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Does social proof and herd behaviour drive food choices of consumers?

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British Food Journal

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Abstract

Purpose

People often look to the opinions and actions of others to guide their food choices, especially when they are uncertain or unfamiliar with a particular food. This influence can be positive or negative depending on the context and can have an impact on food consumption and health outcomes.

Design/methodology/approach

The paper analysed data from 500 young adult consumers in China and employed a multi-study design to examine various aspects of social proof and herd behaviour in food choices. Experiment 1 examined the influence of testimonials from an influential person on buying decisions and eating behaviour. Experiment 2 explored whether herd behaviour drives food options. Experiment 3 assessed the influence of social proof on food choices. Chi-square tests of independence were conducted to examine the relationship between social proof and food choice, as well as herd behaviour and food decision-making. Several logit regression analyses were performed to identify the factors that drive consumers' susceptibility to social proof and herding.

Findings

The results indicated that the source of feedback, whether from an influential person or a family member, did not have a statistically significant effect on the likelihood of following the food guide recommendations. The preference for a healthier food option was stronger than following the herd. In contrast, social proof in the form of reviews and ratings influenced participants' choices. The paper highlights the usefulness for stakeholders and policymakers seeking to promote healthier eating habits.

Originality

The originality lies in its comprehensive approach, combining multiple experiments and analytical methods.

Keywords. Food influencer, feedback, review, ratings, food choice

1. Introduction

Recently, there has been a rise in the availability and variety of healthier food alternatives. For example, low or fat-free or sugar-free diets or low-calorie alternatives. In addition, there are numerous science-based advice on what foods to eat to keep healthy, reduce the risk of chronic disease, and meet nutrient needs. These are usually in the form of food-based dietary guidelines directed at the general population. However, preventable malnutrition remains prevalent. For example, there has been a nearly threefold increase in obesity rates globally since the mid-1970s (WHO, 2021). In China, a recent study shows a 48% change increase in obesity and overweight prevalence among young adults in 2018 compared to 2013 (Wang et al., 2020). Also, young and middle-aged Chinese adults are reported to have a higher diet-related health problem compared to the past (Gong et al., 2020). However, recent evidence suggests that compared to middle-aged, young adults are more likely to be food enthusiasts (Gong et al., 2020) and are very susceptible to lifestyle and dietary changes (Jia et al., 2021). These raise the crucial questions of what drives younger adults' food choices, how do young adults actually make food choices and what opportunities exist for modifying their behaviour towards healthier options.

Studies have shown that when consumers encounter a situation where they do not have a distinct preconceived preference or when they face a dilemma in choosing from multiple options, cues from 'social proof' and consequently 'herding' (mimicking behaviour of other) can be especially influential in reaching a decision (Venema et al., 2020; Naeem, 2021). People aim to verify the accuracy of their opinions and choices through social comparison with reference groups which they identify with. Consequently, a consumer tends to act in a manner consistent with that of the group (Cialdini et al., 1999). However, there may also be the risk of making food choices which are unhealthy food (Chan et al., 2009; Janssen et al., 2018). We revisit this aspect in section 2 of the paper.

Social proof and herd behaviour have been extensively studied globally and in China in non-food contexts (e.g., Salmon et al., 2015; Al-Sheyab et al., 2018; Hilverda et al., 2018). However, there is limited research that first, examines its application in the context of food choice among Chinese consumers. Second, few studies examine how contextual factors influence herd behaviour and food decisions. This is important as findings from one country cannot be generalised to others with precision. There is evidence of how regional cultures and traditions influence food choices and dietary patterns (see Zhang et al., 2016; Tang et al., 2020) since people often prefer familiar and culturally acceptable foods. Specifically, few studies have examined the interaction between these different factors in shaping food decisions among Chinese consumers. This understanding

is particularly crucial in cultures dominated by collectivistic values, such as China. Third, there is a lack of empirical evidence on mixed groups of young people as most of the studies have examined the social proof effect in a fairly homogenous population, e.g., college students or adults in a workplace. In addition, some of the existing studies have been framed in ways that may not fully reflect real-world scenarios e.g., hypothetical food guides or nutrients compositions. Fourth, several studies have examined how different types of social proof (such as expert endorsements or online reviews) can affect food choice. However, it is not clear in the literature whether the social proof effect is stronger for certain types of food (such as unhealthy vs. healthy foods). Accordingly, this paper examines the relationship between social influences and food choice and the role the former plays in shaping eating behaviours among young adults in China.

