

THE EFFECT OF EMOTIONS ON FOOD WASTE BEHAVIORS AMONG YOUNG CHINESE CONSUMERS

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Abstract: Food waste is a serious problem in the environment, economy and society at present. This paper examines the relationship between food waste behaviours and emotions for young consumers in China. Data were collected from 384 individuals aged 18-35 across China using a quantitative method. Covariance-Based Structural Equation Modeling (CB-SEM) was conducted on the above model. The above data show that emotions are linked to a person's behavior of wastefulness. Negative emotions such as regret and self-blame for wasting food lead to more responsible consumption behaviour and reduce the amount of food waste. The above results indicate that emotions are related to the sustainable consumption and food waste. Our study offers some suggestions for the government and schools on how to organize effective awareness-raising activities and interventions to encourage young people to reduce food waste.

Keywords: Emotions; Food Waste Behaviors; Young Consumers; Sustainable Consumption; China.

Introduction

According to the Food and Agriculture Organization (FAO), about one-third of all the food produced for people's consumption is lost or wasted every year around the world, which amounts to about 1.3 billion tons (FAO, 2023). The environment will have the following negative consequences: higher greenhouse gas emissions, the excessive use of land and water resources, reduced biodiversity, etc. Economically, there is also a large loss; the World Wildlife Fund reported that the annual cost of food waste around the world is over \$940 billion (WWF, 2024).

China is also one of the most prominent cases around the world. As China is the world's most populous country and one of the leading economies globally, changes in food consumption patterns have also occurred due to urbanisation and higher incomes. According to a recent report, about 35 million tons of food are wasted by Chinese households and food service

enterprises every year, and as a result, the government has taken some countermeasures, such as the "Clean Plate Campaign" in 2020 (Tsai, Chen, & Yang, 2022).

The theory of planned behaviour has been used to study the role of attitudes, subjective norms and perceived behavioural control in the traditional research on food waste. Although it is beneficial, this cognitive-centred way of thinking has neglected the significant impact of emotions on people's consumption and waste behaviour (Jabeen, Dhir, Islam, Talwar, & Papa, 2022). Recently, scholars have focused more on the mechanisms of emotions and believe that guilt, shame, fear, etc., are powerful reasons why people act differently.

Based on the above, the three research questions of this study are as follows:

- (1) How do positive and negative emotions affect the food waste behaviour of young Chinese consumers?
- (2) What is the mechanism by which emotions lead to irresponsible consumption habits?
- (3) What are some feasible recommendations to reduce food waste among this group of people?

A quantitative research design and Covariance-Based Structural Equation Modeling (CB-SEM) were used to analyze the data of 384 young Chinese consumers in this study. The above results add to the body of knowledge on sustainable consumption by showing how emotions affect the desire to waste food.

Literature Review and Hypothesis Development

Theoretical Foundations

The two theories providing support for this study are the Theory of Planned Behaviour (TPB) and the Theory of Interpersonal Behaviour (TIB), which are compatible. Although TPB has been widely used to study the reasons for pro-environmental behaviour, it focuses too much on a rational decision-making process and has thus been criticized for neglecting emotional and habitual factors in consumer behaviour (Ajzen, 2020). Triandis (1979) put forward the more all-encompassing model of TIB, which includes emotions, habits and supporting conditions in addition to intentions and attitudes.

TIB explicitly incorporates affect and past behavior/habits as direct antecedents alongside cognitive components, thereby offering a more comprehensive lens to capture the emotional and habitual nuances inherent in young consumers' food waste decisions. This integrated framework allows us to examine how emotions interact with cognitive and habitual factors in shaping wasteful behaviors.

Recently, some research has been conducted on how to determine reasons for food waste through consumer behavior studies. Jabeen et al. (2022) used TIB to study the influence of emotions, attitudes and intentions on the behaviour of reducing food waste among users of food delivery platforms, and found that negative emotions are positively related to a greater willingness to reduce food waste. Lau and Ng (2024) have used cognitive theory of emotion in conjunction with TIB to explore the influence of ordering routines and perceived moods on responsible consumption in green restaurant environments.

