# Sustainable Consumption Behavior Measurement of Three Generations Using Descriptive Variables

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**Abstract: Purpose**: this study aimed at measuring the sustainable consumption behaviors of generations X, Y and Z using various descriptive variables. **Methodology**: the convenience sampling method was used for the data of this cross-sectional study collected during March 15-20, 2023, which obtained 244 usable survey data. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) 26. Descriptive statistics and parametric tests were used in the study, such as t, Analysis of Variance (ANOVA) and Pearson correlation analysis. **Results**: the participants exhibited sustainable consumption behaviors at a moderate level (3.03). Positive and significant relationships ($p<0.05$) existed between the Sustainable Consumption Behavior Scale and its "environmental sensitivity" (r: 0.789), "saving" (r: 0.725), and "reusability" (r: 0.616) sub-dimensions. There was no statistically significant difference in the sustainable consumption behavior levels of the participants in terms of the variables, such as gender, educational level, income level and family type ($p>0.05$). However, statistically significant difference existed in the sustainable consumption behavior levels of the participants in terms of the variables, such as marital status, place of residence and generation ($p<0.05$). **Conclusions**: married participants living in the city in generation Y exhibited significantly more sustainable consumption behaviors than others. **Implications**: the study results revealed that the participants did not have sufficient environmental awareness. In this age of continuous consumption, it is of great importance to make necessary efforts on the issue. Within this context, environmental communities and educational institutions should provide more seminars and trainings on this issue.

**Keywords:** Sustainability; Sustainable consumption behavior; Environment; Generations; Society

## 1. Introduction

The concept of "sustainability" has come to the fore both in the international literature and in the development policy for at least 30 years. Although several definitions have been put forward on sustainability, the one made by the Brundtland Commission is the most frequently cited one. The Commission defined sustainability as the potential to meet today's needs without compromising the ability of future generations to meet their own needs (Meinzen-Dick et al., 2014).

The concept of sustainability not only refers to the necessity to reduce the demand for environmental resources in general from a long-term perspective, but also explains the need to make necessary changes to achieve social and economic development goals (Newman & Kenworthy, 2000).

Research on sustainability and sustainable development has been developing rapidly, by focusing on interactions between natural, social and engineered systems. Officially introduced by the World Commission on Environment and Development in 1987, the concept of sustainable development has been continuously improved and reinforced, most recently through the 2030 Agenda for Sustainable Development, thanks to the efforts of the United Nations (UN). The UN Sustainable Development Goals is the global community's response to the pressing sustainability challenges of our time (Liu et al., 2019).

Sustainable development refers to a long-term approach, which can only be achieved through the joint efforts of businesses, non-governmental organizations, government agencies, international organizations, and the media and consumers. Within the context of sustainable development, the role of individual consumers should be studied more closely in coming years. Satisfaction of seemingly endless consumer demands has been indicated as the main cause of global environmental problems, and it has been emphasized to make necessary changes in consumption habits for a more desirable life (Cohen & Murphy, 2001). From this perspective, it is possible to say that the core component of sustainable development is sustainable consumption.

Environmental problems have been globalized and have become a threat to life on the planet, which causes people to reconsider their relations with nature, their attitudes and behaviors towards the environment, and to redefine ecological culture and environmental awareness (Sam et al., 2010). On the one hand, science and technology development has made human life easier in the last few years. On the other hand, it has triggered several problems, such as depletion of natural resources, and pollution of soil, air and water. If the human population and consumption rate continue to increase in this way, it is worried that the next generations will not have the same living standards in the future (Hoşgör et al., 2015).

The concept of sustainable consumption, which aims to transform the consumption concept in a qualitative and quantitative sense, was addressed for the first time in Agenda 21 within the framework of the Sustainable Development Action Plan of the Earth Summit held in Rio in 1992. However, the Organisation for Economic Cooperation and Development (OECD) reports clarified the definition and defined sustainable consumption as "the use of goods and services that meet basic needs and offer a better quality of life while minimizing the use of natural resources, toxic substances, waste emissions and environmental pollutants from a life-cycle perspective by taking into account the needs of future generations" (OECD, 2002).