The main objective of this paper is to examine the role of social proof and herd behaviour in food choices of consumers. Broadly, this paper contributes to understanding consumer food choice behaviours, developing effective interventions to promote healthy eating and better diets, and ensuring the sustainability of food systems and the economic well-being of the consumer. Specifically, the findings from this paper would inform strategies for promoting healthy eating habits at a population level and inform the design of effective interventions on public health strategy for healthy food. Considering the number of Chinese consumers, particularly those in urban areas that are aware of the benefits of healthier eating and place importance on health are gradually increasing (see Cong et al., 2020; Jiang et al., 2013), the paper would provide insights into avenues to influence consumption of healthy foods. Further, the empirical evidence from the paper could assist food manufacturers and businesses in harnessing social influences to develop effective marketing and pricing strategies to promote healthier and more sustainable food choices. Crucially, understanding the association between social proof and food choice would help identify potential negative consequences of social influence on food habits and develop strategies accordingly to mitigate the influence on unhealthier eating habits.

2. Literature Review

2.1 Social influences in food decision making: unpacking the phenomenon of social proof and herd behaviour

The literature is robust with different types of social influence on decision-making, many of which are used interchangeably. Two widely studied social influences are 'social proof' and 'herd behaviour'. Although social proof and herd behaviour are closely related concepts that describe how individuals are influenced by the behaviour, actions, beliefs or opinions of others, leading to conformity and a sense of belonging, however, there are some distinctions between the two. On

the one hand, social proof is a phenomenon where people display the tendency to conform to the behaviours or beliefs of others. In other words, by following the option preferred by others, individuals look to others to guide their behaviour (Cialdini, 1984, Salmon et al., 2015; Pawar et al., 2020). The foundation is based on the principle of social validation (Prentice et al., 2022). In the context of food choice, social proof can play a significant role in influencing a person's choice of food and how much they consume.

On the other hand, herd behaviour refers to the tendency of people to conform to the group behaviour without fully considering the underlying information and discounting whether it conflicts with their personal opinion or information (Ha et al., 2016; Erjavec and Manfreda, 2022). Banerjee (1992) posited that the phenomenon encompasses situations where people follow what everyone else does, regardless of whether their private information suggests doing something different. In such situations, being part of the same reference group takes precedence over the supposed superiority of the group information (Salazar et al., 2013). Generally, following the herd can help individuals make decisions they would find difficult to make on their own, particularly when it reduces uncertainty about what action to take (Shiller, 2015). In other cases, discounting one's information and following the actions of others may result in actions which may be suboptimal or inefficient. In food consumption, herd behaviour in food decisions can have positive and negative outcomes. Thus, there are implications to this assumption that the actions of others are essentially always correct and lead to more accurate decisions. On the one hand, it can lead to consumers trying out new and healthy foods, and it can help to foster a sense of community or shared experiences around food. On the other hand, it can also lead to overconsumption of certain foods or the exclusion of other foods that may be otherwise considered healthy, e.g., vegetables.

Studies have shown that herd behaviour can impact food choices, such as the trend of "superfoods," which are often marketed as healthy and beneficial for overall health (Liu et al., 2021). Many people may choose to eat these foods simply because they are popular and widely recommended, without necessarily considering whether they align with their personal preferences or dietary needs. Also, some findings show that individuals may order the same dish as their friends or colleagues, even if it is not one they would normally choose on their own (McFerran et al., 2010; Higgs & Ruddock, 2020).

In essence, social proof can lead to herd behaviour because people tend to follow the actions and beliefs of the group, even if they do not necessarily agree with them. In the same vein, herd behaviour can also reinforce social proof because as more and more people engage in a certain

behaviour, it becomes even more socially acceptable and desirable. This can create a feedback loop where the behaviour becomes increasingly popular, and more people feel compelled to conform.

