

GenZ's Current Behaviors, Consumption Patterns and Opinions Towards Single-Use Plastics

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Abstract

This research delves into the behaviours, consumption patterns, and opinions of Generation Z (Gen-Z) in India concerning single-use plastics (SUPs). As the global community grapples with the repercussions of a disposable culture, understanding the stance of Gen-Z, a demographic poised to significantly influence future consumption patterns, becomes paramount. Employing a mixed-methods approach, comprising surveys, interviews, and the Defining Issues Test (DIT) based on Kohlberg's moral development theory, this study offers insights into Gen-Z's moral reasoning behind their interactions with SUPs. Preliminary findings suggest a heightened awareness (88%) of the environmental impact of SUPs among Gen-Z respondents. The majority exhibit post-conventional moral reasoning, underlining a deep-rooted ethical understanding of the issues surrounding SUPs. 55% of Gen-Z participants in this study demonstrated post-conventional moral reasoning, revealing an internalized understanding of single-use plastic's ethical implications, in contrast to 15% for pre-conventional and 30% for conventional. However, challenges such as cost, and availability of sustainable alternatives persist. This research emphasizes the critical role of Gen-Z in steering societal behaviours towards sustainable practices and provides recommendations for businesses, policymakers, and educators to harness this potential effectively.

Keywords: Gen-Z, Single Use plastics, plastic consumption patterns, environmental behaviour, moral reasoning, Defining Issues Test, sustainability.

1. Introduction

Single-use plastics, which are intended for one-time use and disposal, have come to represent a throwaway society [1]. An urgent need to thoroughly comprehend the behaviour, consumption habits, and attitudes of the coming generation, Gen Z, regarding single-use plastics, develops as the globe struggles with the effects of this convenience-driven lifestyle. Our societal dependence on single-use plastics has catastrophic consequences [2]. A staggering 300 million tons of plastic are manufactured annually worldwide, with half of this quantity going toward throwaway commodities [3]. The single-use plastics industry in India has a sizable yearly economic output of over 53,000 crores and employs over 13 lakh personnel across 10,000 businesses. This sector is sprouting up at a 20% pace, thereby rendering it an integral economic force in the whole of the country. However, this economic success has an enormous adverse effect on the environment, notably in terms of plastic trash. Given these facts, it is unambiguous that an in-depth and methodical investigation is required [4]. India is presently experiencing a demographic phenomenon, with Millennials and Gen Z accounting for a sizable 52% of

the population as of 2021, above the worldwide average of 47%. Gen Z is positioned to have a significant impact on how future consumption habits and ecological impacts are shaped [5]. According to a 2022 Deloitte report, the purchasing power of Gen Z in India is projected to reach a staggering \$350 billion by 2025. Beverage giants are keenly leveraging this trend, directing marketing campaigns towards this demographic. A 2023 Nielsen survey solidified this observation, revealing that 65% of Gen Z respondents in India exhibited a preference for branded beverages, even if it comes at a premium. Their viewpoints, decisions, and beliefs have the power to either make the single-use plastics issue more severe or change it for the better. Our research endeavors to provide a comprehensive understanding of how Gen Z perceives single-use plastics, their role in contributing to plastic pollution, and the influence they wield in steering society towards sustainable choices.

1.1 The Research Objectives

To address these critical issues, our research adopted a rigorous methodology that encompasses surveys, interviews, and in-depth data analysis. We aim to achieve the following objectives:

1. Examine Gen Z's attitudes and behaviours regarding single-use plastics in India.
2. Understand the present awareness level of the environmental implications of single-use plastics.
3. Investigate the influence of Gen Z on consumer choices and sustainable practices.
4. To investigate the alignment between Generation Z's attitudes, behaviours, consumption patterns, and opinions regarding single-use plastics in India with Kohlberg's theory's stages of moral development. The objective is to discern the moral reasoning that influences their decisions and actions related to environmental sustainability and plastic consumption. The goal of this research is to shed light on the intersection of Gen Z's values, preferences, and behaviours with the pervasive issue of single-use plastics.

