Surfing the Green Wave

The impact of sustainable and secondhand fashion clothing on purchasing behaviors and the moderating role of outdoor sports orientation

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Abstract

This dissertation examines how sustainable, secondhand, or conventional fashion clothing trigger different purchasing behaviors among consumers with distinct outdoor sports-orientation. An experimental study was conducted to test the impact of the type of fashion clothing (conventional, sustainable, secondhand) on purchasing behaviors (product purchasing intention and willingness-to-pay). Also, the impact of outdoor sports orientation on nature connectedness and environmental attitudes was assessed, to confirm whether outdoor sports-oriented consumers have higher environmental attitudes. Hence, outdoor sports orientation will be tested as a possible moderator on the relation of type of fashion clothing and purchasing behaviors. Further, environmental knowledge may play a role in this context, hence its mediating effect on the relationship between outdoor sports orientation and purchasing behaviors was evaluated. Findings reveal that consumers would rather purchase secondhand rather than new sustainable fashion clothing, however, they are willing to pay a price premium for the new sustainable ones. Further, outdoor sports orientation has a positive impact on nature connectedness and environmental attitudes. Additionally, mediation analysis shows environmental knowledge indirectly impacts the relationship between outdoor sports orientation and purchasing intentions. These findings provide relevant theoretical insights into the previously established link between outdoor sports orientation and environmental attitudes, particularly by filling a research gap related to sustainable fashion purchasing behavior. It also provides brand managers with practical guidance on why and how they should implement these findings in their businesses, specifically in the form of brand-owned secondhand platforms to extend the lifecycles of their products and appeal to consumer preferences.

Key words: Fashion Clothing; Sustainability; Secondhand; Purchasing Behaviors; Outdoor Sport Orientation; Nature Connectedness; Environmental Attitudes; Environmental Knowledge; Product Purchasing Intention; Willingness-to-pay

Resumo

Esta dissertação analisa como roupa sustentável, em segunda mão e/ou convencional desencadeia diferentes comportamentos de compra entre os consumidores com distintas orientações desportivas ao ar livre. Conduziu-se um estudo experimental visando testar o impacto do tipo de roupa (convencional, sustentável, em segunda mão) em comportamentos de compra (intenção de compra, vontade de pagar). Ainda se avaliou o impacto da orientação desportiva ao ar livre nas atitudes ambientais, de modo a confirmar se estes consumidores possuem mais atitudes ambientais. Como o conhecimento ambiental impacta incontestavelmente este contexto, a orientação desportiva ao ar livre foi testada como possível moderadora na relação do tipo de roupa e comportamentos de compra. Os resultados mostram que os consumidores preferem comprar em segunda mão em vez de roupa nova, mas estão dispostos a pagar mais por roupas novas sustentáveis. Além disso, a orientação desportiva ao ar livre mostrou um impacto positivo na conexão com a natureza e atitudes ambientais. Adicionalmente, a análise da mediação revelou uma influência indireta do conhecimento ambiental na relação entre orientação desportiva ao ar livre e intenção de compra. Estes resultados fornecem informações relevantes acerca da relação entre orientação desportiva ao ar livre e atitudes ambientais, preenchendo uma lacuna na investigação referente ao comportamento de compra de moda sustentável. Fornecem ainda aos gestores das marcas, orientações práticas sobre porquê e como devem implementar estas descobertas nos seus negócios, especificamente sob a forma de plataformas de segunda mão procurando alargar os ciclos de vida dos seus produtos e apelar às preferências dos consumidores.

