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The Connection between Responsible Behavior Regarding Recycling and Spirituality as a Higher level of the Individual

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ABSTRACT

The environmental changes are an important consequence of the negative impact of human activity. Companies are focusing more and more on developing sustainable practices, decreasing their waste and carbon emissions. Individuals have started to become more conscious about their consumption behaviors. In the last years, an increased level of spirituality is related with conscious behavior. Spiritual individuals have an enhanced level of empathy thus learning in their spiritual process to care more about the environment and other beings. Although the transformation regarding sustainability is visible, its rhythm is not fast enough to avoid significant damages on the planet. The main cause to this issue might be that consumers are not constant in their responsible behavior. We want to identify if individuals' behavior is due to the fear of judgement or out of consciousness about the beneficial impact on society. Therefore, we have created a questionnaire and distributed it randomly online on social media groups to discover what motivates individuals towards a sustainable conduct. The purpose of the article is to find out if individuals that pursue spiritual teachings or spirituality have a more sustainable behavior than individuals who do not. Is social media a beneficial source of information with regards to sustainability? This paper is helpful for people and companies who activate in the sustainability field and other related domains.

1. Introduction

This paper aims to analyze the importance of consumer competence when it comes to responsible buying behavior in order to better understand people's eating and food purchasing habits in relation to sustainability. We are all familiar with the adage "you are what you eat," but we frequently fail to understand its profound meaning when we try to apply it to our own lives. We have been so cut off from the natural world that when we eat consistently, we do not realize what the food is doing in our bodies beyond the brief taste sensation in the mouth. As a result, we must alter our food system since it is our food system, not necessarily healthcare, that holds the key to improving our health. The solution is to change the food system and cultivate a more attentive society at the same time. (High Level Panel of Experts on Food Security and Nutrition, 2017) We are all aware of how difficult modern life is in this technology age since there are so many things vying for our attention and because we are constantly on the edge of excitement. Although meditation has been recommended as a mean to calm the mind and find tranquility, many of us have found it to be extremely difficult. (United Nations Department of Economic and Social Affairs, 2019) It has been suggested that our ability to enter that meditative state is significantly influenced by the food we eat. When certain nutrients are lacking or we are under nutritional stress, our nervous system and brain never allow us to leave our physical bodies.

Some people are driven by spirituality type "II" as it is called research, which is the spirituality linked to day-to-day behavior and it can be seen in each interchange with the environment. Compassion and belonging are two of the main things that can be observed in this type of spirituality. The study shows that people driven by the natural spirituality tend to consume more fruits and vegetables instead of processed food (Werner et al., 2020).

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2. Literature review

Consumer behavior related to food is a complicated phenomenon that is influenced by a wide range of variables that go beyond hunger or nutrition and frequently include cultural, religious, and personal values and aspirations. (Food and Agricultural Organization, 2019) As they choose what to buy, consumers are becoming more ethically conscious. Consumers are increasingly confronted with ethical decisions when shopping because they do not believe that retailers are ethical, and ethical consumption has increased significantly in recent years across product categories, ranging from fair trade to organic or free-range products produced in a way that is environmentally conscious. (World Economic Forum, 2019) This justification is supported by the idea of reasoned action, which posits that behavior is influenced by both attitudes and one's views of social standards. The intensity of the desire to carry out the action mediates this. Since ethical opinions are frequently influenced by a variety of factors, they may fit under these criteria because broad metrics have varying predictive capabilities. Given the disconnect between intention and behavior, it is reasonable to argue that shoppers may feel post-purchase dissonance and guilt if they are unable to reflect some of the values they want to instill in their lives in their everyday purchases. As a result, researchers and industry experts have looked at what influences consumers' decisions to make ethical purchases. (The Co-op's Ethical Consumerism Report, 2021) To avoid the latter's fleeting effects on pro-environmental behavior, scholars have also tried to concentrate on behavioral antecedents that were value-based rather than context-driven. Studies on religious attitudes have been conducted as a result. Despite these studies, there hasn't been as much research on how spirituality functions as a set of fundamental principles that might affect ethical consumption.