Undoubtedly, environmental problems have paved the way to the discussion of sustainable consumption. The necessity of sustainable consumption behaviors has been reflected in several aspects, such as increased environmental pollution, signs of water and food scarcity, global warming problem and problems caused by the hole in the ozone layer (Karalar & Kiracı, 2011).

In order to ensure sustainable consumption and effective use of resources, the right starting point is to determine the underlying causes of consumer behaviors. It is possible to ensure consumption sustainability by incorporating natural resources into the production process, presenting products for consumption, ensuring no harm of wastes to the environment, and even by putting wastes into the production process and presenting products for consumption (Bayazıt Hayta, 2009).

Several ways are available to make consumer behaviors more sustainable, including use of energy more efficiently by individuals and households, less energy consumption and use of environmentally friendly products instead of those that may harm the environment. Minimized household consumption does not mean a lower quality of life or poverty. Therefore, while developing strategies to ensure more sustainable consumer behaviors, it is necessary to address socio-political issues related to social inequality and poverty (Kraemer, 2002).

The United Nations Development Group (UNDG) has determined the global sustainable development goals as "eliminating poverty", "protecting our planet" and "enabling people to live in peace and harmony". Goals within this scope include "eliminating poverty", "eliminating hunger", "healthy individuals", "quality education", "gender equality", "accessible clean energy", "decent work and economic growth", "industry, innovation and infrastructure", "reducing inequalities", "sustainable cities and living spaces", "responsible consumption and production", "climate action", "life in the water", "life on land", "peace, justice and strong institutions" and "partnerships for goals" (The United Nations Development Group, 2016).



**Figure 1.** Global goals for sustainable development (https://sdgs.un.org/goals)

The subject of this study is "Responsible Consumption and Production (12th sub-dimension)", one of these sub-dimensions. One of the sub-goals is "Sustainable Management and Use of Natural Resources (12.2. sub-goal)" (Cassar, 2022). Figure 1 shows these global goals.

For more than half a century, scientists have been investigating human behaviors that harm the natural environment. Moreover, social scientists have been developing techniques to ensure more sustainable relationships between people and the environment. The first step to better understand sustainable consumption behaviors is to measure people's attitudes towards the issue effectively and reliably. Therefore, this study aimed to investigate the sustainable individual consumption behaviors of different generations using various descriptive variables. According to the determined generational intervals, people living during 1965-1979 and 1980-1994 belong to generations X and Y, respectively, those living in 1995 and later belong to generation Z (Hoşgör & Bozkurt, 2023).

## 2. Methodology

With individuals living in Uşak as the population of this study, their sustainable consumption behaviors in generations X, Y and Z were measured using various descriptive variables.

The data of this cross-sectional study were collected during March 15-20, 2023, using the Sustainable Consumption Behavior Scale developed by Doğan et al. (2015). The convenience sampling method was used, which obtained 244 usable survey data. The scale has 17 items, with responses rated on a five-point Likert type scale ranging from 1 (never) to 5 (always). The scale has four sub-dimensions, namely, environmental sensitivity, unneeded consumption, saving and reusability. The higher the score obtained from the "environmental sensitivity", "saving" and "reusability", the higher the sustainable consumption behavior level. As for "unneeded consumption", the situation is the opposite and its score decreases with the increase of the sustainable consumption level. The Cronbach's Alpha reliability coefficient for the overall scale and its sub-dimensions ranges from 0.67 to 0.87. Both scales used in the study have high reliability and validity values. In addition, these scales have been used a lot and still continue to be used. Therefore, it can be stated that the scales meet all scientific requirements.
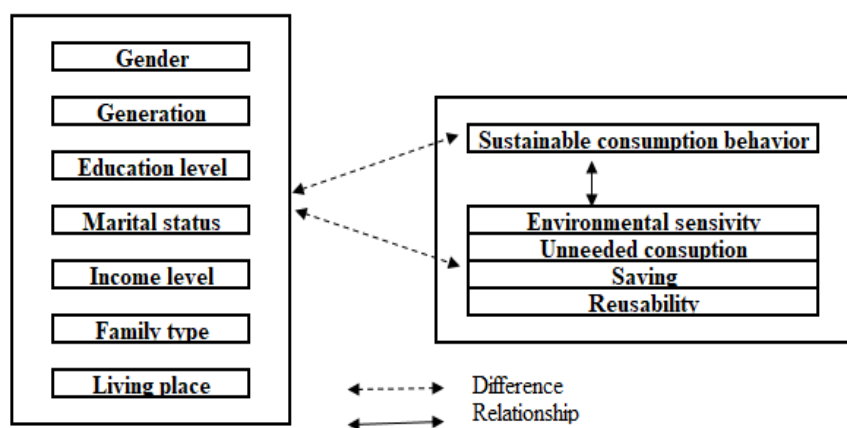