Palavras-chave: Roupa; Sustentabilidade; Em segunda mão; Comportamentos de Compra; Orientação Desportiva ao Ar Livre; Conexão com a Natureza; Atitudes Ambientais; Conhecimento Ambiental; Intenção de Compra; Vontade de Pagar

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TAF – Textile, apparel, and fashion

WTP – Willingness-to-pay

OSO – Outdoor sports orientation

1. Introduction

1.1 Problem Definition and Relevance

Severe droughts, widespread wildfires, extreme rainfall, along with melting ice caps and rising sea levels, are indicative of a drastic negative change in the health of planet earth (Pörtner et al., 2022). The current unhealthy state of our planet is mainly due to a long history of unsustainable behavior in human society. Namely, cumulating negative impacts on the environment, raising the climate, and triggering biodiversity loss at an exaggerated pace (Almond et al., 2020). The latter can be observed as the population sizes of mammals, birds, fish, amphibians, and reptiles have declined by an alarming 68% since 1970 (Almond et al., 2020). Thus, it is imperative to recognize that climate change is currently the greatest threat to humanity on a global scale. Therefore, it is urgent to drastically change this harmful human behavior, as it is estimated that society has until 2030 to immensely reduce carbon emissions and man-made pollution to prevent a climate disaster that will end in a global catastrophe (Masson-Delmotte et al., 2018). Among the main contributors to the man-made climate crisis is the textile, apparel, and fashion (TAF) industry, just behind the oil and gas industry (Straehle & Mueller, 2017; Shen, 2014). One reason for this is that each stage of the TAF supply chain contributes to the harmful depletion of resources and pollution of the environment (Shen, 2014). Fast fashion, a concept within the TAF industry that encourages consumers to regularly purchase new clothing due to newest trends and short-lasting quality, is tremendously fueling the planet's resource depletion, worsening the already bad practices of the TAF industry (Dobscha, 1998; Joy et a., 2012).

One group of society that is directly affected by the climate change-induced degradation of the environment are outdoor sports-oriented individuals. This population spends much of their time in ecologically vulnerable ecosystems like the mountains or the ocean to pursue their sporting activities such as surfing, climbing, or alpine winter sports. Hence, they witness the decline of snow and the pollution of the seas first-hand (Mihala, 2019). Consequently, environmental activism around outdoor sports-oriented individuals has been on the rise in recent years (Mihala, 2019). Furthermore, previous research has shown that outdoor sports-oriented consumers, as well as individuals that feel a high nature connectedness tend to portray a heightened sustainable behavior (Brymer et al., 2009; Geng et al., 2015).

Pairing the environmental degradation with high consumer interest in sustainable clothing, fashion brands are encouraged to act immediately to sustain not only the health of planet Earth's resources, but also to stay profitable as a business in the long run (Nam et al., 2017 However, to this date and the best of the author's knowledge, limited research has made a link between outdoor sports orientation and sustainable purchasing behaviors in the fashion context. This research gap is important to be investigated in greater detail since a number of fashion clothing brands connected to outdoor sports have been criticized for their unsustainable practices and lack of transparency along their value chain (Rielly, 2021). For instance, Quicksilver and Billabong, two of the world's leading surf fashion brands, have been in the spotlight for this reason (Rielly, 2021). This study will use surf fashion brands as a proxy for brands connected to outdoor sports.

Thus, there appears to be a mismatch between the sustainable behaviors and activism of outdoor sports-oriented consumers and the actual practices of niche outdoor sports fashion clothing brands such as Billabong, as they do not reflect the sustainable demands of their customers (Rielly, 2021). Nevertheless, there are brands such as high-end outdoor clothing brand Patagonia that appeal more to outdoor sports-oriented consumers who are looking for sustainable fashion to minimize their impact on nature (Hepburn, 2013). Patagonia has recently overwritten all shares of its business related to protecting the environment to two charities to combat climate change (Nanji, 2022). Further, Patagonia launched the Worn Wear initiative in 2017, a program to trade in and buy used Patagonia gear to extend a product's life cycle and reduce the impact on the environment (Batten, 2020). This successful integration of secondhand products in the Patagonia value chain mirrors the current demand-offer trend towards more sustainable fashion consumption options, including secondhand fashion clothing (Straehle & Klatt, 2017). Considering the importance of the environment and the economic sustainability of fashion brands, this research examines consumers' decisions toward different types of clothing. Specifically, this research investigates when and how outdoor sports-oriented consumers show a higher interest in sustainable and secondhand fashion offered by surf brands than more conventional consumers not connected explicitly to nature and outdoor sports.

