



Article

Health and Environment Conscious Consumer Attitudes: Generation Z Segment Personas According to the LOHAS Model

Marietta Balázsné Lendvai ¹, Ildikó Kovács ², Bence Ferenc Balázs ¹ and Judit Beke ^{2,*}

¹ Faculty of Business Administration, University of Pannonia, 8200 Zalaegerszeg, Hungary; balazsne.lendvai.marietta@zek.uni-pannon.hu (M.B.L.); balazsbence99@outlook.hu (B.F.B.)

² Faculty of International Management and Business, Budapest Business School, 1165 Budapest, Hungary; kovacs.ildiko@uni-bge.hu

* Correspondence: lisanyi.endrene@uni-bge.hu

Abstract: As a lifestyle and consumer trend, the LOHAS (Lifestyle of Health and Sustainability) has been growing in popularity worldwide. The LOHAS is followed by a consumer group that is characterised by consumer attitudes and behaviours focusing on health and sustainability, that is increasingly concerned about global problems and challenges, and that follows trends related to sustainability, such as health and environmental consciousness. In addition, this group strives for a sense of naturalness, aims to behave ethically, and seeks to hold authentic and individualistic values. The objective of this research is to explore how young people today relate to the components of the LOHAS model, how the different characters respond, and what their perceived values are. We are also looking for answers pertaining to whether clusters may be formed based on the examined factors. In our study, we surveyed 357 Hungarian respondents, who are members of Generation Z. As a method of data analysis, descriptive statistical methods, correlation analyses, factor analysis, cluster analysis, and the persona profiles were designed using the design thinking method. Based on the factors of the LOHAS model, three separate groups may be ascertained within Generation Z: personas that fit the LOHAS, personas that could fit the LOHAS, and personas that do not fit LOHAS.

Keywords: LOHAS segment; buyer persona; generation Z; environmentally conscious consumption; health-conscious consumption

Citation: Lendvai, Marietta Balázsné, Ildikó Kovács, Bence Ferenc Balázs, and Judit Beke. 2022. Health and Environment Conscious Consumer Attitudes: Generation Z Segment Personas According to the LOHAS Model. *Social Sciences* 11: 269. <https://doi.org/10.3390/socsci11070269>

Academic Editor: Kevin Cullinane

Received: 13 May 2022

Accepted: 16 June 2022

Published: 22 June 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

An increasing number of consumers are becoming aware of the environmental issues that may have an impact on their lifestyles and consumption behaviours (Howard 2007; IRI 2021). The key factors driving this awareness are sustainability requirements, deliberation, openness to nature (Gyarmati 2021), and a search for security (Veér et al. 2018).

As new trends emerge, new consumer groups also appear, within which, values that indicate a need for a more sustainable lifestyle may be identified. Since the late 1990s, a new worldwide lifestyle and consumer trend, the LOHAS (Lifestyle of Health and Sustainability), has been growing in popularity (Korhonen and Ylipoti 2018). The LOHAS can be considered as a new lifestyle that might revolutionize the consumer markets (Mohr 2011).

The LOHAS describes a certain group of individuals who place a high value upon enhancing their lifestyle in terms of health and sustainability by purchasing local products (Howard 2007; Chou et al. 2012; Szakály et al. 2015). They tend to value green living, which involves purchasing organic foods, local produce, and healthier products, which, in turn, influences their family and friends to also adopt sustainable living and healthier lifestyle

choices (Howard 2007; Szakály et al. 2015). The LOHAS group takes into account personal health perspectives, as well as societal perspectives regarding how one contributes to sustainability (Buerke et al. 2017). LOHAS consumers personify a 'new' lifestyle: they comprise a new group that emphasizes values and is going to revolutionize the consumption markets (Mohr 2011). This is because members of that group are seen as being environmentally conscious, socially attuned, and as having a worldview that takes into account personal, community, and planetary outcomes (Pícha and Navrátil 2019).

There are about 100 million people who follow a LOHAS worldwide, and approximately 20.0% of the population in Europe may be labelled as LOHAS consumers (Peyron 2010). In developed countries, the percentage of consumers focusing on sustainability when making purchases may reach 25.0% of the population (Szakály et al. 2015). The market size is estimated to reach USD 500 billion (Chhabra and Kaur 2022). The market size is increasing in Hungary as well, with the estimated size being 8.0% in 2013 and 16.0% in 2020 (Bacher 2020).

In the US, Japan, Australia, and in several countries in Europe, extensive research has been conducted to define and understand the LOHAS consumer group. According to the findings of the Natural Marketing Institute (2008), the typical LOHAS consumer is a middle-aged married woman, who in most cases, has no children. These women generally have reasonably high salaries and possess university degrees, and they have shared values and beliefs. Recently, a new group consisting of Millennials has also appeared, for whom environmental concerns are particularly important (Szakály et al. 2015; Szakály et al. 2017).

2. Materials and Methods

2.1. The LOHAS Model and the Key Criteria of LOHAS Consumers

The acronym LOHAS— which stands for Lifestyle of Health and Sustainability — was used by Ray and Anderson, in 2000, in their book entitled *The Cultural Creatives: How 50 Million People Are Changing the World*. In their lifestyle typology of American society, they highlighted the 'cultural creatives' group, which established a basis for the LOHAS group, and represented 26.0% of the market at the time (Pittner 2017).

The LOHAS customer is concerned about health, personal growth, the environment, sustainable living, social justice, and so on. (Tam et al. 2021). They buy organic and natural food that is locally produced, eco-certified, or fairtrade (Sung and Woo 2019; Osti and Goffi 2021). They are experience seekers, who appear to form opinions based on those experiences (Szakály et al. 2015; Oppermann 2008; Kreeb et al. 2009; Bacher 2020). They are described as people who have perceptual, attitudinal, and behavioural lifestyles, and they seek to achieve environmental and social sustainability (Choi and Feinberg 2021).

The key value categories defining the LOHAS lifestyle are summarised in Figure 1.

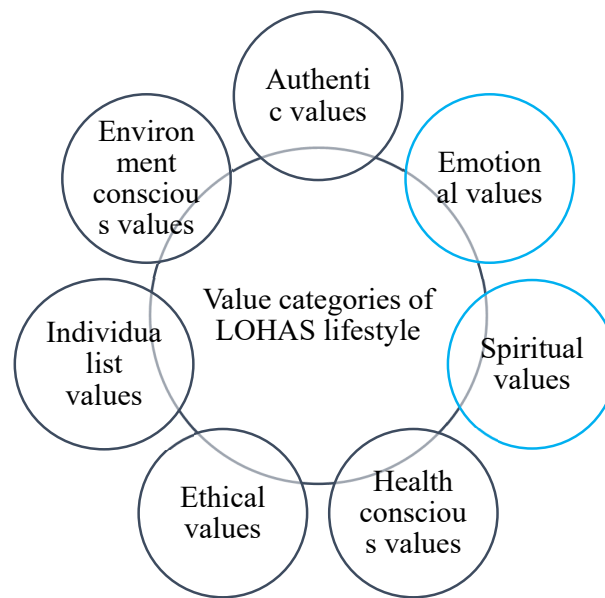


Figure 1. Determining value categories of the LOHAS lifestyle—extended model. Source: Authors’ own compilation based on (Gelfer 2010; Szakály et al. 2015; Choi and Feinberg 2021).

The categories characteristically show that this lifestyle promotes a hybrid set of values, with certain preferences that are adjusted to those values (Reicher and Rácz 2012); therefore, based on the results of the Hungarian and international studies, we systematically collected the key criteria and specifics for LOHAS consumers and Generation Z (see Table 1).

In certain studies, the LOHAS model is supplemented by the six-dimensional concept that was introduced by Choi and Feinberg in 2021. The ‘LOHAS scale includes individual motivation for a healthy life in physical, mental, emotional, and spiritual areas as well as their consideration for well-being of nature and society.’ The LOHAS embraces an optimistic view of the future, experiences relating to new challenges, a desire for peace, and it is relationship oriented. According to Gelfer (2010), spirituality is a core part of the LOHAS, and thus, it can grow the spiritual economy.

Table 1. Consumer criteria and preferences in accordance with the LOHAS dimensions.