1.2 Defining Single-use plastic products for this research

Single-use plastic (SUP) refers to plastic that is produced and designed to be thrown away after being used only once. This includes a wide range of products, as per the EU definition, which specifies that a single-use plastic product is wholly or partly made of plastic and is not intended to be reused or refilled by the producer. While the definition of single-use plastic may vary across countries, in India, many products that are designed for one-time use are recycled. For example, 90% of technically single-use PET bottles are recycled. However, disposable cutlery that cannot be recycled or reused also falls under the category of single-use plastic. It is worth noting that products such as toothbrushes, which have a longer lifespan, can be classified as Sustainable Use Products (SUPs). However, products with shorter lifecycles can also be classified as SUPs. While the EU definition may be suitable for India, the country's constantly evolving consumption patterns make a strong case for a unique definition that is better suited to the Indian context [4]. Specific single-use plastics, food containers, and packaging items were chosen to comprehensively explore the behaviour, consumption patterns, and opinions of Gen Z. The inclusion of these items in the study was based on a multifaceted rationale and careful considerations.

1. **Prevalence and Significance:** The selected SUPs such as PET bottles, water bottles, single-use cutlery, straws, coffee stirrers, food containers, and packaging hold a pervasive presence in contemporary consumer culture. They are integral to daily life, with applications spanning from hydration to food consumption, thereby making them highly relevant subjects for investigation.

Understanding Gen Z's interactions with these items is critical for assessing their role in sustainability efforts.

2. Gen Z is a generation that has unique preferences and behaviours. They have distinctive choices when it comes to dietary preferences, convenience, and sustainable living. These preferences are noticeable in their use of single-use food containers and packaging for takeout and on-the-go meals. By examining this aspect, we can understand how Gen Z's choices intersect with SUPs. The food service industry plays a crucial role in shaping Gen Z's consumption habits. Single-use food containers and packaging are deeply connected to this industry, affecting Gen Z's choices, and contributing significantly to SUP proliferation. It is essential to comprehend this dynamic to address SUP-related challenges effectively.

By examining the selected SUPs, food containers, and packaging, this study seeks to provide a comprehensive understanding of Gen Z's attitudes, behaviors, and opinions concerning single-use plastics. Through this broader scope, we aim to contribute to informed policy decisions, drive responsible consumer choices, and pave the way for a more sustainable future that balances economic prosperity with environmental preservation across various sectors, including food service and personal consumption.

2. Literature Review

Generation Z (Gen Z), born in the mid-1990s to mid-2000s, is emerging as a significant demographic cohort with unique characteristics, values, and behaviors, especially in the context of environmental sustainability. This literature review examines Gen Z's current behaviour, consumption patterns, and opinions regarding single-use plastics, drawing insights from recent research studies.

Environmental Sense and Concerns

Hidayat et al. (2021) conducted research indicating that Gen Z possesses a strong environmental sense. They exhibit deep concern for Sustainable Development Goals (SDGs), including good health and well-being, poverty reduction, environmental sustainability, biodiversity conservation, and plastic litter reduction in oceans. Gen Z's awareness extends beyond individual well-being; they see it as intertwined with the future of the planet and humankind. This heightened environmental consciousness underscores the importance of examining their behaviours and attitudes towards single-use plastics.

2.1 Consumption Patterns and Management

Khoironi et al. (2019) delved into Gen Z's consumption patterns and management of single-use plastics. Their study revealed that a significant percentage of Gen Z households use one to four single-use plastic bottles daily, with a minority using more than four. Alarmingly, only a small fraction of respondents separate plastic bottles in their trash disposal. These findings reflect Gen Z's participation in the high consumption of single-use plastics, contributing to environmental concerns. Moreover, the study by Khoironi et al. highlights the influence of local community behaviour on Gen Z's plastics consumption. The behaviour of the community plays a pivotal role in the increasing use of single-use plastic bottles. This underscores the need for communitywide initiatives to curb such consumption patterns and promote sustainable alternatives.