**Figure 2.** Research model
Note: This figure was prepared by the authors of this study.

After designing the e-survey using Google forms, this study collected the data online and analyzed them using the SPSS 26. Descriptive statistics (e.g., frequency, percentage, arithmetic mean, standard deviation, minimum and maximum values), and parametric tests (e.g., t, ANOVA and Pearson correlation analysis) were used. The kurtosis and skewness values ranged from +1.5 to -1.5 in this study, indicating that the data were normally distributed (Tabachnick & Fidell, 2013), which met the prerequisite of using parametric tests. In addition, the p value was accepted as 0.05 for the significance of the data to be evaluated in the 95% confidence interval. The descriptive variables in the research method in Figure 2 were created in accordance with the existing literature.

## 3. Results

According to Table 1, among the participants, 74.2% of them are women; generations Z, Y, and X account for 59.8%, 28.3% and 11.9%, respectively; 62.7% are single; 47.1% have got at least a college diploma; 87.7% have nuclear families; incomes of 50.8% are equal to their expenses; and 54.9% live in the city. Due to use of relatively stronger parametric tests, it was believed that numerical differences among generations did not have a critical effect on the study results.

Participants obtained 3.03 mean score from the overall Sustainable Consumption Behavior Scale. According to

the analysis of the mean scores obtained from the sub-dimensions of the scale, the participants obtained moderate mean scores 3.09 and 3.24 from the "environmental sensitivity" and "reusability", respectively, a low mean score 2.22 from the "unneeded consumption", and a high mean score 3.81 from the "saving". The internal reliability coefficients of the scale and its sub-dimensions were high, ranging from 0.63 to 0.86. The kurtosis and skewness values ranged from +1.5 to -1.5, and the data showed a normal distribution (Table 2).

Statistically significant relationships existed between the scale and all its sub-dimensions, except the "unneeded consumption" ($p<0.05$). Relationships between the scale and "environmental sensitivity" (r: 0.789), "saving" (r: 0.725), and "reusability" (r: 0.616) were positive and significant ($p<0.05$) (Table 3).

Relationships between the gender variable and the scale and all its sub-dimensions were not statistically significant ($p>0.05$) (Table 4).

**Table 1.** Descriptive characteristics of the respondents

| Gender | f | % |
|---|---|---|
| Female | 181 | 74.2 |
| Male | 63 | 25.8 |
| Generation | f | % |
| Generation X | 29 | 11.9 |
| Generation Y | 69 | 28.3 |
| Generation Z | 146 | 59.8 |
| Marital status | f | % |
| Single | 153 | 62.7 |
| Married | 91 | 37.3 |
| Educational level | f | % |
| Below High school | 110 | 45.1 |
| High school | 19 | 7.8 |
| University and above | 115 | 47.1 |
| Family type | f | % |
| Nuclear family | 214 | 87.7 |
| Extended family | 30 | 12.3 |
| Income level | f | % |
| Incomes more than expenses | 40 | 16.4 |
| Incomes less than expenses | 80 | 32.8 |
| Incomes equal to expenses | 124 | 50.8 |
| Place of residence | f | % |
| City | 134 | 54.9 |
| Rural area | 110 | 45.1 |
| Total | 244 | 100.0 |