Emotions and Consumer Behavior

The two main types of emotions are generally classified as positive (e.g., pride, happiness, contentment) and negative (e.g., shame, regret, anxiety). There are roles for both types of

emotions in eating behaviours and health. Positive emotions related to abundance, generosity and enjoyment of food may lead to over-ordering and thus waste. On the other hand, negative emotions caused by recognising waste can be used to drive behaviour modification (Nguyen, 2025).

Anticipated emotions are particular instances of feelings that people have about the future. Consumers who believe they will feel guilty about food waste are more likely to be motivated to plan ahead and control the amount of food they eat or have left over (Talwar, Jabeen, & Dhir, 2023). Guilt has been considered a "positive motive" to change instinctive and wasteful behaviour into thoughtful, long-term habits (Elsharnouby & El-Baz, 2025).

Scarcity mindset has been identified as a moderator of young consumers' waste avoidance behaviour, and it can be seen as having both cognitive and affective components; that is, the feeling of resource shortage can cause anxiety over deprivation at the same time that it fosters an awareness of the value of food resources (Contzen & Handrich, 2023).

Some recent studies have also found that, for certain conscious consumers of food waste, cognitive dissonance is a reason why they have not thrown away edible food. Spicka (2025) found that the propensity to waste food was, in fact, higher among people who knew about their food waste and were concerned about the cost; Casonato and Principato (2024) suggested that this apparent contradiction might be due to cognitive dissonance.

Food Waste Behaviors among Young Chinese Consumers

Young Chinese consumers are a special group that needs to be focused on. Jia and others (2022) discovered that young consumers lacking farming experience and women were more likely to waste food after ordering online; thus, experiential and demographic factors have also been identified as influencing this behaviour. Meituan and Ele.me have established a culture of convenience that has normalised the behaviour of excessive ordering by consumers; that is to say, they order too frequently because of promotions, free delivery thresholds, and aesthetic presentation standards that favour abundance over efficiency (Wang, Luo, & Zhang, 2023).

Hypothesis Development

Based on the theory and research results mentioned above, the following hypotheses are put forward.

H1: The degree of positive emotion directly relates to the behaviour of food waste among young Chinese consumers.

Rationale: A positive emotional state, such as a good eating experience, the satisfaction of giving to one's family and friends, and the pleasure of experiencing variety, can reduce people's awareness of food waste (Jabeen et al., 2022).

H2: Negative emotions are negatively correlated with food waste behaviour among young Chinese consumers.

H3: Negative Emotions are positively correlated with responsible consumption behaviour.

Rationale: This study proposes that negative emotions aid self-regulation to develop a better plan for portioning and reducing food waste (Nguyen, 2025).

H4: Responsible Consumption Practices Mediate the Path from Negative Emotions to Reduced Food Waste.

Rationale: Negative emotions do not reduce waste directly; instead, they cause people to change their behaviour to avoid waste, such as making good plans, consuming mindfully and reasonably storing food (Lau & Ng, 2024).

Conceptual Framework

According to the above theory and hypotheses, the following conceptual framework is put forward.

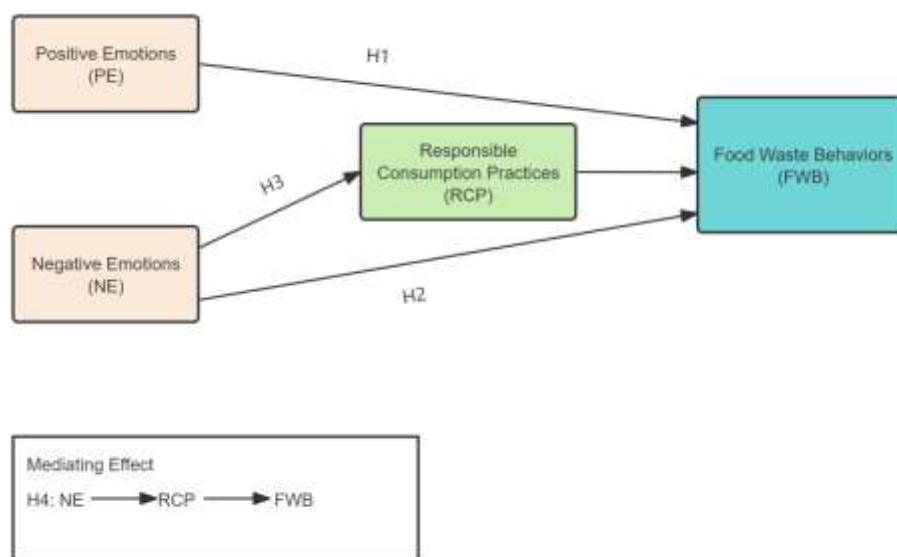


Figure 1: Conceptual Framework

Source: Developed by the author based on Jabeen et al. (2022), Elsharnouby & El-Baz (2025), and Lau & Ng (2024)

