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Master Thesis

The halo vs. horn effect: How does a green product affect the perception of the same brand's non-green product portfolio?

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Thank you!

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Abstract

With the increasing consumer demands of eco-friendly alternatives in the marketplace, companies have started to think green. Many well-established non-green companies are now contemplating the launch of a green product to complement their existing product portfolio. This paper attempts to expand the existing and limited research on green horn effects, and how this effect is particularly liable within the strong product category. In our main study, 124 participants rated the attributes of several sunscreens. Half of the group was exposed to a brand, including both a green and a non-green sunscreen, while the other group only evaluated the non-green sunscreen. To manipulate the research purpose, the participants had to rate several other sunscreens. In addition to this, we assessed the participants' pro-environmental orientation to analyze a potential interaction with the effect of the certified green label. The results showed that the participants were more negative towards the non-green product attributes when the brand's product portfolio included a green sunscreen; as well as a decrease in preference and purchase intention. This negative effect also extended to the brand image. However, the hypothesized interaction effects with pro-environmentalism were not supported empirically. These findings confirm the existence of green horn effects on strength-related products and how it can affect the perception of existing product attributes. This result adds to Yenipazarli & Vakharia (2015) research on the risks of green line extensions, as well as Luchs et al., (2010) research on strong product's negative trade-offs.

Keywords: *horn effect, green horn, certified labeling, green strategies, green line extension.*

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1.0 Introduction

1.1 Background

Throughout the past decade, the focus on the environment has increased dramatically, where trending topics have been climate change, green thinking, and sustainability. In 2019 the UN created 17 sustainable development goals, established as a blueprint to achieve a better and more sustainable future (United Nations, 2019). Moreover, Greta Thunberg, a 17- years old environmental activist, was nominated for the Nobel Peace Prize in 2019, as she has inspired an international movement to fight climate change (Carrington, 2019). There are many other examples of how the view on the environment has shifted. However, companies' most critical aspect is that consumers are becoming more aware and educated about the environmental impact of excessive consumption (Sena, 2018). The Guardian (2015) reported that some people call it "conscious consumption" and consists of people who behave in a pro-environmental manner, and carefully select what to buy to minimize the negative impact on the environment. It is possible to assume that buying and acting green is a newly founded social trend (Olsen, Slotegraaf & Chandukala, 2014).

As consumers demand a more extensive selection of green alternatives and socially responsible companies, non-green companies have reacted to this shift in consumer behavior by focusing on the increasing needs of sustainability (Borin, N., Lindsey-Mullikin, J., & Krishnan, R., 2013). Sustainability and eco-friendliness have become the mantras for companies and brands seeking to create a competitive advantage (Borin et al., 2013). New and green brand strategies range from introducing completely new sustainable products to engaging in a greener marketing and production process. As one of the standard green approaches, many firms have started introducing green products in their non-green product lines (Yenipazarli & Vakharia, 2015). Global brands such as Adidas, H&M, and L'Orèal have taken many of these steps to introduce "greener" alternatives.

Companies can apply for a green-certified label to differentiate the degree of environmental friendliness in a diverse product portfolio consisting of both green and non-green products. Achieving the certified green logo can take several years, especially since the requirements to attain it are very strict (Kjeldsen, 2014). In addition to this, companies have to pay different fees to apply and attach it to their product(s) (Kjeldsen, 2014). In Norway, the most well-known certified logo is "The Nordic Swan", making it easier for consumers to choose sustainable goods and services.

Within the cosmetic industry, sunscreen has become a product that has had an increase in consumer demand regarding its environmental footprint, especially after several recent studies on how sunscreen harms life in the ocean and corals underwater (Downs, C. A., Kramarsky-Winter, E., Fauth, J. E., Segal, R., Bronstein, O., Jeger, R., ... & Loya, Y., 2009). The Nordic Swan has provided in total over 28,000 products with its label, where 511 products have the Nordic Swan label in the beauty category. Out of this, 83 are products within the suncare category (Svanemerket, 2020). Many new cosmetic brands establish themselves as environmentally friendly and sustainable, having all of their cosmetic products eco-friendly with certified labels. In contrast, other well-established companies, such as Biotherm, a French skincare brand that has produced and sold cosmetics since the 1950s, have first in recent years acknowledged the consumer demands for eco-friendly alternatives. In 2017, Biotherm launched an ocean-friendly "Waterlover" sunscreen. After applying for the Nordic Swan label since then, Biotherm finally got the Swan logo in 2020 on its very first product, being the Waterlover Sun Milk (Biotherm, 2020). In total, Biotherm has eight different sunscreens in its product portfolio, and only one of these products has the certified green Nordic Swan label.

How consumers' perceptions positively or negatively change when a non-green brand introduces a green product in an existing non-green product line, has been of little research. There are reasons to believe that this new green introduction can lead to several reactions. One reaction can be that consumers perceive the brand and the existing brown product line more positively than before and think of the

existing brand as more environmentally friendly and socially responsive. An explanation could be that the underlying mechanism causing such biased perception is a psychological phenomenon called "halo effect". Initially coined by psychologist Edward Thorndike, the term indicates a cognitive bias. Consumers might judge products with one positive attribute more favorably on other attributes, even when they are not substantially related (Schuldt and Schwarz, 2012). However, the opposite of this might also happen. The consumer perceives the existing product line as more harmful than before the introduction—the willingness to purchase products from the brand, and the overall perception of products and brand image decreases. The opposite of a halo effect is the horn effect, which in this case, would be the biased perception. Thus, as more and more companies are trying to serve the consumer's needs by offering more environmentally friendly alternatives, this possible change of positive or negative perception of different attributes is essential to research. It is crucial to avoid the risk of decreasing brand equity and cannibalization of product lines.

1.2 Structure

This paper will start with a review of the existing and relevant literature. The literature review will serve as a basis for this paper with an overview of the existing research of green line extensions, the influence of certified green labels, and lastly, as our primary focus, the green halo vs. horn effects. Following this, our predictions and hypotheses will derive. Chapter 3.0 and 4.0 explain our studies' methodology, and each study has its chapter with the procedure, descriptions of sampling, data interpretation, and a short discussion of the results. After that, Chapter 5.0 will include a combined general discussion from the results of the two studies. Lastly, we will discuss the managerial implications, suggestions for further research, limitations, and a conclusion.

The wording "green", "greenness", "environmentally friendly", "eco-friendly", and "sustainable", as well as "non-green" and "brown", are used homogeneously throughout our thesis with no variation in the meaning of them. The wording "certified labeled", "green label", "certified green logo" are also terms used homogeneously and will refer in this case to the Nordic Swan Label/Svanemerket,

as this is the most known and most used label for certified green products in Norway. A green product is a product that has a lower impact on the environment and less harmful to human health than traditional products, hence the term sustainable or green products (Liobikiené & Bernatoniene, 2017). Green products are products that consumers perceive to be environmentally friendly, whether due to the production process, the types of materials or ingredients used to manufacture the product, packaging, and marketing communications (Johnstone & Tan, 2015).

2.0 Literature review

2.1 Green line extensions

Brands have operated with brand extension strategies for many years, and research supports the benefits that derive from doing so (DelVecchio, 2000). These benefits include both perceptual advantages such as more favorable ratings of the extension product, and market-based outcomes, including the increased market share and advertising efficiencies (Smith and Park, 1992). Previous interviews with over 750 CEOs globally explained that 93 percent felt that implementing sustainability programs that fit their core businesses would be critical to achieving success (UN Global Compact, 2010). Moreover, 72% of CEOs globally claimed that the drivers of motivation to take sustainable actions were "brand, trust, and reputation", and 58% believed that the most important stakeholder group that would drive this change were the consumers (Lacy and Hayward, 2011). The different sustainability programs that companies can choose to implement range from developing new green products, developing recycled, or refurbished products to other greener processes (Borin et al., 2013). A study on green strategies shows that a green line-extensions (vs. category extensions) is more favorable by consumers (Karjaluoto & Chatterjee, 2009). Here, the line extensions enhanced the original brand schema through other positive brand associations (Karjaluoto & Chatterjee, 2009). The authors also found that a halo effect on the parent brand occurred due to environmental associations. Green line extensions range from slight modifications of existing products (e.g., Garnier minimizing its packaging waste), to entirely new green product innovations (e.g.,

Toyota's development of the Prius hybrid) (Borin et al., 2013). New green products give the company a chance to differentiate itself and establish itself with a completely new consumer base (Borin et al., 2013). However, this might also be the riskiest strategy. Ginsberg and Bloom (2004) advise companies to consider the size of the potential market, as well as the consumer's ability to differentiate on greenness (e.g., with a green label).

Borin et al. (2013) examined consumer preference between three chosen green strategies, including green line extensions. However, the research did not go deep enough into this particular firm strategy. Previous literature has looked at the risks of implementing new green products as a chosen green strategy to a certain degree. The focus has been on pricing strategy and the risk of cannibalization (e.g., Yenipazarli & Vakharia, 2013; Yenipazarli & Vakharia 2015; Yenipazarli & Vakharia, 2017). To the best of the author's knowledge, there is still a lack of research regarding consumer's perceptions of the existing products change, in terms of price, quality, effectiveness, preference and purchase intention, and whether this is due to a heuristic cue (such as a green label). The research often focuses on how consumers perceive the new green product, not enough on how they perceive the existing ones.

2.2 The power of green labels

Certified green labels, or eco-labels, are a well-known strategy to tell consumers that the product is "good" and "green". Consumers have expressed confusion regarding eco-labels, which has led to multiple associations creating eco-labeling guides such as GreenerChoices.org in the United States, and the Scandinavian website the "Nordic Swan". Globally there is the "Ecolabel Index", a complete global directory of eco-labels (Brécard, D 2014). An eco-label is a label or logo that identifies a product's or service's overall environmental preference within a specific product/service category (Horne, 2009). Brècard (2014) has divided eco-labels into (1) certified labeling, certified by a third party, and (2) company produced labeling, lastly being a self-declaration by firms. Eco-labels aims to identify and promote products that have a reduced environmental impact compared to other similar products and used as a selling mechanism to enhance

green sales. The Nordic Swan was introduced in the Nordic countries in 1989 by the Nordic Council of Ministers; to present a standard, official environmental label in the Nordic countries. In Norway, the numbers recognizing the Nordic Swan, the Scandinavian eco-label, amounted to 70% in a 2005 European survey of consumer trust (Gertz, 2005), which, most likely, is an even larger number today. However, even though organizations try to reduce confusion concerning labels, multiple surveys have highlighted this issue through websites and larger standard labels (Comas Marti & Seifert 2012). A study conducted in Europe by the Gallup Organization revealed that approximately 50% state that eco-labeling plays an essential role in purchasing decisions (Eurobarometer, 2009).

Eco-labels have been around for a long time. However, as the movement of pro-environmental consumption has become a trend, eco-labeling has become even more relevant (Baker, 2015). Moreover, a research analysis mentioned that "as consumers become more interested in what they're taking into their bodies, they've also become more interested in what they're applying typically to the body" (Eurobarometer, 2009). Hence, this has resulted in a higher request for eco-labels on personal care products (Cervellon, Rinaldi, & Wernerfelt, 2011).

2.3 The green halo - vs. horn effect

2.3.1 Green Halo

The halo effect defines as "the initial favorable impression that promotes subsequent favorable evaluations on unrelated dimensions" (Schuldt et al. 2012). The halo effect occurs when an individual's assessment of an entity's dimension greatly influences or biases the perception of other aspects (Lee, Shimizu, Kniffin, & Wansink, 2013). Several previous studies have analyzed green halo-effects, many of them being on organic labels or natural ingredients concerning food products (e.g., Abrams et al., 2010, Devcich et al., 2007, Dickson-Spillmann et al., 2011, Lee et al., 2006, Lee et al., 2013, Lockie et al., 2004, Magnusson et al., 2003, Rozin et al., 2004, Schifferstein and Ophuis, 1998, Siegrist and Cousin, 2009). For instance, food with "organic" or "natural" labels believe to be healthier, with fewer calories, people tend to think eco-friendly labeled fruit and wine has a

better taste, and fragrances with organic labels have a better smell (Lee et al., 2013; Sörqvist et al., 2015; Apaolaza et. al,. 2014; Wiedmann et al., 2014; Bacig et al., 2019). Past research has detected a halo effect when firms engage in Corporate Social Responsibility (CSR), as people perceive these companies to have better products (Blair and Chernev, 2014).

2.3.2 Green Horn

There are, however, some detrimental effects of green labels or statements. The horn effect refers to "the tendency to limit the overall assessment of an entity due to a single negative dimension or attribute" (Rubin, 1982). A growing number of consumers are becoming skeptical about the eco-friendliness and benefits of green products. This skepticism increases by a widespread societal concern that firms are disseminating false or ambiguous environmental information (Goh, S. K., & Balaji, M. S., 2016). Recent research consistently finds that consumers perceive green products as less effective with a lower quality than non-green products (Gleim, M. R., Smith, J. S., Andrews, D., & Cronin Jr, J. J., 2013; Lin and Chang, 2012; Newman, G. E., Gorlin, M., & Dhar, R., 2014). There is also a widespread belief that green products are more expensive than conventional ones (Gleim et al., 2013).

For many categories (e.g., cleaning products), consumers may doubt the ability to achieve as good results with eco-friendly products as with conventional products as far as performance (Borin et al., 2013). Lin & Chang (2012) studied consumers' usage behavior after buying a green product vs. a conventional product to investigate discrepancies. The study showed that the green product was used more frequently than the traditional product. However, the experiment used the same product (a hand sanitizer) only with a green label in the experimental group. In other words, the green sticker on the hand sanitizer served as an item for a horn effect. This result is most likely because consumers expect hand sanitizers to be of quality, and green products are not associated with being as effective as conventional products (e.g., Gleim et al., 2013). Ironically, it means that the green products' resources got overused and thus had consequences to the environment

after all. The research proposed that merely the status of a green product itself determined the usage amounts (Lin & Chang, 2012).

2.3.3 Pro-Environmentalism as Moderator

Researchers have studied how the consumer's existing pro-environmental behavior plays a part in the halo vs. horn effects (e.g., Schuldt & Schwarz, 2010; Lee, Shimizu, Kniffin & Wansink, 2013; Apaolaza, V., Hartmann, P., López, C., Barrutia, J. M., & Echebarria, C., 2014). This behavior refers to the individual's knowledge and understanding of the green products, and the willingness to educate and learn more about the issue. A lower pro-environmental behavior and knowledge lead consumers to choose the product based on attributes such as the brand, price, advertising, celebrity endorsement, or other influencing factors, such as the sales staff's information. It seldom includes an extensive background check of the ingredients or other attributes that require a more extended search for information (Beharrell & Denison, 1995; Silayoi & Speece, 2004; Apaolaza et al., 2014). Previous research has addressed the role of moderating variables involved in the kind of halo- and horn effects mentioned above. Moreover, the theory regarding the pro-environmental behavior of the consumer is also suggested (Apaloaza et al., 2014; Schuldt and Schwarz, 2010; Lee et al., 2013). Findings have been somewhat ambiguous, however. While Schuldt and Schwarz (2010) found that high levels of pro-environmentalism made the participants more likely to be affected by the organic claim and thus mediated it. In contrast, Lee et al. (2013) showed that participants who deemed themselves to engage in environmentally friendly activities more often were less susceptible to this kind of halo effect.

2.3.4 Strong vs. gentle product category

Luchs et al. (2010) proposed that sustainability was not always an asset, even if the consumers cared about social and environmental issues. According to the authors, the degree to which the sustainable attributes enhanced the consumer's preferences depended strongly on the type of benefit that consumers valued most for the product category in question. The authors found that sustainability was positively associated with gentleness-related attributes and negatively associated

with strength-related attributes. This distinction is something we see clearly through the literature on the halo vs. horn effect. The halo effect is prominent for gentleness-related attributes (e.g., organic fragrances), while the horn effect is prominent for the strength-related attributes (e.g., hand sanitizer). Therefore, by adding a green product in a strong product line (e.g., sunscreen), there are reasons to believe that the perceived attributes of the existing products will be negatively affected and that consumers (perhaps depending on pro-environmental behavior) will experience a cognitive horn bias.

2.4 Our Position in the Literature

Research shows that more and more non-green companies are initiating different sustainability programs to serve the increasing consumer demands (Borin et al. 2013). One of the most common strategies is introducing a new green product into their brown product line, often with a green label to differentiate between the products. Research in the halo vs. horn section shows how gentle products (e.g., body lotion) with a green logo often lead to a halo-effect. In contrast, strong products (e.g., hand sanitizer) with a green logo often leads to a horn effect. Moreover, research claims that creating eco-labels has been to signal eco-friendliness and quality to consumers. The introduction of certified green labels was to minimize consumer confusion, increase consumer trust, and be a tool for promoting (Horne, 2009). Researchers have discovered that eco-labeling does play an important role in purchasing decisions (Eurobarometer, F. 2009).

We predict that people make use of the new certified green product as a heuristic cue, to draw the judgment of the brown products in the same product line. We wish to contribute to the research of green strategies, and the previous finding by Yenipazarli and Vakharia (2015) that suggests how expanding a brown product line with a new green offering can cannibalize the sales of the existing brown products. Additionally, we wish to add to the scarce research of green horn effects by testing the consumer preferences on strength-related attributes when there is a sustainable introduction (Luchs et al., 2010). With the findings of Karjaluoto & Chatterjee (2009), we additionally want to analyze if this horn effect decreases the consumers' green perception of the parent brand.

Lastly, we want to test the possible moderating effect of pro-environmentalism, and see whether this cognitive bias is still active when consumers have a higher pro-environmental behavior, with the purpose to add to the previous ambiguous finding by Apaloaza et al., (2014); Schuldt and Schwarz, (2010) and Lee et al. (2013). Thus, our research question is constructed as following:

"When a non-green brand introduces a green product, how does the consumers' perception of the existing brown products change, and does the new green product serve as an item for a horn effect across both existing products and brand image?"

To answer this question, we have created the following hypotheses, based on the theories above:

H1a: Consumers' estimation of the greenness, price and effectiveness of the existing brown product will be negatively influenced by the introduction of the new green product.

H1b: Consumers' preference and purchase intention of the existing brown product will be negatively influenced by the introduction of the new green product.

H1c: Consumers' environmental perception of the non-green brand will be negatively influenced by the introduction of the new green product.

In addition to this, we aim to contribute to the green horn effect literature by investigating a possible moderator. The literature review suggests that certified labels are the most commonly used differentiation method for people with a lack of expertise and that the lack of knowledge makes the consumer more liable to experience halo- or horn effects (Apaolaza et al., 2014). Pro-environmentalism is a suggested moderator of halo effects in recent research (e.g., Schuldt & Schwarz, 2010; Lee et al., 2013; Apaolaza et al.,2014). However, the findings have been somewhat ambiguous. Thus, the present study's secondary aim is to assess the

potential interaction of pro-environmentalism with the hypothesized horn effect of certified green labels.

H2: The effect of the certified green claim on the brown product estimation is less pronounced at higher levels of pro-environmentalism.

3.0 Study 1: Pre-Study

To help set up the main study (Study 2), we used a cognitive mapping technique in our pre-study to identify our dependent variables and recognize our participants' patterns and relationships. Thus, we conducted an exploratory study using both a qualitative pre-study and followed up with a quantitative approach (Study 2) to confirm the results and hypotheses, as the findings from our pre-study would not have a large enough sample pool to do so. We chose to use an exploratory study to help set up the main study, as we needed to know whether there was any basis for further results and if our chosen dependent variables made sense.

3.1 Method

Ten Norwegian participants completed this approximately 30-min mind-map experiment. The participants' average age was 23,9, where 23 was the youngest, and 26 was the oldest. All participants currently lived in Norway, and all but one had completed a Bachelor's degree as the highest level of education. Furthermore, 40% of the participants were male, and 60% female, all of the participants had previously used- and purchased sunscreen.