**Table 2.** Descriptive statistics of the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Mean★ | Std. Deviation | Min. | Max. | Cronbach's Alpha | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| Environmental sensitivity | 3.09 | 0.92 | 1.00 | 5.00 | 0.86 | -0.07 | -0.16 |
| Unneeded consumption | 2.22 | 0.87 | 1.00 | 4.80 | 0.81 | 0.68 | -0.11 |
| Saving | 3.81 | 1.00 | 1.00 | 5.00 | 0.86 | -0.68 | -0.31 |
| Reusability | 3.24 | 0.90 | 1.00 | 5.00 | 0.63 | -0.06 | -0.31 |
| Sustainable Consumption Behavior Scale | 3.03 | 0.51 | 1.76 | 4.59 | 0.74 | -0.04 | -0.16 |
| ★ 1.00-1.80: very low; 1.81-2.60: low; 2.61-3.40: medium; 3.41-4.20: high; 4.21-5.00: very High. | | | | | | | |

**Table 3.** Relationships between the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | | (1) | (2) | (3) | (4) |
|---|---|---|---|---|---|
| Environmental sensitivity (1) | Pearson correlation sig. (2-tailed) | | | | |
| Unneeded consumption (2) | Pearson correlation sig. (2-tailed) | -0.279** 0,000 | | | |
| Saving (3) | Pearson correlation sig. (2-tailed) | 0.545** 0,000 | -0.312** 0,000 | | |
| Reusability (4) | Pearson correlation sig. (2-tailed) | 0.482** 0,000 | -0.290** 0,000 | 0.428** 0,000 | |
| Sustainable Consumption Behavior Scale (5) | Pearson correlation sig. (2-tailed) | 0.789** 0,000 | 0,118 0,067 | 0.725** 0,000 | 0.616** 0,000 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | |

Statistically significant relationships existed between the marital status variable and the scale and "environmental sensitivity", "unneeded consumption" and "saving" (p<0.05). Although this significant difference was in favor of married people for the scale and "environmental sensitivity" and "saving", it was in favor of single participants for the "unneeded consumption" (Table 5).

Significant relationships only existed between the "unneeded consumption" and the family type variable (p<0.05). This significant difference was in favor of the nuclear family (Table 6).

Statistically significant relationships existed between the place of residence variable and the scale and "saving" (p<0.05). This significant difference was in favor of those whose place of residence was the city (Table 7).

Statistically significant relationships existed between the place of residence variable and the scale and "environmental sensitivity", "unneeded consumption" and "saving" (p<0.05). According to the results of the post hoc analysis, this significant difference stemmed from the generation Y for the scale and "environmental sensitivity" and "saving", and from generation Z for the "unneeded consumption" (Table 8).

**Table 4.** Analysis of the relationships between the gender variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Gender | Mean | Std. Deviation | t | p |
|---|---|---|---|---|---|
| Environmental sensitivity | Women | 3.02 | 0.86 | -1.81 | 0.07 |
| | Men | 3.29 | 1.07 | | |
| Unneeded consumption | Women | 2.24 | 0.87 | 0.72 | 0.47 |
| | Men | 2.15 | 0.89 | | |
| Saving | Women | 3.77 | 1.01 | -1.05 | 0.29 |
| | Men | 3.92 | 0.99 | | |
| Reusability | Women | 3.28 | 0.90 | 1.09 | 0.28 |
| | Men | 3.13 | 0.91 | | |
| Sustainable Consumption Behavior Scale | Women | 3.01 | 0.50 | -0.84 | 0.40 |
| | Men | 3.07 | 0.56 | | |

*p<0.05

**Table 5.** Analysis of the relationships between the marital status variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Marital status | Mean | Std. Deviation | t | p |
|---|---|---|---|---|---|
| Environmental sensitivity | Single | 2.97 | 0.95 | -2.55 | 0.01* |
| | Married | 3.28 | 0.85 | | |
| Unneeded consumption | Single | 2.31 | 0.87 | 2.06 | 0.04* |
| | Married | 2.07 | 0.85 | | |
| Saving | Single | 3.51 | 1.00 | -6.55 | 0.00* |
| | Married | 4.31 | 0.79 | | |
| Reusability | Single | 3.22 | 0.94 | -0.43 | 0.67 |
| | Married | 3.27 | 0.84 | | |
| Sustainable Consumption Behavior Scale | Single | 2.95 | 0.53 | -3.29 | 0.00* |
| | Married | 3.17 | 0.46 | | |