Although consumerism and spirituality have frequently been seen as competing forces in modern life, a growing body of research has recently revealed that these two ideas are strangely entwined in postmodern culture. (Fanzo and McLaren, 2020) Postmodernity is redefining the link between spiritual ideals and consumption, whereas spirituality has repeatedly denounced the concentration of worldly wealth by idealizing freedom from things. Consumers display a range of competencies in the marketplace, including knowledge of media and advertising as well as economic and financial competencies. But it's now becoming more and more clear that spirituality can be viewed as a fundamental value, directly affecting consumer behavior in certain demographics. (Pourabbasi et al., 2021)

Academic research has focused on identifying the causes of consumer food waste behaviors and testing strategies to minimize food waste through behavior change, reflecting the growing interest in consumer food waste prevention. Research has addressed consumer food waste in two different ways: I as the outcome of an individual behavior, where an individual will act if motivation, opportunities, and abilities are present; and as the result of numerous, interconnected behaviors linked to routines and a food-related lifestyle.

Consumer behavior related to food is a complicated phenomenon that is influenced by a wide range of variables that go beyond hunger or nutrition and frequently include cultural, religious, and personal values and aspirations. The literature has recently begun examining the significance of the numerous meanings that people ascribe to food and how these meanings are connected to food consumption. (Kokkoris and Stavrova, 2021) Research on the meanings of food has been ongoing for some time, however most studies used a qualitative methodology. Five meanings of food have been categorized in contemporary works: religious, moral, health, social, and aesthetic. Food is used to commemorate significant anniversaries, support rituals and customs, or represent holy meanings, taboos, or restraints, which gives food a sacred connotation that is ingrained in most religions. Even in the West, where traditional religion is less prevalent, secular spirituality is growing, and many customers look to the market to meet their spiritual demands. Finally, the aesthetic meaning of food suggests that eating might be connected to a pleasure like to that of appreciating art. Even while we require food to keep ourselves alive physically, consumers are beginning to recognize that food also has a spiritual component. "To be spiritually connected to the food we consume and to enjoy the experience of eating is crucial to being well in mind, body, and spirit." (Bisht, 2020) Humanity is always facing the challenge to keep a balance between tremendous and continuous development as well as the preservation of the environment. Awareness and the level of education help acquire very fast the knowledge in terms of recycling. (Cerqueira and Soukiazis, 2022) According to the same study that took place in Portuguese municipalities, elderly people are more active in regard to recycling activities. This might be linked also with the fact that they have more free time.

One of the biggest environmental problems of the modern era is food waste. Globally, people throw away 1.32 billion tones, or almost one-third, of the food that is produced for human use each year. Furthermore, it has been calculated that the worldwide carbon footprint of food waste is comparable to 3.3 gigatons of carbon dioxide emissions. (Food and Agriculture Organization, 2013) The requirement for an abundance of food to be always available in the home, the desire to avoid inconvenience, and the conviction that eliminating food waste is not a priority are just a few of the many factors that have been identified as potentially influencing household food waste. (Graham-Rowe et al., 2013)

The last stages of the food chain include supermarkets and customers. Approximately 60% of climate problems can be attributed to food waste at the end of the food chain. About 10% of food waste is a result of

retail operations, and another 20% is consumer related. Food waste in supermarkets occurs when perishable goods aren't completely sold before the end of their shelf life or when goods that are almost about to expire (but haven't) are avoided by customers, especially if they can't use them up before the actual expiration date. The expiration date has been considered in previous studies, but little is known about how to handle products that are getting close to (but have not yet reached) their expiration date. (Gustavo et al., 2021)

The current perception of the world food system is one of severe catastrophe. The global energy crisis, climate change, and the finite nature of resources are examples of exogenous factors that have recently evolved into the "landscape," or variables and factors that are not directly related to the food system. These factors also contribute to a deep ecological crisis and make it impossible to guarantee that everyone on the planet has access to food. The socio-technical regime needs to be completely restructured to address the enormous issue of turning the food system into a sustainable model. Numerous scholars stress the significance of consumption in the shift to a more advanced sustainable food regime. (Fonte, 2013)