Consciousness (Health and Environment Consciousness)	
Criteria Typical of the LOHAS Group	Research Results Concerning Generation Z
<ul style="list-style-type: none"> • A holistic approach to health (Bacher 2020). • Pursuit of balanced wellbeing (Cheng et al. 2019). • Members of the LOHAS group are health conscious; they pay a high level of attention to their impact on nature and are aware of social fairness (Kreeb et al. 2009). • For members of the LOHAS group, the importance of accumulating material essentials is replaced by the significance of being (i.e., the soul) (Kreeb et al. 2009). 	<ul style="list-style-type: none"> • Members of Generation Z are the most environmentally conscious (68.0%) (CGS 2019). • The state of our planet is one of the most typical concerns of the examined young people (40.0%), and its protection is of particular importance in terms of their values (Origo 2021). • Members of Generation Z have a high level of commitment to issues related to climate change (Tyson et al. 2021). • Members of Generation Z place outstanding importance upon

	<p>sustainability and environment protection (PwC 2021).</p> <ul style="list-style-type: none"> • Members of Generation Z have a strong sense of social responsibility, and 59.0% of them show sincere interest in controlling the changes of sustainable development (Choi and Feinberg 2021). • Of the younger generation, 61.0% consider the quantity of packaging during the purchasing of products (Reda and Kapoor 2021).
Individualistic values	
Criteria of the LOHAS Group	Research results concerning Generation Z
<ul style="list-style-type: none"> • Brand loyalty (Szakály et al. 2015). • Self-development and self-fulfillment (Bacher 2020). • Members of this group also frequently use convenience services (Szakály et al. 2015). • Members of this group do not want to give up comfort and convenience (Brünger 2016). • Members of this group prefer to buy special branded products (Szakály et al. 2015). 	<ul style="list-style-type: none"> • Members of this group are willing to pay more for products that emphasise their individuality (Francis and Hoefel 2018). • Members of this group are health conscious, and individualistic values are the most important to them (Balsa-Budai and Szakály 2018).
Authentic values	
Criteria of the LOHAS group	Research results concerning Generation Z
<ul style="list-style-type: none"> • Members of this group prefer tradition; moreover, they can also possess authentic and human values (Szakály et al. 2015). • Members of this group prefer purchasing goods from sustainable sources (Szakály 2017). • Members of this group want information from reliable sources (Lehota et al. 2014; Bacher 2020). • Transparent product labelling (Lehota et al. 2014). • Authentic values are deemed to be more important than experience seeking (Kreeb et al. 2009). • Members of this group prefer locally produced goods (Sung and Woo 2019). 	<ul style="list-style-type: none"> • The production process is also taken into account in the purchasing decisions of this group (CGS 2019). • Of the consumers in this group, 18.0% are willing to pay more for environmentally friendly food and drink (IRI 2021). • Of generations Z and Y, 30.0% agree that sustainability statements on food and drink packaging, or in food and drink advertisements, were checked or validated in the last six months (Reda and Kapoor 2021). • Of the members in this group, 65.0% check the origin, the ingredients, and the production process of their purchased goods (Francis and Hoefel 2018).
Ethical factors	
Criteria of the LOHAS group	Research results concerning Generation Z
<ul style="list-style-type: none"> • Ethical economic activity is related to certain expectations and behaviours (Bacher 2020). • Members of this group pay a high level of attention to goods that are healthy and produced ethically (Kovács et al. 2013). 	<ul style="list-style-type: none"> • Members of this group expect brands to support issues that are important to the customers: 70.0% of this group only purchase goods from companies they deem to be ethical, and 80.0% of this group never purchases

	anything from a company that has demonstrated contradictory behaviour or has been involved in scandal (Francis and Hoefel 2018).
Philanthropic	
Criteria of the LOHAS group	Research results concerning Generation Z
<ul style="list-style-type: none"> Members of this group believe that considering the welfare of society is important (Gelfer 2010). 	<ul style="list-style-type: none"> In Central and Eastern Europe, 45.0% of young people make donations to foundations and civil organisations, and 34.0% of them undertake voluntary work. A similar percentage of Hungarian young people make donations (46.0%) and 46.0% of them undertake voluntary work (Origo 2021).
Corporate behaviour	
Criteria of the LOHAS group	Research results concerning Generation Z
<ul style="list-style-type: none"> Members of this group purchase from certain brands, which have convinced them that their products hold a consistent value (Bacher 2020). Members of this group valued brands and advertisements with actual CSR messages more favourably (Gangadharbatla et al. 2020). 	<ul style="list-style-type: none"> Sustainability is a priority when brand loyalty is established (CGS 2019). Two thirds of Generation Z in Germany deem sustainability as more important than quality and price when purchasing a product (PwC 2021). According to research conducted in the UK, US, and Australia, 60.0% of the young people of Generation Z that were interviewed are attracted to a brand which is able to reduce its footprint (Wightman-Stone 2022). The new generation tests the authenticity of companies and holds them accountable for their marketing promises (Francis and Hoefel 2018). Members of this group create an incentive for companies (Kamenidou et al. 2019). Green factors stimulate the purchase intention of luxury organic beauty products (Lavuri et al. 2022).
Hedonistic values	
Criteria of the LOHAS group	Research results concerning Generation Z
<ul style="list-style-type: none"> Members of this group do not reject life-based experiences (Szakály et al. 2015). Style and aesthetics are important purchase criteria for them (i.e., they do not reject hedonism) (Kreeb et al. 2009). 	<ul style="list-style-type: none"> Members of this group want to be special (unique individuals); therefore, they look for innovative and special products (Noh et al. 2014). According to a summary of the relevant literature by Du et al. (2021), this differs significantly by product category, mostly in relation to self-expression.
Motivation of purchase	
Criteria of the LOHAS group	Research results concerning Generation Z

-
- Of Generation Z and Millennials, 53.0% say that sustainability is important when making purchase decisions, and an equivalent proportion also agrees that it costs too much to purchase sustainable products (Reda and Kapoor 2021).
 - Of Generations Z and Y, 68.0% would prefer more information to help make more sustainable decisions (Reda and Kapoor 2021).
 - Generation Z is more likely to purchase upcycled products, and similarly to their generational peers, Generation Z values quality above all else (Johansen 2021).
 - For members of this group, health concerns, a healthy lifestyle, and environmental concerns are the primary determinant attributes (Lago et al. 2020).
- Increasing the domination of value rather than price (Bacher 2020).
 - A lower price sensitivity transforms the decision processes (Szakály et al. 2015; Bacher 2020).
-

Source: Authors' own compilation, 2022.

In 2015, a national representative survey of 1000 people examined the LOHAS group in Hungary (Szakály et al. 2015), and the group that followed the LOHAS most closely was ascertained as being the group of young trend followers (32.1%). The Hungarian and American LOHAS consumers show similarities in demographics; however, it must be emphasised that although the average age of LOHAS consumers is 46.7 in America, the average age falls within the age group of 18–39 in Hungary (Szakály et al. 2015).

Some authors note the lack of scientific soundness of the LOHAS. A review of the available literature (which is currently quite limited) allows us to infer the attributes that are reflected in the LOHAS. First, members of the LOHAS group focus upon enhancing their personal health and wellbeing, along with the health and wellbeing of their families. Perceived consumer effectiveness had a positive impact upon trust and the purchasing intention of upcycled fashion products (Park 2015).

The global trend of the LOHAS was studied by the Natural Marketing Institute (NMI) in 2008 (Natural Marketing Institute 2008). They published non-scientific reports, and the LOHAS was surveyed by asking 12 questions; however, there were no rigorous scientific scale development procedures nor extensive validation, and there seems to be very little scientific research conducted on the nature and scope of this lifestyle (Choi and Feinberg 2021).

2.2. Generation Z as LOHAS Consumers

There seems to be a research gap when it comes to Generation Z, which is important to address since this generation has, and will have, an important role to play in establishing more sustainable consumer patterns. One of our motivations in conducting this research was to highlight how Generation Z relates to sustainability, since in the next decade, they may present significant opportunities in terms of commerce, and they might have high buying and spending power. They are more likely to buy sustainable products, and therefore, understanding their motivations and consumer behaviours is of great importance for the business sector.

The key objective of our research is to find answers to the following questions, with regard to the LOHAS and the involvement of Generation Z.

Q1.: Which element of the LOHAS measuring scale is most dominant?

Q2.: In which factors does the LOHAS measuring scale fit?

Q3.: How well do the young people of today fit in with the components of the LOHAS model?

Q4.: What typical groups may be identified based on the LOHAS scale?

The quantitative research was conducted using an online questionnaire in Autumn 2021 with 385 respondents. Less than 10% (28) of the total 385 responses were irrelevant and had to be removed during data cleaning because they were either not members of Generation Z or they did not have a place of residence in Hungary.

The target area was Hungary, and the target group was Generation Z. The respondents answered the questions in the form of a self-administered online questionnaire. It is important to note that our sample of 357 young respondents, who are members of Generation Z, and who live in Hungary, is not considered particularly small relative to the size of the population of the country. The snowball sampling method was used in order to obtain a more heterogeneous sample. We knew that it would not be easy to contact this age group, and thus, we intended for them to motivate each other to fill in the online questionnaire, both within their community (e.g., in school/university) and outside of their immediate community. The demographical features of the respondents are as follows: we reached 357 persons, and regarding the demographical details of the respondents, 27.0% of whom are male and 73.0% are female. The average age of the respondents is 21 years. Most of them live in county seats or villages/settlements, and 16.0% live in the capital city or in towns. Most of the males are from county seats, whereas the majority of the females are from villages/settlements. The majority of the respondents have secondary education (41.0%) as their highest form of education, followed by those with higher education—a college or university degree (20.0%). Similar tendencies may also be observed in terms of gender, as nearly 50.0% of the males and around 38.0% of the females have secondary education as their highest form of education. The proportion of university/college students is 50.0%, and the proportion of pupils is 30.0% in the sample.