*p<0.05

**Table 6.** Analysis of the relationships between the family type variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Family type | Mean | Std. Deviation | t | p |
|---|---|---|---|---|---|
| Environmental sensitivity | Nuclear | 3.05 | 0.92 | -1.61 | 0.11 |
| | Extended | 3.34 | 0.90 | | |
| Unneeded consumption | Nuclear | 2.26 | 0.88 | 2.07 | 0.04* |
| | Extended | 1.91 | 0.72 | | |
| Saving | Nuclear | 3.80 | 1.02 | -1.08 | 0.91 |
| | Extended | 3.83 | 0.93 | | |
| Reusability | Nuclear | 3.22 | 0.90 | -1.04 | 0.29 |
| | Extended | 3.40 | 0.91 | | |
| Sustainable Consumption Behavior Scale | Nuclear | 3.03 | 0.51 | -0.19 | 0.84 |
| | Extended | 3.05 | 0.53 | | |

*p<0.05

**Table 7.** Analysis of the relationships between the place of residence variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Place of residence | Mean | Std. Deviation | t | p |
|---|---|---|---|---|---|
| Environmental sensitivity | City | 3.15 | 0.97 | 1.17 | 0.24 |
| | Rural area | 3.01 | 0.87 | | |
| Unneeded consumption | City | 2.26 | 0.86 | 0.81 | 0.42 |
| | Rural area | 2.17 | 0.89 | | |
| Saving | City | 3.99 | 1.00 | 3.16 | 0.00* |
| | Rural area | 3.59 | 0.97 | | |
| Reusability | City | 3.32 | 0.87 | 1.52 | 0.13 |
| | Rural area | 3.14 | 0.94 | | |
| Sustainable Consumption Behavior Scale | City | 3.11 | 0.52 | 2.96 | 0.00* |
| | Rural area | 2.92 | 0.49 | | |

*p<0.05

**Table 8.** Analysis of the relationships between the generation variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Generation | Mean | Std. Deviation | F | p |
|---|---|---|---|---|---|
| Environmental sensitivity | X | 3.28 | 0.87 | 6.75 | 0.00* |
| | Y | 3.37 | 0.85 | | |
| | Z | 2.91 | 0.93 | | |
| Unneeded consumption | X | 1.90 | 0.71 | 4.57 | 0.01* |
| | Y | 2.08 | 0.88 | | |
| | Z | 2.35 | 0.87 | | |
| Saving | X | 4.19 | 0.92 | 20.99 | 0.00* |
| | Y | 4.31 | 0.76 | | |
| | Z | 3.49 | 1.00 | | |
| Reusability | X | 3.26 | 0.94 | 0.08 | 0.92 |
| | Y | 3.27 | 0.78 | | |
| | Z | 3.22 | 0.95 | | |
| Sustainable Consumption Behavior Scale | X | 3.09 | 0.44 | 6.38 | 0.00* |
| | Y | 3.20 | 0.48 | | |
| | Z | 2.94 | 0.52 | | |

*p<0.05

**Table 9.** Analysis of the relationships between the educational level variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Educational level | Mean | Std. Deviation | F | p |
|---|---|---|---|---|---|
| Environmental sensitivity | Below high school | 3.10 | 0.87 | 1.86 | 0.16 |
| | High school | 3.45 | 0.73 | | |
| | University and above | 3.01 | 1.00 | | |
| Unneeded consumption | Below high school | 2.18 | 0.82 | 4.88 | 0.00* |
| | High school | 1.69 | 0.75 | | |
| | University and above | 2.34 | 0.90 | | |
| Saving | Below high school | 3.65 | 0.96 | 2.66 | 0.07 |
| | High school | 4.11 | 1.03 | | |
| | University and above | 3.90 | 1.02 | | |
| Reusability | Below high school | 3.24 | 0.91 | 0.13 | 0.88 |
| | High school | 3.33 | 0.93 | | |
| | University and above | 3.22 | 0.90 | | |
| Sustainable Consumption Behavior Scale | Below high school | 2.98 | 0.49 | 0.71 | 0.49 |
| | High school | 3.07 | 0.51 | | |
| | University and above | 3.06 | 0.54 | | |

*p<0.05

According to the relationship analysis between the educational level variable and the scale and its sub-dimensions in Table 9, significant relationships only existed between the "unneeded consumption" and the educational level variable (p<0.05). According to the post hoc analysis results, this significant difference stemmed from those who had a university diploma.