Due to the connection to global food security and the impact food waste has on the environment, society, and economy, it is crucial, first and foremost, given the expected increase in world population by 2050. Both the recent "farm to fork" strategy that is a part of the European Green Deal of the EU and the United Nations Sustainable Development Goals for 2030 (European Commission, 2021) (as it is directly linked to goal 12- ensuring sustainable production and consumption patterns, and indirectly to more goals such as 2- zero hunger, 13- climate action, and 15- life on land) reflect the need to reduce food waste at all stages of the food supply chain. (Theodoridis and Zacharatos, 2022)

Despite significant progress in reducing hunger globally, 135 million people had acute food shortages in 2019 and about 690 million, or 8.9% of the world's population, were considered undernourished. More recently, the COVID-19 pandemic has sparked a severe food crisis and a severe global economic depression. In fact, estimates for the number of undernourished persons because of the pandemic range from 773 to 822 million. (Food and Agriculture Organization, 2020) The pandemic poses a serious threat to and challenge for food systems due to the combination of movement restrictions, lockdown measures, and trade embargoes, particularly in light of the availability of and disruptions to food supplies as well as the general unpredictability surrounding food demand. Considering these growing worries, the global programs "Save food" and "Moving forward on food loss and waste reduction" have been emphasized. (Luo, 2022)

The food sector must also find solutions to problems relating to brand security, food authenticity, origin, traceability, fraud, counterfeiting, and theft; package integrity, food quality, and safety; void fill, food spoilage, food loss, package reuse, and recycling. On the one hand, the existing assessment of food quality, provenance, and authenticity is made using time-consuming and destructive analytical techniques. As a result, it gets harder to keep an eye on and exert control over logistics related to food products and packaging. This is a significant problem for food safety and package integrity, as well as for food authenticity, origin, traceability, fraud, counterfeiting, and theft. (Simões et al., 2022) Many food products require a carefully monitored cold chain, and the associated packages are particularly vulnerable to outside forces and other potentially harmful environmental factors. Due to the introduction of the Internet of Things and Wireless Sensor Networks, as well as the significant research that has been conducted since the dawn of this century within the realm of intelligent food packaging, some of the concerns may be rectified soon. (Vanderroost et al., 2021) A food package can be said to be intelligent if it contains one or more intelligent devices (such as sensors) that can identify or locate the package, as well as track its state and that of its contents and environment. These packaging options also have the possibility of facilitating two-way communication between consumers, retailers, and/or food producers.

Adopting strategies effectively to ensure green waste management is difficult given the convoluted structure of today's supply chains. Therefore, different effective Green Waste Management techniques must be used by various stakeholders involved in the Food Supply Chains to prevent or remediate this waste. However, problems with budget management, the implementation of policies in practice, and the capacity to encourage departmental cooperation influence such adoptions. In these locations, there is a high level of disarray in the green waste management system. Without scientific management, gathered waste is dumped in public dumping grounds. Therefore, encouraging waste avoidance, reduction, and recycling as well as persuading and educating people to start sorting trash at the source are crucial. The informal industries, like the recycling sector, must also be formalized. (Kharola et al., 2022) Research shows that motivation and ability are very important when it comes to the reduction of plastic usage and so are the policies implemented that become easily popular among population. (Fogt Jacobsen et al., 2022) Another important aspect is the trust in the government ability. The trust will make citizens easily accept the actions to reduce urban waste and this will have an impact on the recycling intentions. (Bruno et al., 2022)

The digital agricultural revolution is looming large by utilizing technology-driven farm data to increase food production and supply efficiency considering the challenges we are currently facing as a species, including food shortages occurring during water and energy scarcity, the climate change crisis, and growing population. In contrast, the Food and Agricultural Organization estimated that a third of the food produced for human consumption globally is wasted, costing the world's already limited supply of water, energy, and other natural resources $1 trillion. Scholars have noted the conundrum of pushing systemic

surplus production, which results in food loss, in relation with growing food production. According to the Food and Agricultural Organization Food Loss Index, food loss occurs from post-harvest up to the retail level, but excluding it, and accounts for about 14% of global food production. (Benyam et al., 2021) Therefore, if food loss and waste prevention and reduction are not addressed concurrently, boosting food production via digital agriculture to satisfy the needs of a growing population would be pointless.

