014). This study adds to this stream of literature by taking an information processing perspective and revealing that the Covid-19 pandemic induces feelings of uncertainty and powerlessness, which influence consumer response to advertising appeals.

5.2. Managerial implications

In the restaurant industry, both rational and emotional appeals are commonly adopted. For example, Panera Bread advertises its chicken noodle soup (healthy food) by using rational messages such as “low-fat”, “all-natural” and “fresh”. Burger King incorporates emotional information such as “indulgent”, “juicy” and “creamy” in promoting its Rebel Whopper (indulgent food). Our findings suggest that restaurant managers be aware that the congruency effect between appeal type and food category depends on consumers’ state of uncertainty and sense of power.

Specifically, if restaurant managers want to leverage the congruency effect to promote healthy menu items, they may need to target consumers with a relatively low level of uncertainty. Currently, although people tend to feel uncertain about their health, financial security and social life, such feelings are not uniformly high across individuals. Examining data from Study 1 (participants reported whether their community was under the stay-at-home order, in full opening or partial opening stage), we find that a full opening of the local economy (vs. partial opening and the stay-at-home order) significantly increases people’s feeling of uncertainty. At present, many people are experiencing the fear of losing their job, and this feeling should be higher in states with high unemployment rates. According to the official unemployment statistics (US Bureau of Labor Statistics, 2020), in May, Nevada had the highest unemployment rate (25.3%), followed by Hawaii (22.6%) and Michigan (21.2%). Conversely, Nebraska had the lowest rate (5.2%), followed by Utah (8.5%) and Wyoming (8.8%). Thus, people living in the latter (vs. former) three states might feel less uncertain. Furthermore, it is reasonable to assume that a greater number of confirmed cases and deaths in the local community should bolster people’s feelings of uncertainty. Thus, before determining the appeal type to advertise healthy foods, restaurant managers may assess their target consumers’ feelings of uncertainty based on the local Covid-19 status, government responses and orders, and unemployment rates.

Similarly, when advertising indulgent menu items, managers should evaluate target consumers’ sense of power. Magee et al. (2010) indicate that in light of a disaster (i.e., the 9/11 attack), people’s power states are associated with their social roles. In a similar vein, in light of Covid-19, people having more social, financial or informational resources should feel more powerful. Hence, social class, reflected by income levels, can be used as a proxy for power (Dubois et al., 2015). Since fine dining restaurants tend to cater to high-class customers, emotional appeals should be used to promote indulgent foods. In addition, restaurant managers can assess consumers’ social-economic status via zip codes (Han et al., 2010). For instance, residents with a zip code of 90274 (Palos Verdes Peninsula, California) are very affluent. If restaurants have loyalty reward programs, consumers’ information including their income and occupation can be accessed. Furthermore, prior research shows that power can be primed via power-related words (Smith and Trope, 2006). Thus, to take advantage of the congruency effect between emotional appeals and indulgent foods, words denoting powerfulness should be included in the advertisement. For example, Taco Bell uses a slogan (i.e., charge yourself with protein to power through anything like a bunch of push-ups) to advertise its burritos.

5.3. Limitations and future research

A few limitations should be noted. First, the present study adopted an online experiment to control for extraneous factors (e.g., brand awareness), thus ensuring internal validity. Future research should conduct field studies to address external validity. Second, we examined the moderating effect of sense of power on the effectiveness of advertising appeals for indulgent foods. It would

be worthwhile to investigate the effect of power for healthy foods. Specifically, regarding healthy foods, would powerful people respond more favorably to rational (vs. emotional) appeals due to their preference for consistent information? Since high (vs. low) power individuals tend to exhibit confirmatory information processing (Fischer et al., 2011), we would predict so. Note that we used either rational or emotional appeals to shed light on the congruency effect between appeal type and product category. Future research should examine consumer responses to advertisements with mixed appeals. Finally, the present study examines a generic state of uncertainty stemming from Covid-19. How other causes of such uncertainty (e.g., financial or political situations) might alter our findings merits further investigation.

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Table 1. Cell size for Studies 1-2

Study 1	Rational appeal	Emotional appeal
Low uncertainty	51	43
High uncertainty	43	50