The experiment was carried out in the interviewer's living room as the Covid-19 pandemic restricted the areas where we would have set up the experiment. Due to the Covid-19 pandemic, the recruitment process was not random, as we initially planned to do. The chosen participants were friends of the interviewers, creating a more homogenous group, which can be a weakness of the study. The possible weakness will be elaborated more upon in the Limitations (Chapter 7.0).

3.1.1 Procedure

The participants received timeslots during the same day, June 6th, 2020, the experimental group between 09:00 - 14:00 and the control group between 15:00 - 20:00. The different time slots could lead to a lower degree of external and internal validity, as the control group could have been tired, exhausted, and less attentive. However, we believe that completing all interviews during the same day would increase the validity of the responses, like weather, weekday vs. weekend, and the interviewer's mood would be consistent. To gather our sample, we used opportunity sampling, targeting participants based on convenience. Each participant was in the room with us for at least 30 minutes. We did a pre-test with two participants the day before the planned experiment to ensure that the procedure was reliable and that the questions made sense.

To test the hypothesis of whether a non-green brand's introduction of a green product would affect consumer preferences and perceptions, we chose two of Biotherm's sunscreen products as test objects. As mentioned earlier, Biotherm, launched a new and ocean-friendly "Waterlover" sunscreen first in 2017, retrieving the Nordic Swan label in 2020. In total, Biotherm has eight different sun care products, and it is only Biotherm Waterlover that has a certified green label (Biotherm, 2020). Therefore, in our experiment, we studied the two sunscreens from Biotherm: the non-green sunscreen Biotherm Lait Solaire, and the green Biotherm Waterlover (in the experimental group). During the experiment, we also used other sunscreens to manipulate our motive. We added one sunscreen from Rudolph Care, Piz Buin, Nivea, Cosmica, and Hawaiian Tropic, as we believed that these are some of the most well-known brands in the sunscreen sector. In this mix, there was one green brand (Rudolph Care) and cheaper and more high-end alternatives.

We conducted ten interviews (Appendix A2 - A11), where we divided the participants into two sample groups, with five participants in each group. The Experimental Group was presented with seven sunscreens, where Biotherm offered both a green and a brown sunscreen. In comparison, the Control Group

was presented with six sunscreens, where Biotherm offered only the brown sunscreen. To carry out the mind-mapping experiment, we used the materials presented in Table 1.

Table 1

Pre-Study Materials

Items	Description	Sample Group*
Mind map	Appendix X	1, 2
Sunscreens (7) **	200ml, 30SPF, Lotion format	1
Sunscreens (6) ***	200ml, 30SPF, Lotion format	2
Post-it notes	Five notes per sunscreen	1, 2
Cellphone	One, to record the interview	1, 2
Question sheet	Appendix X	1, 2

*1= Experiment, 2 = Control

** Biotherm Lait Solaire, Biotherm Waterlover, Nivea, Rudolph Care, Piz Buin, Cosmica, Hawaiian Tropic

*** Biotherm Lait Solaire, Nivea, Rudolph Care, Piz Buin, Cosmica, Hawaiian Tropic

3.1.2 Measures

For the first 5 minutes, a normal conversation took place to make the participants feel comfortable. After gathering the necessary data regarding their demographics, we presented an outlined mind map (Appendix A12). We placed the outlined mind map in front of them and explained what it was. Moving forward, we put six or seven (depending on the group) sunscreens in front of the participants and asked them to study them, letting them know that they could feel free to touch, look, feel and smell the different sunscreens. Next to each bottle were five post-it notes with the sunscreen's name, explaining to the participants that we wanted them to rank the sunscreens on the different attributes (branches) on the mind-map, by using the post-it notes provided. The variables we wanted to examine were the attributes Price, Effectiveness, and Environmental Friendliness, as well as the participants' preference and purchase intention. The goal was to ask short questions, hoping for- and encourage lengthy responses to understand the reasoning behind their actions and identify their thinking processes. We also

asked other related questions regarding perceived greenness throughout the experiment (Appendix A13).

After completing the mind-mapping experiment, we chose to add a session with questions regarding their pro-environmental behavior (Appendix A14). Here, the participants rated six environmental statements from Strongly Agree (1) to Strongly Disagree (7) on a seven-point Likert scale. Here, the objective was to detect if the participants' pro-environmental behavior could serve as a moderator for green preference. After ranking the statements, we initiated a conversation about why they made their decisions. The conversation was a way to look into their knowledge regarding green products and certified labels and their green consumption consciousness.

3.2 Results

3.2.1 Mind-Mapping

The dimensions Price and Environmental Friendliness suggested a significant difference between the groups through the conversations and the mind-mapping experiment. The other three branches did not give strong enough results for us to detect any specific patterns.

The perception of Price depended on the brand, design, and sales outlet for both groups (e.g., sunscreens sold at the pharmacy were more expensive than sunscreens sold at the food store). Furthermore, the pattern showed that products with certified green labels were placed as "High Priced" in both groups with Rudolph Care (green), and with Biotherm Waterlover (green) in the experimental group. However, the brown sunscreen tended to follow the green sunscreen into the experimental group's high price category. In contrast, the control group tended to rate the brown sunscreen as moderately priced. This pattern suggested that the perceived price would increase on the brown product when a green product was present in the same product line.

The Environmental Friendliness branch created a clear pattern, where most of the participants looked for details on the bottle that made them believe the item was green (i.e., labels). Three main things prevailed as reasons for their high ratings: 1. green labels, 2. organic ingredients, 3. green leaf icon. These dimensions ensured that Biotherm Waterlover ranked as a constant high in the experimental group, together with Rudolph Care. Simultaneously, Nivea was ranked greener than other non-green sunscreens because of the company-produced green leaf icon. The brown sunscreen was often placed on moderate in the experimental group, while it was more consistently chosen as high in the control group.

When the experimental group was presented with both Biotherm products to rate from 1 to 10 (10 = extremely environmentally friendly), it was clear that it made the participants believe that Biotherm Lait Solaire had to be much less sustainable Biotherm Waterlover. When asked if there was a difference in environmental friendliness, it was clear that most believed there was. To ensure that this finding was reliable, we removed Biotherm Waterlover in the control group, allowing us to test the results accordingly. As a result, the brown sunscreen's average green perception increased from the experimental group (4.9) to the control group (6.7). This apparent difference in mean suggested a clear pattern in which the new green product introduction could serve as an item for a horn effect across the original product line.

Moreover, we also tested the difference in the overall green perception of Biotherm as a brand. The experimental group (6.2) had a slightly lower result than the control group (6.5). However, this difference was not as apparent as the differences in product perceptions, and we would need a larger sample pool (as in Study 2) to research this further.

3.2.2 Pro-environmental behavior

The pro-environmental behavior, measured from the six different statements, showed that most of our participants had an average to low mean result, suggesting that neither had any outstanding pro-environmental behavior or beliefs.

None of the participants identified themselves as experts in green consumption, expressing that they did care, but found it somewhat hard to make environmentally friendly choices. Furthermore, they all recognized the Nordic Swan Label and agreed that a certified label would increase their green perception. However, not all of them used the label to identify the green products in the mapping session. This discrepancy explains why they, on average, neither agreed nor disagreed that they "look after certified labels (such as the Nordic Swan) as a method to identify environmentally friendly products when purchasing personal goods". Therefore, the participant's pro-environmental behavior was not diverse enough and could not be used to detect whether it could be a moderator when ranking different product attributes.

3.3 Discussion and Conclusion

By mapping the participants' mindset in how they perceived the different sunscreens, two distinct factors stood out as notably different between the experiment and control group, including environmental friendliness and Price. In the Price category, the brown sunscreen price seemed to always increase in the experimental group, following the price of the green sunscreen. When we looked into their green perceptions of the products, the experimental group rated the brown sunscreen as much less environmentally friendly than the control group, showing an apparent and robust basis for a possible horn-effect in both price perception and green perception.

Although the small experiment showed many exciting and helpful patterns, the sample size was not large enough to find any significant differences. Therefore, this mind-mapping experiment served as a basis and pre-study for the online experiment (Study 2), building on this experiment's findings and patterns.

4.0 Study 2: Online Experiment

To build on the experimental mapping session (Study 1), we created an online experiment with a between-subjects design. Here, the participants were randomly assigned to either the experimental or the control group. The experiment had only one condition (one product w/ green label vs. another non-green product from the same brand). The disadvantages of this design are the potential lack of internal validity as it does depend on random assignment, and within-subjects design often offers a substantial boost in statistical power (Charness et al., 2012).

4.1. Method

One hundred and twenty-four participants, (Male: 45, Female: 79) completed this approximately 10-min online survey. The average age of participants was 23, ranging from 18 to 56 (Table 2: Descriptive Statistics) Our initial sample size consisted of 209 participants. However, 85 participants needed to be removed from the data as it did not satisfy the conditions and did not fully complete the survey.

A virtual snowball sample was utilized, recruiting participants through Facebook (Baltar & Brunet, 2012). The majority of the participants entered the online experiment through Facebook posts and were not approached directly through email, direct messages, etc. In other words, within the authors' Facebook friends' scope, the participants were randomly selected and participated on their own will. This technique has both advantages and disadvantages. In this case, choosing to experiment online was due to the ongoing Covid-19 crisis, as the timing was in the middle of a Norwegian lockdown. An advantage with virtual sampling is that it can increase the number of responses compared with traditional snowball sampling, as well as the participant might trust the researchers more since the researchers are sharing their personal information on their Facebook profiles (Baltar, 2012). In this case, the most significant disadvantage is that it limits the characteristics and demographics of the online population, such as gender, age, education level, and socioeconomic level (Baltar, 2012). Thus, the exact population size cannot be determined, and generalizations are harder to make.

Table 2

Descriptive Statistics

Measure	Item	Frequency	Percentage
Gender	Female	79	64%
	Male	45	36%
	Total	124	100%
Age	18-25	77	62%
	26-35	34	27%
	36-45	7	6%
	46-55	3	2%
	56+	4	3%
	Total	124	100%
Sample Group	Experimental	63	51%
	Control	61	49%
	Total	124	100%
Education	High School	11	9%
	Bacherlor's degree	76	61%
	Master's degree	23	19%
	Other	14	11%
	Total	124	100%

4.1.1 Procedure

The survey was constructed and distributed using the Qualtrics Survey Software.
Through the randomization feature in Qualtrics, participants were randomly
assigned to one of two experimental conditions. Both groups started the survey by
looking at an image of 6 or 7 sunscreens (depending on group) (see Figure 1) and
asked to take a close look before rating different attributes of the different
sunscreens. The info provided in the picture was that the sunscreens had the same
size (150 ml) and the same SPF (factor 30) to avoid any influential biases. We
assumed that Biotherm, the brand we were focusing on for the experiment, would
be a brand with a high brand awareness across participants. This was proven by
the questions regarding the sunscreens brand familiarity and purchase history in
the start of the survey. The authors are aware that this makes it harder to control
external factors and control external validity; however, it also made the
experiment more realistic for the participants.
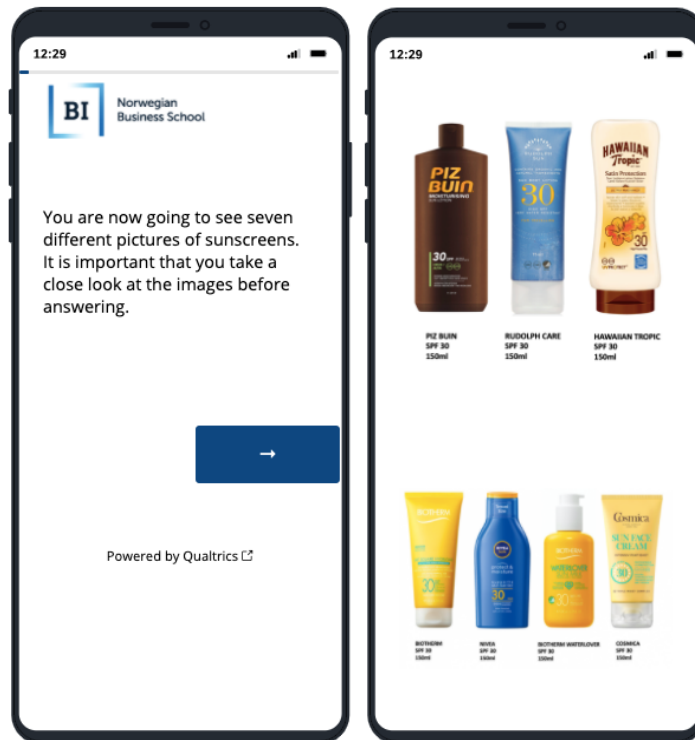
Figure 1: Screenshot of introduction in Qualtrics (Experimental Group)

The independent variable was the new green product with the certified green label (Biotherm Waterlover), which was only introduced to the experimental group, together with the original brown sunscreen (Biotherm Lait Solaire). In contrast, the control group only got to see the brown sunscreen to detect possible differences. Overall, this experiment aimed to determine whether the certified green label served as an item for a horn effect across the product portfolio. To assess manipulation effects, participants in each group had to rate the attributes for the other well-known sunscreens from Nivea, Piz Buin, Hawaiian Tropic, Cosmica, as well as another green certified sunscreen from Rudolph Care. The participants ended the online experiment by answering questions about their demographics.

For the main part of the survey, the participants ranked the sunscreens in the following categories:

- *Price* ("High", "Moderate", "Low")
- *Effectiveness* ("High", "Moderate", "Low")
- *Environmental Friendliness* ("High", "Moderate", Low")
- *Preference* ("Like", "No Preference", "Do Not Like"), and
- *Purchase Intention* ("Would Buy", "Would Consider", "Would Not Buy")

Here, the categories had three different groups in which the participants could place them (e.g., "Like", "No Preference", "Do Not Like") in order to mimic the mind-mapping in the Pre-Survey (Study 1). See Figure 2 for an example. In SPSS, these numbers translated to 1-7, depending on placement within categories. Because of the category placements there were some weaknesses to this method (see Limitations, Chapter 7). In this instance, a lower rating (closer to 1) was the highest and best outcome. After the ranking, the participant was asked why they placed the sunscreens where they did.

Place and rank the sunscreens (items) where you think they belong.

Items	High Price	
	1	Rudolph Care
	2	Biotherm Waterlover
	3	Biotherm

Moderate price	
1	Cosmica

Low price	
1	Nivea
2	Hawaiian Tropic
3	Piz Buin

Figure 2: Screenshot from the ranking system in Qualtrics

4.2 Data analysis

For the analysis of the data, we used the well-known and acknowledged statistical software SPSS (Statistical Package for the Social Sciences). In the following chapter, the analysis for all the hypotheses will be presented sequentially together with each hypothesis's initial results. To avoid confusion, the scale goes from 1-7, where 1 is the "highest" and the best for all of the data. The specific findings will be elaborated on through a more thorough discussion in the General Discussion chapter.

4.2.1 Hypothesis 1a

H1a: Consumers' estimation of the greenness, price and effectiveness of the existing brown product will be negatively influenced by the introduction of the new green product.

An independent samples t-test was performed to test whether the experimental group more negatively perceived the brown sunscreen vs. the control group, on the perception of *Price, Effectiveness* and *Environmental Friendliness*. On this scale, for the sake of clarification, the lowest number is the best/highest (e.g., 1 = very environmentally friendly, 1 = very high price, 1 = very effective).

Table 3

Descriptive Statistics for the Ranking of Price, Effectiveness and Environmental Friendliness

Perception	Group	Mean	SD	N
Price	Experiment	2.15	.893	40
	Control	1.68	.771	44
Effectiveness	Experiment	2.37	.951	46
	Control	2.06	.938	52
Environmental Friendliness	Experiment	1.93	.829	27
	Control	1.42	.614	33

In the *Price* category, the experimental group ($N = 40$) ranked the brown

sunscreen as less expensive (M = 2.15 (SD = .893) than the control group (N = 44, M = 1.68, SD = .771). The assumption of homogeneity of variances was tested and satisfied via Levene's F test, F (82) = .79, p = .375. The independent samples t-test was associated with a statistically significant effect, t(82) = 2.58, p = .012. Furthermore, Cohen's d was estimated at 0.56, which is suggesting a large effect based on Cohen's (1992) guidelines. Calculated as following: Cohen's d = ($M2$ - $M1$)∕SDpooled = (1.68 - 2.15)∕0.834233 = 0.563392.

For the perception of the sunscreens *Effectiveness*, the experimental group (N = 46) perceived the brown sunscreen as less effective (M = 2.37 (SD = .951) vs. the control group (N = 52, M = 2.06, SD = .938). The assumption of homogeneity of variances was tested and satisfied via Levene's F test, F (96) = .006, p = .938. The independent samples t-test was, however, not associated with a statistically significant effect, t(96) = 1.63, p = .106, and no further tests were conducted.

For the rankings of *Environmental Friendliness*, the experimental group (N = 27) ranked the brown sunscreen as less environmentally friendly (M = 1.93, SD = .83) vs. the control group (N = 33), which ranked the sunscreen with M = 1.42 (SD = .614). The assumption of homogeneity of variances was tested and satisfied via Levene's F test, F (58) = .51, p = .476. The independent samples t-test was associated with a statistically significant effect, t(58) = 2.69, p = .009. Cohen's d was estimated at 0.70, which is suggesting a large effect based on Cohen's (1992) guidelines. Calculated as following: Cohen's d = ($M2$ - $M1$)∕SDpooled = (1.42 - 1.93)∕0.730033 = 0.698599.

The results provide a partial support for H1a, as both the perception of *Price* and *Environmental Friendliness*, just like the findings suggested in the Pre-Survey (Study 1), have statistically significant differences. With this, the experimental group rates the brown sunscreen as more expensive and less environmentally friendly than the control group. In other words, it shows that the introduction of the green product serves as a horn effect across the line of the existing brown products, making the consumers estimate the price and greenness as worse than before.

Table 4

Independent Samples T-Test

Perception		Levene's test	Independent *t*-test		
		F	*T*	*df*	*SE*
Price	**Equal variances assumed**	**2.15**	**2.578***	**82**	**.182**
	Equal variances not assumed				
Effectiveness	**Equal variances assumed**	**2.37**	**1.632**	**96**	**.191**
	Equal variances not assumed				
Environmental Friendliness	**Equal variances assumed**	**1.93**	**2.592***	**58**	**.186**
	Equal variances not assumed				

* p < .05

4.2.2 Hypothesis 1b

H1b: Consumers' preference and purchase intention of the existing brown product will be negatively influenced by the introduction of the new green product.

An independent samples t-test was performed to test whether the experimental group both liked the brown sunscreen less and was less inclined to purchase the brown sunscreen vs. the in the control group. Again, the scale is from 1-7, where 1 is the highest and best number.