As a result, social media is essential for promoting a sustainable mindset. It is clear from the fact that in 2020, these platforms gathered 3.6 billion users globally, largely influencing the users' daily lifestyles. They also have the potential to change consumers' sustainable buying habits. The use of social media to advance sustainable ideas and behaviors is still in its infancy. Long-term research has demonstrated that people are less likely to make a purchase if they are not well-informed on the good or service being offered to them. In other words, the customer purchasing process is halted very early due to the absence of information about the things being sold. (Zafar et al., 2021) Because it affects people on a variety of psychological levels, social media platforms can supplement information that could otherwise discourage consumers from purchasing sustainable goods. It is showed by studies that education is key and raising awareness about the importance of becoming responsible towards the environment increases a pro-environmental attitude. (Afsar et al., 2016)

3. Methodology

This article analyses people's eating habits in relation to sustainability. The purpose of this research is to find out if individuals that pursue spiritual teachings or spirituality have a more sustainable behaviour than individuals who do not. Is social media a beneficial source of information with regards to sustainability? To verify the aspects mentioned above in this research, one questionnaire has been created and sent to social media Romanian groups randomly. A sample of 304 individuals responded. All the respondents answered from proper initiative. The number of questions was 25.

3.1. Description of the used data

The following tables includes general information of the questionnaire's respondents, like gender, age and income. The following tables includes general information of the questionnaire's respondents, like gender, age and income (Table 1,2 and 3).

Table 1. Gender.

Gender	Number of respondents	%
Female	192	63.2
Male	112	36.8

Source: Authors

As seen in the table above, the number of women who responded exceeded the number of men, being almost double.

Table 2. Age.

Age	Number of respondents	%
Under 18 years	0	0
Between 18-25 years	44	14.5
Between 26-35 years	156	51.3
Between 36-45 years	52	17.1
Over 46 years	52	17.1

Source: Authors

Interpreting the distribution of the sample by age groups, the highest percentage of 51.3% or 156 respondents is given by the category of persons aged between 26-35 years, followed by persons aged between 36-45 years, with a percentage of 17.1% and of those aged over 46 years with the same precentage. There were no respondents under the age of 18. The distribution of the respondents from the age groups sample did not respect a unitary structure. All age groups were considered for the studied attributes except the first category - age under 18, because there were no respondents.

Table 3. Income.

Income	Number of respondents	%
Under 500 Euros	12	3.9
Between 501-1500 Euros	216	71.1
Over 1501 Euros	76	25

Source: Authors

Analysing the sample according to the category of the monthly average income, it can be noticed that the main percentage is held by people with an income between 501-1500 Euros, with 71.1% or the numerical value of 216, followed by that of people with incomes over 1500 Euros, with 25% or the numerical value of 76, and followed at the end by those with incomes below 500 Euros, with 3.9% or the numerical value of 12. The majority of the respondents live in Romania, in urban areas. 61.8%, respectively 31.6% finished higher education and postgraduate studies, and 81.6% of them are employees.

2.2. Questionnaire answers

In the charts below, information with regards to the respondents' answers can be found.

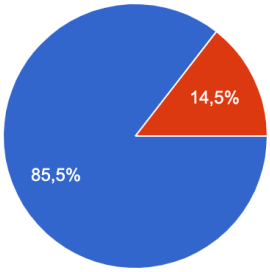

Figure 1. Consumer thoughts with regards to the reorientation towards sustainable and healthy foods and production by manufacturers that produce harmful foods if consumers would stop buying them
Source: Authors

85.5% of respondents believe that if consumers stopped buying harmful food products from companies that do not follow a sustainable production process, these manufacturing companies would reorient themselves towards producing sustainable and healthy products. Due to the lack of demand, manufacturers have to sustain themselves on the market in order to not go bankrupt.