The scale had 34 scale elements, for which we used the following LOHAS value categories defined by Szakály et al. (2015) as a basis: individualistic values, authentic values, health consciousness, environmental consciousness, ethical factors, and corporate behaviour (Szakály et al. 2015). We added one more factor to this list: the hedonistic factor. This factor is associated with the LOHAS scale in the results of several other research papers. The factors listed in the questionnaire were evaluated using a 6-point Likert scale. Descriptive statistical methods (i.e., factor analysis and cluster analysis (K-means cluster analysis)) were used with the help of 'SPSS 27.0 Statistics' software. To depict the groups identified by cluster analysis, we established research persona profiles based on the most influential criteria, which we depicted by using design thinking methods after the presentation of the key criteria of the clusters. As a result, we may find it easier to imagine being in the headspaces of these typical consumers, and thus, it may be possible to address them with more targeted and personal messages.

3. Results and Discussion

3.1. Results of the Descriptive Statistics of the LOHAS Scale Elements

We performed factor analysis for the 30 scale elements examined in the questionnaire with principal component analysis, and Varimax rotation with Kaiser normalisation. The 30 scale elements were grouped into seven different factors to explain 64.8% of the total variance (KMO value, 0.914; sphericity approx. chi-square, 5534.082; df, 435; sig., 0.000. Bartlett test $p = 0.000$). Community values were between 0.408 and 0.866. The factors were as follows: sustainability and environmental friendliness, tradition and local values, hedonism, knowledge and awareness, philanthropy, individualism, and authentic values. The first factor (sustainability and environmental friendliness) represents a high explanatory power, as it in itself explains 35.3% of the total variance. Table 2 shows the most dominant scale elements and factors among the elements of the LOHAS scale.

Table 2. Descriptive statistics of scale elements of the LOHAS model.

Scale Elements	Mean	Standard Deviation	Median
Sustainability and Environment Friendliness ($\alpha = 0.909$), Total Mean = 3.86			
I am happy if I manage to buy a sustainable and/or healthy product.	3.76	1.421	4.00
I try to purchase as many sustainable products as possible.	3.81	1.213	4.00
I use more environmentally friendly solutions in everyday life.	3.87	1.190	4.00
I prefer environmentally friendly wrapping material when making purchases.	3.93	1.383	4.00
I am willing to pay a higher price for sustainable and environmentally conscious products.	3.26	1.352	3.00
I prefer the products of businesses which typically adopt a responsible and sustainable approach.	3.66	1.281	4.00
I am willing to share the knowledge I have gained in the subjects of sustainability and health.	4.10	1.311	4.00
Tradition and local values ($\alpha = 0.806$), total mean = 3.39			
I prefer domestic products when making purchases.	3.50	1.365	3.00
I greatly prefer local (locally produced) products.	3.93	1.383	3.00
Traditions are important to me.	3.76	1.480	4.00
I consciously look for the trademarks of origin and quality on the products.	2.95	1.531	3.00
Hedonism ($\alpha = 0.821$), total mean = 4.24			
I am open to the latest technologies.	4.71	1.117	5.00
I gladly and boldly try new things.	4.51	1.203	5.00
I gladly purchase sustainable and responsible products at present.	4.36	1.353	4.00
I gladly purchase and try sustainable products out of curiosity.	3.99	1.338	4.00
Knowledge and awareness ($\alpha = 0.789$), total mean = 4.00			
Self-development is important to me and I regularly train myself.	4.31	1.288	4.00
I pay attention to conscious and healthy eating.	3.84	1.392	4.00
I exercise and work out regularly.	4.05	1.562	4.00
I am willing to pay a higher price for healthier products.	3.85	1.307	4.00
Naturalness is very important to me (e.g., products without additives).	3.96	1.398	4.00
Philanthropy ($\alpha = 0.707$), total mean = 3.57			
I am willing to undertake voluntary work.	3.11	1.488	3.00
Supporting charity and donation programmes is important to me.	3.33	1.439	3.00
Purchasing products not tested on animals is important to me.	4.26	1.603	4.00
Individualism ($\alpha = 0.728$), total mean = 3.27			
I prefer quality products when making purchases.	3.29	1.426	3.00
I tend to follow trends.	3.19	1.511	3.00
I prefer high quality products.	3.34	1.188	4.00
Authentic values ($\alpha = 0.568$), total mean = 3.56			
I tend to be well-informed while shopping.	3.82	1.406	4.00
I purchase products from companies which are able to convince me of their values and which seem authentic to me.	3.87	1.390	4.00
I have received an environmentally conscious education from my family.	3.89	1.247	4.00
I tend to amplify negative news.	2.67	1.329	3.00

Likert scale: 1 not typical at all; 6 very typical. Source: Authors' own calculations, 2021. $n = 357$.

We examined the internal consistency of the values in one factor, using the Cronbach alpha value following factor analysis. Almost every element had a value over 0.7, except

for 'authentic values' ($\alpha = 0.568$), which means that the items in one factor measured a 'common' phenomenon. Table 2 shows that the highest value given was to being "open to the latest technologies" (mean = 4.71; median = 5.00), whereas the second highest value was given to "try[ing] new things" (mean = 4.51; median = 5.00). The third highest value was given to purchasing "sustainable and responsible products at present" (mean = 4.36; median = 4.00). Based on these results, we can state that the values for hedonism are the most dominant factors for Generation Z in relation to the LOHAS model. Other significant values were self-development and training (mean = 4.31; median = 4.00), and the importance of purchasing products not tested on animals (mean = 4.26; median = 4.00). The sixth highest value was given to the willingness to share knowledge on sustainability and health (mean = 4.10; median = 4.00). The last element which was calculated as being above four on the 6-point Likert scale was the statement "*I exercise and work out regularly*" (mean = 4.05; median = 4.00); therefore, besides hedonism, the second most important factor is knowledge and awareness, whereas the third determining factor is sustainability and environmental friendliness.

It is also apparent that amplifying negative news is not at all typical of the members of Generation Z (mean = 2.67; median = 3.00), and it is also not typical for this generation to look for the trademarks of origin and quality on the products (mean = 2.95; median = 3.00). The third lowest value was given to undertaking voluntary work (mean = 3.11; median = 3.00). Moreover, the statements "*I tend to follow trends*" (mean = 3.19; median = 3.00) were neutral for this group, whereas the statement "*I prefer quality products when making purchases*" (mean = 3.29; median = 3.00) was rather typical, or at least typical for 61% of the respondents. Furthermore, the data suggest that the factor "*Supporting charity and donation programmes*" is a neutral one for the young generation (mean = 3.33; median = 3.00). These results show that the values for individualism and philanthropy are the least dominant factors in relation to the LOHAS model. Furthermore, the authentic and local values, as well as tradition, seem to be less influential for Generation Z.

Table 3 confirms the aforementioned results; therefore, the most dominant element is the '*I am open to the latest technologies*' statement, as 27.0% of the respondents felt it was highly typical of themselves, and 33.0% also gave a 'typical' indication. A further 22.0% indicated that this factor was slightly typical for them. The second most dominant factor was the '*I gladly and boldly try new things*' statement, which was evaluated as being highly typical for 24.0% of respondents, and typical for 30.0%, whereas 26.0% found the statement as being somewhat typical for them. The third most popular statement referred to the purchasing of responsible and sustainable products (25.0% found it to be very typical of them, 25.0% found it to be typical, and 25.0% found it to be rather typical). The statement '*Purchasing products not tested on animals is important to me*' was the most dominant across all the statements (32.5%). In terms of factors, hedonism became the most dominant among young generations, and this factor was determined as being the most dominant based on the top three values. The next determining element was '*prefer[ring] high quality products*', as about 12.0% of the respondents felt that it was very typical of them, whereas 29.7% found it typical. Furthermore, the other 31.9% of participants determined this factor as being rather typical for them, which is a change when compared with the above-mentioned results. As can be seen in Table 3, the importance of self-development was also a dominant factor: about 24.0% of the respondents found that this was very typical of them, 20.7% found it to be typical, whereas 27.7% found it to be rather typical of them.