2.2 Sustainable Decision-making Process

Coughlin et al. (2023) explored the complex decision-making process of Gen Z regarding sustainability. Gen Z's decisions are deeply rooted in their values, emphasizing the importance of sustainability in their choices. They actively seek authentic and honest information, rely on their social circles, and value sustainability education and knowledge. However, despite their intention to act sustainably, they encounter several hurdles, such as pricing, availability, aesthetics, skepticism, and a lack of transparency in sustainability terminology. These challenges suggest that Gen Z's sustainable intentions may not always translate into actions.

2.3 Collective Consciousness and Values

Sakdiyakorn et al. (2021) investigated the collective consciousness of Gen Z and its impact on their values. Major national and global events, personal experiences, and technological influences have shaped Gen Z's collective consciousness. This has led to the development of values such as universalism, benevolence, self-direction, achievement, and security. These values intertwine with their attitudes towards environmental sustainability and their behaviours, including their choices concerning single-use plastics.

2.4 Behavioural Paradoxes

Despite their pro-environmental stance, a behavioural paradox exists. According to research by Patel and Raj (2020), while Gen Z voices strong support for reducing single-use plastics, their actual consumption patterns, influenced by convenience and modern lifestyle demands, don't always align with these sentiments.

2.5 Implications and Future Research

Gen Z shows a strong awareness of environmental issues, but they encounter obstacles in reducing their consumption of single-use plastics due to external factors. It is essential to understand their values, intentions, and the significance of community behavior to develop effective strategies to promote sustainable choices. The findings underscore Gen Z's potential in driving positive change in sustainability and environmental practices. Future research should focus on multidisciplinary approaches to understand Gen Z's leadership potential in building sustainable development across generations. Furthermore, community awareness programs, behavioral change strategies, and sustainable initiatives are required to address the pressing issue of single-use plastics and leverage Gen Z's commitment towards a sustainable future. In conclusion, Gen Z's attitudes and behavior towards single-use plastics are multifaceted and complex, reflecting their environmental consciousness and the challenges they face in translating intentions into actions. Understanding these dynamics is crucial for fostering a more sustainable future.

3. Methodology

This study investigates Gen Z's behaviour, consumption patterns, and opinions on single-use plastics using a mixed-methods research design. A structured questionnaire and semi-structured interviews were used to collect data on single-use plastic usage, environmental awareness, and willingness to change consumption habits. The collected data were analyzed statistically to identify trends and correlations. The themes explored during the interviews included environmental values, decision-making processes,

and barriers to sustainable choices. In addition to behaviour and attitudes assessment, this study integrates an assessment of principled moral reasoning among Gen Z participants, utilizing the Defining Issues Test (DIT) based on Kohlberg's theory of moral development. In our research, Kohlberg's stages of moral development were utilized as a framework to understand the underlying moral reasoning behind GenZ's attitudes, beliefs, consumption, and behavioural patterns towards single-use plastics.

- **Preconventional Level:** Responses that indicated behaviour based purely on personal consequences, such as "I use single-use plastics because they're convenient for me," or "I avoid plastics only if there's a penalty," would be categorized under this level.
- **Conventional Level:** Responses that showed adherence to societal norms or peer influences, such as "I avoid single-use plastics because my friends do" or "It's the norm in my community to use reusable bags," would indicate reasoning in the conventional level.
- **Postconventional Level:** Responses that reflected a deeper, internalized understanding of the global environmental issues and a commitment to larger ethical principles would fall under this level. For instance, statements like "I avoid single-use plastics because of the long-term harm they cause to marine life and the planet, irrespective of what others think or do," would suggest post-conventional reasoning.

Participants are presented with a series of moral dilemmas. For each dilemma, they are given a list of possible considerations or issues that might be relevant in resolving the dilemma. Participants are asked to rate the importance of each consideration on a scale (e.g., from "not important" to "extremely important"). They are then asked to rank the top few (e.g., top 4) most important considerations from the list. Each of Kohlberg's levels of moral reasoning (pre-conventional, conventional, post-conventional) is associated with certain considerations or issues in the DIT. Participants' ratings and rankings are used to compute a score for each level of moral reasoning. This score reflects the extent to which the participant's moral judgments align with each level.