2.2. Studies on social influence and food decision making

Previous studies have shown that people are more likely to choose foods that are perceived as socially acceptable or normative (Robinson et al., 2013). For example, if a person perceives that a particular type of food is commonly consumed by their peers or within their social group, they may be more likely to choose that food over other options. Arguably, a person may likely choose the option that more people had selected, regardless of its healthfulness.

There is evidence that supports the assertion that social influence can work in both positive and negative directions depending on the context. For example, people would tend to eat more when they perceive that others are eating a lot and less when they perceive that others are eating less (Robinson et al. 2014; Robinson et al. 2015).

The group composition to which a person wants to conform to also influences food decisions. For example, studies have reported that when a person eats in a group that consists of family or friends compared to strangers, they tend to consume more, especially if there are people within the group that ate a lot (De Castro, 1994; Salvy et al., 2012; Herman et al., 2015). Other studies have dissected this association further and found that the composition of the group influences the consumption of different types of food, e.g., fruit and vegetable consumption increased when influenced by friends compared to fast food consumption which increased when either friends or family consumed more (Bellettiere et al., 2021).

Since social proof can be a mechanism for reinforcing or challenging existing social norms, the literature recognises the role unwritten rules or expectations that govern group behaviour play in food decisions. Some studies have found that people are more likely to conform to descriptive norms when they perceive that there are benefits to doing so and when they perceive that they are similar to the people whose behaviour they are observing (Rimal et al. 2005). In the context of food choice, this suggests that people may be more likely to choose certain foods if they believe that others like them are also making those choices, particularly if they feel a sense of similarity with those others. In terms of descriptive versus injunctive norms, i.e. what people actually do in a given situation compared to what is commonly approved or disapproved, Salmivaara et al. (2021) findings buttresses the role of perceived descriptive norms as they found that, unlike injunctive social norms, descriptive norms have an impact on actual and intended food choices. Similarly,

Stok et al. (2014) found that when people were exposed to a descriptive norm indicating that their peers ate more fruit than the average person, they ate significantly more.

Social influence also plays an indirect role in wanting to conform to what people perceive to be normative in terms of food choices. For example, exposure to healthy food images prior to making food choices is likely to influence a person to choose healthy options (Dutriaux et al., 2021; Hawkins et al., 2021).

Consumer comments, likes, and reviews which are cues of online social proof, influences consumers' purchase intentions in the food context in an online environment. Hilverda et al. (2018), Aureliano-Silva et al. (2021), Ali et al. (2021), and Park et al. (2021) are examples of studies that found that positive reviews have a substantial beneficial impact on consumer patronage and purchase of food in the restaurant. Similarly, if a friend or family member recommends a particular dish or restaurant, people may be more likely to try it out themselves (De Castro, 1994; Salvy et al., 2012). The reason is that positive comments, likes, and reviews can create a perception of quality, trust, and reliability, making the consumer more likely to purchase the item. In addition, these cues also provide detailed information about the quality of the food and value for money. Thus, the assertion is that consumers are more likely to trust the opinions of other consumers rather than advertisements or promotions from service providers as they perceive customer reviews as unbiased and authentic. These findings may also be attributed to consumers being more likely to be influenced by reviews from people who are perceived as similar to themselves in terms of demographics, such as age and gender (Fortin & Yazbeck, 2015; and Cruwys et al., 2015).

Although there is evidence of a high concordance between food choices and decisions by members of a group, many consumers are not fully aware or do not acknowledge that this behaviour is impacted by social influence. For example, participants in Vartanian et al. (2008) study attributed the similarity in food consumption primarily to hunger and taste.

