

Perception of Gen Z of Palembang City Towards Food Waste

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Abstract

The problem of food waste has become a global issue that impacts economic, environmental, and social aspects. Indonesia is one of the countries with the highest levels of food waste, with around 41.4% of national waste in 2021 originating from food waste. In urban centers like Palembang, the rapid growth of population and urbanization contribute to increased food waste. Generation Z, representing about 24.34% of Indonesia's population, is identified as the age group that produces the most food waste. This research aims to explore the perceptions of Generation Z in Palembang City towards food waste, the factors influencing their behaviors, and the challenges they face. Using a descriptive quantitative method with purposive sampling, data were collected through online questionnaires and analyzed with descriptive statistics. The findings reveal that while Gen Z in Palembang is aware of the environmental and economic impacts of food waste, behavioral gaps persist due to impulsive buying, difficulties in portion estimation, and the influence of food delivery promotions. Efforts to reduce waste, such as proper food storage and reprocessing leftovers, have begun, but challenges persist. The study emphasizes the significance of targeted educational interventions, policy innovations, and community-based campaigns in promoting sustainable food consumption behaviors among Gen Z in Palembang.

Keywords: Food Waste, Generation Z, Perception, Palembang, Behavior, Environment, Education.

1. Introduction

The problem of food waste has become a global issue that affects economic, environmental, and social aspects. Indonesia is one of the countries with the highest levels of food waste in the world, where around 41.4% of the total national waste composition in 2021 came from food waste. ([Maswadi et al., 2024](#)). Big cities such as Palembang, with rapid population growth and urbanization, also contribute to the high rate of food waste. Generation Z, a young and dynamic age group, plays a vital role in shaping future food consumption behaviors. In Indonesia, this generation covers about 24.34% of the total population and is known as the group that produces the most food waste compared to other generations ([Abu Hatab et al., 2022](#)). This is reinforced by research showing that consumption behavior, knowledge, and subjective norms greatly influence the intention of the younger generation to reduce food waste ([Attiq et al., 2021](#)).

Factors influencing food waste perception and behavior in Gen Z include:

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1. **Environmental Knowledge and Awareness:** Gen Z tends to have a high level of environmental awareness, but the implementation of food waste reduction behaviors still needs to be improved ([Purwanto et al., 2023a](#)).
2. **Attitude and Subjective Norms:** Positive attitudes towards food management and social pressures from the surrounding environment can encourage responsible behavior in managing food waste ([Qi et al., 2025](#)).
3. **The Influence of Technology and Lifestyle:** Ease of access to food delivery services and promotions on social media can increase the potential for food waste among Gen Z, especially if it is not balanced with good behavioral control ([Kristia, 2023](#)).
4. **Religiosity and Knowledge Factors:** A recent study in Indonesia found that the level of knowledge and religiosity is the strongest predictor of food waste reduction intentions in the younger generation ([Mariyah et al., 2024a](#)).

In Palembang, as a growing metropolis, changes in consumption patterns and modern lifestyles have also increased the challenges in managing food waste. Gen Z in Palembang needs to be provided with the right education and interventions so that existing awareness can be translated into concrete actions, such as food consumption planning, food waste processing, and participation in food waste reduction programs.

Thus, research on Gen Z Palembang's perception of food waste is highly relevant to formulating effective educational and policy strategies for reducing food waste, while supporting sustainable development goals in the fields of food security and environmental protection. ([Romadhani Ardi et al., 2024](#)). At the individual level, research indicates that knowledge, social norms, behavioral control, and religiosity factors significantly influence food waste behavior among Gen Z. A recent study in Indonesia found that religious beliefs, behavioral controls, and daily habits have a strong influence on the intention to reduce food waste. Bad habits, such as impulsive food buying, lack of meal planning, and the influence of food delivery service promotions, also increase the potential for food waste among Gen Z.