Another interesting finding was that more than 24.0% of the respondents found the statement "*I exercise and work out regularly*" very typical of themselves, and about 20.0% found it 'typical', which is a very high rate; however, it was not among the top 10 most dominant values in relation to the LOHAS model. Similar results were found for the statement "*Naturalness is very important to me*". Although a great number of the respondents (18.0%) reported it as being very typical for them, and about 20.0% of the respondents found it typical, it was not found among the most dominant scale elements.

It is interesting to note that the willingness of Generation Z to pay a higher price for healthier products was found to be very typical of less than 10.0% of the respondents; however, it is found to be the ninth most important element in relation to the LOHAS model.

Table 3. Frequency of answers for the LOHAS model scale elements (%).

Factor	Scale Elements	Not Typical at All	Not Typical	Rather Not Typical	Rather Typical	Typical	Very Typical	TOP 3 Scale Element
Sustainability and environment friendliness	I am happy if I manage to buy a sustainable and/or healthy product.	6.44	14.01	22.41	23.53	21.29	12.32	57.14
	I try to purchase as many sustainable products as possible.	2.52	12.04	25.49	30.25	21.57	8.12	59.94
	I use more environmentally friendly solutions in everyday life.	2.80	8.96	24.93	34.17	19.89	9.24	63.31
	I prefer environmentally friendly wrapping material when making purchases.	4.48	10.36	25.77	21.85	22.13	15.41	59.38
	I am willing to pay a higher price for sustainable and environmentally conscious products.	12.32	17.93	24.65	25.21	16.53	3.36	45.10
	I prefer the products of businesses which typically adopt a responsible and sustainable approach.	5.88	11.48	28.29	26.33	21.29	6.72	54.34
	I am willing to share the knowledge I have gained in the subjects of sustainability and health.	2.80	8.96	19.89	29.97	20.73	17.65	68.35
Tradition and local values	I prefer domestic products when making purchases.	7.28	16.53	28.57	21.85	17.65	8.12	47.62
	I greatly prefer local (locally produced) products.	10.92	17.93	26.89	24.93	12.04	7.28	44.26
	Traditions are important to me.	7.84	15.13	18.77	23.25	21.85	13.17	58.26
	I consciously look for the trademarks of origin and quality on the products.	21.01	24.09	19.33	17.65	10.64	7.28	35.57

Hedonism	I am open to the latest technologies.	0.28	2.80	13.17	22.13	33.05	28.57	83.75
	I gladly and boldly try new things.	1.68	3.64	14.85	25.77	30.25	23.81	79.83
	I gladly purchase sustainable and responsible products at present.	3.64	5.60	16.25	25.21	24.37	24.93	74.51
	I gladly purchase and try sustainable products out of curiosity.	3.36	11.76	20.17	26.61	23.81	14.29	64.71
Knowledge and awareness	Self-development is important to me and I regularly train myself.	1.96	5.32	20.45	27.73	20.73	23.81	72.27
	I pay attention to conscious and healthy eating.	5.32	12.61	21.85	27.45	18.49	14.29	60.22
	I exercise and work out regularly.	5.88	14.01	17.65	18.49	19.61	24.37	62.46
	I am willing to pay a higher price for healthier products.	5.32	11.48	18.49	31.93	23.53	9.24	64.71
	Naturalness is very important to me (e.g., products without additives).	3.36	12.89	23.25	23.53	19.33	17.65	60.50
Philanthropy	I am willing to undertake voluntary work.	16.25	21.57	24.65	18.49	10.92	8.12	37.54
	Supporting charity and donation programmes is important to me.	10.92	18.77	28.01	20.17	12.89	9.24	42.30
	Purchasing products not tested on animals is important to me.	7.84	7.84	15.41	20.45	15.97	32.49	68.91
Individualism	I prefer to purchase brands.	14.57	15.69	21.01	29.41	13.17	6.16	48.74
	I tend to follow trends.	17.37	18.77	21.01	19.33	17.65	5.88	42.86
	I prefer high quality products.	2.80	5.60	17.93	31.93	29.69	12.04	73.67
Authentic values	I tend to be well-informed while shopping.	5.04	14.85	21.29	24.65	20.73	13.45	58.82
	I purchase products from companies which are able to convince me of their values and which seem authentic to me.	8.40	6.72	20.17	31.65	20.17	12.89	64.71

I have received an environmentally conscious education from my family.	4.48	7.56	23.53	33.33	20.73	10.36	64.43
I tend to amplify negative news.	22.69	25.77	25.49	17.37	5.04	3.64	26.05

Likert scale: 1 not typical at all; 6 very typical. Source: Authors' own calculations, 2021, n = 357.

As can be seen in Table 3, amplifying negative news, looking for the trademarks of origin and quality on the products, and undertaking voluntary work, are the least influential factors for Generation Z in relation to the LOHAS, since these factors were only evaluated as being rather typical, typical, or very typical of them by 35.0%, or less than 35.0%, of the respondents. Further results are presented in Table 3.

3.2. Characteristics of the Segments

Using the factors of the LOHAS model as a basis, we worked with the K-means cluster and the Euclidean distance methods. We identified three significantly different groups, wherein 154 persons were put in the first cluster, 104 were placed in the second group, and 99 were placed in the third one. The different clusters are differentiated from each other primarily as a result of the questions relating to the LOHAS model (respect of traditions, environmental consciousness, voluntary work, preference for quality products, etc.). With the exception of two statements, the factors showed significant differences among the groups (see Table 4).

Table 4. Characteristics of the segments.

Factor	Cluster	Cluster That Nearly Fits									ANOVA p-Value
		Fitting the LOHAS Model			the LOHAS			Far from LOHAS			
		Mean	Standard Deviation	Median	Mean	Standard Deviation	Median	Mean	Standard Deviation	Median	
Sustainability and environment friendliness	I am happy if I manage to buy a sustainable and/or healthy product.	4.95	0.952	5.00	3.81	1.230	4.00	2.56	1.022	3.00	0.000
	I try to purchase as many sustainable products as possible.	4.98	0.795	5.00	3.88	0.808	4.00	2.58	0.809	3.00	0.000
	I use more environmentally friendly solutions in everyday life.	4.97	0.826	5.00	3.84	0.864	4.00	2.87	0.976	3.00	0.000
	I prefer environmentally friendly wrapping material when	5.10	0.898	5.00	4.01	1.114	4.00	2.69	1.062	3.00	0.000

	making purchases.										
	I am willing to pay a higher price for sustainable and environmentally conscious products.	4.48	0.941	5.00	3.38	0.998	3.00	1.90	0.819	2.00	0.000
	I prefer the products of businesses which typically adopt a responsible and sustainable approach.	4.84	0.804	5.00	3.73	0.964	4.00	2.42	0.889	3.00	0.000
	I am willing to share the knowledge I have gained in the subjects of sustainability and health.	5.12	0.860	5.00	4.21	0.990	4.00	2.95	1.194	3.00	0.000
Tradition and local values	I prefer domestic products when making purchases.	4.59	1.088	5.00	3.55	1.172	4.00	2.40	0.961	3.00	0.000
	I greatly prefer local (locally produced) products.	4.46	1.240	5.00	3.24	1.073	3.00	2.32	1.073	2.00	0.000
	Traditions are important to me.	4.58	1.246	5.00	3.85	1.262	4.00	2.84	1.489	2.50	0.000
	I consciously look for the trademarks of origin and quality on the products.	4.33	1.294	4.00	2.80	1.280	3.00	1.85	0.983	2.00	0.000
Hedonism	I am open to the latest technologies.	5.29	0.860	6.00	4.72	0.987	5.00	4.13	1.220	4.00	0.000
	I gladly and boldly try new things.	5.25	0.896	5.00	4.39	1.145	4.50	3.97	1.202	4.00	0.000
	I gladly purchase sustainable and responsible products at present.	5.49	0.720	6.00	4.56	0.855	4.50	2.98	1.238	3.00	0.000