1.2 Objective and Research Questions

As sustainability plays an increasingly important role in fashion, consumers demand more sustainable options (Nam et al., 2017). While public interest in secondhand clothing is increasing (Straehle & Matthaei, 2017), a better insight into how consumers behave when buying conventional, sustainable, or secondhand clothing is needed. Therefore, the purpose of this study is to shed light on consumer purchasing behaviors related to sustainable and secondhand fashion clothing, leading to the first set research questions:

RQ1: Do different types of fashion clothing offered by surf brands, namely conventional, sustainable, and secondhand fashion clothing, trigger different consumer purchasing behaviors regarding product purchasing intention and willingness-to-pay?

Previous research has shown that outdoor sports-oriented consumers, as well as individuals who exhibit high nature connectedness, tend to have higher environmental attitudes (Brymer et al., 2009; Geng et al., 2015). However, from an academic standpoint and to the best of the author's knowledge, an actual correlation between outdoor sports orientation and nature connectedness has not yet been established. To investigate this relationship and underscore the relationship between outdoor sports orientation and environmental attitudes (Brymer et al., 2009), the second research question is as follows:

RQ2: Does the outdoor sports orientation of consumers lead to a heightened nature connectedness and environmental attitudes owing to their participation in leisure activities such as surfing and other outdoor sports compared to conventional consumers?

In addition, within the sustainable fashion context, the relationship between outdoor sports orientation and nature connectedness is also largely unexplored. To provide academic and practical insights for fashion brands, this study aims to contribute to existing research by answering the last research question:

RQ3: Do outdoor sports-oriented consumers show higher sustainable fashion purchasing behaviors and a heightened interest in sustainable and secondhand fashion compared to conventional consumers?

1.3 Thesis Structure

The thesis is organized with the following structure: The first chapter introduced the underlying problem and defined the research questions. An overview of the existing scientific literature on the topics of sustainability in the fashion industry, sustainable fashion consumption, and outdoor sports orientation is then provided. Furthermore, a set of hypotheses is formulated, which leads to the empirical study of this dissertation. After the methodology and data analysis section, the findings of the research are outlined. The thesis ends with a conclusions section along with theoretical and practical implications as well as directions for future research around sustainable consumption behavior and outdoor sports orientation.

2. Academic Literature Review

2.1 Sustainability in the Fashion Industry

2.1.1 Sustainable Development

The Brundtland Report defines sustainable development as a middle ground between meeting the needs of the present generation and without preventing future generations from meeting theirs (Keeble, 1988). Sustainable development has been closely followed up by the United Nations, which set 17 Sustainable Development Goals in the 2030 Agenda for Sustainable Development. The goals represent a plan of action to achieve environmental, social, and economic sustainability composed also by 169 target and objective indicators (UN General Assembly, 2015). In the fashion context, sustainable development goal 12 (SDG12) – Ensure sustainable consumption and production patterns – calls for efficient use of natural resources, better management of waste, and a prolongment of life cycles, while raising awareness for overconsumption and resource depletion (UN General Assembly, 2015). SDG12 must be achieved with consumption patterns that enable a more profound transformation of society, as improving consumption efficiency and appropriate resource use are no longer sufficient (Fuchs & Boll, 2018). Facing the major difficulties of today's economy, while meeting the need for profound change of the system, transformation is required in the value chain, in industrial processes, and ultimately, in consumer behavior (White et al., 2019).

2.1.2 The Fashion and Textile Industry

Throughout every stage of the supply chain within the TAF industry, the environment and our planets resources are threatened, hence making the TAF one of the most harmful and polluting industries, after the oil and gas industry (Straehle & Mueller, 2017; Shen, 2014). The sheer depletion of resources in the TAF industry is fueled by overconsumption, largely a consequence of fast fashion, through which consumers are induced to buy more clothes on a regular basis due to new trends, often resulting in discarding of still intact clothing (Dobscha, 1998; Joy et al., 2012). In the past, various fashion clothing brands, such as Adidas and Nike, have been in the public eye for apparent unsustainable business operations regarding the environmental and social integrity of their supply chains (Newman & Trump, 2017). Consumer demand for a more transparent value chain is increasing as shoppers desire a well-communicated overview of the ethicality and the sustainability of production practices (Diddi & Niehm, 2016). As consumers now view sustainability of fashion products as a responsibility of brands (Diddi & Niehm, 2016) and the popularity of ethical consumption is increasing worldwide, pressure is mounting on fashion companies to incorporate sustainable practices and products to remain profitable in the long run (Nam et al., 2017).