Methodology

Research Design

This study employed a quantitative, cross-sectional research design. A survey method was selected as appropriate for measuring psychological constructs (emotions, attitudes) and self-reported behaviors across a large sample. The study received ethical approval from the institutional review board, and all participants provided informed consent prior to participation.

Sampling and Data Collection

The survey was carried out on young Chinese consumers between 18 and 35 years old. A multi-stage sampling method was employed. Firstly, five major Chinese cities (Beijing, Shanghai, Guangzhou, Chengdu and Shenzhen) were chosen to cover different areas. Then, potential respondents were chosen from online panels provided by a certain market research company in each city.

The sample size was determined according to CB-SEM principles. According to Kline (2023), a respondent ratio of at least 10 is recommended for each estimated parameter. As our proposed model includes 38 parameters, at least 380 responses were required. In all, 450 questionnaires

were distributed and 384 valid ones were collected, showing a 85.3% response rate. To test the non-response bias, the replies from the beginning and the end of the investigation were compared, but no significant differences were observed.

Table 1: Demographic Characteristics of Respondents

Characteristic	Category	Frequency (N)	Percentage (%)
Gender	Male	182	47.4
	Female	202	52.6
Age Group	18–24 years	156	40.6
	25–30 years	148	38.5
	31–35 years	80	20.8
	High school or below	46	12.0
Education	Bachelor's degree	234	60.9
	Postgraduate degree	104	27.1
Monthly Income (CNY)	<5,000	98	25.5
	5,001–10,000	156	40.6
	10,001–20,000	88	22.9
	>20,000	42	10.9
City Tier	Tier 1 (Beijing, Shanghai, Guangzhou, Shenzhen)	210	54.7
	Tier 2 (Chengdu, etc.)	174	45.3

Measurement Instruments

All constructs were measured using multi-item scales adapted from validated instruments in previous research. Items were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The survey was administered in Chinese; translation and back-translation procedures were followed to ensure linguistic equivalence.

Positive Emotions (4 items): Adapted from Jabeen et al. (2022), measuring satisfaction, happiness, and enjoyment associated with food consumption. Negative emotional indicators (5 components) are obtained from the research of Elsharnouby and El-Baz (2025). Responsible Consumption Practices (5 items): Adapted from Lau & Ng (2024), measuring planning behaviors, portion control, and leftover management. Food Waste Behaviors (4 items): Adapted from Jia et al. (2022), measuring self-reported frequency and quantity of food waste .

Data Analysis Procedure

These indicators are closely related to remorse, self-criticism and humiliation after food waste. The data analysis follows the two-stage procedure proposed by Gaskin, Lowry, Rosengren and Fife (2025) for Covariance-Based Structural Equation Modeling (CB-SEM).

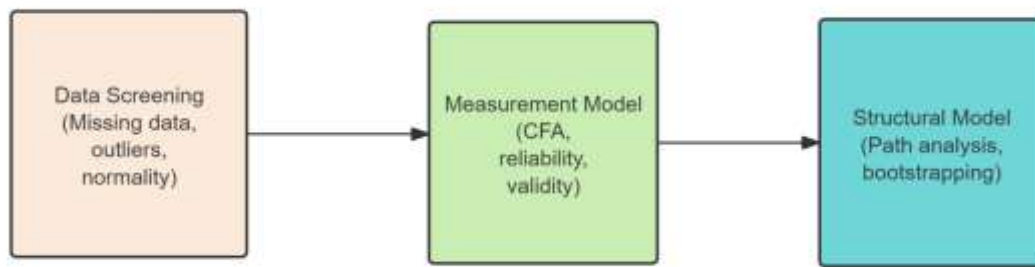


Figure 2: Data Analysis Workflow

Source: Developed by the author based on Gaskin et al. (2025)

Findings

Measurement Model Assessment

In the first stage, the measurement model is evaluated for its reliability and validity. Specifically, reliability, convergent validity and discriminant validity are tested. In the second stage, the structural model is examined to verify the proposed hypotheses. All the analyses are carried out using IBM SPSS 28.0 and AMOS 28.0. Maximum likelihood estimation is utilized and bootstrapping (5000 replications) is applied to assess the indirect effects.