Study 2	Rational appeal	Emotional appeal
Low power	47	46
High power	50	45

Table 2. Demographic information about participants

	Categories	Study 1	Study 2
Gender	Male	107 (57.2)	109 (58.0)
	Female	80 (42.8)	79 (42.0)
Income	Less than \$20,000	13 (7.0)	13 (6.9)
	\$20,000-\$39,999	34 (18.2)	39 (20.7)
	\$40,000-\$59,999	52 (27.8)	43 (22.9)
	\$60,000-\$79,999	37 (19.8)	42 (22.3)
	\$80,000-\$99,999	20 (10.7)	21 (11.2)
	\$100,000 or more	31 (16.6)	30 (16.0)
Education	High school or equivalent	20 (10.7)	17 (9.0)
	Some college education	37 (19.8)	23 (12.2)
	College degree	92 (49.2)	107 (56.9)
	Graduate school/ professional degree	38 (20.3)	40 (21.3)
	Other	0 (0.0)	1 (0.50)
Ethnicity	White/Caucasian	140 (74.9)	151 (80.3)
	Black/African American	18 (9.6)	17 (9.0)
	Asian	12 (6.4)	9 (4.8)
	Latino/Hispanic	8 (4.3)	7 (3.7)
	American Indian	3 (1.6)	0 (0.0)
	Other	6 (3.2)	4 (2.1)
Covid-19 situation	Stay at home order	53 (28.3)	23 (12.2)
	Partially opened	117 (62.6)	135 (71.8)
	Fully opened	17 (9.1)	30 (16.0)
Total		187 (100.0)	188 (100.0)

Table 3. Regression results from Study 1

	<i>b</i>	<i>se</i>	<i>t</i> -value	95% CI
Constant	4.44**	0.47	9.38	[3.51, 5.38]
Appeal type	-1.31*	0.60	-2.18	[-2.49, -0.12]
Uncertainty	0.00	0.07	0.01	[-0.14, 0.15]
Interaction	0.23*	0.11	2.00	[0.00, 0.46]
Experiential thinking	0.24**	0.07	3.62	[0.11, 0.37]
<i>F</i>	4.50**			

Note. N=187. CI = confidence interval, *b* = unstandardized coefficient, *se* = standard error.
p* < .05. *p* < .01.

Table 4. Regression results from Study 2

	<i>b</i>	<i>se</i>	<i>t</i> -value	95% CI
Constant	7.54**	1.58	4.76	[4.41, 10.66]
Appeal type	-2.90	1.90	-1.53	[-6.65, 0.85]
Power	0.03	0.29	0.10	[-0.55, 0.61]
Interaction	0.86*	0.40	2.14	[0.07, 1.66]
Experiential thinking	0.41*	0.17	2.37	[0.07, 0.76]
<i>F</i>	5.98**			

Note. N=188. CI = confidence interval, *b* = unstandardized coefficient, *se* = standard error.
p* < .05. *p* < .01.