Participants are scored based on how often they prioritize pre-conventional or post-conventional considerations. Their scores are used to determine the predominant level of moral reasoning in the sample, which was done using various statistical methods. These results indicate the distribution of moral reasoning levels in the sample, such as whether participants tend to reason based on universal ethical principles. By segmenting survey responses, we gained insight into GenZ's moral foundations driving their attitudes and behaviours towards single-use plastics. This information can help shape interventions and educational programs that align with their moral perspectives.

Limitations: Convenience sampling in the surveys may introduce bias in the sample. Additionally, the study relies on self-reported data, which could be subject to recall and social desirability biases. It is important to note that the research may not capture the entire diversity of Gen Z, as it only focuses on those with internet access and willingness to participate.

4. Results and Discussion

4.1 Awareness and Attitude towards Single Use Plastics

Awareness of Environmental Impact: An impressive 88% of Gen Z respondents are aware of the environmental repercussions of single-use plastics. Such heightened awareness is likely a result of global environmental campaigns and extensive media spotlight on the issue. **Life Without Plastics:** 80% of respondents can visualize a lifestyle free of single-use plastics. This figure suggests an evolving consumer behaviour, moving away from the dependence on plastics. **Refusal of Single-Use Cutlery:**

When ordering food, 70% of respondents make the conscious choice to refuse single-use cutlery, showcasing active participation in sustainable practices.

4.2 Usage Patterns

According to the data, Gen Z in India consumes an average of 1.5 PET bottles per day. This trend is a result of the economic growth in India, which has led to increased purchasing power among the younger generation. As a result, bottled beverages have become a popular and affordable option. Among the most commonly used single-use plastics are water bottles (68%), carry bags (60%), and food containers (58%). These figures reflect global consumption trends, highlighting the need for sustainable alternatives. However, it is encouraging to note that 78% of respondents have either experimented with or have knowledge of alternatives to single-use plastics.

4.3 Disposal and Sustainability

Recycling Practices: A mere 30% of respondents are aware of mechanisms and ways to recycle plastics, indicating a pressing need to bolster waste management infrastructure in India.

Reuse and Upcycling: 35% showcase creativity in repurposing plastics, hinting at an emerging trend towards upcycling. **Intrinsic Value of Sustainability:** The sentiment that sustainability is a 'necessity' is prevalent, emphasizing intrinsic motivation. Notably, a substantial portion of respondents conveyed guilt associated with the use of single-use plastics, accentuating the internal moral conflict.

Economic Indicators: A discernible inclination to pay more for sustainable alternatives suggests a pivotal market transition.

4.4 Influences and Perceptions

Educational Impact: 75% of respondents opined that sustainable behaviour develops most effectively through early education, underscoring the instrumental role of curricular integration of sustainability.

Government and Peer Influence: Both are perceived as considerable influencing factors, implying a collective societal movement towards eco-consciousness.

Barriers to Sustainability: The most significant challenges faced are cost (predominant concern), followed by availability and awareness.

Gen Z's perspective on single-use plastics in India is both insightful and inspiring. The data underscores their profound awareness and intrinsic motivation to foster a sustainable environment. Their actions, such as refusing single-use cutlery, point towards a deep-seated ethical stance. This is further bolstered by the adapted Defining Issues Test (DIT), which unveiled that the majority would favour environmental ethics over societal norms when faced with a plastics-related moral dilemma. This principled moral reasoning, combined with feelings of guilt associated with plastic use, emphasizes their genuine concern. Most Gen-Z participants (55%) in this study displayed post-conventional moral reasoning, indicating a deep, internalized understanding of the ethical implications related to single-use plastics. This contrasts with 15% at the pre-conventional level and 30% at the conventional level. Conclusively, while Gen Z in India showcases promising tendencies towards reducing single-use plastics, there are palpable barriers like cost and availability. It's pivotal for stakeholders, including businesses and policymakers, to harness these insights, address challenges, and pave the path to a sustainable future.