Table 5

Descriptive Statistics for the Ranking of Preference and Purchase Intention

Perception	Group	Mean	SD	N
Preference	Experiment	2.61	1.285	38
	Control	1.72	.734	43
Purchase Intention	Experiment	2.7	1.631	37
	Control	2.07	1.043	44

For the ranking of *Preference*, the experimental group ($N = 38$) liked the brown sunscreen ($M = 2.61$ ($SD = 1.285$) less than the control group ($N = 43$), which on average ranked the sunscreen with $M = 1.72$ ($SD = .734$). The assumption of homogeneity of variances was tested and scored via Levene's F test, $F(79) = 14.12$, $p = .000$. This result means that equal variances between the groups are not assumed. Therefore, the degrees of freedom were adjusted from 79 to 57. However, the independent samples t-test was associated with a statistically significant effect, $t(57) = 3.74$, $p = .000$. Furthermore, Cohen's d was estimated at 0.85, which is suggesting a high effect based on Cohen's (1992) guidelines. Calculated as following: Cohen's $d = (M2 - M1) / SD\text{pooled} = (1.72 - 2.61) / 1.046418 = \underline{0.850521.}$

For the ranking of *Purchase Intention*, the experimental group ($N = 37$) had a lower purchase intention ($M = 2.70$, $SD = 1.631$) than the control group ($N = 44$, $M = 2.07$, $SD = 1.043$). The assumption of homogeneity of variances was tested and scored via Levene's F test, $F(79) = 9.737$, $p = .003$. This result means that equal variances between the groups are not assumed. Therefore, the degrees of freedom were adjusted from 79 to 59. However, the independent samples t-test was associated with a statistically significant effect, $t(59) = 2.04$, $p = .046$. Furthermore, Cohen's d was estimated at 0.46, which is suggesting a medium effect based on Cohen's (1992) guidelines. Calculated as following: Cohen's $d = (M2 - M1) / SD\text{pooled} = (2.07 - 2.7) / 1.368943 = \underline{0.460209.}$

The results provide full support for H1a, as both the *Preference* and the *Purchase Intention* is significantly worse in the experimental group, suggesting that people have a lower preference and purchase intention for the existing brown product when a new green product is introduced.

Table 6

Independent Samples T-Test

| Perception | | Levene's test | | Independent *t*-test | |
		F	T	df	SE
Preference	Equal variances assumed	2.15	3.858	79	.229
	Equal variances not assumed		**3.738****	**57**	**.237**
Purchase	Equal variances assumed	2.37	2.118	79	.300
Intention	**Equal variances not assumed**		**2.042***	**59**	**.311**

** p < .01

* p < .05

4.2.3 Hypothesis 1c

H1c: Consumers' environmental perception of the non-green brand will be negatively influenced by the introduction of the new green product.

We want to address whether consumers' green perception of the non-green brand will be negatively affected by the introduction of the new green product. Here, the participants were asked to rate the brands from most Environmentally Friendly (1) to least Environmentally Friendly (7) on a 7-point Likert-scale.

Table 7

Descriptive Statistics for the Perceived Greenness of Brand

Perception	Group	Mean	SD	N
Environmental	Experiment	2.78	1.301	63
Friendliness	Control	2.03	1.238	61

For the brand's perception, the experimental group ($N = 63$) ranked the brown sunscreen as less environmentally friendly ($M = 2.78$, $SD = 1.301$) than the control group ($N = 61$, $M = 2.03$, $SD = 1.238$). An independent samples t-test was performed to detect whether there were any statistically significant differences in the brand's green perception. The assumption of homogeneity of variances was tested and scored via Levene's F test, $F (122) = .17$, $p = .734$. This result means that the variances between the groups are assumed to be equal. The independent

samples t-test was associated with a statistically significant effect, $t(122) = 3.26$, $p = .001$. Furthermore, Cohen's d estimated at 0.59, which suggests a large effect based on Cohen's (1992) guidelines. Calculated as following: Cohen's d = (M2 - M1)∕SDpooled = (2.03 - 2.78)∕1.269379 = 0.59084.

The results suggest a full support for H1c, and we can conclude that there is a negative change in consumers' perception of brand when a non-green brand introduces a new green product.

Table 8

Independent Samples T-Test

		Levene's test		Independent *t*-test	
Perception		*F*	*T*	*df*	*SE*
Environmental	**Equal variances assumed**	**.116**	**3.265****	**122**	**.228**
Friendliness	Equal variances not assumed				

** p < .01

4.2.4 Hypothesis 2

H2: The effect of the certified green claim on the brown product estimation is less pronounced at higher levels of pro-environmentalism.

As an additional hypothesis, we wanted to detect possible differences between the participants on their pro-environmental behavior and see if this could be a factor that influenced the differences between groups. This theory builds on the literature in which a consumer with a lack of (green) knowledge would be more likely to be affected by the halo/horn effects. The participants' pro-environmentalism was measured with a 7-point Likert-scale, ranging from 1 = Strongly Agree to 7 = Strongly Disagree. The participants reported on the same questions as in Study 1.

The Cronbach's alpha on the scale was .447, indicating that it was too weak to be considered reliable. Therefore, we conducted a factor analysis to determine whether we could merge any greenness measurements into one. The Kaiser-Meyer-Olkin measure of sampling adequacy was .69, above the commonly

recommended value of .6, and Bartlett's test of sphericity was significant ($\chi 2$ (15) = 100.196, p < .00). The extraction method was the Principal Component Analysis (PCA) with orthogonal rotation. The initial Eigenvalues suggested two distinct components of the items that explained 90,2% of the variance (Appendix X, Table X). The Cronbach's alpha of the two new components showed 0.738 for the first component, indicating adequate scale reliability. The items that loaded to component 1 were the statements: "The Nordic Swan Label increases my green perception of the brand.", "I try to make environmentally friendly choices when purchasing personal goods.", and "I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods." The second component scored a Cronbach's alpha of .193, without any substantial increases in alpha by eliminating any items. Therefore, we chose to eliminate the second component and focus on the first. A single index for pro-environmentalism was achieved by adding the mean scores of the three items. The mean value of the pro-environmentalism score was 3.12, reflecting an overall medium green orientation of the sample. To examine possible interaction effects, following Lee et al. (2013), the participants were divided into two groups with high vs. low pro-environmentalism based on the ratings' median (x = 3).

A Two-Way Multivariate Analysis of Variance (MANOVA), using Wilk's Lambda, was employed to detect any interaction effects between pro-environmental behavior within and between the groups. The main effect of the group (experimental vs. control) is statistically significant, Wilk's Lambda=.624, $F(5,22) = 2.653$, $p < .05$, partial $\eta 2 = .70$. The other main effect, the pro-environmental behavior (Pro_Environmentalism) was statistically significant, with a 90% confidence level, Wilk's Lambda=.638, $F(5,22) = 2.494$, $p < .1$, partial $\eta 2 = .66$. However, the interaction between the group and the pro-environmental behavior (Group*Pro_Environmentalism) was not statistically significant; Wilk's Lambda=.744, $F(5,22) = 1.513$, $p = .226$, partial $\eta 2 = .43$. This result tells us that the variation in mean rankings between the two groups does not vary as a function of different pro-environmental behavior among the participants. From Table 9, we see that there are only two statistically significant measures.

Table 9

Two-Way MANOVA Summary

Source	Value	F	df	partial η2
Group	.624	2.653*	5,22	.697
Pro-Environmentalism	.638	2.494**	5,22	.666
Group * Pro-Environmentalism	.744	1.513	5,22	.430

* p < .05

** p < .1

Furthermore, to determine how the dependent variables differed, we examined the Univariate ANOVA results. Between the two levels of Pro-Environmentalism, only the variable *Purchase Intention* was statistically significant (F(1,26) 6.705, *p* =.016, partial η2 = .70) (see Table 10).

Table 10

Test of Between-Subjects Effects

Source	Measure	Type III Sum of Squares	df	Mean Square	F
Group (experimental vs. control)	Env.friendly	3.267	1	3.267	6.245*
	Price	.600	1	.600	.897
	Effectiveness	.417	1	.417	.409
	Preference	4.817	1	4.817	6.537*
	Purchase Intention	3.75	1	3.75	3.421
Pro - Environmentalism	Env.friendly	.067	1	.067	.127
	Price	2.400	1	2.400	3.586
	Effectiveness	.15	1	.15	.147
	Preference	.817	1	.817	1.078
	Purchase Intention	7.35	1	7.35	6.705*

Thus, the participants with a lower pro-environmental behavior had a higher average purchase intention ranking of the brown sunscreen vs. the participants

with a higher pro-environmental behavior (High, $M = 1.900$ vs. Low, $M = 2.950$).
See table 11 for a summary of all average rankings in the high and low pro-
environmental groups.

Table 11

Pro-Environmental Groups Ranking Summary

Dependent variable	Pro-Environmental Behavior	Mean	SE
Env.friendly	High	1.600	.198
	Low	1.700	.198
Price	High	2.250	.224
	Low	1.65	.224
Effectiveness	High	2.2	.276
	Low	2.35	.276
Preference	High	1.900	.238
	Low	2.250	.238
Purchase Intention	High	1.900*	.287
	Low	2.950*	.287

In sum, we cannot support H2 as there was not enough evidence on multiple
rankings that the participants' pro-environmental behavior made a difference
between the groups. The only significant variable was *Purchase Intention*, which
had a larger mean rank (i.e. lower purchase intention) with the participants with a
low pro-environmental behavior.

4.3 Summary of results

Study 2 results indicate a horn-effect across different attributes when a non-green
company introduces a green product to a non-green product line, supporting the
research of halo and horn-effects in the gentle vs. strong category. In H1a, we
analyzed whether there were any statistically significant average differences in the
participant's rankings across the attributes of perceived *Price, Effectiveness,* and
Environmental Friendliness. Only perceived effectiveness did not show a
significant difference in the average ranking of all features, showing partial
support for H1a. For the perception of price and greenness, however, the brown

sunscreen was consistently rated worse in the experimental group, suggesting a green horn effect, similar to the results in the Pre-Study (Study 1). In H1b, we looked at two other dimensions of importance; *Preference* and *Purchase Intention.* Both factors were rated statistically significantly different between the experimental - and control group, suggesting the new green product served as an item for a horn effect. Even the green perception of the brand showed significant differences (H1c), although in this case, multiple brands showed the same result (see Appendix B2). This result implies that brown companies with a non-green product portfolio should think twice before introducing a new and green product to "please the consumers", as it might harm the existing products in terms of negatively estimated greenness, price preference, and purchase intention. Lastly, researching the last hypothesis H2, the pre-existing pro-environmental behavior of the participant (low vs. high) did not significantly differ on any of the variables, except their purchase intention, which was more prominent in the group with a low pro-environmental behavior. More on what the results imply and the possible consequences for the companies will be discussed below.

5.0 General Discussion

This research explored how consumers use new green product introductions (with certified green labels) as a heuristic cue to draw judgments of the existing products in the same product line. The research also examined whether this extended to the brand itself. For this purpose, we identified one main research question:

"*When a non-green brand introduces a green product, how does the consumers' perception of the existing brown products change, and does the new green product serve as an item for a horn effect across both existing products and brand image?*"

5.0.1 Product attributes

When examining H1a, we found that across the three dimensions of *Environmental Friendliness, Price, Effectiveness,* all but the perception of *Effectiveness* showed a significant difference between the control and

experimental group. The differences in mean were subsequently always lower in the control group, suggesting that the control group perceived the non-green product's attributes as more favorable than the experimental group across all categories (seeing that the "highest/best" number was 1). Although we controlled for the differences by including different sunscreens, the average difference of ratings of the other sunscreens was very robust between the two groups and showed little to no difference. When the brand implemented the new green product, the "Environmentally Friendly" evaluation of the existing product was greatly diminished. This effect suggests that the new product served as a type of a "reminder" that the existing product did not meet the same requirements for the certified green label. Regarding the difference in effectiveness and price, research has found that consumers perceive green products to be less effective than conventional products (Gleim et al., 2013; Lin and Chang, 2012; Newman et al., 2014). Gleim et al., (2013), among other researchers, also found the perceived price point to be of negative effect. In our analysis, the different perceptions of effectiveness did not yield any significant results. Regarding the price, it is interesting to see that the perception of the brown product's price followed the green product in the experimental group. The double price increase suggests that consumers do not only think that the green product will be more expensive but also believe that the conventional product will increase in price as well.

5.0.2 Preference and Purchase Intention

With H1b, examining *Preference,* and *Purchase Intention*, the two groups had a significantly different average of ratings. On the contrary, from how the participants rated price, greenness, and effectiveness, these two dimensions could further suggest whether there are risks of cannibalization of existing product portfolios, supporting the research of Yenipazarli & Vakharia (2013). As both the preference and purchase intention got lower in the experimental groups, this result suggests potential liability for the non-green companies aiming to introduce green products. In our study, the only factor that differentiated the two sunscreens were the certified green Nordic Swan Label. According to Horne (2009), the introduction of certified green labels minimizes consumer confusion, increases consumer trust, and is a tool for promoting. In this case, we can agree that the

green label minimizes consumer confusion. However, regarding consumer trust and a tool for advertising, our results clearly state the opposite, and the effect of the green label contradicts itself. Although research suggests that eco-labeling plays an essential role in purchasing decisions (Eurobarometer, 2009), in this case, it plays a critical role in diminishing the purchase intention. We think that this depends highly on the product category, which again supports the finding of Luchs et al., (2010) in how green products with strength-related attributes are more negatively perceived.

5.0.3 Green Brand Image

For the support of H1c, a statistically significant difference was detected between the groups concerning the green perception of the brand. In the experimental group, the average ranking of the brand's greenness scored higher (worse) than the control group, suggesting that the brand's green image was better before the introduction of a green product. There might be several reasons for this paradox; however, one might be the fact that the participants already thought of the brand as green. Then, when suddenly introducing a green product, the brand's image might shift as the participants suddenly realized that the brand was not that green after all. In other words, the brand reminded the consumers that they did not have any other certified green products in their product portfolio. This result adds a contradicting finding of Karjaluoto & Chatterjee (2009), which found that green line extensions added positive associations to the parent brand. However, this study researched the effects of pet products, which we would argue fits in the gentle product category, and hence also supports the critical difference. With 72% of CEOs globally claiming one of the most significant drivers to take sustainable action is the "brand, trust and reputation" (Lacy and Hayward, 2011), CEOs need to know which product category their business fits in.

5.0.4 Pro-Environmentalism as Moderator

Lastly, with H2, we wanted to examine how the participants' differences in pro-environmentalism could serve as moderators for the results. In this case, the hypothesis was not supported as there were not enough statistically significant results from the different variables. The only variable influenced by the

participant's pro-environmental status was the purchase intention, which, ironically enough, scored higher with the participants with low pro-environmental status (higher score = lower purchase intention). Ironically, it means that the group with a higher pro-environmental behavior was more inclined to purchase the brown product than the group with lower green knowledge. Several factors can explain this paradox. The brand could have a moderating effect as several of the participants already thought of Biotherm as a greener brand due to "Bio" being part of the name. The limitations of including real brands will be elaborated upon below. However, this finding supports Schuldt and Schwarz (2010) research that the higher levels of pro-environmentalism made the participants more likely to be affected than the counterpart.

6.0 Implications and Directions for Future Research

6.1 Managerial implications

Our results imply that a green product introduction in a non-green product line might lead consumers to perceive its non-green products as worse than initially. This study suggests that new green products can serve as an item for a horn-effect across the product line and that this affects the consumer's perception of the existing product's eco-friendliness and price and a reduction in preference and purchase intention. This finding is especially vital for companies that operate within the strong product category, as we believe that sunscreen is expected to have a high quality and effectiveness. This result additionally confirms the already existing literature on trade-offs between sustainability and quality (e.g., Gleim et al, 2013; Lin and Chang, 2012; Newman et al., 2014). In this case, it seems like consumers think that one new green product will diminish the existing non-green products' attributes in the same category. Consumers might also believe that non-green companies that suddenly introduce green products do this out of unauthentic reasons or attempt to "greenwash" their consumers. This theory implies that product managers and the marketing team would have to tread carefully about how they communicate the new and eco-friendly products with this aspect in mind to avoid cannibalizing its existing product portfolio. This is especially vital in the

strong product category, as literature shows that gentle product categories can experience the opposite and yield positive results (Karjaluoto & Chatterjee, 2009).

Our study has some limitations that make it difficult to generalize or claim any revolutionary findings for managers. However, we believe that some take-outs from our research are worth noting. Our results contribute to the literature gap regarding green line extensions, the green horn effect, and the field of certified green labels. In addition to this, it shows that the certified green logo alone can distinguish between green- and non-green products and that the majority of people (in this case, 94%) know what it stands for, and few (23%) are confused by its meaning. However, as previously stated, the certified green label's positive vs. negative effect can depend significantly on the product category.

6.2 Implications for future research

Our literature review clearly shows that a green shift is happening and will continue to do so. Future research must look into all aspects of green consumption and corporate green strategies to find the ideal program to serve the consumer's demand for a green product, without cannibalizing existing non-green product portfolios. Future research should also look more closely into how gentle vs. strong products come into play, see if a halo-effect occurs for the gentle products, and see if the horn effect is consistent within the strong product category.

Moreover, we hope that researchers can use our thesis as a basis for future research, with a larger sample size and fewer limitations, testing the effect across a larger number of product attributes. One interesting aspect would be to research how consumers' minds work when several mixed brands are presented, with multiple green and non-green products related to the same brand. In addition to this, it would be interesting to look at how several brands with a mix of green and non-green products would be ranked against each other and if the question of "fit" between the brand and the green product extension had a moderating effect. Additionally, it is essential to test if established brands are more affected by the halo/horn effect than smaller, niche brands. Therefore, we suggest that our study is replicated; however, instead of using well-known brands, the study should be

conducted with "unknown" brands to remove brand associations and have a straightforward design on the sunscreen bottles. Furthermore, as we tested our theory with a certified label as the distinctive green feature, future research should look at different aspects that create a green image, such as company produced logos, organic claims, product-name, and colors.

7.0 Limitations

Findings and conclusions should be taken with some caution since this study has several limitations. We have identified possible limitations to our research related to our samples and the two studies regarding how they were carried out. The focus is mainly on limits regarding the Covid-19 restrictions, as well as internal and external validity.

7.1 Covid-19 restrictions

Covid-19 restrictions led to many obstacles throughout our research period. The main obstacle that affected our results was the procedure of the experiment. Initially, this was not planned to be done online but in a controlled environment with adequate sample size, collected randomly without any prior relationship, and with a broader diversity between the participants. Due to the national lockdown in March 2020 and the restrictions that followed, we were unable to do so. However, we felt that we did the best we could with the means we had at the time and recognized valuable patterns and got significant results both in a smaller experiment and online.

7.2 Internal and external validity

To recognize limitations in empirical research, there are two fundamental dimensions of validity that are frequently discussed – internal and external validity. Researchers want to choose a research approach that increases the validity. Validity means whether the research methods and observations provide a satisfying reflection of the truth (Roe and Just, 2009). This means that if we can assume that X's relationship to Y is responsible for the observed results, determining a cause and effect relationship. Internal validity can be defined as

"the ability of a researcher to argue that observed correlations are causal" (Roe and Just, 2009, p. 1266). In contrast, external validity refers to "the ability to generalize the relationships found in a study to other persons, times, and settings" (Roe and Just, 2009, p. 1266). In other words, by definition, internal validity is not enough to achieve general validity; the findings must be able to apply in a real-world situation, thus for the results to be able to achieve external validity (Proctor, 2005, p. 256).

The Pre-Study (Study 1) was done in the living room of one of the authors with friends as participants due to government restrictions. In other words, many external factors could influence the results. Another mechanism that might lead to less internal validity is if the respondents experienced technical difficulties during the online experiment in Study 2. To ensure a more substantial validity for our online experiment, we placed "attention checks" throughout the survey to ensure that the respondents were attentive.

We must ensure that our sample can be generalized to the target population; if so, we have achieved external validity. External validity is defined as "Generalizability refers to the extent to which one can generalize from the observations at hand to a universe of generalizations" (Birks & Malhotra, 2006, p. 316) we must ensure that our findings fit this definition. For this to be the case, our sample must be as similar to the population as possible. Our online experiment (N = 124), assumes that the respondents in the different groups (experimental vs. control) are statistically comparable according to observable and unobservable traits. However, the distribution of age was not optimal. In both our studies, there was a clear majority of young adults. All participants in the mind mapping experiment were between the ages of 23-26, and 62% of respondents in the online experiment were between 18-25 years old. This most likely occurred since we, as authors, fit these boxes ourselves, and as we gathered our participants through Facebook, the majority of our Facebook friends would fit in the age group.