In addition, even though Gen Z is known as a generation that is tech-savvy and active on social media, their awareness of the issue of food waste is still relatively low. A national survey shows that only about 45.9% of Gen Z are truly aware of the importance of reducing food waste ([Purwanto et al., 2023](#)). However, there is a positive trend where most Gen Z are starting to take concrete steps such as bringing their own food containers to reduce waste, with 50% of women and 42% of Gen Z men in Indonesia already implementing this habit. In terms of policy, the efforts of the Palembang city government in managing household waste still face various obstacles, such as low community participation and lack of education about the impact of food waste. This emphasizes the need for more targeted interventions, both through education, social campaigns, and the implementation of regulations that support food waste reduction among the younger generation.

By considering the various factors above, research on Gen Z Palembang's perception of food waste is becoming increasingly important. The results of this study are expected to provide strategic recommendations for the government, educational institutions, and the wider community to reduce food waste, increase food security, and create a more sustainable environment in the future ([Romadhani Ardi et al., 2024](#)). The impact of food waste is not only felt on the environmental aspect, but also on the economic and social aspects. Economically, research in workplace canteens in Palembang shows that the average economic value of wasted

food reaches more than 13 thousand rupiah per individual per lunch. The majority of food waste contributors are young age groups, especially women aged 20-26 years, who are also included in the Gen Z category. From a social perspective, food waste exacerbates food access inequality and contributes to local food security problems. In addition, the accumulation of unmanaged food waste can cause public health problems, such as water and air pollution, and increase the risk of infectious diseases.

Efforts to handle food waste in Palembang have been carried out through various programs, such as the establishment of waste banks, TPS 3R, and the socialization of the Food Waste Movement which involves collaboration between the government, academics, business actors, the community, and the mass media (pentahelix approach). However, challenges remain, such as limited management facilities, low education levels, and the habits of people who still rely on traditional management systems ([Admin Faktual, 2024](#)). Especially for Gen Z, food waste behavior is greatly influenced by knowledge, social norms, personal motivation, as well as the influence of social media and the promotion of food delivery services. The latest study confirms that promotions on food delivery applications, knowledge levels, and subjective norms greatly affect food waste reduction behavior among Indonesian Gen Z, with these variables explaining up to 63.7% variation in sustainable behavior related to food waste. However, environmental awareness and the intention to reduce food waste among Gen Z still need to be improved through education, campaigns, and community-based interventions.

Thus, research on Gen Z Palembang's perception of food waste is very important as the basis for developing more effective and sustainable intervention strategies, both through government policies, education programs, and food waste management technology innovations. This is in line with the Sustainable Development Goals (SDGs) target point 12.3, which is to reduce food waste by half by 2030, and support the creation of healthier, cleaner, and more competitive cities ([Aaron & Budiman, 2025](#)).

2. Literature Review

2.1. Food Waste Behavior in Generation Z in Indonesia

Generation Z is an age group that has an important role in food consumption patterns and food waste management. A study by [Novitasari et al. \(2025\)](#) shows that although Gen Z is known as an environmentally conscious generation, there is a significant gap between their attitudes and behaviors towards food waste. Factors such as attitudes, subjective norms, and perceived behavioral control significantly affect food waste behavior among Gen Z, with attitude being the most dominant factor. High food waste behavior has a negative impact on sustainable food security, so it is important to raise awareness and build positive attitudes towards food management ([Novitasari et al., 2025](#)).

2.2. Theory of Planned Behavior in Food Waste Studies

Many studies use the Theory of Planned Behavior (TPB) to understand food waste reduction behavior among Gen Z. Studies in DKI Jakarta by ([Mariyah et al., 2024](#)) and confirm that attitudes, social norms, and behavioral control play an important role in shaping food waste reduction intentions and behaviors. In addition, the promotion factor of online food delivery services was also found to have a significant effect on food waste behavior, because ease of access and promotion can encourage excessive consumption and waste ([Mariyah et al., 2024](#)).