Composite reliability (CR) and Cronbach's alpha values both exceeded the threshold of 0.70 and thus were considered acceptable. All constructs had Average Variance Extracted (AVE) values greater than 0.50 and were thus convergent. Discriminant validity was verified through the Fornell-Larcker criterion, and the square root of each construct's AVE exceeded its correlations with other constructs; Table 2 shows the reliability and convergent validity indices of each construct.

Table 2: Measurement Model: Reliability and Convergent Validity

Construct	Items	Cronbach's α	CR	AVE
Positive Emotions	4	0.862	0.871	0.628
Negative Emotions	5	0.894	0.902	0.697
Responsible Consumption Practices	5	0.877	0.883	0.655
Food Waste Behaviors	4	0.841	0.849	0.586

Source: Author's calculation from survey data (2025)

Table 3: Factor Loadings and Cross-Loadings

Item	Positive Emotions	Negative Emotions	Responsible Consumption	Food Waste Behaviors
PE1	0.812	0.124	0.089	0.156
PE2	0.785	0.098	0.112	0.134
PE3	0.798	0.145	0.076	0.167
PE4	0.756	0.112	0.134	0.123
NE1	0.098	0.834	0.423	-0.367
NE2	0.123	0.856	0.398	-0.345
NE3	0.087	0.812	0.445	-0.389
NE4	0.145	0.798	0.412	-0.356
NE5	0.112	0.823	0.389	-0.334
RCP1	0.098	0.412	0.834	-0.512
RCP2	0.112	0.398	0.821	-0.498
RCP3	0.134	0.445	0.798	-0.523

Note: Bold values indicate factor loadings >0.70; CR = Composite Reliability; AVE = Average Variance Extracted. All loadings are significant at $p < 0.001$.

Source: Author's calculation from survey data (2025)

Model fit indices indicated acceptable fit for the measurement model: $\chi^2/df = 2.34$ (recommended <3.0), CFI = 0.945 (recommended >0.90), TLI = 0.932 (recommended >0.90), RMSEA = 0.058 (recommended <0.08), SRMR = 0.047 (recommended <0.08).

Structural Model and Hypothesis Testing

Construct a model to test the above proposed relationships empirically. The model explained 41.2% of the variance in responsible consumption behaviour ($R^2 = 0.412$) and 38.7% of the variance in food waste behaviour ($R^2 = 0.387$).

Table 4: Hypothesis Testing Results

Hypothesis	Path	β	SE	t-value
H1	Positive Emotions → Food Waste Behaviors	0.324	0.045	7.200
H2	Negative Emotions → Food Waste Behaviors	-0.418	0.052	-8.038
H3	Negative Emotions → Responsible Consumption Practices	0.456	0.048	9.500
H4	Responsible Consumption Practices → Food Waste Reduction	-0.387	0.046	8.413

Note: β = standardized path coefficient; SE = standard error; all path coefficients significant at $p < 0.001$.

Source: Author's calculation from survey data (2025)

Mediation Analysis

To verify Hypothesis 4 (mediation), 5,000 bootstrap replications were used to compute the indirect effect and its corresponding confidence interval. The indirect effect of negative emotions on food waste reduction via responsible consumption behaviour was relatively small ($\beta = 0.176$, 95% CI [0.132, 0.228]), thus only a partial mediator.

Table 5: Direct, Indirect, and Total Effects

Effect Type	Path	β	95% CI Lower	95% CI Upper
Direct	Negative Emotions $\rightarrow$ Food Waste Reduction	-0.242	-0.336	-0.148
Indirect	Negative Emotions $\rightarrow$ RCP $\rightarrow$ Food Waste Reduction	-0.176	-0.228	-0.132
Total	Negative Emotions $\rightarrow$ Food Waste Reduction	-0.418	-0.512	-0.324

Source: Author's calculation from survey data (2025)

Discussion

Interpretation of Findings

This paper examined the effect of emotions on the food-waste behaviour of young Chinese consumers in this paper. All four of the hypotheses have been verified by the above results.

