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Saving your Health or the Environment?

The Effects of Altruism and Safety Concerns on
Organic Cosmetics Purchase Intentions

Maria Carolina Pardal Filipe

Dissertation presented as partial requirement for obtaining
the Master's degree in Information Management

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PURCHASE INTENTIONS**

by

Maria Carolina Pardal Filipe

Dissertation presented as partial requirement for obtaining the Master's degree in Information Management, with a specialization in Marketing Intelligence

Advisor: Diego Costa Pinto

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ABSTRACT

The growth of organic cosmetics markets is important to achieve a more sustainable consumption, as environmentally friendly products help minimize the impacts of consumption on the planet. To boost green cosmetics sales, it is crucial to understand the main reasons why consumers purchase these products and the strongest motives behind their buying intent.

To address this gap, the present study analyzes consumers' perceived healthiness regarding green cosmetics against consumers' environmental behaviors and their perception about the environmental friendliness of these products, as well as the altruistic behaviors of the consumers. A model was developed using Partial Least Squares Structural Equation Modeling (PLS-SEM technique), due to its' robustness and applicability to marketing research models.

The findings suggest that despite products' environmental friendliness impact on consumers purchase intention being mediated by pure altruism, it is also moderated by consumers' perceived healthiness. Besides, perceived healthiness has a direct influence on purchase intent, as this relationship is also mediated by the consumers' perception on green cosmetics' safety and risks. This suggests that health is in a general a stronger predictor of green cosmetics buying intentions.

Additionally, 60% of the variance explained is related with green cosmetics buying intentions, 23% with safety and risk perception regarding these products and 12% in respondents' level of pure altruism.

This research contributes to marketing literature on cosmetic brands, that can use these conclusions to perform suitable marketing strategies to target more costumers, who seek for safety and health promoting effects in green cosmetics.

KEYWORDS

Green Cosmetics; Altruism; Perceived Healthiness; Safety and Risk; Environmental Friendliness

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LIST OF ABBREVIATIONS AND ACRONYMS

BI	Buying Intentions
EB	Eco-friendly Behaviors
EF	Environmental Friendliness
PH	Perceived Healthiness
PA	Pure Altruism
SR	Safety/Risk
CR	Composite Reliability
AVE	Average Variance Extracted

1. INTRODUCTION

The planet sustainability depends on the humanity's ability to provide quality life without exhausting earth's resources or creating irreversible damages on its systems. The understanding of the link between consumers behaviors and their impact on the environment is still in a mature stage of development. Therefore, to improve sustainable consumer behaviors and enable sustainable systems of production and consumption, policy measures must encourage sustainable lifestyles (Tukker, Cohen, Hubacek, & Mont, 2010). The growth of goods and services consumption should not damage environmental quality, therefore, promoting an environmentally friendly lifestyle is one of the most important elements to assure a sustainable consumption (Liobikienė & Juknys, 2015).

However, to achieve a sustainable consumption it is important to increase the purchase of environmentally friendly products (green products) with the goal of minimizing the current impact of non-green products on the planet. Therefore, companies play a crucial role in achieving sustainability, and businesses perceive their contribution to a sustainable consumption that later results in new business opportunities. By providing alternative solutions rather than setting goals on increasing product sales and consequently profit, innovative companies help reduce the levels of material goods needed for delivering service to consumers and users (Mont & Plepys, 2008).

Since the end of the 80s, the companies' awareness of sustainable competitive advantage created the opportunity of a new strategy, concerning the integration of environmental marketing in several businesses. Green marketing started being used to respond to the current demand from environmentally conscious consumers (D'Souza, Taghian, Lamb, & Peretiatkos, 2006; Smith & Brower, 2012).

The literature on green products has been focused on organic foods (Yadav, 2016; Yadav & Pathak, 2015; Michaelidou & Hassan, 2008; Chen M.-F. , 2007; Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003; Soler, Gil, & Sánchez, 2002). Over the recent year, more researches regarding organic cosmetics have been appearing, (Matić & Puh, 2016; Ghazalia, Soon, Mutum, & Nguyend, 2017; Chin, Jiang, Mufidah, Persada, & Noer, 2018; Kim & Chung, 2011; Chhetri, Fernandes, & Baby, 2021; Zollo, Carranza, Faraoni, Díaz, & Martín-Consuegra, 2021). However, none of the literature found was made in Portugal, therefore, it is relevant to investigate if behaviors concerning this theme in the Portuguese context are similar among other countries with different cultures.

Achieving a healthier lifestyle has been a goal of many consumers in the recent years, contributing for the growth of green/organic markets and rising the consumers awareness of the risk associated with regular products composed by artificial components and chemicals. Consequently, a boost in the cosmetics industry has occurred, being the cosmetic market one of the sectors with higher chances of further development. Therefore, companies have been trying to gain a competitive advantage by being more creative and innovative, motivated by this demand for cosmetic products (Zollo, Carranza, Faraoni, Díaz, & Martín-Consuegra, 2021; Cosmetics Europe, 2021).

The present study will focus on the purchase behavior of green cosmetics by Portuguese consumers, as it is a promising growing market that consumers are paying attention to. Organic cosmetics can be defined as styling gels/mousses, fragrances, make up or simply personal care products, like lotions, shampoos, toothpaste, etc. (Liobikiene & Bernatoniene, 2017).

The primary goal is to understand the focal reasons why consumers purchase these products and the strongest motives to purchase them. Consumers' perceived healthiness regarding green cosmetics will be analyzed against consumers' environmental behaviors and their perception about the environmental friendliness of these products, as well as the altruistic attitudes of the consumers.

The purpose of this study is to discover what motivates consumers the most to buy green cosmetics products: for the **environment** or for **health** issues. Is it consumers' altruism towards the environment and the fact that these products might be more environmentally friendly or is it the consumers' concern about their own health and their belief that organic cosmetics might be safer?

In the second section of this study, a review of the existing literature regarding the most frequently studied predictors of green purchase intention, alongside with the hypotheses proposed in the current research is presented.

PLS-SEM technique is used to test the developed model that will be presented further, with the help of SmartPLS tool, that has been a consistently growing program in marketing research, because of its' robustness and applicability to marketing research models.

Theoretical contributions and practical implications are also covered in this research, as part of the conclusions and discussion of the results achieved. Finally, some limitations and recommendations are also presented, with suggestions for future research.

2. LITERATURE REVIEW

To develop a suitable conceptual framework, several theories from different authors were analyzed, from which constructs and findings were collected, to understand the factors most frequently studied and considered responsible for green cosmetic products purchase intentions.

The fact that most of the literature concerning green purchase intentions refers to green products in general, might lead to some confusion on the respondents' side. Some consumers might link green products with organic food, others with organic cosmetics and so on. Therefore, in an unconscious way their answers will always be based on a product category within the organics/green type. With that in mind, the factors behind purchase intentions might vary concerning different green product categories (Liobikiene & Bernatoniene, 2017). Other authors also found that the preferences of people regarding eco-friendly products differ among the several product categories as well (Majumbar & Swain, 2015), and that is why the present study focus on a unique category – green cosmetics.