2.3. The Influence of Social Media and Food Delivery Service Promotion

Technological advances and the rise of food delivery services (OFD) also affect the consumption patterns of Gen Z. Study by [Kristia et al. \(2023\)](#) shows that intensive promotion through digital platforms can increase food waste behavior among Gen Z. However, subjective knowledge and norms can be a balancing factor that encourages food waste reduction behavior. Therefore, education and campaigns that utilize social media are very strategic to change the consumption behavior of Gen Z (K. [Kristia et al., 2023](#)).

2.4. The Role of Religiosity in Food Waste Reduction Behavior

Recent research in Indonesia found that religious values have a strong correlation with food waste reduction intentions in Gen Z. Study by [Novanda 2025](#) revealed that 62.4% variation in food waste reduction intentions can be explained by religious beliefs, especially among Muslims who dominate the Gen Z population in Indonesia. This indicates the importance of including aspects of religiosity in education strategies and food waste reduction policies ([Novanda et al., 2025](#)).

2.5. Food Waste Awareness and Education Among Gen Z

Awareness of the issue of food waste among Gen Z still needs to be increased. Studies in Tangerang and its surroundings show that even though Gen Z has basic knowledge about food waste, the implementation of reduction behaviors is still low. Educational interventions that focus on changing attitudes and behaviors through community approaches and social media are needed to increase the effectiveness of reducing food waste ([Elmada et al., 2022](#)).

3. Research Method

This study uses a descriptive quantitative method to understand the perception of Generation Z in Palembang City towards food waste. This method was chosen because it can systematically measure and describe phenomena based on numerical data obtained from respondents.

3.1 Population and Sample

The population in this study consists of Generation Z in Palembang City aged 18–26 years. The sample was selected using a purposive sampling technique, with criteria including individuals domiciled in Palembang and having experience eating outside the home or purchasing food online. The sample size was determined using the Slovin formula with a margin of error of 5%.

3.2 Data Collection Techniques

Data were collected through an online questionnaire disseminated via social media platforms. The questionnaire consists of two main parts:

The first part covers demographic data such as age, gender, and employment or student status.

The second part contains questions related to perceptions of food waste, attitudes toward food management, and factors influencing food waste behavior.

Responses were measured using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

3.3 Data Analysis Techniques

The collected data were analyzed using descriptive statistical methods to describe the tendencies in Generation Z's perceptions of food waste. Reliability and validity tests were conducted to ensure the research instruments' consistency and accuracy. Data analysis was

performed using statistical software such as SPSS and Microsoft Excel.

3.4 Research Limitations

This study has several limitations, including a limited sample coverage of Generation Z in Palembang City and reliance on respondents willing to complete online questionnaires. Therefore, the results may not be generalized to Generation Z populations outside Palembang.

Table. 1. Question Indicators

No	Variable	Indicator	Statement
1	Perception	Understanding	I know food waste is a problem
2	Attitude	Consumption	I'm trying to finish my food
3	Factor	Buying habits	I often buy excess food
4	Attempt	Change	I want to reduce food waste
5		Utilization	I often process leftovers

Fig. 1. This table contains question indicators used in the questionnaire to measure the perception of Generation Z in Palembang City towards food waste. Each statement uses a Likert scale from 1 to 5 (1 = strongly disagree, 5 = strongly agree).

Interview Results on Generation Z Perception in Palembang towards Food Waste

1. Understanding Food Waste

Most respondents understand that food waste is a serious problem impacting the environment and economy. However, not all are able to avoid it completely.

- “I know that throwing away food can increase the amount of waste and have a bad impact on the environment, but sometimes it's hard to avoid it.” (RA, 22 years old)

2. Attitude towards Food Consumption

Respondents showed awareness of not wanting to throw away food, but some admitted they still often do so for reasons such as large portions or unsatisfactory food quality.

- “I always try to finish the food, but if it doesn't taste good or the portions are too much, I often throw it away.” (DS, 24 years old)

3. Habits of Buying Food

Many respondents admitted to impulsive food purchases driven by promotions or social media advertisements.

- “Sometimes I am tempted to buy food just because of discounts or advertisements on social media, but in the end, it does not get finished.” (NA, 21 years old)

4. Efforts to Reduce Food Waste

Some respondents have started reducing food waste by storing food properly or sharing excess food with family or friends.