First, positive emotions were found to be positively associated with food waste behaviour (H1: $\beta = 0.324$, $p < 0.001$). Jabeen et al. (2022) have also found that when people are in a good mood, such as being satisfied with the different kinds of food they can order or feeling good about the generous portions, they are more likely to leave food uneaten. The culture of "mianzi" (face) in China may also make people feel that they need to order extra food to show off their hospitality and not seem cheap.

Second, negative emotions were strongly negatively correlated with food-waste behaviour (H2: $\beta = -0.418$, $p < 0.001$). Elsharnouby and El-Baz (2025) have also found that the main emotions linked to the reduction of food waste in homes are feelings of guilt. The way it works is that, after realizing they have wasted food, people are often more likely to be self-disciplined and stop doing it in the future.

Third, negative emotions positively related to responsible consumption behaviour (H3: $\beta = 0.456$, $p < 0.001$). Lau and Ng (2024) have shown that negative mood-induced awareness of waste led to improved planning behaviour, thus extending the earlier research. Young consumers who were more guilty about the past waste were more likely to make shopping lists, check the refrigerator before buying, and properly store leftovers.

Fourth, responsible consumption behaviour indirectly reduced food waste through a negative-emotion pathway ($\beta = -0.176$, $p < 0.01$). As shown in the above results, emotions affect behaviour in the following ways: Negative emotions do not reduce waste directly but are related to cognitive and behavioural strategies to reduce waste. According to Elsharnouby and El-Baz's (2025) dual-process theory, the first kind of thinking (System 1) is often based on intuition and emotion, and the second type of thinking (System 2) is slow, conscious and logical.

Theoretical Implications

The above are the study's theoretical contributions. First, in light of the demand in the literature for an extension of cognitive frameworks such as TPB, affective factors have been added to models of sustainable consumption (Jabeen et al., 2022). By demonstrating the significant role of both positive and negative emotions, this study contributes to a more comprehensive understanding of consumer behavior.

Second, the study advances the application of TIB in food waste research. While TIB has been applied in other contexts, its explicit focus on emotions as distinct from attitudes and intentions provides a valuable framework for understanding the "attitude-behavior gap" that has puzzled sustainability researchers (Lau & Ng, 2024).

Third, by identifying responsible consumption practices as a mediating mechanism, this study contributes to process-oriented understanding of behavioral change. Rather than treating emotions as direct drivers, the findings suggest that emotions work through specific behavioral pathways—a distinction with important theoretical and practical implications.

Practical Implications

The results provide useful suggestions for government officials, teachers and advertisers. Firstly, the awareness programs should use emotional appeals effectively. Instead of depending only on the information of environmental effects, the programs can include guilt- or regret-inducing messages which fit well with the emotional feelings of young consumers. However, attention must also be paid to the risk of guilt-appeal leading to defence-denial rather than actual behaviour change (Elsharnouby & El-Baz, 2025).

Second, the intervention will aim to foster good consumption habits. Negative emotions operate through planning and management behaviour; therefore, training programmes that teach students how to plan and control their own meals, portions, storage methods, etc., will be more likely to guide positive behaviour. Educational institutions can add the above skills to sustainability education.

Third, as ubiquitous among young Chinese consumers, food delivery platforms can add emotion-based design functions. For example, order confirmation pages can show a small warning about waste, and after ordering, there may be a mechanism for feedback on how that meal was used. Jia et al. (2022) found that the structure of online ordering platforms (e.g., a minimum order value for free delivery) is conducive to over-ordering, and thus these features could be reformed to reduce waste at its origin.

Limitations and Future Research

The following are the deficiencies. First, the cross-sectional design cannot establish causality. According to the above theory, The anticipated direction of the effect is specified. Thus, no causal inferences can be drawn, and future studies might involve an experimental or longitudinal design. In the future, one can conduct experimental manipulations of emotions to investigate the cause.

Second, the behaviour reported by oneself may be subject to a social desirability bias due to the social acceptability of pro-environmental responses. In the future, one or more of these objective indicators of food waste could be added.

Third, although the sample is geographically dispersed, it may not be representative of rural young people or young people in lower-tier cities. Consumption patterns and emotional responses will differ by area and economic level. Future research will explore the above circumstances.