In addition to that, the mind mapping experiment should have had a larger sample size. In both experiments, there should be a third sample group that only rated the green sunscreen without the brown to also control for manipulations. In the online experiment, a mapping/rating system limited the scope of the scale. Instead of having three boxes in which the participants could place the sunscreens, we should have operated with a 7-point Likert scale to get more depth and larger sample size in each category. In this case, we could only examine the differences between the experimental- and control group that ranked the sunscreen in the same category (e.g., "High Price"). The results could also be somewhat confusing as the lowest average ranking was the most positive (e.g., a low mean score in purchase intention meant a higher purchase intention). In retrospect, we have learned that we could have reversed these numbers in SPSS before doing our analysis; thus, we would avoid confusion.

Additionally, as we had the ranking by category, there should be a replacement for the seventh sunscreen in the control group to ensure that the mean differences did not come from having one less sunscreen to rate. To ensure that the differences came from the test brand alone, there should also have been several sunscreens from the same brand in the mix, either non-green or green and non-green. Although we included one green sunscreen, we quickly found that the participants had limited knowledge of this particular sunscreen. Therefore, we should have included a more diverse selection of sunscreens and preferably a pre-test to see which sunscreens people were aware of.

Additionally, the fact that the study used established brand names could alter the results. Instead of using well-known brands, the study could have been conducted with unbranded, ordinary bottles to remove brand associations and environmental cues affecting the outcomes. Another issue with having real products and brands was other influential factors such as product name. Through our mind-mapping discussion, we noted that Biotherm Waterlover was constantly mentioned as "waterproof". This was because the name said "water". Many also thought of Biotherm as a green brand as the name included "Bio" in it. Lastly, the questions

we used to detect a pro-environmental behavior should be replicated by another well-respected survey instead of making our own (e.g., Lee et al., 2013).

8.0 Conclusion

In conclusion, this research supports Yenipazarli & Vakharia's (2015) study, adding to the findings that consumers can draw negative associations to the existing product line when a brown firm introduces a green product. Moreover, the results show how there is a difference in gentle vs. strong product categories in terms of halo - and horn effects. Additionally, the findings show how strength-related products are more likely to experience horn effects (Luchs et al., 2010). In the current marketplace, the increasing consumer demand for sustainable alternatives forces non-green companies to change their strategy and become more sustainable. Biotherm is one of many well-established brands trying to serve these needs with a sustainable sunscreen line. Other examples of brown companies suddenly introducing green products are e.g., Adidas with their new Parley line (running shoes made out of upcycled marine plastic waste) and Jordan Green Clean (a new toothbrush made out of 90% recycled material). Although these are all positive and innovative contributions to the marketplace, companies need to examine their consumer base, their product category, and other possible green strategies before introducing new green products in their non-green product line. As our results suggest, a green product introduction might harm the company's product sales of the existing portfolio and overall brand image.

This thesis does add to the existing literature in this field. However, the literature provided about green horn effects and green strategies is still scarce and somewhat contradicting. It is essential that more research is done to fill these gaps, to help companies find the correct fit for their green strategy. The green movement began over 50 years ago and has continued to grow. With our thesis, we are one step closer to filling the literature gap to ensure that companies can correctly adapt to the green era.

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Appendices

Appendix A: Pre-Study

Appendix A1: Question Sheet

1. Introduction to the interview:

   The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. Demographics:

   a. We want to get to know you a little better, so we will now ask you a few simple questions:
   b. How old are you?
   c. What gender do you identify with?
   d. What is your highest completed education?
   e. Where do you live?
   f. Have you ever used sunscreen?
   g. Have you ever purchased sunscreen?
   h. How do you describe your sunscreen usage, in other words, how often do you use sunscreen?
   i. Of the sunscreens on the table, how many do you recognize?
   j. Of the sunscreens on the table, have you ever purchased any of them?

3. Present Mind Map to participant

   The sheet placed in front of you is called a mind-map. You will now be asked to look at these 7/6 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking

you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. The first branch I want you to focus on is Price.
    a. Which of these products do you consider as high priced?
        i. Why would you consider these as high priced?
    b. Which of these products do you consider as low price?
        i. Why would you consider these as low priced?
    c. Which of these products do you consider in the middle and why?

5. The second branch I want you to focus on is effectiveness of the product, here we mean how well will it protect your skin from the sun.
    a. Which of these products do you consider as highly effective?
        i. Why would you consider these as highly effective?
    b. Which of these products do you consider to have a low effectiveness?
        i. Why would you consider these as having a low effectiveness?
    c. Which of these products do you consider as moderately effective and why?

6. The third branch I want you to focus on is the environmental friendliness of the product.
    a. Which of these products do you consider as highly friendly?
        i. Why would you consider these as highly friendly?
    b. Which of these products do you consider to have a low friendliness?
        i. Why would you consider these as having a low friendliness?

c. Which of these products do you consider as moderately friendly and why?

7. Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

8. The fourth branch I want you to focus on is preference
    a. Which of these products do you like?
        i. Why would you like these products?
    b. Which of these products do you not like?
        i. Why do you not like them?
    c. Which of these products do you not have a preference for and why?

9. The last branch I want you to focus on if you would ever buy any of the presented products?
    a. Which of these products would you buy?
        i. Why would you buy these products?
    b. Which of these products would you not buy?
        i. Why would you not buy them?
    c. Which of these products would you consider and why?

10. Pre-existing environmental habits
    a. Have you ever heard of certified label "Svanemerket"?

    b. How well do you agree with the following statements, from 1(strongly disagree) to 7 (strongly agree)?
        i. "The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."
        ii. "I try to make environmentally friendly choices when purchasing personal goods."

      iii.   "I find it hard to make environmentally friendly choices when purchasing personal goods."

      iv.   "I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

      v.   "I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

      vi.   "Brands without certified green labels are not sustainable"

11. *Experiment 1-5*

    a.   We want you to look at these two sunscreens (Biotherm Lait Solaire and Biotherm Waterlover)

      i.   Can you please tell me what you think of them

      ii.   Do you believe there is a difference in their environmental friendliness

      iii.   Can you rate each of these sunscreens from 1-10 (1 is bad, 10 is the best).

      iv.   Did you know that Biotherm had some environmentally friendly products before today?

      v.   How environmentally friendly would you rate Biotherm as a brand.

12. *Experiment 6-10*

    a.   We want you to look at this sunscreen (Biotherm Lait Solaire)

      i.   Can you please tell me what you think of it

      ii.   Can you rate this sunscreen from 1-10 (1 is bad, 10 is the best) based on environmentally friendliness.

      iii.   How environmentally friendly would you rate Biotherm as a brand.

      iv.   Did you know that Biotherm has an environmentally friendly sunscreen called waterlover?

Appendix A2: Interview transcript - Participant 1 (Experiment Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

    a. (I) How old are you?

        i. Participant (P) 24

    b. (I)What gender do you identify with?

        i. (P) Male

    c. (I)What is your highest completed education?

        i. (P) Bachelor's degree

    d. (I)Where do you live?

        i. (P) Oslo, Norway

    e. (I)Have you ever used sunscreen?

        i. (P) Yes

    f. (I)Have you ever purchased sunscreen?

        i. (P) I think so, but I am not certain

    g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

        i. (P) If I am being honest, only when I go to the beach.

    h. (I)Of the sunscreens on the table, how many do you recognize?

        i. (P)Three, Nivea, Piz Buin and Rudolph Care

    i. (I)Of the sunscreens on the table, have you ever purchased any of them?

        i. (P) If I have, I think it was Piz Buin

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 7 sunscreens. Feel free to touch, look and study the

different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.

    a. (I)Which of these products do you consider as high priced?

        i. (P) Biotherm Waterlover and Biotherm Lait Solaire

    b. (I)Why would you consider these as high priced?

        i. (P) Because the name Waterlover makes me believe it has extra qualities, that would result in a higher price. I placed Biotherm Lait Solaire there as well since they are in the same "family", and I believe this brand is exclusive.

    c. (I)Which of these products do you consider as low priced?

        i. (P) Nivea and Piz Buin

    d. (I)Why would you consider these as low priced?

        i. (P) I believe that Nivea is a cheap brand as it has mass-produced products and is available at any common grocery store. I also believe Piz Buin, for the same reasons as Nivea. However, I believe Nivea is the cheapest of the two.

    e. (I)Which of these products do you consider in the middle and why?

        i. (P) The rest of them, Rudolph Care more towards the expensive side, as the design looks more expensive. Then Cosmica, and lastly Hawaiian Tropic. Mainly based on how the bottles look. Hawaiian Tropic looks cheaper than Cosmica, but looks more expensive than Piz Buin. So basically, all of this is based on my gut feeling.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

    a. (I)Which of these products do you consider as highly effective?

        i. (P)Biotherm Waterlover and Biotherm Lait Solaire

b. (I)Why would you consider these as highly effective?

    i. (P) Biotherm Waterlover, due to the belief that it is highly effective in water, which means you hardly ever have to re-apply even if you go swimming. Biotherm Lait Solaire is also high, since it is the same brand, and I believe it to be a high quality brand.

c. (I)Which of these products do you consider to have a low effectiveness?

    i. (P)Nivea and Piz Buin

d. (I)Why would you consider these as having a low effectiveness?

    i. (P) I believe both of these brands are low since I perceive them as cheap.

e. (I)Which of these products do you consider as moderately effective and why?

    i. (P) I have placed Rudolph Care closer to highly effective, Cosmica in the middle, and Hawaiian Tropic closer to low, purely based on my gut feeling.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

a. (I)Which of these products do you consider as highly friendly?

    i. (P)Biotherm Waterlover and Rudolph Care

b. (I)Why would you consider these as highly friendly?

    i. (P) They have the certified eco-label "Svanemerket", and I conclude that makes them environmentally friendly. On the bottle, they also say they are recyclable.

c. (I)Which of these products do you consider have a low friendliness?

    i. (P)Nivea and Piz Buin

d. (I)Why would you consider these as having a low friendliness?

    i. (P) I just have this feeling that these products are bad, like not good for the planet, and I believe that the cheaper they are, the worse they are for the planet.

e. (I)Which of these products do you consider as moderately friendly and why?

   i.   (P)Hawaiian Tropic is placed closer to high, Biotherm Lait Solaire in the middle, and Cosmica closer to low. These are more neutral, since I see that some are recyclable, I think, and the rest are based on my good old gut feeling.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

   a. (P) 5, as I do not think it is good, but I do not think it is bad either. I believe that Biotherm is a brand that cares, but as the product does not have the Nordic Swan and I know that the Waterlover has it, I believe this one has to be less green, if that makes sense?

8. (I)The fourth branch I want you to focus on is preference

   a. (I)Which of these products do you like?

      i.   (P) Piz Buin, Rudolph Care, and Biotherm Waterlover.

   b. (I)Why would you like these products?

      i.   (P)I really like the smell of Piz Buin, it is really pleasant. I like Rudolph Care, since it has awards under its name. Lastly I like Biotherm Waterlover, since it makes me believe it is a good waterproof sunscreen, I am usually a lot in the water swimming, so I like it when they are waterproof and I can use this one. The name, Waterlover, makes me believe that this sunscreen holds better in the water as well, and I like that as I find it a hassle to always have to reapply sunscreen after I go swimming.

   c. (I)Which of these products do you not like?

      i.   (P) Nivea

   d. (I)Why do you not like them?

      i.   (P) Because it is mass-produced, a cheap product with bad quality.

   e. (I)Which of these products do you not have a preference for and why?

i. (P)Biotherm Lait Solaire, Hawaiian Tropic and Cosmica, Biotherm Lait Solaire is higher up then the others since it is in the family of Waterlover. The other two, I just do not know enough about them to have any strong feelings about them.

9. (I)The last branch I want you to focus on is if you would ever buy any of the presented products?
   a. (I)Which of these products would you buy?
      i. (P) Piz Buin, Biotherm Waterlover, Biotherm Lait Solaire
   b. (I)Why would you buy these products?
      i. (P) Piz Buin smells so good and it is easy to get a hold of it, as it is available in a lot of places, and I like the Biotherm brand, and the water aspect of Waterlover, so both deserve a spot on this part of the branch.
   c. (I)Which of these products would you not buy?
      i. (P)None
   d. (I)Why would you not buy them?
      i. (P) I would not, not buy them
   e. (I)Which of these products would you consider and why?
      i. (P) Rudolph Care Hawaiian Tropic, Cosmica, Nivea. All of them seem like good alternatives.

10. <u>Pre-existing environmental habits</u>
    a. (I)Have you ever heard of certified label "Svanemerket"?
       i. (P) Yes
    b. (I)How well do you agree with the following statements on a scale from 1, Strongly disagree to 7, Strongly agree?
       i. (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."
          1. (P) 7 - Strongly agree

    ii.   (I)"I try to make environmentally friendly choices when purchasing personal goods."

        1. (P) 1 - Strongly disagree

    iii.   (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

        1. (P) 3 - Somewhat disagree

    iv.   (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

        1. (P) 6 - Agree

    v.   (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

        1. (P) 3- somewhat disagree

    vi.   (I)"Brands without certified green labels are not sustainable"

        1. (P) 4 - neither agree nor disagree

11. (I) We want you to look at these two sunscreens (Biotherm Lait Solaire and Biotherm Waterlover)

    a. (I) Can you please tell me what you think of them

        i. (P) Same brand, same design, one is certified one is not. Only huge difference is the name Waterlover, I think.

    b. (I) Do you believe there is a difference in their environmental friendliness

        i. (P) No, not really. Or well, there is a difference, but probably not, even though one is certified.

    c. (I) Can you rate each of these sunscreens from 1-10 (1 is bad, 10 is the best).

        i. (P) Biotherm Lait Solaire 5, Biotherm Waterlover 8.

    d. (I) Did you know that Biotherm had some environmentally friendly products before today?

        i. (P) Yes

e. (I) How environmentally friendly would you rate Biotherm as a brand.

    i. (P) 7

Appendix A3: Interview transcript - Participant 2 (Experiment Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions

    a. (I) How old are you?

        i. (P) 26

    b. (I)What gender do you identify with?

        i. (P) Female

    c. (I)What is your highest completed education?

        i. (P) Bachelor's degree

    d. (I)Where do you live?

        i. (P) Oslo, Norway

    e. (I)Have you ever used sunscreen?

        i. (P) Yes

    f. (I)Have you ever purchased sunscreen?

        i. (P) Yes

    g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

        i. (P) I actually only use sunscreen on vacation abroad, but if it is really sunny I can use it here in Norway too.

    h. (I)Of the sunscreens on the table, how many do you recognize?

          i.   (P) I recognize Biotherm Lait Solaire, Nivea, Hawaiian Tropic, Piz Buin and Biotherm Waterlover. I do not recognize Rudolph Care

     i.   (I)Of the sunscreens on the table, have you ever purchased any of them?

          i.   (P) Cosmica and Piz Buin

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 7 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

   (I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.
   a. (I)Which of these products do you consider as high priced?
      i. (P)Biotherm Waterlover, Biotherm Lait Solaire, Rudolph Care
   b. (I)Why would you consider these as high priced?
      i. (P) Biotherm Lait Solaire is expensive, the brand is sold at pharmacies, and I believe that makes them more expensive. The only difference I see between the Lait Solaire and Waterlover is the water resistant factor. I think. Or I think the name Waterlover signals that it is water resistant. But both are high since they are the same brand. Waterlover is probably the most expensive of the two. Rudolph Care looks expensive, and that is why I placed it there, and it has received awards, that probably makes it more expensive.
   c. (I)Which of these products do you consider as low priced?
      i. (P)Piz Buin, Nivea

    d. (I)Why would you consider these as low priced?

        i.   (P) I saw Piz Buin was on sale yesterday at my local store. Nivea I know is cheaper, since it is available everywhere, a cheaper option.

    e. (I)Which of these products do you consider in the middle and why?

        i.   (P)Cosmica and Hawaiian Tropic, since I have bought both, and feel like Cosmica is worth it. Hawaiian is cheaper than cosmica, I think. Not super cheap, but not not cheap.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

    a. (I)Which of these products do you consider as highly effective?

        i.   (P)Biotherm Waterlover and Biotherm Lait Solaire

    b. (I)Why would you consider these as highly effective?

        i.   (P) Biotherm is a well known brand, and so both sunscreens should be effective. Biotherm Waterlover is water resistant, and therefore should be more effective since you do not have to reapply all the time, since you can swim with it. So I think Waterlover is the most, most effective, even though I do not believe there is a huge difference between the Biotherm products.

    c. (I)Which of these products do you consider to have a low effectiveness?

        i.   (P)Hawaiian Tropic

    d. (I)Why would you consider these as having a low effectiveness?

        i.   (P) I have used it before, and I did not like it. Bought it once, and never felt the need to purchase it again. Smells good though.

    e. (I)Which of these products do you consider as moderately effective and why?

        i.   (P)Cosmica, Rudolph Care, Piz Buin, Nivea. I believe the rest are good, but do not have really good reasoning to why. Cosmica on the higher side and Nivea and the lower, just

because Cosmica is sold at pharmacies and Nivea is sold
everywhere.

6. (I)The third branch I want you to focus on is the environmental
friendliness of the product.
    a. (I)Which of these products do you consider as highly friendly?
        i. (P)Rudolph Care
    b. (I)Why would you consider these as highly friendly?
        i. (P) It says that it is organic, so I guess this one has to be
           good right? Yeah I think so. I will place it as the highest. It
           is a test-winner too, so yeah.
    c. (I)Which of these products do you consider have a low
       friendliness?
        i. (P)None
    d. (I)Why would you consider these as having a low friendliness?
        i. (P)
    e. (I)Which of these products do you consider as moderately friendly
       and why?
        i. (P)Nivea has a green icon on it, the rest I just believe are
           moderate, that includes Cosmica, Biotherm Lait Solaire,
           Biotherm Waterlover, Piz Buin and Hawaiian Tropic. I
           believe that sunscreen in general is not environmentally
           friendly, but not like really bad. And they all have plastic
           bottles, so I think most are bad, but I do not feel like I know
           enough or have enough knowledge to rank these as really
           bad either. So I am just going to place all of them on
           moderate.
7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you
   rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness.
   Not comparing it to anything else in the room?
    a. (P) 6

8. (I)The fourth branch I want you to focus on is preference

a.　(I)Which of these products do you like?

    i.　(P) Piz Buin, Biotherm Waterlover, Biotherm Lait Solaire

b.　(I)Why would you like these products?

    i.　(P) I really like Piz Buin, it smells good and it is kinda like a habit, as I have always used this sunscreen. Biotherm Lait Solaire and Biotherm Waterlover since I really like the brand. They look expensive and have a nice design, even though I have not used them, I would still say that I like them, since I like other products from the brand.

c.　(I)Which of these products do you not like?

    i.　(P) Hawaiian Tropic

d.　(I)Why do you not like them?

    i.　(P) I used it once and I just do not like it. I have made the conclusion that I won't ever use it again, even though it smells good.

e.　(I)Which of these products do you not have a preference for and why?

    i.　(P) Rudolph Care, Cosmica, Nivea. I just bought Cosmica, but I have not tried it yet, so I do not have an opinion. Rudolph Care I do not know anything about. While Nivea is just ehh, if you know what I mean.

9.　(I)The last branch I want you to focus on is if you would ever buy any of the presented products?

a.　(I)Which of these products would you buy?

    i.　(P) Cosmica, Piz Buin

b.　(I)Why would you buy these products?

    i.　(P) I purchased Cosmica yesterday, because I could not find Piz Buin. So yeah, these were the ones I actually considered buying, and have bought.

c.　(I)Which of these products would you not buy?

    i.　(P) Hawaiian Tropic and Rudolph Care

d.　(I)Why would you not buy them?

i. (P) I have bought Hawaiian Tropic once, and I felt like it did not work, so I know I will never buy it again. I won't buy Rudolph Care, since it looks way too expensive.

e. (I)Which of these products would you consider and why?

i. (P) I would consider purchasing, Biotherm Lait Solaire and Biotherm Waterlover, because I like the brand, and I believe it is good, and Nivea is considerable since it is available everywhere and if I was desperate for sunscreen, I know I can always get my hands on Nivea.

