

An Empirical Study on the Factors Shaping Millennials' Purchasing Behavior and Its Influence on Food Waste

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Abstract — Food is widely available and easily accessible, leading to misconceptions that contribute to excessive food waste. Controlling food wastage is crucial to ensuring long-term food security and meeting fundamental human needs. This study examines the key factors influencing millennials' purchasing behavior and how their food handling practices impact waste generation. A structured questionnaire was used to collect data from millennial respondents, providing insights into their shopping habits and attitudes toward food consumption. The findings indicate that socio-demographic variables, psychological influences, economic factors, and health consciousness significantly shape millennials' purchasing decisions. Additionally, the way they handle purchased food—whether efficiently or inefficiently—plays a critical role in determining food wastage levels. Understanding these factors can help develop strategies to reduce food waste and promote responsible consumption habits.

Keywords — Food Waste, Food Waste Management, Millennials, Shopping Habits

1. Introduction

Food wastage begins at the point of purchase and is influenced by shopping habits and consumption patterns. The purchasing behavior of millennials is shaped by various factors, and food security remains a global concern as populations grow. Managing food supply chains and reducing waste is critical for ensuring food availability for all. According to the FAO (2014), improving food management and minimizing waste are essential strategies for combating global hunger. This study explores the factors affecting millennials' purchasing behavior and their effective and ineffective handling of food, which leads to food wastage.

2. Millennials – An Overview

Millennials (born 1981–1996), currently aged 28–43, constitute 47% of India's working-age population (Deloitte India, 2020). As digital-native earners, they prioritize experiences over ownership, with 32.7% of discretionary spending allocated to entertainment and dining, 21.4% to apparel, and 11.2% to electronics. Their tech-driven consumption is reshaping retail, fintech, and food delivery markets, prompting brands to adopt omnichannel strategies. As millennials enter peak earning years, their financial behaviours—including a preference for UPI payments, sustainable brands, and subscription models—are influencing industry standards. However, inflation and the rise of Gen Z pose challenges. By 2030, their spending on health, education, and premium products is projected to grow 1.7x, solidifying their economic influence (Retailers Association of India, 2020).

3. Objectives Of The Study

- To identify the purchasing behavior of millennials and explore the various factors contributing to food wastage.
- To examine the factors influencing millennials' attitudes and choices in their purchasing behavior.
- To assess the effective and ineffective handling practices of purchased food.

4. Research Methodology

According to Clifford Woody, research involves defining and redefining problems, formulating hypotheses, collecting, organizing, and evaluating data, making deductions, reaching conclusions, and testing whether they fit into formulated hypotheses. This study adopts a descriptive research design, focusing on the millennial generation in Chennai. The sample size consists of 200 respondents selected using a convenience sampling method. Data analysis is conducted using SPSS software.

5. Hypotheses Of The Study

- There is a significant relationship between economic factors and purchasing behavior.
- There is a significant relationship between socio-demographic factors and purchasing behavior.
- There is a significant relationship between psychological factors and purchasing behavior.

6. Review Of Literature

Food wastage has been a significant concern globally, with various studies identifying causes and factors that influence this issue.

- Wenlock et al. (1977) investigated the relationship between income and food waste but found no statistical significance in their results. Their study did not support

the notion of a direct causal link between income levels and food wastage.

- Lyndhurst (2007) observed that families with lower incomes tend to generate less food waste, highlighting the role of income in food waste generation. This was further supported by WRAP (2007), which found that people with lower incomes show less inclination toward purchase planning and are more likely to live in the present, contributing to food waste.
- WRAP (2008) identified key causes of food waste in Britain, such as leftovers and inedible food resulting from damage during preparation. The study emphasized the importance of timely consumption, as food is often discarded when it expires or deteriorates, making it unsuitable for consumption.
- Parfitt et al. (2010) examined the role of household size and composition in food waste. They concluded that food waste tends to be more prevalent among adults than children and that smaller households waste more food per person compared to larger households.
- WRAP (2009) reported that larger households tend to produce lower per capita food waste compared to smaller households in developed countries. In contrast, WRAP (2008) found that food waste per person is higher in single-person households.
- Stefan et al. (2013) argued that higher household income results in higher food waste. Wassermann and Schneider (2005) also observed that individuals with regular employment tend to waste more food, a phenomenon linked to education, employment type, and earning potential. They noted that people with higher education are more likely to discard food.
- Sriraj (2016) highlighted food wastage as a global problem, referencing a report from the National Resources Defence Council (NRDC). This report revealed that approximately 40% of food in the U.S. is wasted, and countries such as India and China face 1.3 billion tonnes of food waste annually. India ranks seventh in food wastage, particularly in poultry, agricultural produce, and milk. Kumar (2015) further suggested that food wastage in India occurs at both pre-harvest and post-harvest stages, with fruits and vegetables accounting for 70% of the total food waste and causing 40% of economic losses.
- Yang et al. (2011) found that the lack of proper recycling facilities in households contributes to food waste. They emphasized the need for proper garbage sorting and socially responsible behavior to reduce food waste.
- Lazaros and Shackelford (2008) reported that households are responsible for approximately 70% of global food waste. They noted that many consumers purchase food but fail to consume it, leading to wastage. They also found that as disposable income rises, food waste volumes increase.