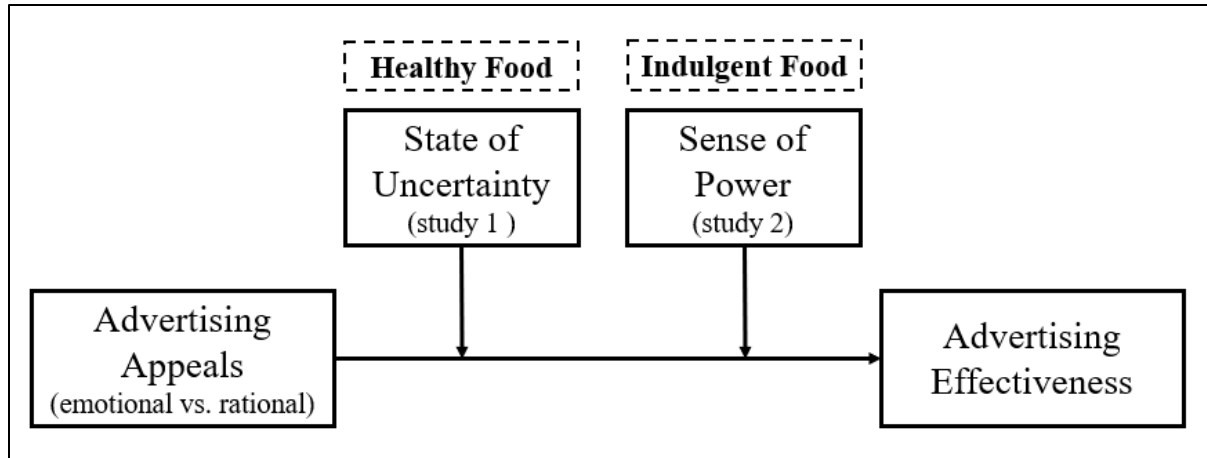


Figure 1. Conceptual Framework

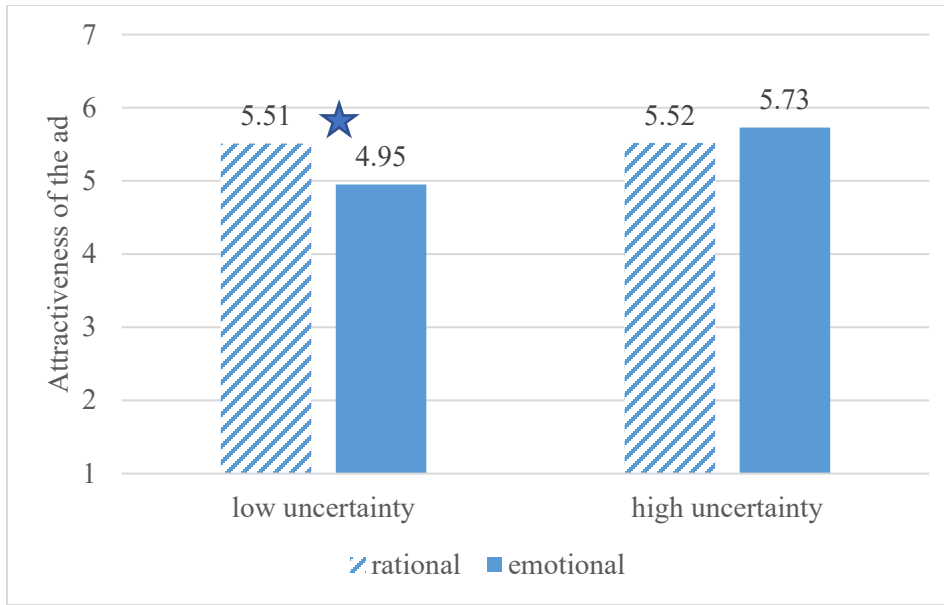


Figure 2. Interaction plot for Study 2

Note. The star mark indicates statistical significance at $\alpha = 0.05$ level

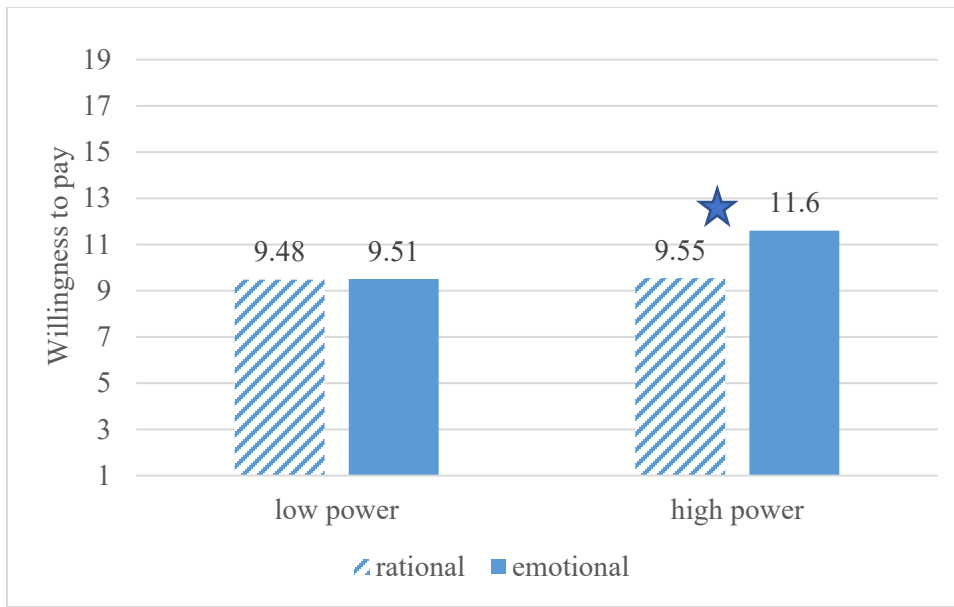


Figure 3. Interaction plot for Study 2

Note. The star mark indicates statistical significance at $\alpha = 0.05$ level

APPENDIX. Experimental stimuli

Study 1

[Emotional appeal]

Feeling like enjoying some delectable food at the comfort of your home? We are now delivering to you. Check out our new toasted chicken avocado sandwich. Try our delicious chicken avocado melt and wake up your taste buds.



For Your Sensory Delight!

- **Tender** chicken
- **Creamy** avocado
- **Juicy** tomato

[Rational appeal]

Thinking about getting some quality food at the convenience of your home? We are now delivering to you. Check out our new toasted chicken avocado sandwich. Order our nutritious chicken avocado melt and maintain your healthy lifestyle.



For Your Health!

- **Low-fat** chicken
- **Nutritious** avocado
- **Fresh** tomato

Study 2

[Emotional appeal]

Feeling like enjoying some delectable food at the comfort of your home? We are now delivering to you. Try our delicious chicken pasta and wake up your taste buds.



For Your Sensory Delight!

- **Creamy** Alfredo sauce
- **Sautéed** chicken breast
- **Juicy** tomatoes

[Rational appeal]

Thinking about getting some quality food at the convenience of your home? We are now delivering to you. Order our nutritious chicken pasta and maintain your healthy lifestyle.



For Your Health!

- **Light** cream sauce
- **Grilled** chicken breast
- **High-quality** tomatoes