10. <u>Pre-existing environmental habits</u>

a. (I)Have you ever heard of certified label "Svanemerket"?

i. (P) Yes

b. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

i. (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

1. (P) 5 - Somewhat agree

ii. (I)"I try to make environmentally friendly choices when purchasing personal goods."

1. (P) 1- Strongly disagree

iii. (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

1. (P) 7 - Strongly agree

iv. (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

1. (P) 1 - Strongly disagree

v. (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

1. (P) 7 - Strongly agree

> vi.   (I)"Brands without certified green labels are not
>
> sustainable"
>
>> 1. (P) 2 - Disagree

11. (I) We want you to look at these two sunscreens (Biotherm Lait Solaire
    and Biotherm Waterlover)

    a. (I) Can you please tell me what you think of them

        i.   (P) I consider them as effective products, and they do what
              they are supposed to do. I look at Biotherm as a well
              known, respected and safe brand, and I like it.

    b. (I) Do you believe there is a difference in their environmental
        friendliness

        i.   (P) I hope so, Waterlover should be, as it has the Nordic
              Swan label.

    c. (I) Can you rate each of these sunscreens from 1-10 (1 is bad, 10 is
        the best).

        i.   (P) Biotherm Waterlover 9, Biotherm Lait Solaire 6

    d. (I) Did you know that Biotherm had some environmentally friendly
        products before today?

        i.   (P) No

    e. (I) How environmentally friendly would you rate Biotherm as a
        brand.

        i.   (P) 7

Appendix A4: Interview transcript - Participant 3 (Experiment Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to
    complete and your participation is completely voluntary, and you have the
    right to leave the interview whenever you want. All of the collected data
    will be anonymous, and we will not use your name. The results will be
    treated confidentially and the results from this experiment will only be
    included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

    a. (I) How old are you?

        i. Participant (P): 23

    b. (I)What gender do you identify with?

        i. (P) Female

    c. (I)What is your highest completed education?

        i. (P) Bachelor's degree

    d. (I)Where do you live?

        i. (P) Oslo, Norway

    e. (I)Have you ever used sunscreen?

        i. (P) Yes

    f. (I)Have you ever purchased sunscreen?

        i. (P) Yes

    g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

        i. (P) Daily during the summer season, and if I am abroad.

    h. (I)Of the sunscreens on the table, how many do you recognize?

        i. (P) Cosmica, Piz Buin, Hawaiian Tropic, Biotherm Lait Solaire, Nivea

    i. (I)Of the sunscreens on the table, have you ever purchased any of them?

        i. (P) Cosmica, Piz Buin, Biotherm Lait Solaire and Hawaiian Tropic

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 7 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.
    a. (I)Which of these products do you consider as high priced?
        i. (P)Biotherm Waterlover, Biotherm Lait Solaire, Rudolph Care
    b. (I)Why would you consider these as high priced?
        i. (P) Rudolph Care since it is marketed as an award winner, Biotherm Lait Solaire, and Biotherm Waterlover since it is a well known, quality brand, and they can therefore price their products higher.
    c. (I)Which of these products do you consider as low priced?
        i. (P) Nivea and Piz buin is in between low and moderate.
    d. (I)Why would you consider these as low priced?
        i. (P) Since you can purchase them wherever, like H&M or Coop. Piz Buin is like a little more expensive, but still like available everywhere.
    e. (I)Which of these products do you consider in the middle and why?
        i. (P)Hawaiian Tropic and Cosmica. These you can find many places, and I have seen the prices, and they cost what I mean is moderate.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.
    a. (I)Which of these products do you consider as highly effective?
        i. (P)Cosmica and Biotherm Waterlover
    b. (I)Why would you consider these as highly effective?
        i. (P) Cosmica, since I believe it has won a lot of awards from the pharmacies in Norway. Biotherm Waterlover is placed as high since it is a good water resistance sunscreen or it

says so on the bottle, and that means it is effective in water as well.

   c. (I)Which of these products do you consider have a low effectiveness?

      i. (P)Hawaiian Tropic and Piz Buin

   d. (I)Why would you consider these as having a low effectiveness?

      i. (P) These are like made to make you tan, so the focus is not on protecting as much, in my opinion.

   e. (I)Which of these products do you consider as moderately effective and why?

      i. (P)Nivea, Rudolph Care and Biotherm Lait Solaire. Nivea has been around for awhile, and even though it is cheap does not mean it is not effective. Biotherm Lait Solaire because it is not water resistant, or does not have a fancy name like Waterlover does.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

   a. (I)Which of these products do you consider as highly friendly?

      i. (P)Cosmica and Biotherm Waterlover

   b. (I)Why would you consider these as highly friendly?

      i. (P) Cosmica since I know it has won a lot of awards, and I am hoping greenness is one of them. Biotherm Waterlover is placed on high, since it seems a little more exclusive than the other Biotherm Lait Solaire, and it talks a lot about water.

   c. (I)Which of these products do you consider have a low friendliness?

      i. (P) Hawaiian Tropic, Piz Buin, Nivea

   d. (I)Why would you consider these as having a low friendliness?

      i. (P) I think Piz Buin has a lot of bad chemicals that are harmful for the sea and coral reefs and stuff like that and I therefore put it as low. Same goes for the other two, just a feeling, I feel like they are a little shady.

e. (I)Which of these products do you consider as moderately friendly and why?

   i. (P)Biotherm Lait Solaire and Rudolph Care, Biotherm Lait Solaire because I have a good opinion of the brand. Rudolph Care since I do not know a lot about it, but it seems fine.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

   a. (P) 5

8. (I)The fourth branch I want you to focus on is preference
   a. (I)Which of these products do you like?
      i. (P) Cosmica and Biotherm Lait Solaire
   b. (I)Why would you like these products?
      i. (P) I really like the Cosmica bottle, and how easy it is to use, and that is why it is my personal go-to sunscreen. Biotherm Lait Solaire, because I like the brand.
   c. (I)Which of these products do you not like?
      i. (P)Nivea, Piz Buin (kinda, feel like i have to)
   d. (I)Why do you not like them?
      i. (P) I feel like Nivea did not match my skin-type, it was too sticky. I do not like Piz Buin as I feel like I have been told not to, because it is not good for the ocean and hormones or something like that, but I kinda still like, if I am being honest. I grew up with Piz Buin and it smells so good, so I guess it is kinda nostalgic.
   e. (I)Which of these products do you not have a preference for and why?
      i. (P)Rudolph Care, Biotherm Waterlover, Hawaiian Tropic. Hawaiian tropic is neutral since I have used it and I did not mind it, but did not love it either. Rudolph Care I have no

relationship towards, and therefore I have a rather neutral tone towards it. Biotherm Waterlover since I have not used it before, and feel like I can not have any opinion of it because of it, but I do like the brand.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?
    a. (I)Which of these products would you buy?
        i. (P) Cosmica, Biotherm Lait Solaire, Biotherm Waterlover
    b. (I)Why would you buy these products?
        i. (P)Cosmica I have bought multiple times, and Biotherm Lait Solaire because I like the brand and I would also buy the Waterlover version because of that.
    c. (I)Which of these products would you not buy?
        i. (P) Hawaiian Tropic, Piz Buin, Nivea
    d. (I)Why would you not buy them?
        i. (P) I care more about what I put on my body, and I listen to rumors regarding hormones and bad stuff in creams, and Nivea is just too sticky.
    e. (I)Which of these products would you consider and why?
        i. (P) I could consider Rudolph Care, if I knew more about it. I like that it has awards, so yeah I can consider it I guess.

10. Pre-existing environmental habits
    a. (I)Have you ever heard of certified label "Svanemerket"?
        i. (P) Yes
    b. (I)How well do you agree with the following statements on scale from 1, strongly disagree to 7, strongly agree?
        i. (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."
            1. (P) 6 - Agree
        ii. (I)"I try to make environmentally friendly choices when purchasing personal goods."

                       1. (P) 4 - Neither agree nor disagree

     iii.   (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

                       1. (P) 7 - Strongly Agree

     iv.   (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

                       1. (P) 5 - Somewhat agree

     v.   (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

                       1. (P) 6 - Agree

     vi.   (I)"Brands without certified green labels are not sustainable"

                       1. (P) 4 - Neither agree nor disagree

11. (I) We want you to look at these two sunscreens (Biotherm Lait Solaire and Biotherm Waterlover)

   a. (I) Can you please tell me what you think of them

      i.   (P) I think they look professional, especially Waterlover, I enjoy the design. The Biotherm Lait Solaire is nice as well, but I prefer a different type of bottle, like the Cosmica bottle. There is also way too much information on the bottle of Biotherm Lait Solaire, while Waterlover has a lot more icons, I like that better, as it is easier to process and I do not have to think as much.

   b. (I) Do you believe there is a difference in their environmental friendliness

      i.   (P) Not really, since it is the same brand. Why make one green and not the other? So maybe they just got the one certified, who knows.

   c. (I) Can you rate each of these sunscreens from 1-10 (1 is bad, 10 is the best).

          i.   (P) Biotherm Lait Solaire 7, Biotherm Waterlover 7

  d. (I) Did you know that Biotherm had some environmentally friendly products before today?

          i.   (P) Yes

  e. (I) How environmentally friendly would you rate Biotherm as a brand.

          i.   (P) 5

Appendix A5: Interview transcript - Participant 4 (Experiment Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

  a. (I) How old are you?

          i.   Participant (P) 23

  b. (I)What gender do you identify with?

          i.   (P) Female

  c. (I)What is your highest completed education?

          i.   (P) High School Diploma

  d. (I)Where do you live?

          i.   (P) Oslo, Norway

  e. (I)Have you ever used sunscreen?

          i.   (P) Yes

  f. (I)Have you ever purchased sunscreen?

          i.   (P) Yes

  g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

      i.   (P) Daily

  h. (I)Of the sunscreens on the table, how many do you recognize?

      i.   (P) All of them, with the exception of Hawaiian Tropic

  i. (I)Of the sunscreens on the table, have you ever purchased any of them?

      i.   (P) I have bought Cosmica, Biotherm Lait Solaire, Piz buin

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 7 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.

  a. (I)Which of these products do you consider as high priced?

      i.   (P) Biotherm Lait Solaire, Piz Buin, Cosmica

  b. (I)Why would you consider these as high priced?

      i.   (P) These are the ones I have bought, and I feel like they were expensive when I bought them, so that is why.

  c. (I)Which of these products do you consider as low priced?

      i.   (P) Nivea, Hawaiian Tropic

  d. (I)Why would you consider these as low priced?

      i.   (P) Nivea, since you buy it at the grocery store, and it can't be super expensive if it is from a grocery store. Hawaiian Tropic since it just looks super cheap, if you know what I mean.

  e. (I)Which of these products do you consider in the middle and why?

      i.   (P) Biotherm Waterlover and Rudolph Care, since I do not have personal experience with them, but they look more expensive than "grocery store" products.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

    a. (I)Which of these products do you consider as highly effective?

      i.   (P) Biotherm Waterlover

    b. (I)Why would you consider these as highly effective?

      i.   (P) Since it is waterproof, but I kinda believe that they are all the same since they are all have SPF 30… I am kinda confused by the question I guess.

    c. (I)Which of these products do you consider have a low effectiveness?

      i.   (P) None, as they all have a good sun protection level.

    d. (I)Why would you consider these as having a low effectiveness?

      i.   (P) None, as they all have a good sun protection level.

    e. (I)Which of these products do you consider as moderately effective and why?

      i.   (P) I believe that all of them are moderate, since all of them have the same protection level and that means they should all have the same effectiveness. Since one is waterproof, or the name is Waterlover, which I believe means waterproof, I will move that one to highly effective.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

    a. (I)Which of these products do you consider as highly friendly?

      i.   (P) Rudolph Care and Biotherm Waterlover

    b. (I)Why would you consider these as highly friendly?

      i.   (P) I am looking for certified labels, but they are hard to find, but I see now that Rudolph Care has one and Biotherm Waterlover has one.

    c. (I)Which of these products do you consider have a low friendliness?

        i.   (P) All of the rest

    d. (I)Why would you consider these as having a low friendliness?

        i.   (P) They do not have a certified label

    e. (I)Which of these products do you consider as moderately friendly and why?

        i.   (P) Rudolph Care and Biotherm Waterlover, since I am looking for certified labels, but they are hard to find, but I do see that Rudolph Care has one and Biotherm Waterlover has one. But I find it hard to say that sunscreen is green at all, but some that are better for us as users.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

    a. (P) 4

8. (I)The fourth branch I want you to focus on is preference

    a. (I)Which of these products do you like?

        i.   (P) Biotherm Lait Solaire, Cosmica, Piz Buin, Biotherm Waterlover

    b. (I)Why would you like these products?

        i.   (P)I like Biotherm Lait Solaire, I like Cosmica as well, since I have been using it lately and I am satisfied. I love the smell of Piz Buin, it smells so so good, I need this one. Biotherm Waterlover is here, since I like Biotherm Lait Solaire, so I must like this one as well.

    c. (I)Which of these products do you not like?

        i.   (P) Nivea, Hawaiian Tropic

    d. (I)Why do you not like them?

        i.   (P) I just do not like Nivea, no real reason, I just do not have a good impression of it. Same goes for Hawaiian Tropic

e. (I)Which of these products do you not have a preference for and why?

    i. (P) Rudolph Care, I do not have a lot of opinions, but I do not, not like it.

9. (I)The last branch I want you to focus on is if you would ever buy any of the presented products?

    a. (I)Which of these products would you buy?

        i. (P) Piz Buin, Biotherm Lait Solaire, Cosmica

    b. (I)Why would you buy these products?

        i. (P) I have already purchased these, and do like them so I would purchase again.

    c. (I)Which of these products would you not buy?

        i. (P) Hawaiian Tropic

    d. (I)Why would you not buy them?

        i. (P) It just looks cheap and not really appealing to me.

    e. (I)Which of these products would you consider and why?

        i. (P) Biotherm Waterlover and Rudolph Care are placed here just because I have recently bought sunscreen, so I do not need anymore at the moment, but do believe I can consider these next time I need to purchase sunscreen. I guess I could also consider Nivea if nothing else was available or if I was low on cash.

10. Pre-existing environmental habits

    a. (I)Have you ever heard of certified label "Svanemerket"?

        i. (P) Yes

    b. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree ?

        i. (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

            1. (P) 6 - Agree

    ii.   (I)"I try to make environmentally friendly choices when purchasing personal goods."

        1. (P) 4 - Neither agree nor disagree

    iii.   (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

        1. (P) 4 - Neither agree nor disagree

    iv.   (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

        1. (P) 5 - Somewhat agree

    v.   (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

        1. (P) 2 - Disagree

    vi.   (I)"Brands without certified green labels are not sustainable"

        1. (P) 1 - Strongly disagree

11. (I) We want you to look at these two sunscreens (Biotherm Lait Solaire and Biotherm Waterlover)

    a. (I) Can you please tell me what you think of them

        i.   (P) I like the packaging, there is a clear difference between them as one has a certified label, and the other does not.

    b. (I) Do you believe there is a difference in their environmental friendliness

        i.   (P) Not really, they are from the same brand, they look the same with the exception of the certified label.

    c. (I) Can you rate each of these sunscreens from 1-10 (1 is bad, 10 is the best).

        i.   (P) Biotherm Waterlover I rate as an 6, while Biotherm Lait Solaire as a 5

    d. (I) Did you know that Biotherm had some environmentally friendly products before today?

i.   (P) No

e.   (I) How environmentally friendly would you rate Biotherm as a brand.

i.   (P) 6.5

Appendix A6: Interview transcript - Participant 5 (Experiment Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions

a.   (I) How old are you?

i.   (P) 25

b.   (I)What gender do you identify with?

i.   (P) Male

c.   (I)What is your highest completed education?

i.   (P) Bachelor's degree

d.   (I)Where do you live?

i.   (P) Oslo Norway

e.   (I)Have you ever used sunscreen?

i.   (P) Yes

f.   (I)Have you ever purchased sunscreen?

i.   (P) Yes

g.   (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

i.   (P) Every time I tan, so every time I am in the sun

h.   (I)Of the sunscreens on the table, how many do you recognize?

i.   (P) All of them with the exception of Rudolph Care

    i.   (I)Of the sunscreens on the table, have you ever purchased any of them?

        i.   (P) Cosmica

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 7 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.
   a. (I)Which of these products do you consider as high priced?
      i. (P) Rudolph Care, Hawaiian Tropic, Biotherm Waterlover, Biotherm Lait Solaire
   b. (I)Why would you consider these as high priced?
      i. (P) They look more expensive, and Biotherm is a known brand, so you can only purchase that brand at more expensive places.
   c. (I)Which of these products do you consider as low priced?
      i. (P) Nivea and Piz Buin
   d. (I)Why would you consider these as low priced?
      i. (P) They both have low quality bottle design, that makes them look cheap.
   e. (I)Which of these products do you consider in the middle and why?
      i. (P) Cosmica, since I know what it costs, and I believe that to be a moderate price.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

    a. (I)Which of these products do you consider as highly effective?

        i. (P)Biotherm Lait Solaire, Biotherm Waterlover, Rudolph Care, Cosmica

    b. (I)Why would you consider these as highly effective?

        i. (P) Rudolph Care is highly effective, as well as Biotherm Lait Solaire and Biotherm Waterlover since Biotherm is a well-known cosmetics brand. Cosmica has won a lot of awards, which makes me believe it is highly effectiveness

    c. (I)Which of these products do you consider have a low effectiveness?

        i. (P)Hawaiian Tropic, Piz Buin and Nivea

    d. (I)Why would you consider these as having a low effectiveness?

        i. (P) I have read that both Hawaiian Tropic and Piz Buin have bad scores in different tests, and Nivea comes after that since I do not have a good opinion of the brand.

    e. (I)Which of these products do you consider as moderately effective and why?

        i. (P) None

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

    a. (I)Which of these products do you consider as highly friendly?

        i. (P) Rudolph Care and Biotherm Waterlover

    b. (I)Why would you consider these as highly friendly?

        i. (P) Rudolph Care is organic, awards winning and looks really good. Biotherm Waterlover is certified, and has a lot of labels and remarks on the bottle inclining that it is really good, I believe them to be honest, hence I place it as High on being environmentally friendly.

    c. (I)Which of these products do you consider have a low friendliness?

        i. (P)Cosmica, Biotherm Lait Solaire, Piz Buin, Hawaiian Tropic

      d. (I)Why would you consider these as having a low friendliness?

           i.   (P) Piz Buin and hawaiian tropic are moderate to low since they are internationally mass produced, they focus more on price than environmentally friendliness. Biotherm Lait Solaire does not have any certified labels, and does not talk about the environment and is therefore placed as low. Cosmica is placed as low to moderate since it does not say anything about its greenness.

      e. (I)Which of these products do you consider as moderately friendly and why?

           i.   (P) Nivea, they say they are biodegradable and therefore I place them as moderate.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

      a. (P) 3

8. (I)The fourth branch I want you to focus on is preference

      a. (I)Which of these products do you like?

           i.   (P) Cosmica

      b. (I)Why would you like these products?

           i.   (P) I have used Cosmica for many years, it works and feels nice on the skin.

      c. (I)Which of these products do you not have a preference for and why?

           i.   (P) The rest, as I do not really have any strong opinions regarding sunscreen.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?

      a. (I)Which of these products would you buy?

           i.   (P) Cosmica, Biotherm Waterlover, Biotherm Lait Solaire

      b. (I)Why would you buy these products?

          i.   (P) Cosmica of course, since I have bought it and Biotherm Lait Solaire and Biotherm Waterlover since I like Biotherm as a brand.

   c. (I)Which of these products would you not buy?

          i.   (P) Piz Buin and Hawaiian Tropic

   d. (I)Why would you not buy them?

          i.   (P) Since they come out bad in different tests

   e. (I)Which of these products would you consider and why?

          i.   (P) Rudolph Care looks exciting and I could consider buying it if I saw it when I was going to buy sunscreen and Nivea is my backup sunscreen, since it is available everywhere and I know I can always get my hands on it, if needed.