Recent research concluded that attitude, mental and ethical norms, perceived behavior control, health motivation and environmental concern influence consumers' purchase of organic food (Imani , Allahyari, Bondori, Surujlal, & Sawicka, 2021).

Other recent study in the context of organic foods found environmental protection awareness and food safety to play a moderating role between consumer perception and value perception. One of the findings of the same study is related with the consumers' perception of environmental protection and health value being both significantly and positively correlated with consumers purchase intentions (Yuan & Xiao, 2021).

The category of green cosmetics as still a lot to explore, as the existing literature is still in a stage of development as its' majority is from recent years. The main determinants that will be considered to understand its' effect on consumers' green cosmetics buying intentions are the following: environmental friendliness, health consciousness, pure altruism, safety/risk perception and eco-friendly behaviors. Each one of these constructs will be discussed further in this section.

2.1. ENVIRONMENTAL FRIENDLINESS AND GREEN COSMETICS BUYING INTENTIONS

Environmental conscious consumers have been keeping companies more attentive to address environmental issues, forcing companies to start designing their products in a way less harmful for the planet (Gadenne, Sharma, Kerr, & Smith, 2011).

Previous studies have explored environmental friendliness behaviors of consumers' and their purchase intentions towards green products, as well as how companies' or brands' environmental friendliness influences consumers purchase intentions towards a certain product. However, few studies refer to the concept of products' environmental friendliness (Chen, Lin, & Weng, 2015) and the consumers' perception of how environmentally friendly is a certain product.

With that in mind, this study environmental friendliness is going to be explored as the perception of consumers regarding green cosmetics' environmentally friendliness, rather than consumers' or brands' environmental friendliness. This construct will allow the understanding of consumers'

perception regarding green cosmetics friendliness towards the environment, analyzing points like if their production goes easy on resources, if organic cosmetics mean in fact eco-friendly products and so on.

Environmental friendliness of products can be defined as products that go easy on the planet's resources, whose production does not cause pollution and environmental destruction during the lifecycle of such products. Therefore, in the context of this research, environmental friendliness of a green cosmetic product refers to the consumers' belief that the production of these products does not have harmful effects on the environment (Chen, Lin, & Weng, 2015). Regular cosmetics have chemicals that might be harmful for the environment, as after being used by consumers they are usually evacuated through sewerage system (Boxal, et al., 2012).

Furthermore, as another study suggests, environmental friendliness of companies significantly impacts green product purchasing decisions (Kumar & Ghodeswar, 2015). Therefore, the conclusions in the context of green cosmetics' environmental friendliness must be similar.

One of the purposes of this study is to understand if the consumers' perception on the environmentally friendliness of green cosmetics influences them to buy them or not. It is expected that consumers worried about the environment sustainability will prefer to buy products that they really believe to be better for the planet. Hence, the following hypothesis is presented:

H1: Environmental friendliness of green cosmetics positively influences consumers' buying intentions towards green cosmetics.

2.2. MEDIATING ROLE OF PURE ALTRUISM IN ENVIRONMENTAL FRIENDLINESS AND GREEN COSMETICS BUYING INTENTIONS RELATIONSHIP

As explained before environmental friendliness is about consumers' perception on green cosmetics' environmental friendliness.

Regarding altruism, it can be defined as one's willingness or desire to act or give upon someone else's needs. Sometimes, it can be somewhat controversial, as each person's point of view on altruism depends upon ego knowing and really caring about the needs and satisfaction of others. However, altruism seems to be around the idea of gratuitousness (Cohen, 1972). Similarly, Lishner & Stocks (2008) described altruism as "a motivational state with the goal of increasing another's welfare". Although, they state that some researchers, associate altruism with prosocial behavior - any behavior that benefits someone other than oneself, regardless of the motivation involved (Lishner & Stocks, 2008).

In the context of green purchase, altruism is a human value that plays a central role in sustainability. Many companies have started to adapt their products to this new reality and coming up with new ways to promote a conscious consumption (Ryan, 2017). In line with this, Ryan T. (2017) aimed at understanding why consumers really purchase green products, considering companies are spending lots of money launching organic, sustainable, and environmentally friendly products and one of the factors found to be an indirect predictor of green purchase behavioral intent was altruism.

Steg et. al. 2014 stated that altruistic people are more concerned about their impact in the environment sustainability, therefore they are more likely to engage with pro-environmental

behavior (Steg, Bolderdijk, Keizer, & Perlaviciute, 2014). Besides, past research suggests that altruism plays an important and significant role in consumers' green purchase intentions (Hopkins & Powers, 2008; Yadav & Pathak, 2015).

Moreover, Panda, T. & Kumar, A. (2019) found that consumers' awareness of environment sustainability positively influences altruism, which consequently influences consumers' green purchase intentions, presenting the mediating role of altruism in this relationship (Panda, et al., 2019). Recently, consumers have been motivated by both egoistic and altruistic values which may impact their attitude towards green products and their intent to purchase them (Birch, Memery, & Kanakarathne, 2018). Consumers believe that what they purchase and own is what represents themselves in a certain way (Bautista, Dui, Jeong, & Paredes, 2020), therefore they are more likely to engage in behaviors that benefit the environment such as the purchase of green products. A recent study showed that pure altruism has impact on a sustainable consumption, and green buying intention and proposes that individuals are more eager to act pro-socially and pro-environmentally when they have the inner motivation of helping others and a cooperating mindset (Morais, Pinto, & Cruz-Jesus, 2021).

Similarly, consumers' altruism in this study may also play a crucial role when explaining consumers' perception of green cosmetics' environmental friendliness and purchase intentions towards them.

There is still a gap in the literature concerning the mediating role of altruism in the relationship between environmental friendliness and green purchase. As explained before, the direct relationship of these two variables will also be tested, however the indirect effect will be analyzed, with altruism playing a mediator role, suggesting that the consumers' perception of the environmental friendliness of green products will positively influence consumers to be more altruistic, which will consequently encourage them to purchase more green cosmetics. Thus, the following hypotheses are proposed:

H2: Environmental friendliness positively influences consumers' pure altruism.

H3: Pure Altruism positively influences consumers' buying intentions towards green cosmetics.

2.3. PERCEIVED HEALTHINESS AND GREEN COSMETICS BUYING INTENTIONS

Perceived healthiness can be defined as the consumers' perception of the influence that consuming a certain brand or product has on their health. Despite health consciousness not meaning exactly perceived healthiness, but instead, the consumers' willingness to undertake health actions (Lee, Conklin, Cranage, & Lee, 2013), one can say that these two concepts are related, as the kind of actions consumers can engage with is seeking for healthier products within certain brands.