Knowledge and awareness	I gladly purchase and try sustainable products out of curiosity.	5.05	0.908	5.00	4.06	1.122	4.00	2.87	1.080	3.00	0.000
	Self-development is important to me and I regularly train myself.	5.24	0.916	6.00	4.23	1.095	4.00	3.55	1.314	3.00	0.000
	I pay attention to conscious and healthy eating.	4.96	1.106	5.00	3.81	1.125	4.00	2.82	1.180	3.00	0.000
	I exercise and work out regularly.	4.80	1.220	5.00	3.88	1.552	4.00	3.60	1.628	3.00	0.000
	I am willing to pay a higher price for healthier products.	4.81	0.877	5.00	3.95	1.093	4.00	2.77	1.151	3.00	0.000
	Naturalness is very important to me (e.g., products without additives).	5.30	0.775	5.00	3.99	1.003	4.00	2.63	1.072	2.50	0.000
Philanthropy	I am willing to undertake voluntary work.	4.21	1.280	4.00	3.03	1.323	3.00	2.17	1.194	2.00	0.000
	Supporting charity and donation programmes is important to me.	4.45	1.127	4.00	3.33	1.205	3.00	2.26	1.191	2.00	0.000
	Purchasing products not tested on animals is important to me.	5.17	1.031	6.00	4.39	1.359	4.00	3.21	1.788	3.00	0.000
Individualism	I prefer to purchase brands.	3.33	1.429	4.00	3.34	1.340	4.00	3.18	1.550	3.00	0.639
	I tend to follow trends.	3.25	1.528	3.00	3.15	1.463	3.00	3.18	1.575	3.00	0.869
	I prefer high quality products.	4.49	1.155	5.00	4.17	1.089	4.00	3.84	1.278	4.00	0.000
Authentic values	I tend to be well-informed while shopping.	4.62	1.291	5.00	3.75	1.197	4.00	3.15	1.433	3.00	0.000
	I purchase products from companies,	4.80	1.020	5.00	3.95	1.187	4.00	2.88	1.327	3.00	0.000

which are able to convince me of their values and which seem authentic to me.										
I have received an environmentally conscious education from my family.	4.63	1.046	5.00	3.88	1.128	4.00	3.22	1.214	3.00	0.000
I tend to amplify negative news.	2.97	1.374	3.00	2.70	1.299	3.00	2.35	1.268	2.00	0.003

Likert scale: 1 not typical at all; 6 very typical. Source: Authors' own calculations, 2021. $n = 357$.

As a result of this study, we identified one cluster that fit the LOHAS model, one cluster that nearly fit the LOHAS model, and one cluster that was far away from fitting the LOHAS model. We also prepared research persona profiles to demonstrate the criteria that were typical of the three groups.

The first cluster that fit the LOHAS model completely was given the name 'Lohaspass' (see Figure 2). This group consisted of university students in their twenties. This group greatly identified with almost every factor represented by the LOHAS model, and with the hedonist trait in particular. Within each of the factors, the three most important elements for this group were as follows:

- I gladly purchase sustainable and responsible products at present (mean = 5.49; median = 6.00).
- Naturalness is very important to me (e.g., products without additives) (mean = 5.30; median = 5.00).
- I am open to the latest technologies (mean = 5.29; median = 6.00).

They found the following elements to be the least important:

- I tend to amplify negative news (mean = 2.97; median = 3.00).
- I tend to follow trends (mean = 3.25; median = 3.00).
- I prefer branded products when making purchases (mean = 3.33; median = 4.00)

In addition, this group was the most environmentally conscious, and this was the group most willing to quickly act for a more sustainable future. They seemed to have an outstanding attitude, in addition to shaping and influencing power.



He is particularly concerned about environmental problems and challenges, and is making serious efforts to bring about change. Awareness permeates her everyday life, and she is happy to share her experiences with others. This persona is fitting LOHAS completely.

Lohaspass Lola

Gender: female
Age: 21
Lives in the city
Status: university student

- Naturalness is very important for me (e.g. products without additives).
- I tend to be well -informed while shopping .
- I prefer quality products in my purchases.
- Supporting charity and donation programmes are important for me.
- I gladly and boldly try new things.
- I am willing to share my knowledge gained in the subjects of sustainability and health .
- I prefer domestic products in my purchases.

Source: <https://ujso.com/egeszseg/sok-bajtol-szabadulhat-meg-ha-egeszegesen-taplalkozik>

1. Cluster fitting LOHAS

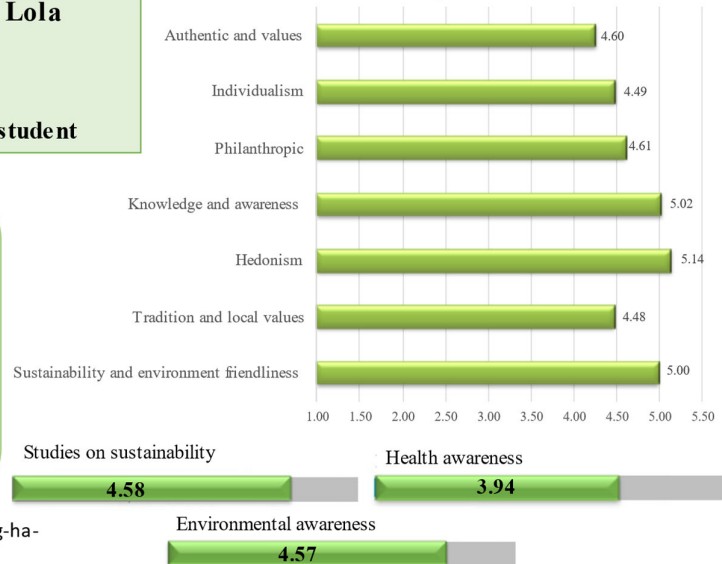


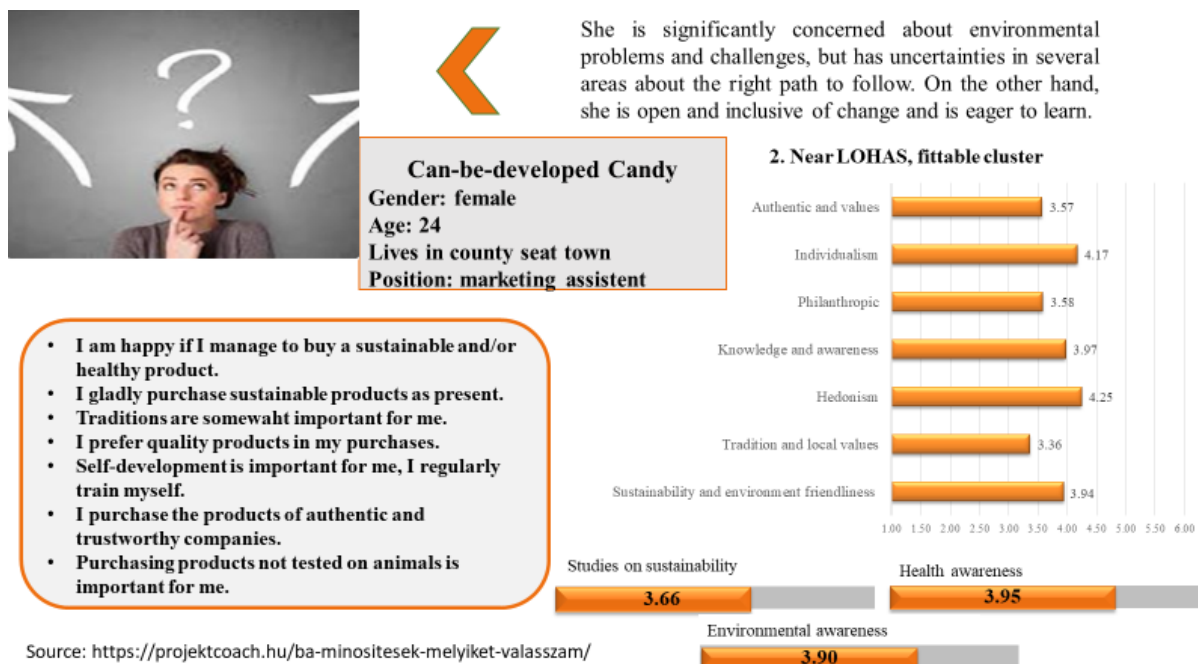
Figure 2. ‘Lohaspass’—the persona that best fits the LOHAS model. Source: Authors’ own compilation based on the results of cluster analysis, 2022.

The second cluster was given the name ‘Can-be-developed’ (see Figure 3). They found that they were moderately influenced by the majority of the examined factors (e.g., sustainability, environment friendliness, authentic and local value). They were, however, open to development and change, and they may be significantly influenced by their environment in this respect. Out of the factors in the LOHAS model, the hedonistic traits most typically applied to them as they valued these statements highest; therefore, sustainable products, the latest technologies, and trying new things were of outstanding importance for them. Within each of the factors, the three most important elements for this group were as follows:

- I am open to the latest technologies (mean = 4.72; median = 5.00).
- I gladly purchase sustainable and responsible products at present (mean = 4.56; median = 4.50).
- I gladly and boldly try new things (mean = 4.39; median = 4.50).
- Purchasing products not tested on animals is important to me (mean = 4.39; median = 4.00).

They found the following elements to be the least important:

- I tend to amplify negative news (mean = 2.70; median = 3.00).
- I consciously look for the trademarks of origin and quality on the products (mean = 2.80; median = 3.00).
- I am willing to undertake voluntary work (mean = 3.03; median = 3.00).



Source: <https://projektcoach.hu/ba-minositesek-melyiket-valasszam/>

Figure 3. ‘Can-be-developed’ — the persona that nearly fits the LOHAS model. Source: Authors’ own compilation based on the results of cluster analysis, 2022.