3. Methodology

3.1 Data

Chinese consumers between the ages of 18-35 were selected to investigate whether social proof and herd behaviour drive the food choices of consumers. Responses were obtained from 500 respondents between June and July 2023 through an online survey posted on the online survey platform (Wenjuanxing). The survey consisted of questions from which self-reported responses related to the drivers of food decision-making and food choices including eating habits, food

expenditure, perception of body shape and three behavioural economics-type experiments. The survey was approved by [REMOVED FOR REVIEW], and informed consent was obtained from all participants before conducting interviews or surveys. The same participants answered all three experiments. The experiments were presented in a randomised order to prevent order effects. The average time taken by respondents to answer the question was 13 minutes. As most of the data was closed responses, the level of data cleansing required was minimal. We checked to see that respondents did not consistently tick the same response across all questions, as this will imply that the specific data from that respondent would be unreliable and unusable.

Experiment 1

First, to test the influence of feedback/testimonial from an influential person outside of one's social network on changing consumers' future eating behaviour, participants were split into two groups and asked to imagine they had come across the information in Figure 1 which reports a third persons experience of the benefits they derived from the Chinese Food Guide Plate.

[Figure 1 here]

The statement is as follows:

"…I followed the food guide in the last year which helped me to stay strong and healthy. I encourage you to do the same for the next year"

Participants were then asked to report the extent they are inclined to follow this request on a five-point scale of "Extremely likely, Very likely, Moderately likely, Slightly likely and Not at all". In the first group, participants were informed that close family or friend posted the recommendation. In contrast, the second group were informed that their favourite celebrity made the recommendation.

Experiment 2

This experiment was designed to test whether herd behaviour influences consumers' food decisions and, specifically, whether it acts as a heuristic. Participants were told to imagine they were in a food market or supermarket to do their food shopping. Participants were presented with the nutritional facts of two soy sauces. Soy sauce A was similar to Soy sauce B, but the latter had 43% less salt (Figure 2). However, in addition to the nutritional information, participants saw a sign "*most popular with customers that visit this shop*" placed above Soy Sauce A, implying that most people who bought soy sauce in this shop bought Soy Sauce A. Participants then picked one out of the two foods.

[Figure 2 here]

Experiment 3

A test to assess the influence of social proof from consumer-generated content, i.e., reviews and ratings, on consumers' choices was also conducted. Participants were randomly split into four groups of (126, 125, 125, 124) and told to imagine they had to choose between one of the two yoghurts to buy, i.e., option A is yoghurt with added sugar while option B is yoghurt with no added sugar (Figure 3). Group 1 saw the options without any reviews or ratings. Group 2 were shown reviews only, Group 3 saw ratings only, while the information for Group 4 included both review and ratings. A summary of the conceptual model for the experiments is presented in Table 1.

[Figure 3 here]

[Table 1 here]

3.2 Analytical methods

A chi-square test of independence was performed to examine, firstly, the relation between social proof and food choice and, secondly, the association between the source of feedback and consumers' intention to change future eating behaviour. Logistic regression results examined the relationship between testimonials from an influential person and changes in food behaviour (Experiment 1), personal factors that influence consumers' food choice under herding (Experiment 2) and social proof influence from reviews and ratings (Experiment 3).

4. Results

Sample profile

67% of the participants were female. Participants were between the age bracket of 18-35 years, with 18-20 years old constituting 43%, and 22-25 years old accounting for 42%. 61% were students, while 35% were employed. 40% and 38% spend approximately 21-30% and 31-40% of their total household monthly income on food, respectively. 10% were from Central China, 47% from Northern China and 43% from Southern China.

Influences on food choices

The results showed that many young consumers' food purchase decisions in the past had been motivated by influencers, as 74% reported that they had bought food from a live broadcast involving an influencer at least once. Further, when asked if food products recommended by

netizens or netizen shops by a celebrity would they trust the product more and try it out, 16% gave an affirmative answer. However, the majority (58%) will only make such a purchase only after checking consumers' reviews. Regarding other inferences on food choices, information from consumer reviews/ratings had a greater level of importance, followed by information from 'expert reviews/ratings and observing others buying the food (Figure 4).