Consumers seem to believe, for example, that organic foods are healthier than conventional foods (Bauer, Heinrich, & Schäfer, 2013). Health consciousness has been analyzed as a determinant of green products purchasing, especially food and cosmetics – both directly related with consumers' health, across several studies (Ritter, Borchardt, Vaccaro, Pereira, & Almeida, 2015). Besides, health consciousness was found to be an important factor in the prediction of consumers' attitudes towards green products, being one of the factors most considered by consumers in decision making regarding these type of products purchase (Kim & Chung, 2011).

Previous research have proven that health consciousness positively influences green products purchase intentions (Yadav & Pathak, 2015; Hsu, Chang, & Lin, 2016; Wen & Li, 2013) for green products in general and with a population of college students. Besides, health has been found to be one of the strongest predictors of consumers' purchase intentions on a study (Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003) about the choice of organic foods.

Furthermore, a recent review on consumer behavior and purchase intention of organic food revealed that health consciousness motivates consumers to purchase organic food, as it promotes the inclusion of nutritional food in the consumers' diet (Rana & Paul, 2017). This review considered articles from several authors (Kumar & Ali, 2011; Bonti-Ankomah & Yiridoe, 2006).

Besides, Salleh et. al. (2010) also discovered that health consciousness is a strong factor when explaining consumers' purchase intention towards organic food (Salleh, Ali, Harun, Jalil, & Shaharudin, 2010). Similarly, a recent study concluded that consumers health consciousness has a significant impact on their buying intention of organic food (Nagaraj, 2021).

Regarding consumers' attitude towards organic produce, another study found health consciousness to be also the most important predictor of consumers' attitudes (Marangoz, Paksoy, Paksoy, Özçalici, & Çelikkan, 2014).

This is already a proved relationship across several studies, as consumers' awareness and concern for their well-being, as well as the desire for improving their health and quality of life gives place to healthier behaviors (Michaelidou & Hassan, 2008; Espinosa & Kadić-Maglajlić, 2018). Hence, the following hypothesis is proposed:

H4: Perceived healthiness positively influences consumers' buying intentions towards green cosmetics.

2.4. MEDIATING ROLE OF SAFETY/RISK PERCEPTION ON PERCEIVED HEALTHINESS AND GREEN COSMETICS BUYING INTENTIONS RELATIONSHIP

Cosmetics' safety and risk perception is related with consumers' belief on organic cosmetics safety, being harmless to their health, as they are free of chemical residues and pesticides. In general, consumers perceive that organic products feature a higher product safety, than conventional ones. For organic food, it has already been proved by several studies (Soler, Gil, & Sánchez, 2002), that the concern for product safety positively impacts consumers' purchase intentions.

Previous research has identified food safety as a key motive for the increasing consumption of organic food (Rana & Paul, 2017) and this factor is becoming important across the world, providing opportunities for organic foods (Kumar & Ali, 2011). Michaelidou and Hassan (2008) concluded that the relationship between food safety concerns and purchase intentions towards organic food was indirect, explaining the crucial mediating role of attitude towards organic food. However, Hsu, Chang, and Lin (2016) found a direct effect between these two variables, concluding that food safety concerns positively influenced organic food purchase intentions.

Furthermore, there are several reasons that played an important role on influencing consumers to seek for organic products, rather than conventional ones. Moreover, Yin et al. (2010) found that

67.5% of consumers reported that the initial purchase reason for organic foods was the desired lack of chemical content (Ghazalia, Soon, Mutum, & Nguyend, 2017; Yin, Wu, Du, & Chen, 2010).

Applying to the case of cosmetics, people that have higher risk of cancer, respiratory disorders when in contact with some chemical ingredients, such as paraben, lead and other toxic elements (Nguyen, Nguyen, & Vo, 2019) might go for green cosmetics more often. Nguyen et. al. 2019 found that the safety component has a positive influence on consumers' attitude toward purchasing and repurchasing green cosmetics.

Moreover, another study regarding food safety suggests that safety is one of the concerns among consumers that positively affect their attitudes towards these products produce (Marangoz, Paksoy, Paksoy, Özçalici, & Çelikkan, 2014). Similarly, also in the context of food safety and risks, a recent study concluded that consumers are willing to pay a premium price of such products, mainly due to the health and safety benefit (Yuan & Xiao, 2021).

As explained above, perceived healthiness is defined as the consumers' perception on the impact that consuming a certain brand or product has on their health, whereas cosmetics' safety and risk perception represents the consumers' belief that organic cosmetics are safer and harmless to their health. This perception might contribute for consumers' perceived healthiness relationship with purchase intentions towards organic cosmetics, suggesting that by consumers being conscious about their health they will have a greater perception on whether the consumption of organic cosmetics is safer than conventional ones, leading them to be more inclined to purchase these products. Hence, the following hypothesis is proposed:

H5: Perceived Healthiness positively influences consumers' safety and risk perception.

H6: Safety and risk perception positively influence consumers' buying intentions towards green cosmetics.

2.5. PERCEIVED HEALTHINESS AS A MODERATOR OF ENVIRONMENTAL FRIENDLINESS AND GREEN COSMETICS BUYING INTENTIONS

A gap in the literature was found regarding the moderating role of perceived healthiness or even health consciousness, in the context of green products. Hence, this is the first study approaching perceived healthiness as a moderator in the relationship between environmental friendliness and green cosmetics purchase intentions.

A study conducted in Taiwan explained the moderating effect of health consciousness and healthy lifestyle on consumers' willingness to use functional foods, where factors like reward, confidence, necessity and safety were analyzed as part of consumers' attitudes towards these types of foods (Chen M.-F. , 2011).

An individual with a higher level of perceived healthiness will probably be more willing to engage in behaviors directly related to health, such as the consumption of natural products or in the context of the present study, the use and buying of green cosmetics.

Therefore, the relationship between environmental friendliness and green cosmetics buying intentions might depend on a third variable: perceived healthiness. This construct can perform a

moderating effect on green cosmetics buying intentions, contributing for a stronger relationship between consumers' perception of green cosmetics environmental friendliness and the intention to buy them.

H7: Perceived healthiness moderates the relationship between environmental friendliness and green cosmetics buying intentions.

2.6. ECO-FRIENDLY BEHAVIORS AND GREEN COSMETICS BUYING INTENTIONS

Eco-friendly behaviors refer to the actions an individual is willing to take to contribute to a sustainable environment, like recycling, buying/investing in more green products, rather than conventional ones. Furthermore, influencing family and friends to have greener friendly lifestyle and belonging to some green associations might also be considered as eco-friendly behaviors. One of the items of the scale used in the present study to measure consumers' eco-friendly behaviors is in fact the purchase of green products.

Environmentally friendly behaviors were investigated by Magnusson M. et. al. (2003) as a determinant of purchase intention. This research found that consumers' eco-friendly behaviors are equally a strong predictor of purchase intentions towards organic foods (Magnusson, Arvola, Hursti, Aberg, & Sjodén, 2003).

Furthermore, a recent study from Liobikiene and Bernatoniene (2017) suggests that environmentally friendly behaviors positively affect green purchase behavior (Liobikiene & Bernatoniene, 2017).