10. Pre-existing environmental habits

   a. (I)Have you ever heard of certified label "Svanemerket"?

          i.   (P) Yes

   b. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

          i.   (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

                1. (P) 5 - Somewhat agree

          ii.   (I)"I try to make environmentally friendly choices when purchasing personal goods."

                1. (P) 4 - neither agree nor disagree

          iii.   (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

                1. (P) 3 - somewhat disagree

          iv.   (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

                1. (P) 1- strongly disagree

        v.   (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

            1. (P) 2 - disagree

        vi.   (I)"Brands without certified green labels are not sustainable"

            1. (P) 1- strongly disagree

11. (I) We want you to look at these two sunscreens (Biotherm Lait Solaire and Biotherm Waterlover)

    a. (I) Can you please tell me what you think of them

        i.   (P) Waterlover seems more advanced, since it has a special name and has a certified label, being water resistance etc. But in all honesty, I do not think there is a huge difference between the two.

    b. (I) Do you believe there is a difference in their environmental friendliness

        i.   (P) Yes, since Waterlover explicitly says it is water-clean, ocean clean etc, I do believe it is more green than Biotherm Lait Solaire.

    c. (I) Can you rate each of these sunscreens from 1-10 (1 is bad, 10 is the best).

        i.   (P) Biotherm Waterlover is 9 and Biotherm Lait Solaire is 3

    d. (I) Did you know that Biotherm had some environmentally friendly products before today?

        i.   (P) No

    e. (I) How environmentally friendly would you rate Biotherm as a brand.

        i.   (P) 5.5

Appendix A7: Interview transcript - Participant 6 (Control Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the

right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:
    a. (I) How old are you?
        i. (P) 24
    b. (I)What gender do you identify with?
        i. (P) Female
    c. (I)What is your highest completed education?
        i. (P) Bachelor's degree
    d. (I)Where do you live?
        i. (P) Trondheim, Norway
    e. (I)Have you ever used sunscreen?
        i. (P) Yes
    f. (I)Have you ever purchased sunscreen?
        i. (P) Yes
    g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?
        i. (P) I use it when I know I am going to be in the sun, either sunbathing, working out or similar activities, but not if I am not planning on spending most of my time outside. Spring/summer seasons
    h. (I)Of the sunscreens on the table, how many do you recognize?
        i. (P) All, with the exception of this one (Rudolph Care)
    i. (I)Of the sunscreens on the table, have you ever purchased any of them?
        i. (P) Hawaiian Tropic, Cosmica, Piz Buin

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 6 sunscreens. Feel free to touch, look and study the

different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.
    a. (I)Which of these products do you consider as high priced?
        i. (P)Rudolph Care, Biotherm Lait Solaire
    b. (I)Why would you consider these as high priced?
        i. (P) I am not aware of Rudolph Care, so I would think it is more expensive and is sold at more exclusive cosmetic places. Biotherm Lait Solaire is more expensive in my mind as it is just my perception, as I have never really looked at their prices before.
    c. (I)Which of these products do you consider as low priced?
        i. (P)Nivea and Cosmica
    d. (I)Why would you consider these as low priced?
        i. (P) Nivea is cheap in my mind, since I do not have a good opinion of it. Cosmica is one of the cheaper brands at the pharmacy so I would categorize it as cheap.
    e. (I)Which of these products do you consider in the middle and why?
        i. (P) Hawaiian Tropic and Piz Buin, I have a better opinion of them, and therefore believe they are a little more expensive than Nivea and Cosmica.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.
    a. (I)Which of these products do you consider as highly effective?
        i. (P)Cosmica and Rudolph Care
    b. (I)Why would you consider these as highly effective?

        i.   (P) Cosmica has won a lot of awards as being "best in test", and I believe that gives me the right to say that it is highly effective. I have never seen or heard of Rudolph Care before, and believe that it must be certain stores that sell it which makes me believe it is more exclusive and highly effective.

   c. (I)Which of these products do you consider have a low effectiveness?

        i.   (P) Nivea and Hawaiian Tropic

   d. (I)Why would you consider these as having a low effectiveness?

        i.   (P) I have gotten sunburned by Nivea many times, and I feel like I have to reapply often when using it. Hawaiian tropic is also here since I have to reapply often.

   e. (I)Which of these products do you consider as moderately effective and why?

        i.   (P)Piz Buin and Biotherm Lait Solaire, I like Piz Buin and have a better experience with it than Hawaiian Tropic, and I therefore feel like it is moderate in its effectiveness. I do not know a lot about Biotherm Lait Solaire, so I do not want to say if it is low or high, so I want to be safe and place it in the middle.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

   a. (I)Which of these products do you consider as highly friendly?

        i.   (P) Rudolph Care

   b. (I)Why would you consider these as highly friendly?

        i.   (P) It says it is organic, so I feel like this can be considered a little more green than the rest.

   c. (I)Which of these products do you consider have a low friendliness?

        i.   (P) None

   d. (I)Why would you consider these as having a low friendliness?

      i.   (P) I feel like most businesses care about the environment to a certain degree.

    e. (I)Which of these products do you consider as moderately friendly and why?

      i.   (P) The rest are here, I find it really hard to have an opinion on grenness, and I see that some say they are biodegradable, but I feel like most brands care about the environment in some shape or form, so I do not want to place any of these as low, therefore all but Rudolph Care are considered as moderate.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

    a. (P) 6.5

8. (I)The fourth branch I want you to focus on is preference

    a. (I)Which of these products do you like?

      i.   (P)Piz Buin

    b. (I)Why would you like these products?

      i.   (P) It smells good, and it is usually my go to sunscreen

    c. (I)Which of these products do you not like?

      i.   (P) Nivea

    d. (I)Why do you not like them?

      i.   (P) I just do not like it, I do not feel like it is a good sunscreen.

    e. (I)Which of these products do you not have a preference for and why?

      i.   (P) Cosmica, Rudolph Care, Biotherm Lait Solaire, Hawaiian Tropic, I just do not have a strong opinion regarding these products.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?

a. (I)Which of these products would you buy?

   i. (P) Piz Buin and Hawaiian Tropic

b. (I)Why would you buy these products?

   i. (P) I could buy these, since these are my go to sunscreens.

c. (I)Which of these products would you not buy?

   i. (P) Nivea

d. (I)Why would you not buy them?

   i. (P) I have gotten sunburned, and I just do not like it and will never buy this product myself.

e. (I)Which of these products would you consider and why?

   i. (P)Rudolph Care, Biotherm Lait Solaire, Cosmica, I do not have any relationship with these sunscreens, but would absolutely consider them if my go to sunscreens where not available.

10. Pre-existing environmental habits

a. (I)Have you ever heard of certified label "Svanemerket"?

   i. (P) Yes

b. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

   i. (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

      1. (P) 6 Agree

   ii. (I)"I try to make environmentally friendly choices when purchasing personal goods."

      1. (P) 5 - Somewhat agree

   iii. (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

      1. (P) 7- strongly agree

   iv. (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

          1. (P) 4 - Neither agree nor disagree

     v. (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

          1. (P) 1- strongly disagree

     vi. (I)"Brands without certified green labels are not sustainable"

          1. (P) 3 - somewhat disagree

11. (I) We want you to look at this sunscreen (Biotherm Lait Solaire)

    a. (I) Can you please tell me what you think of it

       i. (P) Nice design, it stands out.

    b. (1) Can you rate this sunscreens from 1-10 (1 is bad, 10 is the best) based on environmentally friendliness.

       i. (P) 7.5

    c. (1) How environmentally friendly would you rate Biotherm as a brand.

       i. (P) 7.5

    d. (1) Did you know that Biotherm has an environmentally friendly sunscreen called waterlover?

       i. (P) No.

Appendix A8: Interview transcript - Participant 7 (Control Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

    a. (I) How old are you?

      i.   (P) 23

b. (I)What gender do you identify with?

      i.   (P) Female

c. (I)What is your highest completed education?

      i.   (P) Bachelor's degree

d. (I)Where do you live?

      i.   (P) Bergen, Norway

e. (I)Have you ever used sunscreen?

      i.   (P) Yes

f. (I)Have you ever purchased sunscreen?

      i.   (P) Yes

g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

      i.   (P) On vacation, or when it is really sunny outside

h. (I)Of the sunscreens on the table, how many do you recognize?

      i.   (P) All of them

i. (I)Of the sunscreens on the table, have you ever purchased any of them?

      i.   (P) Yes, Cosmica, Nivea, Piz Buin and Biotherm Lait Solaire

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 6 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.

    a. (I)Which of these products do you consider as high priced?

        i.   (P) Rudolph Care, Biotherm Lait Solaire

   b. (I)Why would you consider these as high priced?

        i.   (P) I have never purchased Rudolph Care, but have seen it, so I look at it as expensive. I have purchased Biotherm Lait Solaire, and I associate Biotherm as an expensive brand.

   c. (I)Which of these products do you consider as low priced?

        i.   (P) Hawaiian Tropic, Piz Buin, Nivea

   d. (I)Why would you consider these as low priced?

        i.   (P) Hawaiian Tropic is sold at cheaper stores such as Cubus, and the same goes for Nivea and Piz Buin as you can find those at grocery stores.

   e. (I)Which of these products do you consider in the middle and why?

        i.   (P) Cosmica is in the middle since I have recently purchased it, and it is not expensive but more moderate as it is sold at the pharmacy.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

   a. (I)Which of these products do you consider as highly effective?

        i.   (P) Cosmica, Piz Buin

   b. (I)Why would you consider these as highly effective?

        i.   (P) Cosmica since I have never gotten a sunburn while using it, and same goes for Piz Buin

   c. (I)Which of these products do you consider have a low effectiveness?

        i.   (P) Hawaiian Tropic

   d. (I)Why would you consider these as having a low effectiveness?

        i.   (P) I have never used Hawaiian Tropic myself, but associate this sunscreen with sunoil, which makes me have "negative" associations towards it.

   e. (I)Which of these products do you consider as moderately effective and why?

       i.   (P) Nivea, Biotherm Lait Solaire, Rudolph Care, I do not have any specific associations towards these, and therefore think they are moderate.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.
    a. (I)Which of these products do you consider as highly friendly?
        i. (P) Biotherm Lait Solaire and Cosmica
    b. (I)Why would you consider these as highly friendly?
        i. (P) Cosmica is high, since its sales outlet is the pharmacy, and I believe that they have more restrictions than other outlets and that environmental friendliness is one of the restrictions. Biotherm Lait Solaire is high since it is a highly recognized international brand and I feel like they are so well known they have to consider their impact on the environment.
    c. (I)Which of these products do you consider have a low friendliness?
        i. (P)Hawaiian Tropic
    d. (I)Why would you consider these as having a low friendliness?
        i. (P) I believe it is low, since it is sold at random cheap stores such as Cubus.
    e. (I)Which of these products do you consider as moderately friendly and why?
        i. (P)Nivea, Rudolph Care, Piz Buin, are moderate, not bad, not good, just in the middle.
7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?
    a. (P) 7
8. (I)The fourth branch I want you to focus on is preference
    a. (I)Which of these products do you like?
        i. (P)Piz Buin, Cosmica, Nivea, Biotherm Lait Solaire

b. (I)Why would you like these products?

    i. (P) Piz Buin smells amazing and is easy to use. I like Cosmica since I look at it as a safe choice, since it is sold at the pharmacy. I like Nivea and Biotherm Lait Solaire too, as I have no bad association towards them.

c. (I)Which of these products do you not like?

    i. (P) None

d. (I)Which of these products do you not have a preference for and why?

    i. (P) Hawaiian Tropic and Rudolph Care are placed here since I have not tried them.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?

    a. (I)Which of these products would you buy?

        i. (P)Piz Buin and Cosmica

    b. (I)Why would you buy these products?

        i. (P) Since I have bought them before, I like them, smell good and have a history with them.

    c. (I)Which of these products would you not buy?

        i. (P)Rudolph Care, Hawaiian Tropic

    d. (I)Why would you not buy them?

        i. (P)Rudolph Care because I have never seen it and it therefore seems like more work to try to find it. Hawaiian Tropic because I look at it as cheap and less effective than other sunscreens.

    e. (I)Which of these products would you consider and why?

        i. (P)Nivea and Biotherm Lait Solaire , I would definitely consider purchasing these, but they are not my go-to products at the moment.

10. Pre-existing environmental habits

    a. (I)Have you ever heard of certified label "Svanemerket"?

        i.   (P) Yes

b. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

        i.   (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

            1. (P) 6 - agree

      ii.   (I)"I try to make environmentally friendly choices when purchasing personal goods."

            1. (P) 5 - somewhat agree

     iii.   (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

            1. (P) 4 - neither agree or disagree

     iv.   (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

            1. (P) 4 - neither agree or disagree

      v.   (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

            1. (P) 1 - strongly disagree

     vi.   (I)"Brands without certified green labels are not sustainable"

            1. (P) 6 - agree

11. (I) We want you to look at this sunscreen (Biotherm Lait Solaire)

a. (I) Can you please tell me what you think of it

        i.   (P) Fresh design, easy and fun.

b. (1)Can you rate this sunscreen from 1-10 (1 is bad, 10 is the best) based on environmental friendliness.

        i.   (P) 7

c. (1)How environmentally friendly would you rate Biotherm as a brand.

        i.   (P) 7

      d. (1)Did you know that Biotherm has an environmentally friendly sunscreen called waterlover?

          i. (P) No

Appendix A9: Interview transcript - Participant 8 (Control Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

    a. (I) How old are you?

        i. (P) 24

    b. (I)What gender do you identify with?

        i. (P) Male

    c. (I)What is your highest completed education?

        i. (P) Bachelor´s degree

    d. (I)Where do you live?

        i. (P) Ski, Norway

    e. (I)Have you ever used sunscreen?

        i. (P) Yes

    f. (I)Have you ever purchased sunscreen?

        i. (P) Yes

    g. (I)How do you describe you sunscreen usage, in other words, how often do you use sunscreen?

        i. (P) Mostly during the summer season, but I use sunscreen every time I know I will be outside for a couple of hours or more.

    h. (I)Of the sunscreens on the table, how many do you recognize?

        i. (P) All of them

       i.   (I)Of the sunscreens on the table, have you ever purchased any of them?

            i.   (P) Cosmica, Nivea and Biotherm Lait Solaire

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 6 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.
    a. (I)Which of these products do you consider as high priced?
        i.   (P) Rudolph Care
    b. (I)Why would you consider these as high priced?
        i.   (P) Rudolph Care is placed as high since it is harder to find, and I believe it is like a "special" brand, which is usually more expensive.
    c. (I)Which of these products do you consider as low priced?
        i.   (P) Hawaiian Tropic
    d. (I)Why would you consider these as low priced?
        i.   (P) I see it everywhere, and my friends usually go for the cheaper options and they usually always have Hawaiian Tropic.
    e. (I)Which of these products do you consider in the middle and why?
        i.   (P)Biotherm Lait Solaire, Cosmica, Nivea, Piz Buin, I have bought most of these and believe that in general that sunscreen is moderate in price.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

    a. (I)Which of these products do you consider as highly effective?

        i. (P) Cosmica, Nivea

    b. (I)Why would you consider these as highly effective?

        i. (P) After my experience with both of these sunscreens I have a good association towards them, as I have never gotten burned and do not feel the need to re-apply constantly.

    c. (I)Which of these products do you consider have a low effectiveness?

        i. (P) Hawaiian Tropic

    d. (I)Why would you consider these as having a low effectiveness?

        i. (P) I have heard stories from friends that have gotten seriously burned while using Hawaiian Tropic

    e. (I)Which of these products do you consider as moderately effective and why?

        i. (P) Biotherm Lait Solaire, Piz Buin, Rudolph Care, the rest are moderate as I have no concrete proof to say otherwise.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

    a. (I)Which of these products do you consider as highly friendly?

        i. (P)Nivea and Cosmica

    b. (I)Why would you consider these as highly friendly?

        i. (P) I believe these to be more environmentally friendly as they are well known companies, and they would have enough capital to focus on sustainability to a certain extent.

    c. (I)Which of these products do you consider have a low friendliness?

        i. (P)Hawaiian Tropic

    d. (I)Why would you consider these as having a low friendliness?

   i. (P) To be honest it is just a feeling, with no good reasoning behind it.

  e. (I)Which of these products do you consider as moderately friendly and why?

   i. (P)Biotherm Lait Solaire, Rudolph Care, Piz Buin, these are larger brands that should have sustainability practices in place and therefore I believe they are moderate rather than low.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

  a. (P) 7

8. (I)The fourth branch I want you to focus on is preference

  a. (I)Which of these products do you like?

   i. (P) Nivea and Cosmica

  b. (I)Why would you like these products?

   i. (P) Nivea and Cosmica since I have a good experience with them, and has a lot to do with how effective they are.

  c. (I)Which of these products do you not like?

   i. (P) Hawaiian Tropic

  d. (I)Why do you not like them?

   i. (P) Hawaiian Tropic for the same reason as effectiveness, I have heard it does not work that well.

  e. (I)Which of these products do you not have a preference for and why?

   i. (P) Piz Buin, Rudolph Care and Biotherm Lait Solaire are placed as neutral since I do not have any strong opinions about them.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?

  a. (I)Which of these products would you buy?

        i.   (P)Nivea, Cosmica,

  b. (I)Why would you buy these products?

        i.   (P) Since they l like them and since I consider them highly effective

  c. (I)Which of these products would you not buy?

        i.   (P)Hawaiian Tropic

  d. (I)Why would you not buy them?

        i.   (P) A lot of the same from what I like, I have a bad association with this brand.

  e. (I)Which of these products would you consider and why?

        i.   (P)Biotherm Lait Solaire, Piz Buin, Rudolph Care, I could consider these if my favorites were not available.

10. Pre-existing environmental habits

  a. (I)Have you ever heard of certified label "Svanemerket"?

  b. (P) Yes

  c. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

        i.   (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

             1. (P) 4 - Neither agree nor disagree

        ii.   (I)"I try to make environmentally friendly choices when purchasing personal goods."

             1. (P) 7 - Strongly agree

        iii.   (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

             1. (P) 7 - strongly agree

        iv.   (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

             1. (P) 4 - neither agree nor disagree

v. (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

1. (P) 2 - disagree

vi. (I)"Brands without certified green labels are not sustainable"

1. (P) 4 - neither agree nor disagree

11. (I) We want you to look at this sunscreen(Biotherm Lait Solaire)

a. (I) Can you please tell me what you think of it

i. (P) I immediately notice the protection level and it is clear on what benefits this sunscreen gives the user.

b. (1)Can you rate this sunscreen from 1-10 (1 is bad, 10 is the best) based on environmentally friendliness.

i. (P) 7

c. (1)How environmentally friendly would you rate Biotherm as a brand.

i. (P) 5

d. (1)Did you know that Biotherm has an environmentally friendly sunscreen called waterlover?

i. (P) No.