According to the relationship analysis between the income level variable and the scale and its sub-dimensions in Table 10, significant relationships existed between the income level variable and "saving" and "reusability" (p<0.05). According to the post hoc analysis results, this significant difference stemmed from those whose incomes were more than their expenses for both sub-dimensions.

**Table 10.** Analysis of the relationships between the income level variable and the Sustainable Consumption Behavior Scale and its sub-dimensions

| Sustainable Consumption Behavior Scale and its sub-dimensions | Income level | Mean | Std. Deviation | F | p |
|---|---|---|---|---|---|
| Environmental sensitivity | Incomes more than Expenses | 3.12 | 0.89 | | |
| | Incomes less than Expenses | 3.01 | 0.85 | 0.45 | 0.64 |
| | Incomes equal to Expenses | 3.13 | 0.98 | | |
| Unneeded consumption | Incomes more than Expenses | 2.27 | 1.05 | | |
| | Incomes less than Expenses | 2.27 | 0.91 | 0.35 | 0.70 |
| | Incomes equal to Expenses | 2.17 | 0.79 | | |
| Saving | Incomes more than Expenses | 4.10 | 0.91 | | |
| | Incomes less than Expenses | 3.63 | 0.95 | 3.09 | 0.04* |
| | Incomes equal to Expenses | 3.83 | 1.05 | | |
| Reusability | Incomes more than Expenses | 3.44 | 0.91 | | |
| | Incomes less than Expenses | 3.04 | 0.89 | 3.27 | 0.04* |
| | Incomes equal to Expenses | 3.30 | 0.89 | | |
| Sustainable Consumption Behavior Scale | Incomes more than Expenses | 3.15 | 0.54 | | |
| | Incomes less than Expenses | 2.94 | 0.49 | 2.43 | 0.09 |
| | Incomes equal to Expenses | 3.04 | 0.51 | | |

*p<0.05

## 4. Discussion and Conclusions

This study was carried out with those living in one province only, and the results are applicable to those surveyed only and cannot be generalized to the whole country and/or region, which constitutes the most important limitation of this study. This study aimed to investigate the sustainable consumption behaviors of individuals in generations X, Y and Z using various descriptive variables. Literature review shows that many studies have been conducted in different areas of sustainability, such as sustainable water (Çakır Yıldırım & Karaarslan Semiz, 2019), electricity (Guo et al., 2018), energy (Zhou & Yang, 2016), food (Kamenidou et al., 2019), organic agriculture (Lazaroiu et al., 2019), and green consumption (Rustam et al., 2020). The mean scores obtained from the sub-dimensions of the Sustainable Consumption Behavior Scale demonstrated that the participants obtained moderate mean scores from the "environmental sensitivity" and "reusability", a low mean score from the "unneeded consumption", and a high mean score from the "saving". Although the study results are generally promising, it may be useful to plan some initiatives to raise the individual awareness of such behaviors. Within this context, it may be possible to add courses, which will develop students' sustainable consumption behaviors, to the education curriculum at all levels. The studies of Işık-Öner & Kadıoğlu-Ateş (2020), Karalar & Kiracı (2011), and Sarı & Topçuoğlu (2019) reported that participants displayed sustainable consumption behaviors at a moderate level, which is consistent with the results of this study.

At the end of the study, it was observed that as the participants increased their tendency to display sustainable consumption behaviors, the levels of their environmental sensitivity, saving and reusability attitudes also increased significantly. The study conducted in the Turkish Republic of Northern Cyprus (TRNC) by Tatar (2021) reported that positive and significant relationships existed between sustainable consumption behaviors and sensitivity to environmental problems, which is consistent with the findings of this study. In a study conducted with prospective teachers, it was stated that the participants displayed sustainable consumption behaviors at a sufficient level (Ateş, 2018).