The third cluster was given the name ‘Indifferent’ (see Figure 4). It is the group that is most distant from the LOHAS model. The members of this group found almost every factor of the model to be of least importance or not important at all. The key features were the following: 16 years of age, students in secondary school, the slowest to act, the least environmentally conscious, and least health conscious. They placed less value upon the purchasing of local products and other factors relating to tradition. Furthermore, with regard to the factors that determined the LOHAS model, they were the least conscious group among the three clusters. This cluster seemed to deem the individualistic factors as being typical of themselves, which means that they prefer to buy higher quality and branded products; therefore, within each of the factors, the three most important elements for this group were as follows:

- I am open to the latest technologies (mean = 4.13; median = 4.00).
- I gladly and boldly try new things (mean = 3.97; median = 4.00).
- I prefer high quality products (mean = 3.84; median = 4.00).

Nevertheless, they found the following elements to be non-important:

- I consciously look for the trademarks of origin and quality on the products (mean = 1.85; median = 2.00)
- I am willing to pay a higher price for sustainable and environmentally conscious products (mean = 1.90; median = 2.00).
- I am willing to undertake voluntary work (mean = 2.17; median = 2.00)

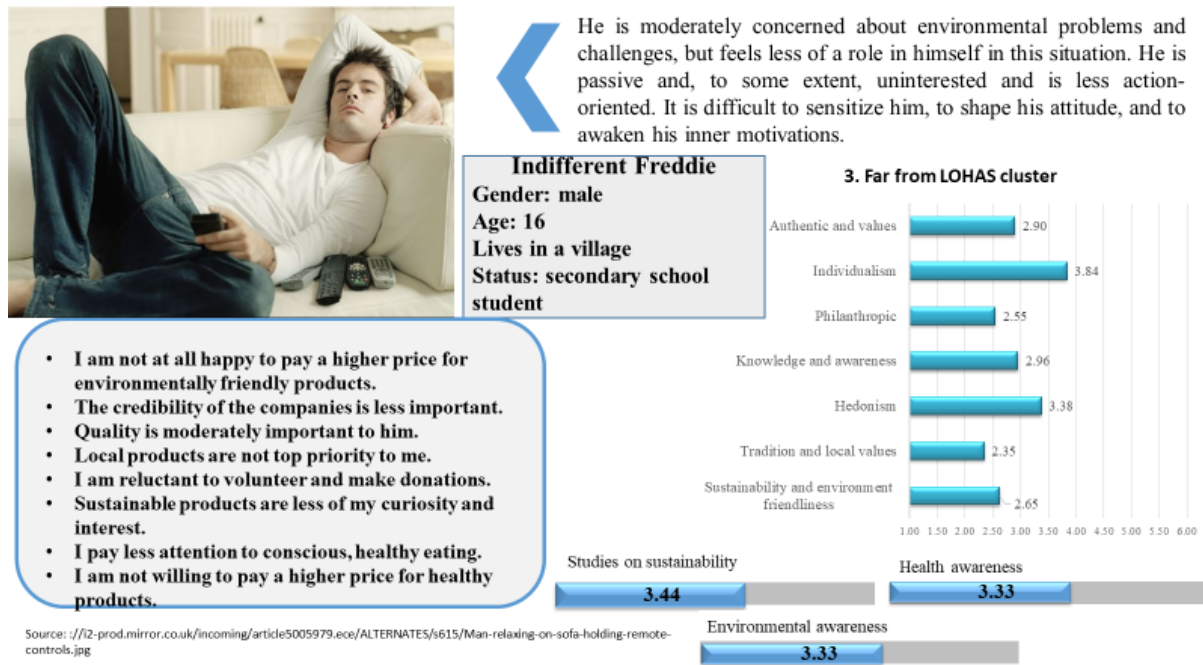


Figure 4. ‘Indifferent’ — the persona that is furthest from the LOHAS model. Source: Authors’ own compilation based on the results of cluster analysis, 2022.

Our survey supports and confirms several previous research findings on Generation Z and sustainability. The following are the most important of these findings. Our primary research confirmed the results of Mastercard’s survey published by Origo (2021), which found that 40.0% of young people are mostly concerned about the state of our planet, 34.2% of the respondents are significantly concerned, and 23.2% of them are somewhat concerned about environmental issues and sustainability challenges. Of the studied population, 69.2% indicated that they are very environmentally conscious. The survey by CGS (2019) showed similar results, with members of Generation Z being the most environmentally conscious (68.0%).

According to Francis and Hoefel (2018), 65.0% of young people want to be informed about the origin and ingredients of the product. In our survey, 34.1% of young people tend to be significantly or very well-informed while shopping, and 18% are consciously looking for trademarks of origin and quality on their products as well.

The survey by Mastercard (Origo 2021) found that 46.0% of Hungarian young people donate to foundations and non-governmental organizations. In our survey, 20.2% of the respondents indicated that they find supporting charity and donation programmes to be important. The 2021 survey by PwC found that for two-thirds of the respondents, sustainability is more important than quality and price when buying a product. In our online survey, 54.3% of the young people surveyed stated that they significantly or greatly prefer products from businesses that are characterized by a responsible and sustainable approach.

Of the three clusters identified in our research, there are significantly more women in the cluster that fits the LOHAS model and the cluster that nearly fits the LOHAS model, which has also been confirmed in the study by Bakewell and Mitchell (2004). Previous research on consumer decision-making styles has mostly investigated women consumers, since purchasing is still seen as a mostly feminine activity.

Values also have an influence on how the environment and health are perceived by LOHAS consumers, as suggested in the following:

- consumer attitudes, subjective norms, and perceived behavioural control are significant determining factors of the sustainable consumer behaviour of consumers (Matharu et al. 2020);
- numerous studies investigating how individuals' attitudes and subjective norms influence their purchase intention toward apparel products (Belleau et al. 2007; Marcketti and Shelley 2009; Yan et al. 2010; Yoh et al. 2003; Chi and Kilduff 2011; Pícha and Navrátil 2019).

According to Matharu et al. (2020), the LOHAS consumers make their consumption decisions based on the extent to which they follow the LOHAS approach (high versus low). The cluster analysis revealed that there was a group that fit the LOHAS scale to a significant extent, a group that fit the scale to a low extent, and between the two groups, there was a cluster that 'can-be-developed'.

In a survey by Balsa-Budai and Szakály (2018), which examined university students in Debrecen, Hungary, hedonism and individualism were the more dominant LOHAS factors. In our research, hedonism became the most dominant factor in the younger generation, after taking all else into consideration. In the research of Balsa-Budai and Szakály (2018), the authors defined four consumer clusters, the results of which show similarities between two groups in the primary research, which concerned the names and size of the clusters: the ambitious trend followers (25.1%), the value-creating cluster in our current research (27.7%), the trend-rejecting passive group (35.4%), and the indifferent cluster in our current research (29.1%).

The 2018 research by Balsa-Budai and Szakály identified health-conscious and individualistic values as being the most important in the case of university students, whereas hedonistic values were identified as being the most important in our survey. This finding supports the results of (Noh et al. 2014), according to which, Generation Z wants to be special; therefore, they are looking for innovative and unique products. The most dominant scale elements in our research concerning Generation Z were "*I am open to the latest technologies*" and "*I gladly and boldly try new things.*" The above results open up new doors for further research in that we may identify the background factors of the LOHAS approach in the Generation Z age group.

4. Conclusions

The LOHAS (Lifestyle of Health and Sustainability) model envisions the future consumer, for whom sustainability and responsibility are important. We identified seven factors by factor analysis, which were sustainability and environment friendliness, tradition and local values, hedonism, knowledge and awareness, philanthropy, individualism, and authentic values.

Hedonism was the most dominant element among the factors. The second most important element was knowledge and awareness, whereas the third determining factor was sustainability and environment friendliness. Nevertheless, the values of individualism and philanthropy are the least dominant factors among Generation Z. It is interesting to note that both authentic and local values, as well as tradition, were found to be less relevant for this young generation.

Based on the factors of the LOHAS model, three groups may be formed within Generation Z. Regarding their ability to fit with the starting model dimension, there are personas that fit the LOHAS model, personas that nearly fit the LOHAS model, and personas that are far from the LOHAS model. Differences in the characters of every persona are easily detectable, and the diversity in the appearances of the LOHAS factors is shown.

Overall, we may state that environmentally conscious behaviour, and certain traits relating to the LOHAS factors, may be found in Generation Z. This is also verified and confirmed by the results obtained for the given personas and the LOHAS factors that were examined by factor analysis. The extent of schooling and age define one's identification

with the LOHAS factors. This was also reflected well in our personas. This means that in order to completely master environmentally conscious and health-conscious behaviour, and to encourage identification with the LOHAS factors as much as possible, education concerning sustainability, our local environment, and the global environment should be implemented. Moreover, European Union sustainability endeavours and initiatives play an outstanding role in achieving these aims.