However, one can assume that the more environmental friendliness behaviors an individual performs, the more likely they are to buy environmentally friendly products (or organic products). Thus, the following hypothesis is presented for green cosmetics purchase intentions:

H8: Consumers eco-friendly behaviors positively influences consumers' buying intentions towards green cosmetics.

According to the abovementioned constructs and hypotheses the following conceptual framework was elaborated:

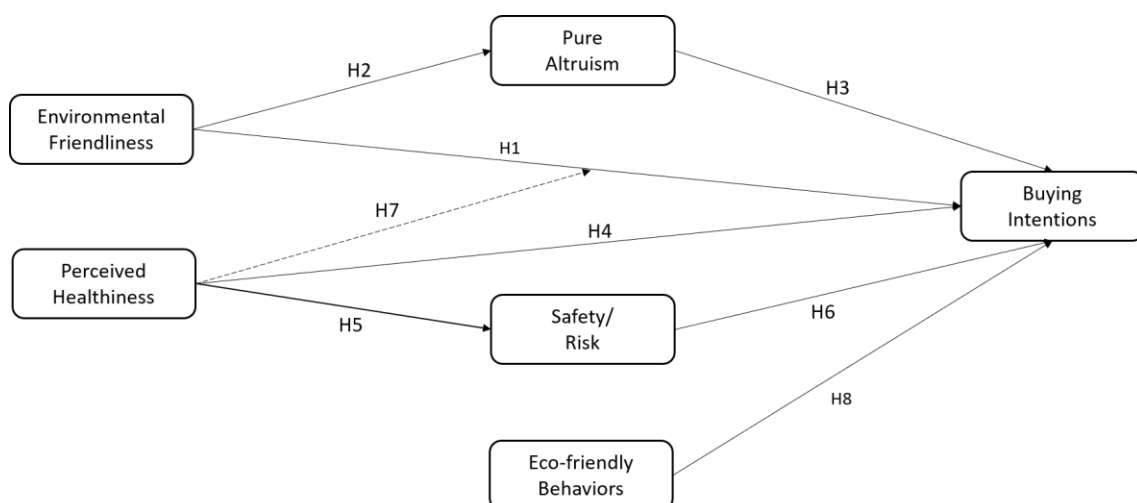


Figure 1 – Conceptual Framework

3. METHODOLOGY

To perform this study an online questionnaire was conducted, whereas only Portuguese respondents were considered with ages between 18 and 58.

The questionnaire was developed using Qualtrics platform and the following adapted scales from several authors were used to study each construct abovementioned. All the items described below (see Table 1) were measured using 7-point scales ranging from 1 (strongly disagree) which represents a negative view and 7 (strongly agree), representing a positive view on the item:

Scale	Items	Source
Perceived Healthiness	Organic cosmetics enhance my health	Adapted from Bauer, Heinrich, & Schäfer, 2013
	Organic cosmetics enable me to live healthily	
	Organic cosmetics have health-promoting effect	
	Organic cosmetics and health-conscious lifestyle match well	
Safety/Risk	Organic cosmetics are free of chemical residues	Adapted from Bauer, Heinrich, & Schäfer, 2013
	Organic cosmetics are not contaminated	
	Organic cosmetics ingredients are free of pesticides	
	Organic cosmetics feature high product safety	
	Organic cosmetics are safer than conventional ones.	
Pure Altruism	In general, I enjoy cooperating with others	Adapted from Pinto, Herter, Rossi, Nique, & Borges, 2019
	In general, I am motivated to help others	
	In general, I sacrifice myself for others	
Eco-friendly Behaviors	I am a member of a green association	Adapted from Barbarossa & De Pelsmacker, 2016
	I regularly talk to others about a more green friendly lifestyle	
	I sort my garbage	
	Whenever possible, I try to recycle	
	Most of the time, I buy green products	
Environmental Friendliness	I have invested in green products	Adapted from Bauer, Heinrich, & Schäfer, 2013
	The production of organic cosmetics goes easy on resources	
	During organic cosmetics' production the environment is highly valued	
	Organic cosmetics are environmentally	

	friendly products	
	Organic cosmetics and environmentalism match well.	
Buying Intentions	I would buy organic cosmetics	Adapted from Lee, Hsu, Han, & Kim, 2010 and White, Macdonnell, & Dahl, 2011
	I am willing to buy organic cosmetics while shopping	
	I am willing to make an effort to buy organic cosmetics in the near future	

Table 1 - Constructs and Scales

Most of the answers collected concern young consumers with ages between 18 and 25 years old. Although this can be a limitation in some aspects, on the other hand the millennial consumers were the ones to start favoring environment friendly and socially responsible products, instead of usual products (Chhetri, Fernandes, & Baby, 2021). Besides, the gender distribution was almost even, with 110 men, representing 52.63% of the total of the respondents and 99 women (47.37%) and a total of 209 respondents (see Table 2).

	N	Percentage (%)
Gender		
Male	110	52.63%
Female	99	47.37%
Total	209	100%
Age		
18-25	145	69.39%
26-33	30	14.35%
34-41	17	8.13%
>41	17	8.13%

Table 2 - Respondents' Demographics

Regarding the conceptual framework, some control variables were also considered, such as age, the consumers' usage of organic cosmetics, as well as the money they spent monthly on these products and the monthly frequency they usually purchase it.

Only 21 male respondents and 1 female respondent answered that they did not use any type of organic cosmetics. Despite answering that they did not use green cosmetics, the male respondents in this situation buy in average 1.3 times a month, and the female respondent 1 time a month.

In what concerns the remaining consumers, they all answered they use organic cosmetics, whereas the ones who buy it more frequently are young consumers, with an average of up to 2 times a month (see Figure 2).

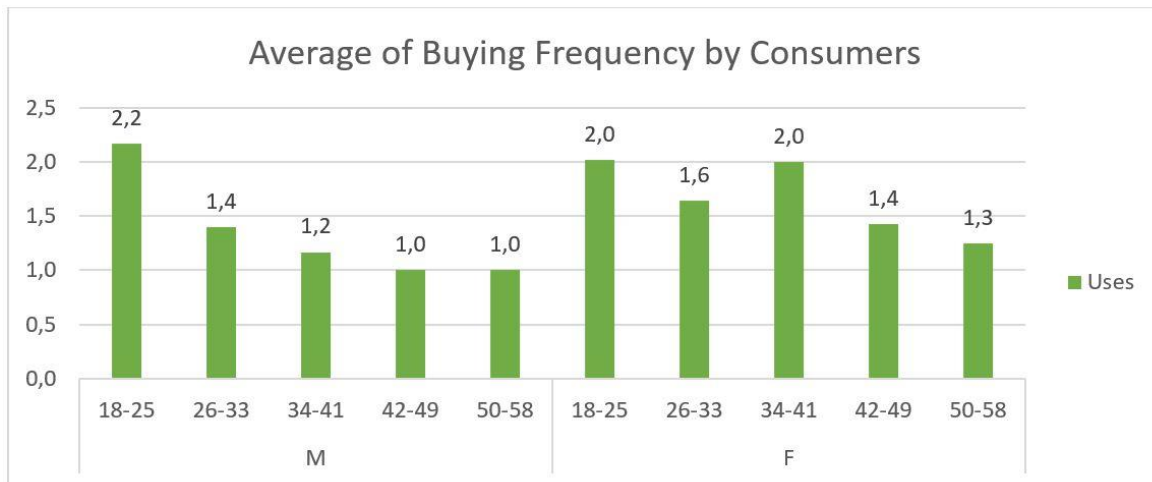


Figure 2 - Average of Consumers' Buying Frequency

Regarding the money spent monthly by consumers in these products, female respondents spend more money than male consumer, which makes sense, as in general women are more concerned about appearance, selfcare and skincare.