[Figure 4 here]

Results of experiment 1

The results of the assessment of the influence of feedback from an influential person outside of one's social network on changing consumers' future eating behaviour show that 19% are extremely likely, 36% very likely, 28% were moderately likely to follow the food guide based on the recommendations of others. Specifically, of the 19% who reported that they were extremely likely to follow the recommendation, 10% had the information that the recommendation was from a celebrity, compared to 9% who had the information that the recommendation was from a family member. Similarly, the 26% of consumers that were moderately likely to follow the recommendation constituted 16% of those who had the information that the recommendation was from a celebrity and 10% that were informed that the recommendation was from a family member. However, a chi-square test of independence showed that there was no significant association between the source of feedback and consumers' intention to change future eating behaviour, $\chi2$ *(4, N = 500) = 7.69, p = .104*. Thus, the hypothesis that there is no difference in the distribution of responses cannot be rejected.

Results of experiment 2

The summary statistics of whether herd behaviour influences consumers' food decisions showed a difference in the proportions in the two groups, i.e., those that chose the option with the sign "most popular with customers that visit this shop" placed above the food and those who chose the alternative. While 46% chose the conventional popular option, which had the most popular sign, 53% chose the low salt option. A z-proportions test was used to test whether significantly more likely participants preferred food option A over option B. The difference was marginally statistically significant, z *= -1.61, p = .053* at a significance level of 0.1, indicating that the preference for option A was greater than what would be expected due to chance.

Results of experiment 3

53% picked the conventional yoghurt with added sugar compared to 47% that chose the no-added-sugar option. The proportion of participants that picked the conventional yoghurt with added

sugar was higher for all treatments (No review or rating, consumer reviews only, consumer ratings only and consumer review and ratings) except for consumer ratings only. Specifically, 40% for consumer review and ratings, 44% for review only, 56% for ratings only, 49% for no review or rating chose the no-sugar yoghurt. This statistic indicates that more than half of the participants in the ratings-only treatment chose the healthier choice. A chi-square test of independence was performed to examine the relation between food choice and the social proof method. The proportion of participants who chose the no-added-sugar yoghurt differed by social proof, $\chi2\ (3,\ N = 500) = 7.45,\ p = .059$ at a marginally significance level of 0.1. Thus, the hypothesis that there is no difference in the distribution of responses is rejected.

Determinants of food choices and decisions

The ordered logistic regression results in Table 2 examining the relationship between feedback from a celebrity and intention to change (*experiment* 1) confirms earlier findings that feedback source has no statistically significant effect on the consumers' intention to change future eating behavior. For the determinants of consumers' food choice (*experiment* 2), participants that are calorie conscious were less likely to choose the least healthy food. Lastly, there is empirical evidence that social proof influences in the form of reviews and ratings (*experiment* 3), albeit for consumer ratings. This implies that participants that saw the consumer ratings only compared to consumer reviews and ratings were more likely to choose the least healthy food.

 [Table 2 here]

5. Discussion

The results of these studies provide valuable insights into the influence of social proof and herd behaviour on food choices among Chinese consumers. The preference for healthier options observed in the presence of social proof arising from consumer ratings indicates the potential effectiveness of its application as a nudging strategy in promoting healthier food choices. However, the study also reveals that the source of feedback from an influential person outside one's social network does not differ from family or friend influence in impacting consumers' future healthy eating behaviour. This contradicts previous studies, which often attribute greater influence to external celebrities compared to close social connections. It may well be the case that the impact of influencers may be stronger in encouraging unhealthy food, a postulation which finds support in previous findings (Alruwaily et al., 2020; Kucharczuk et al., 2022) where there is a seemingly prevalent strategy of using celebrities and influencers mostly to promote unhealthy products. Thus,

this finding does not underestimate the persuasive power of influencers in shaping consumers' food choices. Hence it is worth noting that while external influencers may not strongly impact promoting healthier choices, they still possess significant persuasive power in shaping consumers' food choices, particularly when it comes to promoting unhealthy products.

This statistic that only under the ratings-only treatment did the majority of the participants in the chose the healthier choice suggests that consumers shopping online may rely on ratings as a heuristic (e.g., as reported in Nazlan et al., 2018) to quickly form judgments as it will require less time than reading consumer reviews and provide some consumer validation which could not be found in the no review or rating treatment. Another explanation for this could be that consumers, especially with sugar-reduced products, may be concerned that they do not taste as good (Dias et al., 2020; de Souza et al., 2021) but this concern may have been reduced by the ratings. The findings of social proof from consumer-generated content align with previous research emphasising the impact on consumer food-related decision-making (Wang et al., 2020a; Liu et al., 2023). The finding that participants were more likely to choose the healthy food option when exposed to the ratings from other consumers supports earlier studies highlighting the potential drawbacks of relying solely on reviews (Mo et al., 2015; Wang et al., 2020b).