The novelty of this study is that it presents the factors forming the LOHAS model expressly for Generation Z, which has not been examined either in Hungary or in other countries; therefore, it is a good basis for international comparative studies. The method is generalisable and replicable, and the survey can be used for further research in both Hungarian and international contexts alike.

The practical use of our study can be summarised as follows: Generation Z will be the main customers of the next decade(s), and it is crucial for businesses to know more about this target group. Understanding their motivations, attitudes, and buying habits might help businesses reach them and better advertise sustainable/green products to them. The persona profiles (i.e., the fictional characterizations drawn from our research data) are visually engaging, and they might be useful for the business sector to reach consumers in Generation Z, as well as to assist the advertising of products, communication campaigns, launching products, designing communication campaigns, and so on.

The limitation of the study is that it examines the LOHAS model expressly for Generation Z; however, it also opens the door for further research in terms of involving further age groups for a comparison of generations at both domestic and international levels.

Author Contributions: This research was conducted by the members of the Sustainable Consumption Research Team of the Budapest Business School. Students were also involved in the project. This article has been made possible through the collaborative work of four authors, where M.B.L. offered a significant contribution in terms of the conceptualization of the idea, in the analysis, and the construction of the manuscript. B.F.B. offered a significant contribution in terms of the conceptualization of the idea, in addition to conducting the primary data collection and the statistical analysis on the basis of the study by Balázs and Vízi 2021, the results of which have not been published. I.K. contributed to the literature review and the writing of the manuscript. J.B. contributed significantly to writing, editing, and reviewing the manuscript. All authors have read and agreed to the published version of the manuscript.

Funding: This research was supported by Budapest Business School's Research Fund in 2022. The APC was funded by Budapest Business School.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Bacher, János. 2020. LOHAS Fogyasztók. Akiknek a Zöld már Nem egy szín, Hanem életstílus. Paper Presented at Zöld Marketing Konferencia. Available online: https://markamonitor.hu/wp-content/uploads/2020/02/Z%C3%B6ld_Marketing_Konferencia_20200130_Bacher_Janos_LOHAS.pdf (accessed on 15 June 2022).
- Bakewell, Cathy, and Vincent-Wayne Mitchell. 2004. Male Consumer Decision-Making Styles. *The International Review of Retail, Distribution and Consumer Research* 14: 223–40. <https://doi.org/10.1080/0959396042000178205>.
- Balsa-Budai, Nikolett, and Zoltán Szakály. 2018. A fenntartható értékrend vizsgálata a debreceni egyetemisták körében. *Táplálkozásmarketing* 5: 3–20. <https://doi.org/10.20494/TM/5/1/1>.
- Belleau, Bonnie D., Teresa A. Summers, Yingjiao Xu, and Raul Pinel. 2007. Theory of reasoned action: Purchase intention of young consumers. *Clothing and Textiles Research Journal* 25: 244–57. <https://doi.org/10.1177/0887302X07302768>.

- Brünger, Franziska. 2016. Zielgruppengerechtes Marketing: Strategien und Maßnahmen für Lohas [Hochschule Mittweida, University of Applied Sciences, Fakultät Medien]. Available online: https://monami.hs-mittweida.de/frontdoor/deliver/index/docId/8632/file/BA_Br%c3%bcnger,Franziska.pdf (accessed on 15 June 2022).
- Buerke, Anja, T. Straatmann, Nick Lin-Hi, and Karsten Müller. 2017. Consumer awareness and sustainability-focused value orientation as motivating factors of responsible consumer behavior. *Review of Managerial Science* 11: 959–91. <https://doi.org/10.1007/s11846-016-0211-2>.
- Cheng, Ching-Chan, Ya-Yuan Chang, Ming-Chun Tsai, Cheng-Ta Chen, and Yu-Chun Tseng. 2019. An evaluation instrument and strategy implications of service attributes in LOHAS restaurants. *International Journal of Contemporary Hospitality Management* 31: 194–216. <https://doi.org/10.1108/IJCHM-06-2017-0361>.
- Chhabra, Iksha, and Avneet Kaur. 2022. Development of a convenient, nutritious ready to cook packaged product using millets with a batch scale process development for a small-scale enterprise. *Journal of Food Science and Technology* 59: 488–97. <https://doi.org/10.1007/s13197-021-05031-6>.
- Chi, Ting, and Peter P. D. Kilduff. 2011. Understanding consumer perceived value of casual sportswear: An empirical study. *Journal of Retailing and Consumer Services* 18: 422–29. <https://doi.org/10.1016/j.jretconser.2011.06.004>.
- Choi, Sooyeon, and Richard A. Feinberg. 2021. The LOHAS (Lifestyle of Health and Sustainability) Scale Development and Validation. *Sustainability* 13: 1598. <https://doi.org/10.3390/su13041598>.
- Chou, Chia-Jung, Kuo-Sheng Chen, and Yueh-Ying Wang. 2012. Green practices in the restaurant industry from an innovation adoption perspective: Evidence from Taiwan. *International Journal of Hospitality Management* 31: 703–11. <https://doi.org/10.1016/j.ijhm.2011.09.006>.
- Computer Generated Solutions (CGS). 2019. Sustainability Is Critical for Consumer Brands. Available online: https://www.cgsinc.com/sites/default/files/media/resources/pdf/CGS_2019_Retail_Sustainability_infographic.pdf (accessed on 20 June 2022).
- Du, Chung Thi, Thu Thi Ngu, Thi Van Tran, and Ngoc Bich Tram Nguyen. 2021. Consumption Value, Consumer Innovativeness and New Product Adoption: Empirical Evidence from Vietnam. *The Journal of Asian Finance, Economics and Business* 8: 1275–86. <https://doi.org/doi:10.13106/JAFEB.2021.VOL8.NO3.1275>.
- Francis, Tracy, and Francisca Hoefel. 2018. ‘True Gen’: Generation Z Characteristics and Its Implications for Companies | McKinsey. Available online: <https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies> (accessed on 13 June 2022).
- Gangadharbatla, Harsha, Christopher Vardeman, and Danielle Quichocho. 2020. Investigating the reception of broad versus specific CSR messages in advertisements in an environmental context. *Journal of Marketing Communications* 28: 253–71. <https://doi.org/10.1080/13527266.2020.1857818>.
- Gelfer, Joseph. 2010. Lohas and the indigo dollar: Growing the spiritual economy. *New Proposals: Journal of Marxism and Interdisciplinary Inquiry* 4: 48–60. <https://ojs.library.ubc.ca/index.php/newproposals/article/view/354>.
- Gyarmati, Orsolya. 2021. A jövő újjáépítése—Top 10 fogyasztói trend 2021-ben. *Trade Magazin*, January 25. Available online: <https://trademagazin.hu/hu/a-jovo-ujjaepitese-top-10-fogyasztoi-trend-2021-ben/> (accessed on 27 March 2022).
- Howard, B. 2007. LOHAS consumers are taking the world by storm. *Total Health* 29: 58.
- IRI. 2021. Opportunities with Sustainability-Minded Fresh Consumers. Top Trends in Fresh. Available online: iriworldwide.com (accessed on 14 November 2021).
- Johansen, Adrian. 2021. Gen Z Cares About Sustainability—Brands Should Too. *Re/Make*, May 10. Available online: <https://remake.world/stories/humans-of-fashion/gen-z-cares-about-sustainability-brands-should-too/> (accessed on 15 June 2022).
- Kamenidou, Irene C., Spyridon A. Mamalis, Stavros Pavlidis, and Evangelia-Zoi G. Bara. 2019. Segmenting the Generation Z Cohort University Students Based on Sustainable Food Consumption Behavior: A Preliminary Study. *Sustainability* 11: 837. <https://doi.org/10.3390/su11030837>.
- Korhonen, Virpi, and Kerttu-Maaria Ylipoti. 2018. Packaging Value by Generation—Results of a Finnish Study. Paper presented at the 21st IAPRI World Conference on Packaging, Zhuhai, China, 16 July 2018. <https://doi.org/10.12783/iapri2018/24396>.
- Kovács, Ildikó, Nándor. Komáromi, and Georgina Rác. 2013. Fenntartható fogyasztói értékrend mint az etikus vállalati magatartás kritériuma. *Gazdálkodás: Scientific Journal on Agricultural Economics* 57: 569–78. <https://doi.org/10.22004/ag.econ.199966>.
- Kreeb, Martin, Werner F. Schulz, Sandra Kirstein, Melanie Motzer, and Hans Hörschgen. 2009. Nachhaltigkeitsmarketing—Emotionalisierung durch Medialisierung. *UWF Umwelt Wirtschafts Forum* 17: 119–27. <https://doi.org/10.1007/s00550-009-0115-6>.
- Lago, Nicole Cecchele, Arthur Marcon, José Luis Duarte Ribeiro, Janine Fleith de Medeiros, Vandrê Basbosa Brião, and Verner Luis Antoni. 2020. Determinant attributes and the compensatory judgement rules applied by young consumers to purchase environmentally sustainable food products. *Sustainable Production and Consumption* 23: 256–73. <https://doi.org/10.1016/j.spc.2020.06.003>.
- Lavuri, Rambabu, Charbel Jose Chiappetta Jabbour, Oksana Grebinevych, and David Roubaud. 2022. Green factors stimulating the purchase intention of innovative luxury organic beauty products: Implications for sustainable development. *Journal of Environmental Management* 301: 113899. <https://doi.org/10.1016/j.jenvman.2021.113899>.
- Lehota, József, Éva Csíkné Mácsai, and Georgina Rác. 2014. Az egészségtudatos ételmiszer-fogyasztói magatartás értelmezése a LOHAS koncepció alapján. *Táplálkozásmarketing* 1: 39–46. Available online: <https://ojs.lib.unideb.hu/taplalkozasmarketing/article/view/9174/8293> (accessed on 20 March 2022).