Besides, women in the age group of 42 to 58 years old spend more money in organic cosmetics in average than women in their 20's or 30's, which might be explained by the fact that older women with mature skin will invest more in expensive skincare and other cosmetics that promote the youth of their skin and prevent aging (see Figure 3).

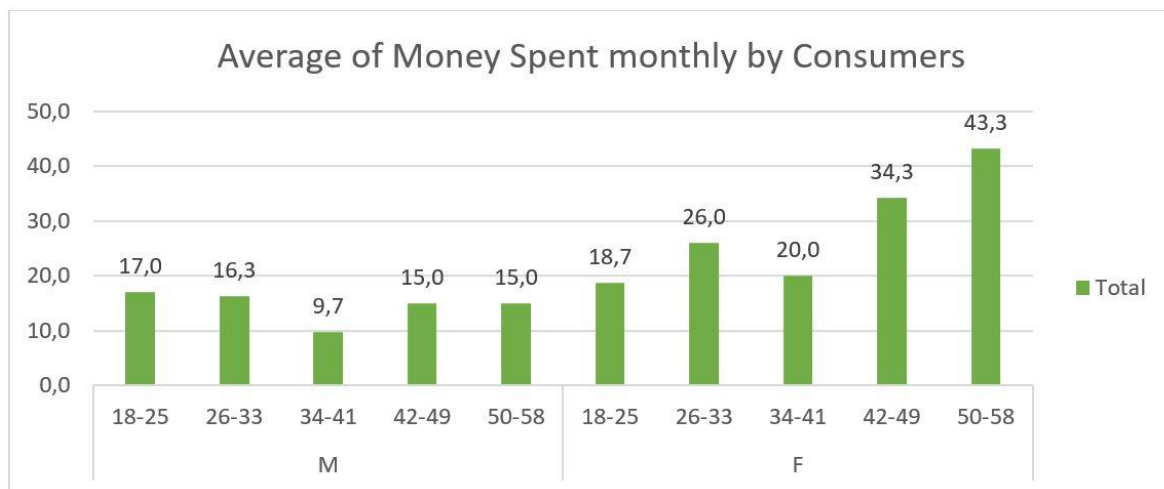


Figure 3 - Average of Consumers' Money Spent

4. RESULTS

According to Ringle et al. (2014), SmartPLS has been a consistently growing program in marketing research, because of its' robustness and applicability to marketing research models. The incorporated PLS-SEM technique seeks to address some weaknesses in the marketing research field, regarding the "absence of symmetric distributions of variables measured by a theory still in its beginning phase or with little "consolidation", formative models, and/or a limited amount of data" (Ringle, da Silva, & Bido, 2014).

The PLS-SEM technique estimates partial model structures by combining the analysis of main components with ordinary least squares regressions (Hair, Risher, Sarstedt, & Ringle, 2019). The main reasons why PLS-SEM technique was chosen are:

- The goal of the current study requires testing a theoretical framework from a prediction perspective;
- The structural model is considered complex, as it includes a reasonable number of constructs and has several relationships to perform mediation and moderation analysis on some constructs;
- The population of the research is relatively small with a dimension of 209 respondents.

The following result analysis will be based on a two-step approach suggested by Becker et al. 2012: (1) verification of the reliability and validity of the measurement model and (2) the assessment of the structural model (Becker, Klein, & Wetzels, 2012).

4.1. MEASUREMENT MODEL

The research model presented in Figure 1 includes only reflective constructs, therefore, as suggested by Hair et al. 2016, internal consistency, convergent validity and discriminant validity criterions were addressed (Hair, Hult, Ringle, & Sarstedt, 2016).

Concerning internal consistency, the composite reliability criterion was assessed to confirm if it complies with the value suggested by Hair et. al. 2016, whereas this measure should be higher than 0.70 for all constructs (Hair, Hult, Ringle, & Sarstedt, 2016). Therefore, the criteria are met except for EB construct, despites being very close to it and the research model was considered to accomplish internal consistency.

Furthermore, to check convergent validity two indicators were considered: the average variance extracted (AVE) and the reliability indicator. AVE should have a value above 0.5 (Fornell & Larcker, 1981) for every construct, in this study every construct exceeded this value, except for EB and MPH. As for reliability, the indicator should have a loading higher than 0.7 with the respective construct, and this criterion is also not met for EB. Despites the criteria not being met for EB construct (although very close to it) in an overall manner the measurement model was considered to achieve convergent validity.

Regarding discriminant validity, three criteria were considered: Fornell-Larcker, cross-loadings and the Hetrotrait-Monotrait ratio (HTMT). The Fornell-Larcker refers to the square roof of the AVE

(please see diagonal values in bold in Table 3) being higher than the correlation between the other constructs (Fornell & Larcker, 1981), the results show that this criteria is met.

Moreover, the cross-loadings shouldn't be higher than the loading of each indicator in the respective constructs (see Table 4) and the HTMT should be lower than 0.9 (see Table 5). According to the results achieved these last two criteria are also met, and therefore discriminant validity is accomplished, and every construct must be suitable to proceed with testing the structural model.

Constructs	BI	EB	EF	HC	MHC	PA	SR
BI	0,928						
EB	0,379	0,560					
EF	0,402	0,216	0,836				
PH	0,626	0,241	0,414	0,852			
MPH	-0,302	-0,024	-0,137	-0,179	0,672		
PA	0,416	0,191	0,335	0,239	-0,091	0,817	
SR	0,475	0,235	0,693	0,479	-0,142	0,288	0,837
CR	0,949	0,671	0,901	0,913	0,912	0,855	0,921
AVE	0,862	0,314	0,698	0,727	0,452	0,668	0,700

Table 3 - Reliability and validity criteria (composite reliability), correlations, and Average Variance Extracted (AVE).