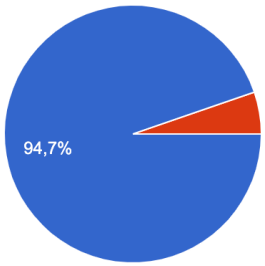

Figure 2. Spiritual or not
Source: Authors

94.7% of respondents believe that they are spiritual, in the sense of self and environmental awareness, concerned with personal development.

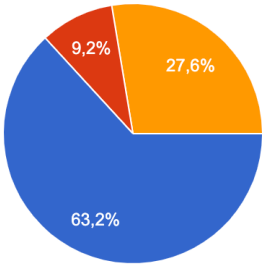

Figure 3. Spirituality contribution
Source: Authors

63.2% of respondents believe that spirituality contributes to the protection of the environment and the quality of life. 27.7% of respondents do not know and 9.2% of them do not believe at all. Spiritual people are more likely to be aware of themselves, the people around them and the environment, thus acting in a more empathetic way in general.

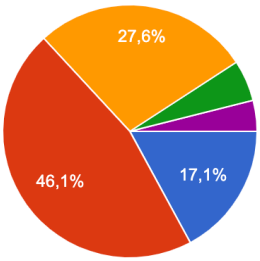

Figure 4. Action and impact
Source: Authors

46.1% of respondents consider the effects of their choices on the environment and/ or other beings ofen, 27.6% of respondents consider the effects of their choices rare, 17.1% of respondents consider the effects of their choices very often, 5.3% rarely and 3.9% never.

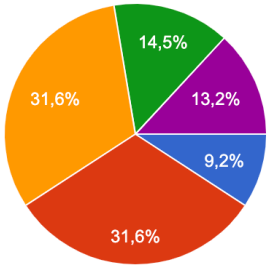

Figure 5. Sustainability and purchase behaviour
Source: Authors

As seen in the chart above, just 9.2% consider the degree of sustainability of a product/ service before purchase/ use. On equal positions, 31.6%, are those who consider the degree of sustainability often and rare, followed by those whom consider vey often with 14.5%, and those who never consider with 13.2%.

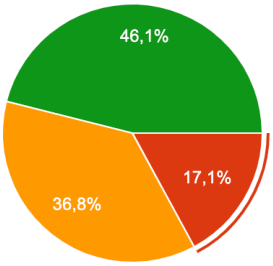

Figure 6. Reviews and food waste
Source: Authors

Most respondents, 46.1% never look for reviews/ recommendations on social media to reduce or limit food waste and make more sustainable choices. 36.8% are doing this on a monthly basis and 17.1% on a weekly basis.

Table 4. To what extent the consumers identified themselves with the following statements.

Affirmation	Measurement	Number of responses
I cook a specific amount of food so that I don't throw it away	to a very large extent	60
	to a great extent	132
	to some extent	68
	to a lesser extent	28
	to a very small extent	16
I only eat once of what I cook and throw the rest away	to a very large extent	12
	to a great extent	8
	to some extent	40

Affirmation	Measurement	Number of responses
	to a lesser extent	108
	to a very small extent	136
If I have any food left, I distribute it to the needy people	to a very large extent	28
	to a great extent	8
	to some extent	44
	to a lesser extent	68
	to a very small extent	156
I never cook, I only buy a specific quantity to eat	to a very large extent	20
	to a great extent	12
	to some extent	48
	to a lesser extent	76
	to a very small extent	148

Source: Authors.

Most of the responses reflect that consumer act more and more sustainable by cooking a specific amount of food or ordering a specific quantity of food to not throw it away. But most people do not have yet the habit of giving the food away to needy people. This can be due to the culture or perception that it is shameful or infamous to give food leftovers (Table 4).