- Marchetti, Sara B., and Mack C. Shelley. 2009. Consumer concern, knowledge and attitude towards counterfeit apparel products. *International Journal of Consumer Studies* 33: 327–37. <https://doi.org/10.1111/j.1470-6431.2009.00748.x>.
- Matharu, Manita, Ruchi Jain, and Shampy Kamboj. 2020. Understanding the impact of lifestyle on sustainable consumption behavior: A sharing economy perspective. *Management of Environmental Quality: An International Journal* 32: 20–40. <https://doi.org/10.1108/MEQ-02-2020-0036>.
- Mohr, Juergen. 2011. *From an Affluent Society to a Happy Society: Vital Signs Promising a Change and the Impacts on Industries*. Hamburg: Diplomica Verl.
- Natural Marketing Institute (NMI). 2008. The LOHAS Consumer Trends Report. Consumer Insights into the Role of Sustainability, Health, the Environment and Social Responsibility (Including A Focus on CSR, A Focus on Foods & Beverages, and A Focus on Personal Care). pp. 1–166. Available online: https://www.lohas.se/wp-content/uploads/2015/07/Understanding-the-LOHAS-Consumer-11_LOHAS_Whole_Foods_Version.pdf (accessed on 20 June 2022).
- Noh, Mijeong, Rodney Runyan, and Jon Mosier. 2014. Young consumers' innovativeness and hedonic/utilitarian cool attitudes. *International Journal of Retail & Distribution Management* 42: 267–80. <https://doi.org/10.1108/IJRDM-07-2012-0065>.
- Oppermann, Rainer. 2008. *LOHAS und Best Ager—Hauptzielgruppe für Bio-Produkte aus der Region?* Braunschweig: Johann Heinrich von Thünen-Institut. Available online: https://literatur.thuenen.de/digbib_extern/zi031821.pdf (accessed on 15 June 2022).
- Origo. 2021. Megleptő Következtetésekre Jutott a Z Generációt Illetően egy Kutatás. Available online: <https://www.origo.hu/gazdasag/20210713-generacio-kutatas-mastercard-jellemvonas-gazdasag.html> (accessed on 30 March 2022).
- Osti, Linda, and Gianluca Goffi. 2021. Lifestyle of health & sustainability: The hospitality sector's response to a new market segment. *Journal of Hospitality and Tourism Management* 46: 360–63. <https://doi.org/10.1016/j.jhtm.2021.01.008>.
- Park, Hyun Hee. 2015. The Influence of LOHAS Consumption Tendency and Perceived Consumer Effectiveness on Trust and Purchase Intention Regarding Upcycling Fashion Goods. *International Journal of Human Ecology* 16: 37–47. <https://doi.org/10.6115/ijhe.2015.16.1.37>.
- Peyron, Carl. 2010. LOHAS—The Largest Market You've Never Heard of. Superbrands. Available online: https://www.lohas.se/wp-content/uploads/2015/07/Superbrands2010LOHAS_CarlPeyron.pdf (accessed on 20 June 2022).
- Pícha, Kamil, and Josef Navrátil. 2019. The factors of Lifestyle of Health and Sustainability influencing pro-environmental buying behaviour. *Journal of Cleaner Production* 234: 233–41. <https://doi.org/10.1016/j.jclepro.2019.06.072>.
- Pittner, Martin. 2017. *Consumer Segment LOHAS: Nachhaltigkeitsorientierte Dialoggruppen im Lebensmitteleinzelhandel*. Wiesbaden: Springer Gabler.
- PricewaterhouseCoopers (PwC). 2021. *Die Gen Z legt Wert auf Nachhaltigkeit beim Einkauf—Und bei der Bundestagswahl*. London: PwC. Available online: <https://www.pwc.de/de/pressemitteilungen/2021/die-gen-z-legt-wert-auf-nachhaltigkeit-beim-einkauf-und-bei-der-bundestagswahl.html> (accessed on 21 March 2022).
- Reda, Ahmed, and Ravi Kapoor. 2021. The CEO Imperative: How Future Generations can Influence Companies to Focus on Sustainability. Available online: https://www.ey.com/en_lb/future-consumer-index/the-ceo-imperative-how-future-generations-can-influence-companies-to-focus-on-sustainability (accessed on 21 March 2022).
- Reicher, Regina Zsuzsánna, and Georgina Rácz. 2012. LOHAS témák megjelenése az offline és online magazinokban. He Appearance of the LOHAS Themes in the Offline and Online Magazines. *Gazdaság & Társadalom/Journal of Economy & Society* 2012: 36–51. <http://dx.doi.org/10.21637/GT.2012.3-4.03>.
- Sung, Jihyun, and Hongjoo Woo. 2019. Investigating male consumers' lifestyle of health and sustainability (LOHAS) and perception toward slow fashion. *Journal of Retailing and Consumer Services* 49: 120–28. <https://doi.org/10.1016/j.jretconser.2019.03.018>.
- Szakály, Zoltán, József Popp, Enikő Kontor, Sándor Kovács, Károly Pető, and Helga Jasák. 2017. Attitudes of the Lifestyle of Health and Sustainability Segment in Hungary. *Sustainability* 9: 1763. <https://doi.org/10.3390/su9101763>.
- Szakály, Zoltán, K. Pető, József Popp, and H. Jasák. 2015. A fenntartható fogyasztás iránt elkötelezett fogyasztói csoport, a LOHAS szegmens jellemzői. *Táplálkozásmarketing* 2: 3–9. <https://doi.org/10.20494/TM/2/1/1>.
- Szakály, Zoltán. 2017. *Élelmiszermarketing*. Budapest: Akadémiai Kiadó.
- Tam, Fung Yi, Jane W. Y. Lung, Juliana da Silva, Mei Ha Lam, Pek I. Ng, and Ka Man Lok. 2021. A Study of Chinese Consumers towards Lifestyles of Health and Sustainability. Macao Polytechnic Institute. *Economics and Business Quarterly Review* 4: 144–51. <https://doi.org/10.31014/aior.1992.04.03.377>.
- Tyson, Alec, Brian Kennedy, and Cary Funk. 2021. Gen Z, Millennials Stand Out for Climate Change Activism, Social Media Engagement with Issue. Available online: https://www.pewresearch.org/science/wp-content/uploads/sites/16/2021/05/PS_2021.05.26_climate-and-generations_REPORT.pdf (accessed on 16 June 2022).
- Veér, Bálint, Anett Janurik, and Vanda Sebestyén. 2018. *Fogyasztói Mozgatóerők. Mi Irányítja a Sokoldalú Fogyasztót? Kereskedelem és Fogyasztói Piacok*. Budapest: KPMG in Hungary. Available online: https://assets.kpmg/content/dam/kpmg/hu/pdf/KPMG_Fogyasztoi_mozgatoerok.pdf (accessed on 16 June 2022).
- Wightman-Stone, Danielle. 2022. Gen Z Consumers Want Better Gender Equality and Inclusion within Fashion. FashionUnited, March 2. Available online: <https://fashionunited.uk/news/fashion/gen-z-consumers-want-better-gender-equality-and-inclusion-within-fashion/2022030261732> (accessed on 2 March 2022).

-
- Yan, Ruoh-Nan, Jennifer Paff Ogle, and Karen H. Hyllegard. 2010. The impact of message appeal and message source on Gen Y consumers' attitudes and purchase intentions toward American Apparel. *Journal of Marketing Communications* 16: 203–24. <https://doi.org/10.1080/13527260902863221>.
- Yoh, Eunah, Mary Lynn Damhorst, Stephen Sapp, and Russ Lacznia. 2003. Consumer adoption of the Internet: The case of apparel shopping. *Psychology & Marketing* 20: 1095–118. <https://doi.org/10.1002/mar.10110>.