Loadings	BI	EB	EF	HC	PA	SR
BI1	0,931					
BI2	0,935					
BI3	0,920					
EB1		0,270				
EB2		0,676				
EB3		0,246				
EB4		0,215				
EB5		0,698				
EB6		0,826				
EF1			0,695			
EF2			0,847			
EF3			0,904			
EF4			0,877			
PH1				0,897		
PH2				0,795		
PH3				0,910		
PH4				0,799		
PA1					0,838	
PA2					0,916	
PA3					0,675	
SF1						0,800
SF2						0,866
SF3						0,853
SF4						0,872
SF5						0,787

Table 4 - Loadings

Constructs	BI	EB	EF	HC	MHC	PA	SR
BI							
EB	0,391						
EF	0,438	0,311					
PH	0,690	0,315	0,460				
MPH	0,273	0,260	0,223	0,232			
PA	0,487	0,323	0,404	0,285	0,192		
SR	0,504	0,340	0,779	0,508	0,195	0,337	

Table 5 - Heterotrait-Monotrait ratio (HTMT)

4.2. STRUCTURAL MODEL

The structural model was measured by observing the significance of path coefficients and the variance explained (R^2) of the dependent constructs presented in section 2 of the present study.

The results of the structural equation modelling detailed in Figure 4 demonstrate that the research model is able to explain 60% of the variance in buying intentions towards green cosmetics, 23% in safety and risk perception regarding these products and 12% in respondents' level of pure altruism. Therefore, the present model can explain a reasonable amount of the variance in its main constructs, showing that the framework is composed by suitable drivers of green cosmetics purchasing, respondents' safety and risk perception and their level of pure altruism.

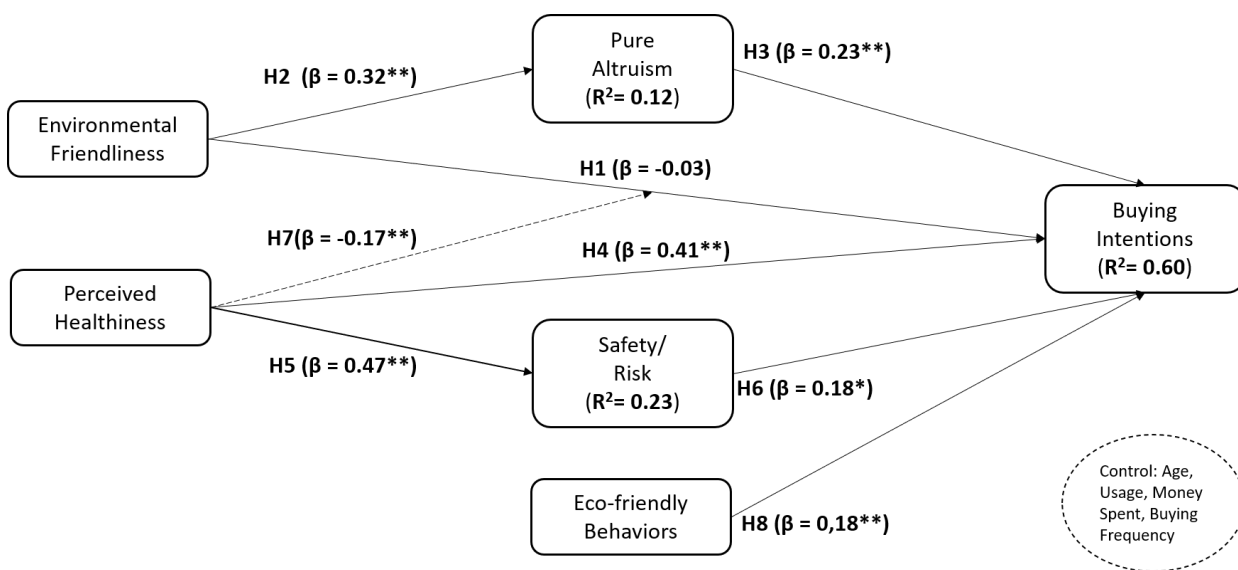


Figure 4 - Results of Structural Equation Modelling; *** significant at $p < 0.01$; ** significant at $p < 0.05$; * significant at $p < 0.1$

For the first hypothesis, whose goal was to understand how environmental friendliness influences buying intentions, it was possible to realize that this direct relationship was not significant ($\beta = -0.03$). Hence, H1 was not supported.

However, it was discovered an indirect effect between these two constructs – environmental friendliness has a direct effect on pure altruism ($\beta = 0.32^{**}$) and consequently, pure altruism has a direct effect on buying intentions ($\beta = 0.23^{**}$). Therefore, both H2 and H3 purposed hypotheses were supported. This suggests that pure altruism mediates the relationship between environmental friendliness and buying intentions, which represents a full mediation – an indirect effect only between the two constructs. This is compliant with the finding from Ryan T. (2017) that concluded that altruism was an indirect predictor of green purchase intentions (Ryan, 2017).

Moreover, perceived healthiness direct effect on buying intentions was also tested and found to be significant ($\beta = 0.41^{**}$), being H4 supported. Previous researches had already discovered that health

consciousness played an important role in consumers decision making regarding organic products purchase (Ritter, Borchardt, Vaccaro, Pereira, & Almeida, 2015; Kim & Chung, 2011; Yadav & Pathak, 2015; Hsu, Chang, & Lin, 2016; Wen & Li, 2013; Rana & Paul, 2017; Salleh, Ali, Harun, Jalil, & Shaharudin, 2010). Other studies found health to be one of the strongest predictor or the one with most significant impact, motivating consumers to buy organic food (Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003; Marangoz, Paksoy, Paksoy, Özçalici, & Çelikkan, 2014; Imani, Allahyari, Bondori, Surujlal, & Sawicka, 2021).

Furthermore, perceived healthiness also has a direct effect on safety/risk ($\beta = 0.47^{**}$), that consequently has a direct effect on buying intentions ($\beta = 0.18^*$), therefore it is possible to state that safety/risk mediates the relationship between perceived healthiness and respondents' buying intentions, these findings support H5 and H6. This represents a partial mediation, being complementary to the existing relationship between perceived healthiness and buying intentions and, therefore, giving more strength to the results.

A research from Michaelidou and Hassan (2008) concluded that the relationship between food safety concerns and purchase intentions towards organic food was only indirect, explaining the mediating role of consumers' attitude towards organic food. However, previous studies identified the concern for product safety as a key motive directly related with the consumption and purchase of organic food (Soler, Gil, & Sánchez, 2002; Rana & Paul, 2017; Hsu, Chang, & Lin, 2016; Yuan & Xiao, 2021).

The present study is aligned with the findings from the last-mentioned authors. Although, their research concerned organic food and the current study applies to green cosmetics and the consumers' perception of these products' safety and risk, being found to directly impact the consumers' intent to purchase this type of products. Nguyen et. al. 2019 also found that the safety has a positive influence on consumers' attitude toward purchasing and repurchasing green cosmetics (Nguyen, Nguyen, & Vo, 2019).