It was concluded that no statistically significant relationships existed between the gender variable and the Sustainable Consumption Behavior Scale and all its sub-dimensions, which is consistent with the study results of Bulut (2022) and Tatar (2021). On the one hand, a study conducted with cultural tourists reported that the participants had a high perception level of sustainable consumption. The results of this study revealed that the levels of sustainable consumption behavior, environmental sensitivity and saving attitudes were significantly higher in the married participants than that of single participants. On the other hand, it was concluded that the level

of unneeded consumption attitude was significantly higher in the single participants than that of married participants.

Marriage requires serious responsibility and joint decision-making behavior, which may lead to these results. Contrary to the results of this study, the findings of Karaca (2018) and Tatar (2021) showed that marital status did not significantly affect the individual sustainable consumption behaviors, which are noteworthy.

The results of this study revealed that the level of unneeded consumption attitude was significantly higher in the participants with nuclear families than that with extended families, which suggested that the participants with nuclear families tended to display hedonic consumption behavior, possibly due to their financial level. The results of this study also revealed that the participants living in the city exhibited sustainable consumption and saving behaviors at a significantly higher level than that of those living in the rural area, which may be caused by their different socio-cultural structures or awareness levels.

According to the results of this study, the participants in generation Y had significantly higher levels of sustainable consumption behaviors, and environmental sensitivity and saving attitudes. The participants in generation Z obtained the highest mean score from the unneeded consumption behaviors. From this perspective, it can be stated that the participants in generation Y displayed a more environmentally friendly and sustainable attitude than the participants in generation Z, which may be caused by the fact that many of the participants in generation Z did not yet achieve their own financial freedom. The study of Okşar & Koç (2020) showed that the participants in generation Z had higher level of unneeded consumption behavior, and the Baby Boomer generation had the highest level of saving attitude. The study of Aktaş & Çiçek (2019) determined that the participants in generation Y had higher level of sustainable consumption behaviors than the participants in generation Z. Although the study of Işık-Öner & Kadıoğlu-Ateş (2020) was not conducted on generations, their study results showed that younger participants obtained a significantly higher mean score from the "unneeded consumption", which is consistent with the results of this study.

The results of this study revealed that the participants with a university or higher education obtained a significantly higher mean score from the "unneeded consumption". The results were surprising and even sad in terms of environmental sustainability. It was expected that people with a higher education would display less unneeded consumption attitudes, probably due to their knowledge, education and awareness levels, or their socio-economic status. It is obvious that more empirical studies should be conducted to make comments more detailed.

In addition, the results of this study showed that the participants, whose incomes were more than their expenses, obtained significantly higher scores from the "saving" and "reusability" attitudes, probably because they had a high level of financial freedom and sustainable environmental awareness. The study of Kır & Polat (2020) reported that the participants tended for unneeded consumption with the increase of their income levels, which is consistent with the results of this study. The study of Okşar & Koç (2020) reported that the participants with high income levels obtained significantly higher mean scores from the "environmental sensitivity" and "saving". However, the study of Tatar (2021) determined that no statistically significant relationships existed between the participants' sustainable consumption behaviors and their income levels.

The results of this study suggested that the participants did not have sufficient environmental awareness. In this age of continuous consumption, it is of great importance to make necessary efforts on the issue. Within this context, educational institutions, families, businesses and environmental communities should assume more responsibilities to help people gain sustainable education, awareness and consumption behaviors. More seminars and trainings regarding this issue should be organized in environmental communities and educational institutions. The knowledge and awareness levels of teachers and prospective teachers on the issue should be increased. More studies need to be conducted to reflect the perspectives of Turkish generations on the subject. From this point of view, studying this subject in different sample groups and sizes will contribute to the literature.

## Author Contributions

All the authors equally contributed to the article, and they read and agreed to the published version of the manuscript.

## Informed Consent Statement

Informed consent was obtained from all the participants in the study.

## Data Availability

The data used to support the research findings are available from the corresponding author upon request.

## Conflicts of Interest

The authors declare no conflict of interest.

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