Despite being exposed to a sign indicating the popularity of the food option, a larger proportion of participants preferred the no-sign low-salt alternative. This finding demonstrated that participants were less likely to choose food items labelled as "most popular" if it was unhealthy. This findings regarding herd behaviour and its impact on food choices deviate from previous studies on consumer behaviour and contradicts research indicating that people generally tend to consistently rely on others' choices as a heuristic when making decisions, including food choices (see Cruwys et al., 2015 for a review). The results of this study also provide evidence that the influence of herd behaviour on consumers' food decisions may be contingent on the type of food being considered. It also confirms that factors beyond herd behaviour play a role in influencing food decisions. For example, health-conscious individuals may have prioritised the health benefits of the low-salt alternative, even if other options are more popular. Thus, it corroborates earlier studies that Chinese consumers, particularly those in urban areas are becoming increasingly aware of the benefits of healthier eating and are now placing importance on healthy diets (Cong et al., 2020; Jiang et al., 2013).

The empirical evidence from this paper on the influences of social proof on food choices is useful for marketers and policymakers seeking to promote healthier eating habits. For example, using social proof, specifically a high consumer rating on healthy foods, as a nudging strategy could

effectively encourage consumers to make healthier food decisions. Further, businesses and marketers looking to promote healthier eating habits should not solely rely on external influencers to promote healthier options but should also harness the power of customer testimonials and feedback from within consumers' social circles, as previous assumptions that external celebrities and influencers hold greater persuasive power over consumers compared to close social connections may not apply to situation targeted at encouraging healthy food habits.

Further, the fact that participants were less likely to choose the "most popular" option when it was unhealthy indicates that herd behaviours' influence on food decisions may be contingent on the type of food being considered. This suggests that health-conscious consumers are willing to prioritise their health over popular choices. Marketers and businesses can leverage this insight to promote health benefits and conscious consumption among their target consumers. A better understanding of the complex interplay of social factors can lead to more effective and responsible marketing practices and ultimately contribute to healthier food choices among consumers.

6. Conclusion

The study aimed to investigate the impact of social proof and herd behaviour on food choices among Chinese consumers. Data from Chinese individuals are analysed using a multi-study design approach to achieve this. Experiment 1 examined whether buying decisions and eating behaviour are driven by testimonials from influential individuals compared to someone within the participants' social network. Experiment 2 explored whether herd behaviour played a role in food options, while Experiment 3 assessed the impact of social proof on food choices.

The findings revealed that the source of feedback, whether from an influential person or a family member, did not significantly affect the likelihood of following the food guide recommendations. Evidence suggests that in this specific context, the consumers' preference for healthier food options was stronger than the tendency to follow the crowd, indicating that Chinese consumers may be conscious of their food choices and prioritise their health outcomes. In addition, social proof in the form of reviews and ratings influenced participants' food choices, suggesting that people are more likely to be influenced by the opinions and experiences of others (shared through reviews and ratings) when making decisions on food. The insight this paper provides into consumers' online shopping and their reliance on ratings as a heuristic holds implications for e-commerce platforms and online food retailers. These findings on the association between the food choices of Chinese consumers and social proof and herd behaviour contribute to the existing body

of literature in this field. By integrating the findings of this study with previous research, stakeholders can develop more effective strategies to influence consumer behaviour. Several implications arise from the findings in this paper. Considering that there is an emerging consciousness towards healthier eating, with an increasing number of people leaning towards options like low-salt or no-added-sugar products, businesses can harness this knowledge for targeted marketing aimed at offering, promoting, and making these healthier options more accessible. While reviews are vital, businesses could emphasize a robust rating system by highlighting ratings separately to impact consumer decisions effectively. Further, food producers and marketers wishing to promote healthier eating habits should harness the power of influencers, customer testimonials and feedback particularly from within consumers' social circles. Public policy can benefit by designing health campaigns that take advantage of the appeal of popular choices at the same time having a stricter regulation on food advertising with misleading portrayal of popularity. This research is also useful to academic discourse, as it provides empirical evidence for a deeper understanding of the impact of social influences on food consumption. The main limitation of the study is the small number of experiments used to elicit social proof and herd behaviour as related to consumers food choices. Future studies can build on this study and expand the composition of the experiments, for example, to different foods and age categories.