The moderating effect of perceived healthiness was found to be significant ($\beta = -0.17^{**}$). Interestingly, this effect is negative, which suggests that the relationship between consumers' perception about green cosmetics' environmental friendliness and these products buying intentions depends on a third variable: perceived healthiness. Being this effect negative, it suggests that the higher the consumers' perceived healthiness, the weaker is this relationship between consumers' perception on green cosmetics' environmental friendliness and purchase intentions towards these products. This might be explained by the fact that perceived healthiness seems to be a more important factor when explaining consumers' purchase intentions, being environmental friendliness less relevant to explain consumers' willingness to buy. Some findings from other authors proved that consumers appear to be more concerned about their own health than about the environment (Salleh, Ali, Harun, Jalil, & Shaharudin, 2010; Bonti-Ankomah & Yiridoe, 2006).

The last hypothesis tested concerns how eco-friendly behaviors influences buying intentions, in which a significant positive effect on the dependent variable was found ($\beta = 0,18^{**}$), suggesting that consumers' eco-friendly behaviors positively influence purchase intentions towards green cosmetics and, therefore, supporting H8. This result is compliant with findings from other authors that investigated environmentally friendly behaviors as a determinant of purchase intentions and found it to be a strong predictor regarding purchase intentions towards both organic food and green products in general (Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003; Liobikiene & Bernatoniene, 2017).

5. CONCLUSIONS AND DISCUSSION

5.1. THEORETICAL CONTRIBUTIONS AND IMPLICATIONS

The current study contributes to the presented literature, particularly in what concerns the existing contrast between consumers' environmental concern and health concern.

As other researchers suggest environmental concern alone is not able to provide enough understanding in the purchase of green products, and it requires health concern to be able to explain consumers' behavior in a suitable manner (Yadav & Pathak, 2015; Yadav, 2016; Sadiq, Adil, & Paul, 2021). The current research contributes in a way that analyzes these two variables against each other, being so far the only study offering this contribution, especially in the context of green cosmetics.

Consumers' level of perceived healthiness was found to significantly impact the consumers' green cosmetics purchase. This contributes to the literature of organic cosmetics, as the majority of the studies examining this construct were in the context of green food. These studies found health to be one of the strongest predictor or the one with most significant impact, motivating consumers to buy organic food (Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003; Marangoz, Paksoy, Paksoy, Özçalici, & Çelikkın, 2014; Imani, Allahyari, Bondori, Surujlal, & Sawicka, 2021; Nagaraj, 2021).

The impact of consumers' perception regarding green cosmetics safety and risk in the purchase of such products is also relevant for organic cosmetics literature. In the context of organic cosmetics other authors found that the safety component has a positive influence on consumers' attitude toward purchasing and repurchasing green cosmetics (Nguyen, Nguyen, & Vo, 2019). However, the remaining literature found on the matter is very focused on food safety and the purchase of organic foods, whereas safety was also an important predictor of consumers' intent to buy green food. A recent study actually discovered that consumers are willing to pay a premium price for organic food, due to health and safety benefits (Yuan & Xiao, 2021).

Moreover, the moderating role of perceived healthiness or even health consciousness, in the context of green products was not approached in any other study until the date of this research, as far as we know of. Therefore, this research contributes to the existing literature proving that environmental friendliness impact on consumers purchase intention of green cosmetics, is dependent on how much consumers perceive and value health.

Furthermore, the analysis of environmental friendliness in the current research was not as consumers' or brands' environmental friendliness as other studies have approached, but instead as the perception of consumers regarding green cosmetics' environmental friendliness. This takes into account a research from (Chen, Lin, & Weng, 2015) that mentioned that few studies pointed to the idea of products' environmental friendliness. However, the impact of environmentally friendliness on green cosmetics purchase is mediated by pure altruism.

Therefore, the consumers' level of pure altruism has influence on green cosmetics buying that also contributes to organic cosmetics literature and is aligned with a recent research that discovered the impact of pure altruism in green products purchase (Morais, Pinto, & Cruz-Jesus, 2021).

Finally, this research contributes to the literature of green cosmetics in general, as it is still very limited and points out the importance of health for consumers, as well as their concern for product safety.

5.2. PRACTICAL AND SOCIAL IMPLICATIONS

The present study examined several determinants of consumers purchase intentions towards green cosmetics. It was found that consumers' pure altruism has a full mediation effect in the relationship between environmental friendliness and green cosmetics' buying intentions, this suggests that although there is no direct relationship between these two constructs, the consumers' awareness on how green cosmetics are environmentally friendly has a positive effect on consumers' altruistic attitudes. Consequently, these altruistic values have a positive effect on consumers' buying intentions towards these products. This adds to the findings from Panda, T. & Kumar, A. (2019), that concluded that altruism mediates the relationship between consumers' awareness of environment sustainability and consumers' green purchase intentions (Panda, et al., 2019).

Moreover, the findings suggest that consumers' perceived healthiness regarding green cosmetics increases their willingness to buy these products. This complements the findings from other authors regarding the significant and positive impact of health consciousness in green purchase intentions (Yadav & Pathak, 2015; Hsu, Chang, & Lin, 2016; Wen & Li, 2013), as well as specifically in the choice and purchase of organic foods (Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003; Rana & Paul, 2017).

Besides, there is also a partial indirect effect between these variables – a mediation of the type complementary (partial mediation) of safety and risk perception. Therefore, it can also be stated that the consumers' perception of the organic cosmetics' safety and risk is in part responsible for the relationship between perceived healthiness and buying intentions. This conclusion is compliant with discoveries from other authors, such as Nguyen et. al. 2019 that found safety to positively influence consumers' attitude towards purchasing and repurchasing green cosmetics

When consumers are more conscious about how organic cosmetics improve their health, their perception about the safety/risk of these products increases, which consequently causes a positive effect on the individuals' willingness to buy green cosmetics. Moreover, Marangoz et. al. 2014, also suggest that safety is a consumers' important concern that positively impacts their attitudes towards these products produce. However, the current study is the first one to present safety and risk perception as a mediator of the relationship between perceived healthiness and green cosmetics purchase intentions.

Furthermore, a consumer that performs eco-friendly behaviors is more willing to or will make an effort to purchase organic cosmetics, as consumers that engage more in this type of behaviors will probably buy more organic cosmetics, as they believe they are better for the environment. Investigations from other researchers also found that environmentally friendly behaviors are an important predictor of consumers' purchase intentions of green products (Magnusson, Arvola, Hursti, Aberg, & Sjöden, 2003; Liobikiene & Bernatoniene, 2017).

Concluding, despite eco-friendly behaviors being an important factor in consumers' decision to buy green cosmetics, as well as the products' environmental friendliness, the current study suggests that

consumers appear to be more concerned with their own health, than being altruistic towards the environment, as perceived healthiness has a stronger effect on consumers purchase intentions towards organic cosmetics. Therefore, the consumers' belief on green cosmetics' health-promoting effect and that a health-conscious lifestyle and this type of products match well, are the main reasons responsible for their buying intentions towards these products, being their belief on the safety of these cosmetics also important in their decision-making.