Finally, future research should take into account cultural differences. Although this study focused on China, the reasons for food waste based on emotions may differ in other cultures. Extrapolate these research results and carry them over to cross-cultural studies.

Conclusion

This study examined the relationship between emotions and food waste behaviour among young Chinese consumers to inform future sustainability policies. Using a quantitative approach and 384 questionnaires, CB-SEM analysis showed that negative emotions are negatively correlated with food waste behaviour and positively correlated with responsible consumption behaviour. On the other hand, positive emotions of satisfaction and enjoyment were positively correlated with food waste. Based on the above research, the cognitive model of behaviour is insufficient to explain all instances of behaviour. According to the above data, policymakers and educators can consider introducing emotionally appealing awareness campaigns and practical skill training in responsible consumption to help young people reduce food waste. As China and the world continue to deal with the problems of sustainability, Understanding why people waste food is needed to plan better actions.

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References

- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314-324.
- Chen, X., & Li, Y. (2024). Bridging the attitude-behavior gap in sustainable consumption: The role of implementation intentions. *Journal of Consumer Behaviour*, 23(2), 178-195.
- Elsharnouby, M. H., & El-Baz, D. (2025). Decoding domestic food waste: Exploring the role of emotions and consumer wisdom in an emerging market context. *Journal of Consumer Affairs*, 59(1), 45-67.
- FAO. (2023). The state of food and agriculture 2023: Moving forward on food loss and waste reduction. Food and Agriculture Organization of the United Nations.
- Gaskin, J., Lowry, P. B., Rosengren, W., & Fife, T. (2025). Essential validation criteria for rigorous covariance-based structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 32(1), 89-112.
- Jabeen, F., Dhir, A., Islam, N., Talwar, S., & Papa, A. (2022). Emotions and food waste behavior: Do habit and facilitating conditions matter? *Journal of Business Research*, 152, 152-167.
- Jia, L., Zhang, Y., & Qiao, G. (2022). Consumer-related antecedents of waste behavior in online food ordering: A study among young adults in China. *Foods*, 11(19), 3098.
- Kline, R. B. (2023). Principles and practice of structural equation modeling (5th ed.). Guilford Press.
- Lau, M. M., & Ng, P. M. L. (2024). From ordering to waste: How emotions shape dining practices in green restaurants. *Journal of Sustainable Tourism*, 32(4), 712-730.
- Li, J., Wang, Y., & Liu, H. (2023). The Clean Plate Campaign in China: Effectiveness and challenges. *Food Policy*, 118, 102456.
- Nguyen, T. P. L. (2025). The effects of emotional self-regulation, ethical evaluations and judgments on customer food waste reduction behaviors in restaurants. *Asia Pacific Journal of Marketing and Logistics*, 37(9), 2637-2650.
- Shao, J., Zhang, M., & Xu, F. (2024). Young consumers' food waste behavior in China: The role of social media influence. *Young Consumers*, 25(3), 345-362.

- Talwar, S., Jabeen, F., & Dhir, A. (2023). Understanding consumer food waste reduction intentions: The role of anticipated emotions. *European Journal of Marketing*, 57(8), 2125-2152.
- Tsai, W. C., Chen, X., & Yang, C. (2022). Consumer food waste behavior among emerging adults: Evidence from China. *Foods*, 11(7), 961.
- Wang, L., Luo, X., & Zhang, J. (2023). Digital platforms and food waste in China: An empirical investigation. *Electronic Commerce Research*, 23(4), 2123-2145.
- WWF. (2024). Driving action on food waste: 2024 global report. World Wildlife Fund.
- Xu, Y., & Wang, S. (2025). Emotional appeals in pro-environmental messaging: A meta-analysis. *Journal of Environmental Psychology*, 91, 102234.
- Zhang, L., Wu, T., & Liu, G. (2023). From leftovers to resources: Consumer food management practices in urban China. *Resources, Conservation and Recycling*, 188, 106678.
- Zhao, J., & Chen, S. (2024). Generation Z's sustainable consumption in China: Values, attitudes, and behaviors. *Sustainability*, 16(8), 3245.
- Zhou, Y., & Li, M. (2025). The role of guilt in promoting sustainable food choices among young consumers. *Appetite*, 195, 107212.