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Figure 1. Example of a test of the influence of testimonial using the Chinese Food Guide
Plate
Source: Chinese Nutrition Society, 2016

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Most popular with customers that visit this shop

Soy sauce A
Typical Values per 100 ml
Energy   450kJ/107kcal
Fat   0 g
Carbohydrate   6.9 g
  ▪ of which saturates   0 g
  ▪ of which sugars   3.9 g
Protein   9.7 g
Salt   16.9 g

Soy sauce B
Typical Values per 100 ml
Energy   450kJ/107kcal
Fat   0 g
Carbohydrate   6.9 g
  ▪ of which saturates   0 g
  ▪ of which sugars   3.9 g
Protein   9.7 g
Salt   9.1 g

43% Less salt than A

Figure 2. Example of a test for herd behavior using conventional vs. low salt foods

Group 1. No Review

Yoghurt

Yoghurt *no added sugar*

Group 2. Reviews only

Yoghurt

Yoghurt *no added sugar*

Reviews by 69 consumers

Reviews by 51 consumers

Group 3. Rating only

Yoghurt

Yoghurt *no added sugar*

Ratings stars (4.3)

★ ★ ★ ★ ☆

Ratings stars (4.2)

★ ★ ★ ★ ☆

Group 4. Review and star rating

Yoghurt

Yoghurt *no added sugar*

Reviews by 69 consumers
Ratings stars (4.3)

★ ★ ★ ★ ☆

Reviews by 51 consumers
Ratings stars (4.2)

★ ★ ★ ★ ☆

Figure 3. Example of a test for social proof using conventional vs. low sugar foods

Note: These review and ratings were obtained from actual supermarket reviews as at the time of the experiment.

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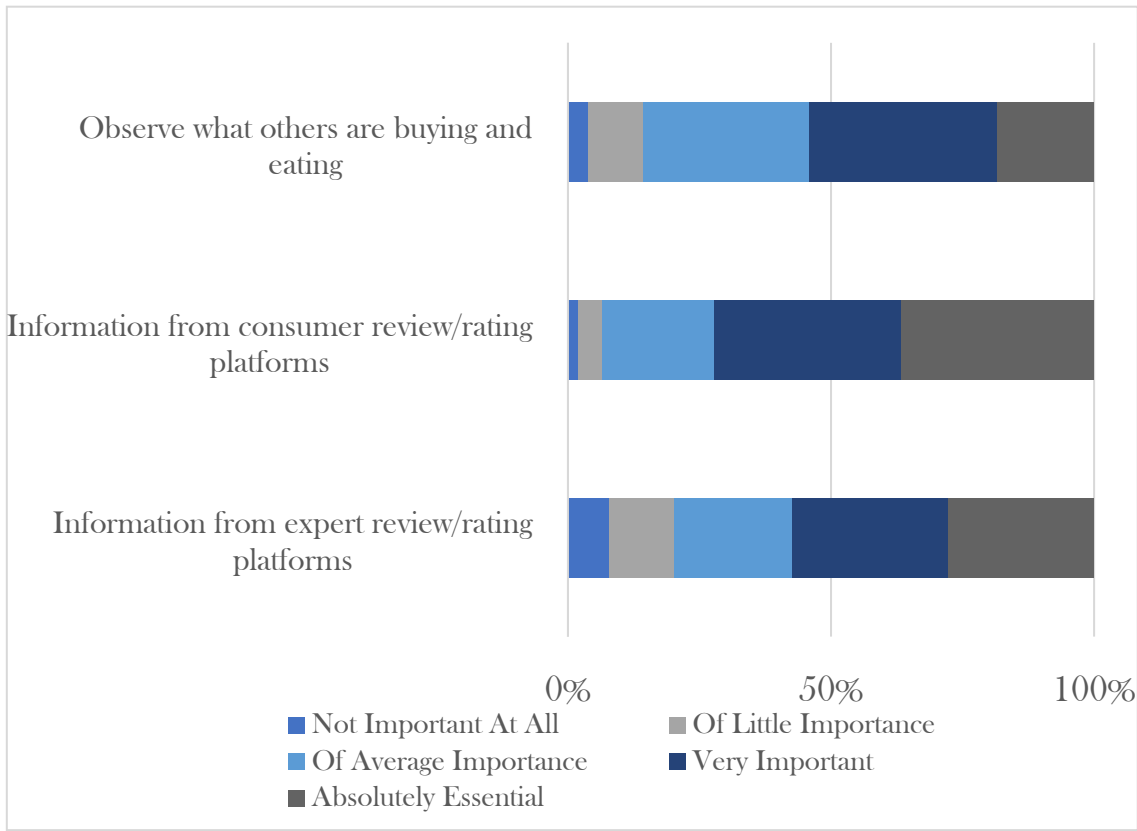48
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Figure 4. Important factors that influence food decision