3.3 Connections and correlations between spirituality and recycling activities

Although spirituality is an important part of many people's lives around the world, there is little research on how spiritual activities affect non-spiritual routines like grocery shopping. However, we recently discovered, using both field and laboratory data, that there are certain connections and correlations that can be established between spirituality and recycling for responsible consumer behavior. As it can be seen below, 71,05% of shoppers with strong spiritual beliefs choose to reuse bags when go shopping and only almost 24% purchase new ones. Moreover, a small percent 5% reflects the category of non-spiritual persons that select in equal parts to acquire new bags or reuse them for the general consumption of goods.

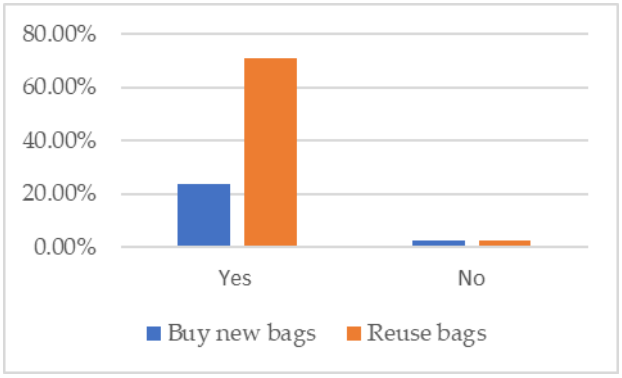

Figure 7. The individuals' level of spirituality when go shopping
Source: Authors

In Figure 8., it can be revealed the impact of being a responsible consumer in correlation with the recurrence of people people's decisions to participate in "pro-environment" behaviors such as recycling or volunteering. The self-interest of individuals when taking very often best decisions regarding environment show that only a small percent of 2,63% are at the same time 100% responsible. The ones who declared that are responsible 50% and 75% of their time, reflect very often to the consequences of their actions upon the environment and other beings in a percent of 5.26% and 9,21%. It is notable to check that two categories of the respondents think rarely 10,53% on how their choices affect environment and/or other beings, although they have affirmed that they are part of the category of 50% or 75% responsible consumers. The highest percentage related to this connection it is given by the 50% and 75% conscious consumers who are interested in taking often long-term decisions that influence in a positive way environmental changes (18.42% and 22.37%). Also, a relevant percentage of 5,26% of the respondents who consider themselves 100% responsible, declared in fact that rarely anticipate the effects of their environmental choices.

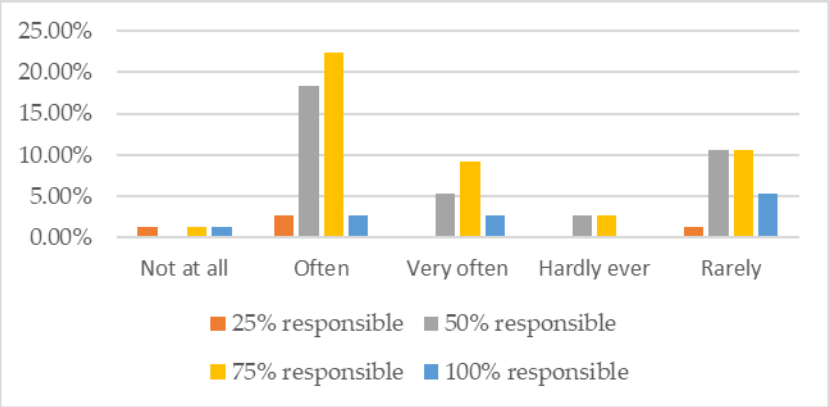

Figure 8. The frequency on considering the effects of people's choices have on the environment and/or other beings in relation with the level of responsibility

Source: Authors

It can be stated that only 55% of the consumers who are indeed spiritual and consider this factor an improvement for the quality of life and the environment protection, also sustain that the consumer behavior would change towards a sustainable trait and manufacturing companies would benefit from it if they would produce sustainable and healthy products. In the same time 22% of the respondents who don't know for sure if spirituality has an influence on our well-being or on the environmental policies, agree with the fact that they would give up to buy harmful food products if organizations would change their strategy for healthy products.