7. Data Analysis and Interpretation

7.1 Demographic Characteristics of the respondents

Data are collected from 200 millennial respondents residing in Chennai city using convenience sampling. Among the 200 millennial respondents 80 respondents are from the age group of 23 to 28 years, 75 millennial respondents are from the age group of 29 to 33 years and the remaining 45 millennial respondents 34 to 38 in Chennai. This distribution is shown in Table 1.

Table 1: Millennial Age Group					
		Frequency	Percent	Valid Percent	Cumulative Percent
Age Group	23 To 28	80	40.0	40.0	40.0
	29 To 33	75	37.5	37.5	77.5
	34 To 38	45	22.5	22.5	100.0
	Total	200	100.0	100.0	

7.2 Reliability Analysis

Prior to conducting the main analysis, the reliability of the variables is measured. All the Independent and Dependent Variables are having the Cronbach's alpha value of above 0.7 hence their reliability is satisfactory. The following table 3 shows the Cronbach's value for each variable.

Table 2: Construct Reliability Analysis (n=200)

Variables		Cronbach's Alpha	AVE	CRE
Socio Demographic Variable		0.923	0.72	0.94
Psychological Factors		0.915	0.55	0.86
Economic Factors		0.863	0.49	0.82
Health Factors	Consciousness	0.859	0.56	0.86
Millennial Behavior	Purchasing	0.842	0.58	0.77

The above table represents the results of the reliability analysis along for each variable. Overall, the study reported strong reliability with coefficient alphas ranging from 0.777 to 0.942 which demonstrated that scale demonstrates good reliability.

7.3 T-test

The t-test is conducted between gender and five different variables of the millennial generation. The results of the t-test are shown in Table 3 as follows.

Table 3 – t-test results					
	GENDER	N	Mean	t- value	Significance
Socio Demographic Variable	MALE	107	3.98	2.822	0.005
	FEMALE	93	3.67		
Psychological Factors	MALE	107	3.85	3.318	0.001
	FEMALE	93	3.41		
Economic Factors	MALE	107	3.79	2.793	0.006
	FEMALE	93	3.38		
Health Consciousness Factors	MALE	107	4.34	-0.686	0.494
	FEMALE	93	4.43		
Millennial Purchasing Behavior	MALE	107	3.85	-0.509	0.612
	FEMALE	93	3.92		

7.4 One-way Anova

The results of One-way Anova test are shown in Table 4

TABLE 4- ONE-WAY ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig .
Socio Demographic Variable	Between Groups	.507	2	.254	.398	.672
	Within Groups	125.688	197	.638		
	Total	126.195	199			
Psychological Factors	Between Groups	1.221	2	.610	.661	.518
	Within Groups	181.974	197	.924		
	Total	183.195	199			
Economic Factors	Between Groups	.327	2	.164	.148	.862
	Within Groups	217.468	197	1.104		
	Total	217.795	199			

Health Consciousness Factors	Between Groups	.943	2	.472	.626	.536
	Within Groups	148.412	197	.753		
	Total	149.355	199			
Millennial Purchasing Behavior	Between Groups	2.721	2	1.360	1.291	.277
	Within Groups	207.634	197	1.054		
	Total	210.355	199			

From the One-Way ANOVA results, we observe that all p-values are above 0.05, indicating that the variables (Socio Demographic, Psychological, Economic, Health Consciousness, and Millennial Purchasing Behavior) do not differ significantly.

8. Limitations of the Study

- The study does not focus on any specific industry, which may limit applicability.
- Convenience sampling may limit the generalizability of findings.

9. Conclusion

This study found that socio-demographic factors, psychological factors, economic factors, and health consciousness significantly impact millennial purchasing behavior. Additionally, effective food handling can reduce food wastage. Future research should explore these factors in-depth to develop strategies for reducing food waste.

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