This answers to the focal question of this study: Why do consumers purchase organic cosmetics? Is it consumers' altruism towards the environment and the fact that these products might be more environmentally friendly or is it the consumers' concern about their own health and their belief that organic cosmetics might be safer? The present study shows that the strongest reasons to purchase organic cosmetics by Portuguese consumers are related with health and safety concerns, and not environmental concerns and altruism towards the environment, being this compliant with results obtained from other authors, mainly regarding different product categories (not cosmetics).

As explained before, the conclusions of this study provide companies' marketers and marketing departments important conclusions, that allow them to focus their marketing not only on the green cosmetics benefit to the environment, but also in providing their consumers' the safety and comfort to purchase green cosmetics, making available to them crucial information that proves that green cosmetics are also beneficial to consumers health.

6. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE WORKS

The present study also has some limitations and possible recommendations for future work. The responses gathered during responses collection period were in their majority from young people between 18 and 25 years old and future studies should try to include a wider variety of age groups.

Besides, this research only concerned Portuguese consumers and it might be interesting to analyze green cosmetics purchase intentions determinants, across other countries and cultures that might have different perceptions. For instances, other cultures might be more altruistic towards the environment, instead of being more concerned with their health and safety.

Moreover, despites eco-friendly being a significant construct when explaining consumers' purchase intentions regarding green cosmetics, this construct did not achieve the best results when observing the loadings of the construct against each indicator. In future researches the eco-friendly behavior construct should be analyzed using a different scale, or perhaps using all the items of the original scale by Barbarossa & De Pelsmacker, 2016, as the scale used in this research was simplified and reduced to fewer elements.

Future research could include, as part of the research model of the current study, the social media component. It would be interesting to understand how social media influencers impact the way consumers value health and their choice regarding green or non-green products. For example, if an influencer posts a review of a non-green cosmetic will consumers go blindly for the non-green cosmetic, discarding the possible health benefit in choosing a green cosmetic?

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8. APPENDIX

8.1. ADMINISTRATED QUESTIONNAIRE

Start of Block: Welcome Intro

Q1 Welcome! As part of my master thesis at Nova Information Management School, I am conducting a questionnaire to understand consumer behaviour towards organic cosmetic products (skincare products, lotions, shower gel, shampoos, foundations or eyeshadows that are completely composed by natural ingredients). Your participation in this study is completely voluntary, so feel free to decide whether you want to participate in this research or not, as well as to leave the questionnaire at any time. The information gathered is entirely confidential and will be used only for academic purposes. However, your participation is very important and this will be an easy and quick questionnaire to answer, therefore it won't take much of your time. Thank you!

Q2 By clicking "I agree" I declare that I am 18 years of age or over, and agree to participate in this research. I declare that I was informed that my participation in this study is voluntary and that the information collected is entirely confidential and will be only used for academic purposes.

I agree

I do not agree

End of Block: Welcome Intro

Start of Block: Does not consent

Q3 As you do not wish to participate in this study, please return your submission on Prolific by selecting the 'Stop without completing' button.

End of Block: Does not consent

Start of Block: Prolific ID

Q4 Before you start, please enter your Prolific ID:

End of Block: Prolific ID

Start of Block: Screener validation

Q5 Nationality:

Portuguese

Other

Q6 Fluent languages:

English

Portuguese

Other

Q7 Age:

End of Block: Screener validation

Start of Block: Inconsistent screening responses

Q8 < You are ineligible for this study, as you have provided information which is inconsistent with your Prolific prescreening responses. Please return your submission on Prolific by selecting the 'Stop without completing' button.

End of Block: Inconsistent screening responses

Start of Block: Qualification and Segmentation Questions

Q9 Gender

- Male
- Female

Q10 Do you normally use/buy cosmetic products? (e.g. skincare products, lotions, foundations, eyeshadow, shower gel, shampoo)

- Yes
- No

End of Block: Qualification and Segmentation Questions

Start of Block: Health Consciousness and Cosmetics Safety

Q11 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
Organic cosmetics enhance my health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics enable me to live healthily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics have a health-promoting effect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics and a health-conscious lifestyle match well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
Organic cosmetics are free of chemical residues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are not contaminated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics ingredients are free of pesticides.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics feature high product safety.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are safer than conventional ones.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Health Consciousness and Cosmetics Safety

Start of Block: Buying Intentions

Q13 Please reply to the following questions in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
I would buy organic cosmetics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to buy organic cosmetics while shopping.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to make an effort to buy organic cosmetics in the near future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Buying Intentions

Start of Block: Attitude towards organic cosmetics and CVPA

Q14 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
Organic cosmetics are healthier.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics have superior quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are a fraud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are worse than the conventional ones.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are more expensive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are more attractive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics have no harmful effects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Organic
cosmetics
are in
fashion.



Q15 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
Owning organic cosmetic products that have superior designs makes me feel good about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy seeing displays of organic cosmetic products that have superior designs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetic products' design are a source of pleasure for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beautiful organic cosmetics designs make our world a better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

place to
live.

End of Block: Attitude towards organic cosmetics and CVPA

Start of Block: Subjective norms and Competitive/pure altruism

Q16 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1- Strongly disagree	2	3	4	5	6	7 - Strongly agree
Most people who are important to me think I should definitely buy more organic cosmetics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most people who are important to me would want me to start buying more organic cosmetics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People whose opinions I value would prefer that I bought organic cosmetics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important that you pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

attention
to this
study.
Please
click
'Strongly
disagree'

Q17 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
In general, I enjoy cooperating with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I am motivated to help others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I sacrifice myself for others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I enjoy competing with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I am motivated to have higher social status.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Subjective norms and Competitive/pure altruism

Start of Block: Eco-friendly Behaviors and Environmental Friendliness

Q18 Please indicate if you relate with the following behaviors, as well as what is the most suitable reason why you engage with each behavior

	No, I don't	No, because it is complicated	No, because it wastes my time	Yes, because I have to	Yes, because it saves me money	Yes, because it is better for the environment	Yes, because everybody does it
I am a member of a green association.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regularly talk to others about a more green friendly lifestyle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sort my garbage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whenever possible, I try to recycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most of the time, I buy green products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have invested in green products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
The production of organic cosmetics goes easy on resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During organic cosmetics' production the environment is highly valued.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics are environmentally friendly products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic cosmetics and environmentalism match well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Eco-friendly Behaviors and Environmental Friendliness

Start of Block: Environmental Concern

Q20 Please reply to the following statements in a scale of 1(strongly disagree) to 7(strongly agree).

	1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree
I am concerned about climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel worried about the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned with energy security, i.e. the extent to which supplies may run out or become unreliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned with the environment because it will help my children in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Environmental Concern

Start of Block: Frequency and money spent

Q21 How frequently do you buy any type of cosmetics/skincare products? (answer more or less the number of times in a month, e.g. 3 times a month)

Q22 How much money do you spend on cosmetics/skincare products per month? (answer in numbers, e.g. 10.5 €)

End of Block: Frequency and money spent