Appendix A10: Interview transcript - Participant 9 (Control Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

a. (I) How old are you?

        i.   (P) 23

  b. (I)What gender do you identify with?

        i.   (P) Female

  c. (I)What is your highest completed education?

        i.   (P) Bachelor's degree

  d. (I)Where do you live?

        i.   (P) Ski, Norway

  e. (I)Have you ever used sunscreen?

        i.   (P) Yes

  f. (I)Have you ever purchased sunscreen?

        i.   (P) Yes

  g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

        i.   (P) Everytime I plan on being in the sun for a longer period of time

  h. (I)Of the sunscreens on the table, how many do you recognize?

        i.   (P) All of them with the exception of Rudolph Care

  i. (I)Of the sunscreens on the table, have you ever purchased any of them?

        i.   (P) Piz Buin, Nivea, Biotherm Lait Solaire

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 6 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

(I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.

  a. (I)Which of these products do you consider as high priced?

        i.   (P) Rudolph Care

  b. (I)Why would you consider these as high priced?

        i.   (P) This is an award winning sunscreen, so I think this could be more expensive than an average sunscreen.

  c. (I)Which of these products do you consider as low priced?

        i.   (P)Nivea, Piz Buin, Hawaiian Tropic

  d. (I)Why would you consider these as low priced?

        i.   (P) You can buy these sunscreens at H&M and other cheap places like Cubus.

  e. (I)Which of these products do you consider in the middle and why?

        i.   (P) Biotherm Lait Solaire and Cosmica because I do not think sunscreen in general is expensive and of these sunscreens I believe these two are a little more pricey than the others, with the exception of Rudolph Care.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

  a. (I)Which of these products do you consider as highly effective?

        i.   (P) Biotherm Lait Solaire

  b. (I)Why would you consider these as highly effective?

        i.   (P) I have a good association towards Biotherm as a brand, and therefore believe it to have good results and that it is highly effective.

  c. (I)Which of these products do you consider have a low effectiveness?

        i.   (P) Piz Buin, Nivea, Hawaiian Tropic

  d. (I)Why would you consider these as having a low effectiveness?

        i.   (P) They are cheap, and therefore less effective.

  e. (I)Which of these products do you consider as moderately effective and why?

        i.   (P) Rudolph Care and Cosmica are placed here since I do not know a lot about them, but they look professional and that they hold some type of standard.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.
   a. (I)Which of these products do you consider as highly friendly?
   b. (P) Rudolph Care
   c. (I)Why would you consider these as highly friendly?
      i. (P) It has the Nordic Swan label, which is my only way to differentiate this one from the others, therefore I believe it is more environmentally friendly than the other ones.
   d. (I)Which of these products do you consider have a low friendliness?
   e. (P) None
   f. (I)Which of these products do you consider as moderately friendly and why?
      i. (P) All, but Rudolph Care, since I have never considered this as a factor when looking at sunscreen, and it is hard for me to judge, when the packaging is not as telling. If I could press a "I have no clue button" I would press it.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?
   a. (P) 5

8. (I)The fourth branch I want you to focus on is preference
   a. (I)Which of these products do you like?
      i. (P) Biotherm Lait Solaire and Piz Buin
   b. (I)Why would you like these products?
      i. (P) Biotherm Lait Solaire is a go to, I always buy it at tax-free and believe it is more expensive than the others, which makes me have a higher opinion about it. I really like Biotherm as a brand. Piz Buin smells amazing, and I really like it because of that.
   c. (I)Which of these products do you not like?

     i. (P) None

  d. (I)Why do you not like them?

     i. (P) I do not really think badly of sunscreen, I am more of either I like it or I have a neutral opinion of it.

  e. (I)Which of these products do you not have a preference for and why?

     i. (P) Cosmica, Hawaiian Tropic, Nivea and Rudolph Care. I could use these I guess, but I really do not have an opinion about these.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?

  a. (I)Which of these products would you buy?

     i. (P) Piz Buin, Biotherm Lait Solaire, Nivea

  b. (I)Why would you buy these products?

     i. (P) I have in my past and I will in my future, purchase Biotherm Lait Solaire, without a doubt. I know I would buy Nivea since it is cheap and I will also buy Piz Buin because it smells good, good price and it is effective.

  c. (I)Which of these products would you not buy?

     i. (P) Hawaiian Tropic

  d. (I)Why would you not buy them?

     i. (P) I do not know why, but it looks cheap and like it is of bad quality.

  e. (I)Which of these products would you consider and why?

     i. (P) I could use Cosmica, since all my friends use it. I could consider Rudolph care because it is award winning in its field.

10. Pre-existing environmental habits

  a. (I)Have you ever heard of certified label "Svanemerket"?

  b. (P) Yes

  c. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

    i. (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

      1. (P) 6 - Agree

    ii. (I)"I try to make environmentally friendly choices when purchasing personal goods."

      1. (P) 1 - strongly disagree

    iii. (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."

      1. (P) 4 - neither agree nor disagree

    iv. (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."

      1. (P) 7 - agree

    v. (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."

      1. (P) 4 - neither agree nor disagree

    vi. (I)"Brands without certified green labels are not sustainable"

      1. (P) 2 - disagree

11. (I) We want you to look at this sunscreen (Biotherm Lait Solaire)

  a. (I) Can you please tell me what you think of it

    i. (P) I see quality, I like the smell and like the product design

  b. (1)Can you rate this sunscreen from 1-10 (1 is bad, 10 is the best) based on environmentally friendliness.

    i. (P) 5

  c. (1)How environmentally friendly would you rate Biotherm as a brand.

    i. (P) 5

d. (1)Did you know that Biotherm has an environmentally friendly sunscreen called waterlover?

    i. (P) No

Appendix A11: Interview transcript - Participant 10 (Control Group)

1. Interviewer (I): The experiment will take approximately 30 minutes to complete and your participation is completely voluntary, and you have the right to leave the interview whenever you want. All of the collected data will be anonymous, and we will not use your name. The results will be treated confidentially and the results from this experiment will only be included in our master thesis.

2. (I)We want to get to know you a little better, so we will now ask you a few simple questions:

    a. (I) How old are you?

        i. (P) 24

    b. (I)What gender do you identify with?

        i. (P) Male

    c. (I)What is your highest completed education?

        i. (P) Bachelor's degree

    d. (I)Where do you live?

        i. (P) Ski, Norway

    e. (I)Have you ever used sunscreen?

        i. (P) Yes

    f. (I)Have you ever purchased sunscreen?

        i. (P) Yes

    g. (I)How do you describe your sunscreen usage, in other words, how often do you use sunscreen?

        i. (P) When I am planning on being outside in sunshine for a longer period of time.

    h. (I)Of the sunscreens on the table, how many do you recognize?

      i.   (P) Nivea, Hawaiian Tropic, Piz Buin, Biotherm Lait Solaire

   i.   (I)Of the sunscreens on the table, have you ever purchased any of them?

      i.   (P) Nivea, Hawaiian Tropic, Piz Buin

3. (I)The sheet placed in front of you is called a mind-map. You will now be asked to look at these 6 sunscreens. Feel free to touch, look and study the different bottles, during the next 15 minutes. We will now start asking you short questions, and feel free to answer whatever comes to mind, and we encourage you to talk freely.

   (I)Now I want you to place and rank the sunscreens on the table, by using the sticky notes, where you think they belong on the tree. I want you to place a sticky note representing each product on each branch.

4. (I)The first branch I want you to focus on is Price.
   a. (I)Which of these products do you consider as high priced?
      i. (P) Cosmica, Biotherm Lait Solaire, Rudolph Care
   b. (I)Why would you consider these as high priced?
      i. (P) I have placed these here as I find their names to sound expensive and of high quality.
   c. (I)Which of these products do you consider as low priced?
      i. (P) Nivea
   d. (I)Why would you consider these as low priced?
      i. (P) I usually buy products when they are on sale, and feel like Nivea is always on sale.
   e. (I)Which of these products do you consider in the middle and why?
      i. (P) Hawaiian Tropic and Piz Buin are moderate because my gut-feeling tells me so.

5. (I)The second branch I want you to focus on is the effectiveness of the product, here we mean how well will it protect your skin from the sun.

    a. (I)Which of these products do you consider as highly effective?

    b. (P) Biotherm Lait Solaire and Cosmica

    c. (I)Why would you consider these as highly effective?

        i.   (P) I feel like these sunscreens are more expensive which increases the quality of the products and then in return increases their effectiveness.

    d. (I)Which of these products do you consider have a low effectiveness?

    e. (P) Piz Buin

    f. (I)Why would you consider these as having a low effectiveness?

        i.   (P) When I think of Piz Buin I think of sun-oil, and therefore I do not think it is effective in protecting its users against the sun.

    g. (I)Which of these products do you consider as moderately effective and why?

    h. (P) Hawaiian Tropic and Nivea are placed here because I feel like I have had a good experience with them, and never heard anyone complain. Rudolph Care is placed here since I have no strong opinions regarding its effectiveness.

6. (I)The third branch I want you to focus on is the environmental friendliness of the product.

    a. (I)Which of these products do you consider as highly friendly?

        i.   (P) Biotherm Lait Solaire

    b. (I)Why would you consider these as highly friendly?

        i.   (P) The brand name "BIO" makes me believe that they focus highly on sustainability, so it is an easy choice to place it as high.

    c. (I)Which of these products do you consider have a low friendliness?

        i.   (P) Rudolph Care and Hawaiian Tropic

    d. (I)Why would you consider these as having a low friendliness?

      i.   (P) I feel like Rudolph Care does not care at all about the environment, and focuses on winning beauty awards instead. While Hawaiian Tropic is also low, but a little better than Rudolph Care, it does not scream sustainable in my mind.

    e. (I)Which of these products do you consider as moderately friendly and why?

      i.   (P) Cosmica, Nivea, PIz Buin, either because they are all large brands or I have little knowledge about them, and I think they should focus on sustainability, but I am scared that they do not, hence I believe they are not the worst, but not the best either.

7. (I) Can you look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is bad, 10 is the best), when you consider its greenness. Not comparing it to anything else in the room?

    a. (P) 7

8. (I)The fourth branch I want you to focus on is preference

    a. (I)Which of these products do you like?

      i.   (P) Nivea

    b. (I)Why would you like these products?

      i.   (P) I have a good experience with Nivea, so I like it.

    c. (I)Which of these products do you not like?

      i.   (P) Piz Buin

    d. (I)Why do you not like them?

      i.   (P) I do not like the idea of sunbathing to get as tan as possible, and feel like that is what Piz Buin promotes, and that is why i do not like them.

    e. (I)Which of these products do you not have a preference for and why?

i.   (P) Hawaiian Tropic, Biotherm Lait Solaire, Cosmica, Rudolph Care, I do not have a huge opinion regarding these, so I want to place them here.

9. (I)The last branch I want you to focus on if you would ever buy any of the presented products?

   a. (I)Which of these products would you buy?

      i.   (P) Nivea, Hawaiian Tropic

   b. (I)Why would you buy these products?

      i.   (P) I would buy both of these because I have good experiences with both.

   c. (I)Which of these products would you not buy?

      i.   (P) Rudolph Care, Cosmica,

   d. (I)Why would you not buy them?

      i.   (P) I will not buy these, because I get more make-up vibes from these bottles.

   e. (I)Which of these products would you consider and why?

      i.   (P) I can consider Biotherm Lait Solaire, since I could easily choose a more sustainable option. Piz Buin is in between "not purchase" and "could consider", because if it was the only option I think I could buy it, if you know what I mean.

10. Pre-existing environmental habits

   a. (I)Have you ever heard of certified label "Svanemerket"?

      i.   (P) Yes

   b. (I)How well do you agree with the following statements on a scale from 1, strongly disagree to 7, strongly agree?

      i.   (I)"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."

         1. (P) 6 - Agree

      ii. (I)"I try to make environmentally friendly choices when purchasing personal goods."

1. (P) 6 - agree
iii. (I) "I find it hard to make environmentally friendly choices when purchasing personal goods."
1. (P) 1 - strongly disagree
iv. (I)"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."
1. (P) 4 - neither agree nor disagree
v. (I)"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."
1. (P) 1 - strongly disagree
vi. (I)"Brands without certified green labels are not sustainable"
1. (P) 1 - strongly disagree

11. (I) We want you to look at this sunscreen (Biotherm Lait Solaire)
    a. (I) Can you please tell me what you think of it
        i. (P) Biotherm as a brand tries to focus on a green image, as well as quality. I get this vibe through the brand name and packaging
    b. (1)Can you rate this sunscreen from 1-10 (1 is bad, 10 is the best) based on environmentally friendliness.
        i. (P) 8
    c. (1)How environmentally friendly would you rate Biotherm as a brand.
        i. (P) 8
    d. (1)Did you know that Biotherm has an environmentally friendly sunscreen called waterlover?
        i. (P) No

Appendix A12: Outlined Mind-Map
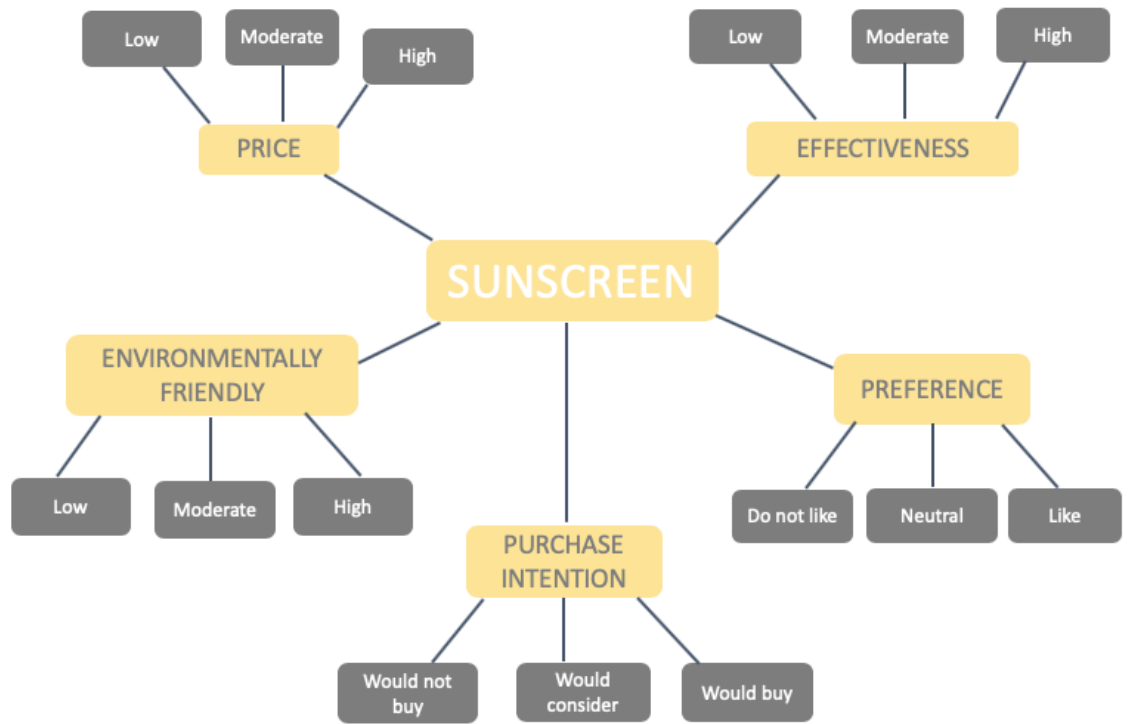
Appendix A13: Questions from Appendix A1 - Added questions green vs. brown product

Section:	Group 1: Experimental	Group 2: Control
During the mind-mapping experiment	Take a look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is terrible, 10 is the best), when you consider its greenness? Do not compare it to anything else in the room.	Take a look at this sunscreen, Biotherm Lait Solaire, what would you rate it out of 10 (1 is terrible, 10 is the best), when you consider its greenness? Do not compare it to anything else in the room.
Last part of the experiment, after the Pre-existing environmental habits section	We want you to look at these two sunscreens (Biotherm Lait Solaire and Biotherm Waterlover): (1)Can you please tell me what you think of them? (2)Do you believe there is a difference in their environmental friendliness? (3)Can you rate each of these sunscreens from 1-10 (1 is terrible, 10 is the best)? (4)Did you know that Biotherm had some environmentally friendly products before today? (5)How environmentally friendly would you rate Biotherm as a brand?	We want you to look at this sunscreen(Biotherm Lait Solaire): (1)Can you please tell me what you think of it? (2)Can you rate this sunscreen from 1-10 (1 is terrible, 10 is the best) based on environmental friendliness? (3) How environmentally friendly would you rate Biotherm as a brand? (4) Did you know that Biotherm has an environmentally friendly sunscreen called Waterlover?

Appendix A14: Questions from Appendix A1 - Pro-Environmental questions

Scale	Pre-existing environmental questions
Yes/No	Have you ever heard of certified label "Svanemerket"?
7-point Likert Scale: 1: Strongly disagree 2: Disagree 3: Somewhat disagree 4: Neither agree nor disagree 5: Somewhat agree 6: Agree 7: Strongly agree	How well do you agree with the following statements? • "The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand." • "I try to make environmentally friendly choices when purchasing personal goods." • "I find it hard to make environmentally friendly choices when purchasing personal goods." • "I look after certified labels (such as the Nordic Swan) as a method to identify environmentally friendly products when purchasing personal goods." • "I find certified labels (such as the Nordic Swan) confusing." • "Brands without certified green labels are not sustainable"

Appendix B: Study 2 - Online Experiment

Appendix B1: Online experiment (Experimental Group)

Hi! We are two students in our final year of Strategic Marketing Management at BI Norwegian Business School working on our Master Thesis. This survey is conducted as a part of the thesis. The survey will take approximately 10 minutes to complete and your participation is completely voluntary. All of the collected data will be anonymous, and we will not be able to trace the answers to any individuals. The data will be treated confidentially and the results from our survey will only be included in our master thesis.

If you have any questions regarding the survey, please contact us: victoriabjorvatn@gmail.com and/or marie.herfin@gmail.com

Thank you in advance for taking part in our study!
You are now going to see seven different pictures of sunscreens.
It is important that you take a close look at the images before answering.

Q1:Which of these sunscreens (brand) do you recognize?

☐ Piz Buin

☐ Rudolph Care

☐ Hawaiian Tropic

☐ Biotherm

☐ Nivea

☐ Cosmica

☐ Neither

Q2: Which of these sunscreens (brand) have you previously bought?

☐ Piz Buin

☐ Rudolph Care

☐ Hawaiian Tropic

☐ Biotherm

☐ Nivea

☐ Cosmica

☐ Neither

Q3: Place and rank the sunscreens (items) where you think they belong.

High Price	Moderate price	Low price
_____ Piz Buin (1)	_____ Piz Buin (1)	_____ Piz Buin (1)
_____ Rudolph Care (2)	_____ Rudolph Care (2)	_____ Rudolph Care (2)
_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)
_____ Biotherm (4)	_____ Biotherm (4)	_____ Biotherm (4)
_____ Nivea (5)	_____ Nivea (5)	_____ Nivea (5)
_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)
_____ Cosmica (7)	_____ Cosmica (7)	_____ Cosmica (7)

Q4: Explain why you chose to put those items as "High Price". (You can answer in Norwegian or English)

_____

Q5: Place and rank the sunscreens (items) where you think they belong.

Highly Effective	Moderately Effective	Not Effective
_____ Piz Buin (1)	_____ Piz Buin (1)	_____ Piz Buin (1)
_____ Rudolph Care (2)	_____ Rudolph Care (2)	_____ Rudolph Care (2)
_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)
_____ Biotherm (4)	_____ Biotherm (4)	_____ Biotherm (4)

_____ Nivea (5)	_____ Nivea (5)	_____ Nivea (5)
_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)
_____ Cosmica (7)	_____ Cosmica (7)	_____ Cosmica (7)

Q6: Explain why you chose those items as "Not Effective". (You can answer in Norwegian or English)

Q7: Place and rank the sunscreens (items) where you think they belong.