- “I started learning to store food properly and if there are leftovers, I try to process them again.” (FH, 23 years old)

5. Challenges in Overcoming Food Waste

Respondents mentioned difficulties in controlling food purchases and portion sizes,

especially when eating out or ordering food online.

- “Sometimes it is difficult to estimate the portion of food, especially if you order online. Sometimes it doesn't meet expectations, so it goes to waste.” (LK, 25 years old)

The interview results indicate that Generation Z in Palembang is aware of the food waste problem but still faces challenges in reducing it. While some understand the environmental impact of food waste, avoiding it completely remains difficult (RA, 22 years old). Attitudes toward food consumption vary, with some trying to finish their meals but discarding food when portions are too large or taste is unsatisfactory (DS, 24 years old). Impulsive buying habits, especially influenced by promotions and social media trends, contribute to food waste (NA, 21 years old). Efforts to reduce waste, such as proper food storage and reprocessing leftovers, have begun (FH, 23 years old). However, the main challenge remains estimating food portions, particularly when ordering online or dining out (LK, 25 years old).

4. Findings and Discussions

Food waste is a growing concern with significant environmental, economic, and social consequences. Generation Z, known for their digital engagement and awareness of sustainability, paradoxically still contributes to food waste due to various behavioral and structural factors ([Shaikh, 2020](#)). The findings from this study suggest that while many respondents recognize the issue of food waste, their actual behaviors do not always align with their awareness. Some respondents demonstrated a strong understanding of the negative environmental impacts, while others viewed food waste as a minor personal concern. This discrepancy highlights the gap between awareness and action, as noted in previous studies on consumer sustainability behaviors ([Solina, 2020](#)).

One of the main causes of food waste among Generation Z in Palembang is impulsive consumption. Many respondents admitted that promotional offers and social media trends often lead them to purchase more food than they need, ultimately resulting in waste. This aligns with research that suggests marketing strategies significantly influence young consumers' food purchasing habits ([Rahmayani et al., 2023](#)). Additionally, the rise of food delivery services has made access to food more convenient, but it has also increased the tendency to over-order, especially when portion sizes are difficult to estimate ([Susanti et al., 2023](#)).

Beyond purchasing habits, a lack of knowledge about food storage and preservation was another key factor contributing to waste. Several respondents admitted that they often discard food simply because they do not know how to store it properly. This aligns with previous findings that emphasize the role of food literacy in reducing waste ([Ciampa & Gallagher, 2021](#)). Without proper storage techniques, even those who are aware of food waste's impact may struggle to change their habits effectively.

Despite these challenges, many respondents expressed a willingness to reduce their food waste. Some have taken proactive steps such as meal planning, portion control, and repurposing leftovers. Educational campaigns and digital initiatives have played a role in fostering this behavior change, supporting research that highlights the importance of digital literacy in promoting sustainability practices ([Yadav et al., 2023](#)). Social media, in particular, has emerged as a powerful tool in shaping perceptions and behaviors related to food sustainability. Several respondents mentioned being influenced by online content that educates consumers on reducing waste, reinforcing the idea that digital platforms can be leveraged to drive positive behavioral change.

Overall, while Generation Z in Palembang exhibits an awareness of food waste and a willingness to adopt sustainable habits, external factors such as marketing influences, digital consumption trends, and a lack of practical knowledge continue to hinder widespread behavioral change. Addressing this issue requires a multifaceted approach, including enhanced food education, targeted digital campaigns, and policy interventions that encourage more responsible consumption habits.

5. Conclusion

This study shows that Gen Z in Palembang City has awareness of the problem of food waste, but still faces challenges in reducing it, such as impulse food buying habits, difficulty estimating portions, and the influence of food delivery service promotions. Food waste reduction efforts are starting to be carried out through good food storage and waste utilization, but more intensive education, community-based interventions, and policy innovations are needed to encourage more sustainable food consumption behaviors among the young generation in Palembang.

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