Table 1: Synopsis of the conceptual model

	What is being measured	How was it measured	Why was it measured
Experiment 1	This experiment measures how likely individuals are to change their eating behaviour based on a testimonial from either a close family/friend or a favourite celebrity	Through Likert scale responses to hypothetical scenarios of behavioural experiments	This experiment was conducted to understand the relative persuasive power of social proof coming from personal connections versus influential members of the public
Experiment 2	This experiment measures consumer choice between two similar food products, one labelled as more popular, to see if the popularity heuristic influences the decision, despite the nutritional difference	Through binary option responses to hypothetical scenarios of behavioural experiments	The purpose of this experiment was to explore whether consumers are more likely to choose a food that is presented as popular among other shoppers, despite there being a healthier alternative available. This information is crucial for understanding how herd behaviour can override individual health considerations in food choices
Experiment 3	This experiment measures the impact of consumer-generated content on food choices	Through binary option responses to hypothetical scenarios of behavioural experiments	The measurement in experiment 3 aimed to quantify how much user-generated content (reviews and ratings) influences consumers' choices between similar food products. This aspect is particularly important in the digital age where online shopping is prevalent, and reviews/ratings are abundant.

Table 2. Logit regression results examining the relationship between the intention to change food behavior and feedback source (*Experiment* 1), factors that influence consumers susceptibility to herding (*Experiment* 2) and social proof influence from reviews and ratings on food choice (*Experiment* 3).

Variable	*Experiment* 1		*Experiment* 2		*Experiment* 3	
	Coef.	St.Err.	Coef.	St.Err.	Coef.	St.Err.
Celebrity recommendation	0.043	0.163				
No review or rating					0.418	0.264
Consumer reviews only					0.253	0.267
Consumer ratings only†					0.76***	0.266
Age	-0.002	0.101	-0.006	0.11	0.255**	0.114
Gender	0.252*	0.182	0.065	0.202	-0.283	0.208
Food expenditure	0.172**	0.088	0.035	0.095	-0.023	0.099
Perception of body shape	0.204***	0.092	0.036	0.098	0.213**	0.102
Low calories priority	0.536	0.087	-0.305***	0.092	0.295***	0.095
Location	0.141	0.132	-0.218	0.146	0.383**	0.149
Constant			0.858	0.573	-3.048	0.639
Chi-square	15.554		68.301		42.101	
Prob > chi2	0.016		0.000		0.000	
Akaike crit. (AIC)	688.999		1347.794		669.477	
Bayesian crit. (BIC)	718.502		1394.155		711.623	

N= 500, *** p<.01, ** p<.05, * p<.1
†Reference category is group 4 (consumer review and ratings)

Note: The experiment preceded a survey which measured food the drivers of food decision-making and food choices including eating habits, food expenditure and perception of body shape.

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