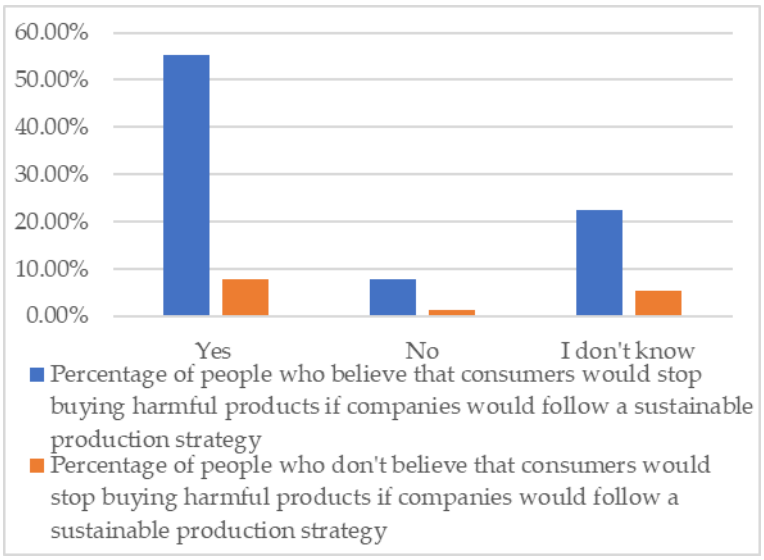

Figure 9. The level of spirituality of people who believe/ don't believe/ don't know that it contributes to the protection of the environment and the quality of life in correlation with the statement that if consumers stopped buying harmful food products from companies that do not follow a sustainable production process, these manufacturing companies would reorient themselves towards producing sustainable and healthy products

Source: Authors

Reduced food loss and waste means increased resource efficiency and, as a result, lower food costs and a sustainable approach in consumer behavior. As it can be revealed below in Figure 10, mostly half of the respondents with average incomes in a percent of 39% do their best to avoid food loss and in the same another 31% are not very interested to learn on how they can reduce food loss and waste. This shows that people still need more education on improper storage – food not being used before it goes bad, which is a major asset that contributes to food waste and loss. Apparently, people with highest monthly revenues have a solid knowledge of food waste concept in a percent of 13%, meanwhile 11% are not interested in the subject.

5. Conclusions

Results of the present study show that people, respectively consumers are becoming more and more sustainable with regards to consumption and food habits. Although most respondents consider the effects of their choices on the environment and/ or other beings ofen, few of them consider the degree of sustainability of a product/ service before purchase/ use. They have to be educated in this direction. The internet is a teacher for those who want a change and a shift in consciousness.

The instant access to information in the online environment increases the level of awareness and quality of life. Now consumers have the possibility to compare beyond barriers and learn new ways of living. Almost all respondents think that social networks influence consumers' perception about the quality of products/ services. The personal reviews and experiences related online win more trust among others. Reviews of other normal people are more likely to be approved in comparison with the ones given by a company.

Most companies use sustainable practices as a growth indicator and do not take into consideration the environment completely. Governements and non-profit organizations should inform and educate people to stop buying harmful food products from companies that do not follow a sustainable production process, so that these manufacturing companies would reorient themselves towards producing sustainable and healthy products. Due to the lack of demand, manufacturers have to sustain themselves on the market in order to not go bankrupt. Governments should amend the legislation to promote sustainable actions and force producers to change their production processes step by step.

People should learn how to be more organized with food in order to share it or give it to others if leftovers remain. A more sustainable behavior is needed for reducing food waste. The recycling concept is almost new in Romania, thus, it would be important to be promoted more and more by governments, organizations, educational institutions and companies, since most Romanians are employees.

Another important finding of this research was the fact that even though a high monthly revenue somewhat affects the individuals excessive purchasing and waste habits, they are not very inclined to get more educated in how they can prevent food loss.

In conclusion, spirituality has an impact on responsible behavior regarding recycling. The spiritual way of thinking shifts mind patterns and leads towards more responsibility. Being more aware of the inside and outside worlds results discipline and empathy.

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