Environmentally friendly	Moderately environmentally friendly	Not environmentally friendly
_____ Piz Buin (1)	_____ Piz Buin (1)	_____ Piz Buin (1)
_____ Rudolph Care (2)	_____ Rudolph Care (2)	_____ Rudolph Care (2)
_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)
_____ Biotherm (4)	_____ Biotherm (4)	_____ Biotherm (4)
_____ Nivea (5)	_____ Nivea (5)	_____ Nivea (5)
_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)
_____ Cosmica (7)	_____ Cosmica (7)	_____ Cosmica (7)

Q8: Explain why you placed those items as "Environmentally friendly". (You can answer in Norwegian or English)

_____

Q9: Explain why you placed those items as "Not environmentally friendly". (You can answer in Norwegian or English)

_____

Q10: Place and rank the sunscreens (items) where you think they belong.

Like	**No preference**	**Do not like**
_____ Piz Buin (1)	_____ Piz Buin (1)	_____ Piz Buin (1)
_____ Rudolph Care (2)	_____ Rudolph Care (2)	_____ Rudolph Care (2)
_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)
_____ Biotherm (4)	_____ Biotherm (4)	_____ Biotherm (4)
_____ Nivea (5)	_____ Nivea (5)	_____ Nivea (5)
_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)
_____ Cosmica (7)	_____ Cosmica (7)	_____ Cosmica (7)

Q11: Place and rank the sunscreens (items) where you think they belong.

Would buy	Would consider	Would not buy
_____ Piz Buin (1)	_____ Piz Buin (1)	_____ Piz Buin (1)
_____ Rudolph Care (2)	_____ Rudolph Care (2)	_____ Rudolph Care (2)
_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)	_____ Hawaiian Tropic (3)
_____ Biotherm (4)	_____ Biotherm (4)	_____ Biotherm (4)
_____ Nivea (5)	_____ Nivea (5)	_____ Nivea (5)
_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)	_____ Biotherm Waterlover (6)
_____ Cosmica (7)	_____ Cosmica (7)	_____ Cosmica (7)

Q12: Explain why you placed those items as "Would not buy". (You can answer in Norwegian or English)

Q13: Explain why you placed those items as "Would buy". (You can answer in Norwegian or English)

Q14: How often do you purchase sunscreen?

O Never

O Less than 1 time per year

O 1-2 times per year

O 3-4 times per year

O More than 5 times per year

Q15: How often do you use sunscreen?

O Seldom to never

O Occasionally (only on vacation)

O Frequently (when it is sunny outside)

O Every day

Q16: How much are you willing to spend on one sunscreen product?

O A lot (250+ NOK)

O A moderate amount (200-249 NOK)

O A little (Less than 199 NOK)

O Nothing

Q17: When considering purchasing a sunscreen, what factors do you consider? (check all that comply)

☐ Brand
☐ Price
☐ Protection (solfaktor)
☐ Ingredients (ex: anti-age, hyaluronic acid, organic)

☐   Skin-type (sensitive, dry, combination, oily)

☐   Environmental impact

☐   Certified labeling (ex: Øko-merket, Svanemerket)

☐   Awards (ex: best i test)

Q18: Rate the following brands from most environmentally friendly (1) to least environmentally friendly (7)

_____ Piz Buin (1)

_____ Rudolph Care (2)

_____ Hawaiian Tropic (3)

_____ Biotherm (4)

_____ Nivea (5)

_____ Cosmica (7)

Q19: Have you heard of the certified label the "Nordic Swan" (Svanemerket)?

o Yes

o No

Q20: How well do you agree with the following statements?

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
"The "Nordic Swan Label" (Svanemerket) increases my sustainable perception of the brand."	O	O	O	O	O	O	O
"I try to make environmentally friendly choices when purchasing personal goods."	O	O	O	O	O	O	O
"I find it hard to make environmentally friendly choices when purchasing personal goods."	O	O	O	O	O	O	O
Attention check: Choose "Somewhat agree"	O	O	O	O	O	O	O
"I look after certified labels (such as the Nordic Swan/Svanemerket) as a method to identify environmentally friendly products when purchasing personal goods."	O	O	O	O	O	O	O
"I find certified labels (such as the Nordic Swan/Svanemerket) confusing."	O	O	O	O	O	O	O
"Brands without certified green labels are not sustainable"	O	O	O	O	O	O	O

Q21: What gender do you identify as?

O Male

O Female

O Other

Q22: What is your age?

_____

Q23: What is the highest degree or level of education you have completed?

O Less than high school

O High school graduate

O Craft certificate (fagbrev)

O Some college courses (årstudium)

O Bachelor's degree

O Master's degree

O Doctorate

O Other: _____

Q24: What country do you currently live in?

O Norway

O Other: _____

Appendix B2: Group Statistics

Table B2.1 – Independent Samples T-Test – Perception of Price

Perception	Group	Mean	SD	N
Piz Buin	Experiment	2.32*	1.041	22
	Control	1.67*	.840	18
Rudolph Care	Experiment	2.07	1.067	29
	Control	1.76	.741	34
Hawaiian Tropic	Experiment	2	.853	12
	Control	1.82	.603	11
Biotherm	Experiment	2.15*	.893	40
	Control	1.68*	.771	44
Nivea	Experiment	1.83	.753	6
	Control	2.67	.577	3
Biotherm Waterlover	Experiment	1.94	.954	48
	Control	.	.	0
Cosmica	Experiment	2.05	.999	22
	Control	1.76	.768	21

Category: "High Price"

* p < .05

Table B2.2 – Independent Samples T-Test – Perception of Effectiveness

Perception	Group	Mean	SD	N
Piz Buin	Experiment	2.67*	1.819	27
	Control	2.39*	1.166	28
Rudolph Care	Experiment	3.06	1.765	18
	Control	2	1.049	21
Hawaiian Tropic	Experiment	3.13	1.959	8
	Control	2.67	1.803	9
Biotherm	Experiment	2.37	.951	46
	Control	2.06	.938	52
Nivea	Experiment	2.43	1.136	28
	Control	2.41	1.417	17
Biotherm Waterlover	Experiment	2.2	1.325	45
	Control	.	.	0
Cosmica	Experiment	2.51*	1.374	39
	Control	1.77*	.777	39

Category: "Highly Effective"

* p < .05

Table B2.3 – Independent Samples T-Test – Perception of Environmental Friendliness

Perception	Group	Mean	SD	N
Piz Buin	Experiment	2.67*	1.366	6
	Control	1.5	1.225	6
Rudolph Care	Experiment	1.86	.655	21
	Control	1.86	.834	22
Hawaiian Tropic	Experiment	3.2	2.490	5
	Control	1.67	.577	3
Biotherm	Experiment	1.93*	.829	27
	Control	1.42*	.614	33
Nivea	Experiment	1.82	1.537	11
	Control	2.17	.753	6
Biotherm Waterlover	Experiment	2.07	1.143	30
	Control	.	.	0
Cosmica	Experiment	1.91	1.109	22
	Control	1.91	.868	22

Category: "Environmentally Friendly"

$* p < .05$

Table B2.4 – Independent Samples T-Test –Preference

Perception	Group	Mean	SD	N
Piz Buin	Experiment	2.36	1.245	33
	Control	2.14	.845	35
Rudolph Care	Experiment	3.44*	2.068	9
	Control	1.29*	.488	7
Hawaiian Tropic	Experiment	2.5	1.465	18
	Control	2.31	.947	13
Biotherm	Experiment	2.61*	1.285	38
	Control	1.72*	.734	43
Nivea	Experiment	2.38	1.498	29
	Control	2.05	1.234	20
Biotherm Waterlover	Experiment	2.15	1.156	26
	Control	.	.	0
Cosmica	Experiment	1.97	1.150	35
	Control	1.87	.922	31

Category: "Like"

$* p < .05$

Table B2.5 – Independent Samples T-Test – Purchase Intention

Perception	Group	Mean	SD	N
Piz Buin	Experiment	2.75	1.459	32
	Control	2.36	1.194	33
Rudolph Care	Experiment	2.23	1.423	13
	Control	2.5	1.605	14
Hawaiian Tropic	Experiment	2.75	1.807	16
	Control	2.53	1.356	15
Biotherm	Experiment	2.7*	1.631	37
	Control	2.07*	1.043	44
Nivea	Experiment	2.3	1.055	30
	Control	1.77	1.066	22
Biotherm Waterlover	Experiment	2.15	1.262	27
	Control	.	.	0
Cosmica	Experiment	1.97	1.071	35
	Control	1.84	.767	32

Category: "Would Buy"

$* p < .05$

Table B2.6 – Independent Samples T-Test – Green Brand Perception

Perception	Group	Mean	SD	N
Piz Buin	Experiment	4.86*	1.693	63
	Control	3.93*	1.459	61
Rudolph Care	Experiment	4.02*	2.012	63
	Control	2.89*	1.427	61
Hawaiian Tropic	Experiment	5.52*	1.795	63
	Control	4.84*	1.280	61
Biotherm	Experiment	2.78*	1.301	63
	Control	2.03*	1.238	61
Nivea	Experiment	4.37	1.937	63
	Control	4.31	1.555	61
Cosmica	Experiment	3.17	2.099	63
	Control	3	1.592	61

Measure: "Rate Brand From Least (1) to Most (7) Environmentally Friendly"

$* p < .05$

Appendix B3: Pro-Environmental Scale

Table B2.6 – Correlation Matrix

	1	2	3	4	5	6
1. "The Nordic Swan Label increases my sustainable perception of the brand."	1					
2. "I try to make environmentally friendly choices when purchasing personal goods."	0.399	1				
3. "I find it hard to make environmentally friendly choices when purchasing personal goods."	0.069	0.165	1			
4. "I look after certified labels as a method to identify environmentally friendly products when purchasing personal goods."	0.534	0.544	0.156	1		
5. "I find certified labels (such as the Nordic Swan/Svanemerket) confusing."	-0.184	-0.179	0.063	-0.195	1	
6. "Brands without certified green labels are not sustainable"	0.088	0.05	0.034	0.116	0.125	1

Table B2.6 – Principal Component Analysis

Initial Eigenvalues

Component	Total	% of Variance	Cumulative %	Cronbach's alfa
1	2.13	35.505	35.505	0.738
2	1.156	19.272	54.777	0.196
3	0.972	16.204	70.981	
4	0.745	12.419	83.4	
5	0.587	9.791	93.191	
6	0.409	6.809	100	

Extraction Method: Principal Component Analysis.

Appendix B4: Figures

Histogram: Experimental vs. Control group
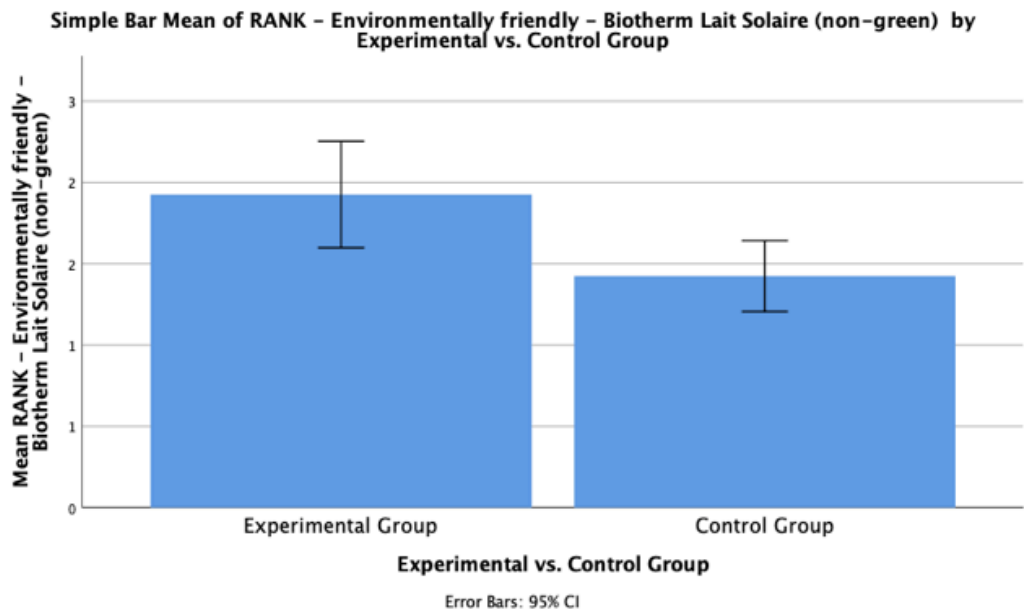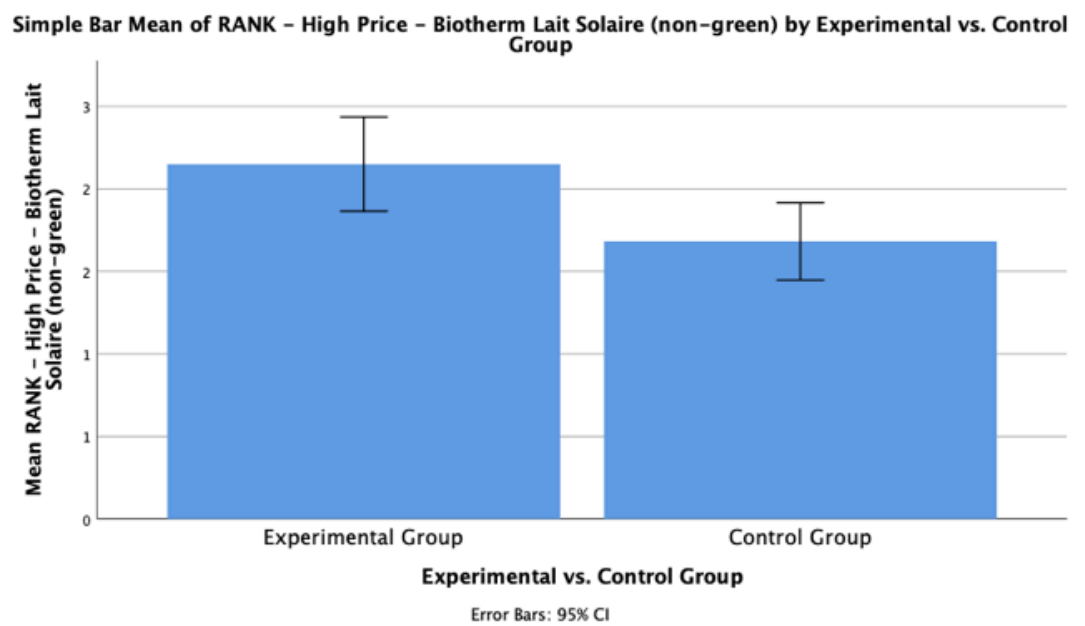
Figure 1: Environmentally Friendly Rank

Simple Bar Mean of RANK – Environmentally friendly – Biotherm Lait Solaire (non-green) by Experimental vs. Control Group

Error Bars: 95% CI

Figure 2: Price Rank

Simple Bar Mean of RANK – High Price – Biotherm Lait Solaire (non-green) by Experimental vs. Control Group

Error Bars: 95% CI

Figure 3: Purchase Intention Rank

Simple Bar Mean of RANK – Would Purchase – Biotherm Lait Solaire (non–green) by Experimental vs. Control Group
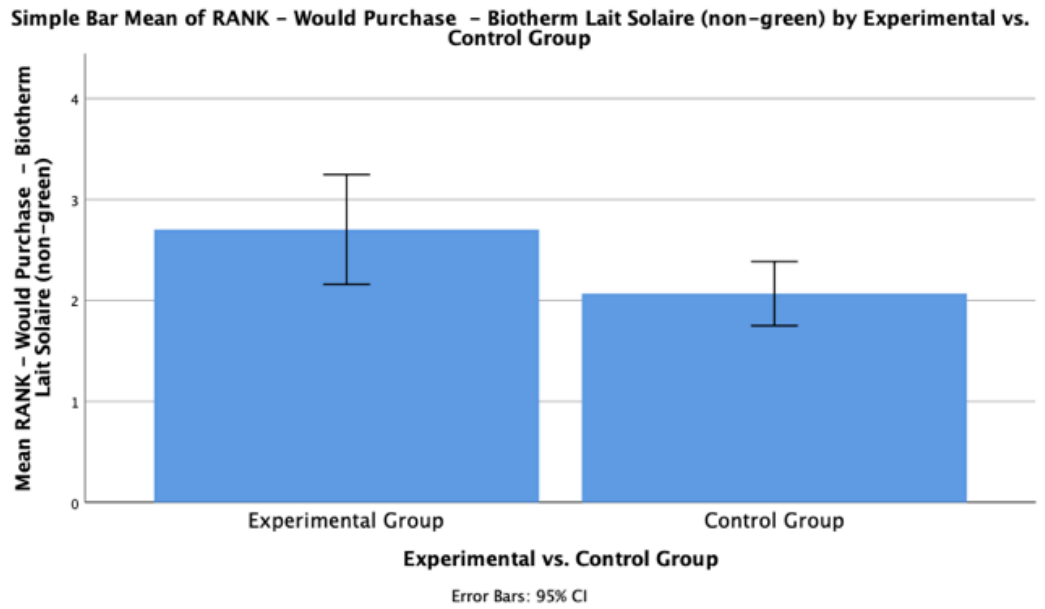
Figure 4: Preference Rank

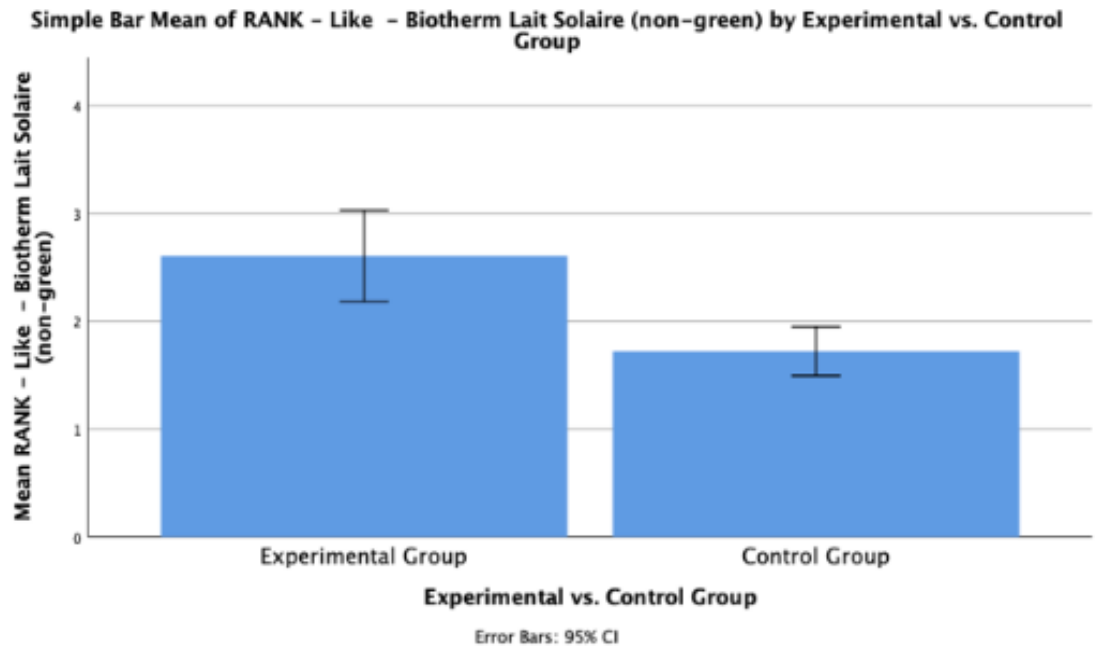Simple Bar Mean of RANK – Like – Biotherm Lait Solaire (non–green) by Experimental vs. Control Group

Figure 4: Green Perception of Brand

Simple Bar Mean of Rate the following brands from most environmentally friendly (1) to least environmentally friendly (7) – Biotherm by Experimental vs. Control Group

Error Bars: 95% CI