5. Conclusion

The research provides a comprehensive insight into Gen-Z's interactions with single-use plastics in India, revealing a demographic that, while highly aware and ethically inclined towards sustainability, still grapples with systemic and practical challenges in their journey to reduce SUP consumption. Their profound understanding, as evidenced by the predominance of post-conventional moral reasoning, suggests that Gen-Z could be instrumental in driving societal change. However, barriers such as cost, availability, and awareness need to be addressed proactively. Stakeholders, encompassing businesses, policymakers, and educators, are presented with a unique opportunity: to leverage the insights from this study and collaboratively pave the way for a sustainable future. By doing so, they can harness the potential of Gen-Z, a generation poised to significantly shape consumption patterns and societal values in the coming decades.

6. Recommendations

- Awareness Campaigns: Target low-awareness regions with focused campaigns using influencers and social media to reach Gen-Z effectively.
- Promote Sustainable Business: Offer incentives to businesses introducing eco-friendly alternatives and prioritize sustainable production.
- Educational Integration: Infuse sustainability topics into curricula and organize practical workshops on the impacts of SUPs.
- Enhance Recycling Infrastructure: Invest in efficient recycling systems and set up community hubs for learning about upcycling.
- Subsidize Eco-friendly Alternatives: Provide subsidies for sustainable alternatives to SUPs and collaborate with manufacturers to reduce production costs.
- Community Engagement: Support community-wide programs like "plastic-free days" and engage with local influencers to discourage SUP use.
- Leverage Digital Tools: Develop apps for Gen-Z to track and reduce plastic consumption and share sustainable practices.

References:

1. Chen Y., Awasthi A. K., Wei F., Tan Q., & Li J., "Single-use plastics: Production, usage, disposal, and adverse impacts", *Science of The Total Environment*, 2021, 752, 141772. <https://doi.org/10.1016/j.scitotenv.2020.141772>
2. Francis T., & Hoefel F., (2018, November 12). "“True Gen”: Generation Z and its implications for companies", McKinsey & Company, 2021 <https://www.mckinsey.com/industries/consumerpackagedgoods/ourinsights/truegengenerationzanditsimplicationsforcompanies>
3. Lindwall C., "SingleUse Plastics 101", NRDC, 2020 <https://www.nrdc.org/stories/singleuseplastics101#what>
4. "Single-use plastic", Centre for science and environment, https://cdn.cseindia.org/attachments/0.28582200_1570445163_factsheet2.pdf
5. "Gen Z and Millennials: Reshaping the Future of Workforce", nasscom <https://www.nasscom.in/knowledgecenter/publications/genzandmillennialsreshapingfutureworkforce>

6. Hidayat Z., Hidayat D., “Environmental Sense of Gen Z in Online Communities: Exploring the Roles of Sharing Knowledge and Social Movement on Instagram”, 2021
<https://eudl.eu/doi/10.4108/eai.18112020.2311741>
7. Khoironi A., Anggoro, S., Sudarno, S., “Community behaviour and single-use plastic bottle consumption”, IOP Conference Series: Earth and Environmental Science, 2019, 293, 012002
<https://iopscience.iop.org/article/10.1088/17551315/293/1/012002>
8. Coughlin A., Dorner E., “Shaping Tomorrow’s Sustainability: Unraveling Gen Z’s Decision-making Journey for Sustainable Consumption”, (Dissertation), 2023
<https://mau.divaportal.org/smash/record.jsf?pid=diva2%3A1777795&dswid=7758>
9. Sakdiyakorn, M., Golubovskaya, M., & Solnet, D., “Understanding Generation Z through collective consciousness: Impacts for hospitality work and employment”, International Journal of Hospitality Management, 2021, 94, 102822.
<https://www.sciencedirect.com/science/article/abs/pii/S0278431920303741>
10. Kohlberg, L., “The philosophy of moral development: Moral stages and the idea of justice”, Harper & Row, 1981