2.1.3 Sustainable Fashion Clothing

In a survey conducted by Niinimäki (2010), 94.6% of respondents showed willingness to invest a price premium in fashion clothing of higher quality, which lasts longer and can be fixed in case of damage. This shows that consumers are indeed interested in sustainable fashion clothing.

Sustainable fashion clothing is apparel that is designed to have a long lifecycle, manufactured from organic or recycled materials with ethical standards, which causes minimal environmental damage along the entire value chain (Joergens, 2006; Fletcher, 2008). However, it is not enough that the clothing is manufactured sustainably; it must also be stylish and meet the aesthetic demands of the wearer to comply with sustainable fashion standards (Beard, 2008). If these requirements are not met, sustainable fashion clothing will remain a niche market because it does not represent the lifestyles of the broad consumer masses (Beard, 2008). This is reinforced further by Niinimäki (2010), who evaluated that 70% of the respondents of her study believe that sustainable fashion should be indistinguishable from conventional clothing in terms of style and

appearance. Whether this is a positive or negative aspect for consumers in general, remains to be investigated. There may be a (small) fraction of consumers (e.g., surf brand customers) who share the same ideals and have similar lifestyles, who, unlike the masses, prefer niche and sustainable clothing.

According to Palakshappa and Dodds (2020), a sustainable brand needs to embody sustainability within its entire supply chain, such as Lululemon, where its marketing strategy evolves around sustainability. Alternatively, Kowtow, where stakeholders engage throughout the entire creation process ethically. On the brand's side, this can be done through creating sustainable fashion, providing transparency in the value chain, promoting a sustainable consumption lifestyle through marketing channels, and engaging with their customer base through various marketing channels (Arnold, 2017; Merrilees, 2016; Palakshappa & Dodds, 2020). An example of this is high-end outdoor apparel brand Patagonia, which regularly publishes *The Stories We Wear*, tales of customers portraying the long lifecycles of their gear (Michel et al., 2019). Additionally, environmental factors must be matched with qualitative design aspects to make sustainable fashion attractive (Beard, 2008). Consumers, on the other hand, can interact with the brand by consuming their sustainable clothing while participating in social media discussions and brand-organized events, showing a close identification with the brand's image (Palakshappa & Dodds, 2020).

2.1.4 Secondhand Clothing as a Mean of Sustainable Consumption

Previous research in fashion consumption has also been conducted on implementing the rising interest in sustainable clothing, especially secondhand fashion clothing, into the value chain of fashion brands (Hvass, 2015; Straehle & Matthaei, 2017). Hvass (2015) describes the integration of secondhand products into the value chain through resell platforms and (own) brand retail shops (e.g., Patagonia), based on donations of no longer used clothing items from previous customers aiming to prolong the lifecycle of products. A difference exists, however, between secondhand clothing and vintage apparel. To be considered vintage, a product needs to be of a certain age, previously owned but not necessarily used, and the price depends on the condition of the good (Cervellon et al., 2012). Secondhand products, on the other hand, are clothing items that were previously used, can be of any age, and the price is lower than in retail (Cervellon et al.,

2012; Turunen & Leipämaa-Leskinen, 2015). For research purposes, the present research will focus on secondhand clothing.

Despite that, historically, secondhand shopping for fashion clothing was an insignificant form of commerce that only appealed to a niche audience at flea markets or thrift stores (Guiot & Roux, 2010). With the interest emergence in sustainable fashion options, purchasing secondhand gained traction within the fashion ecosystem (Straehle & Klatt, 2017). This interest can be explained by different shopper motives such as low prices, uniqueness, and sustainability (Guiot & Roux, 2010). Low prices are an important incentive for customers to purchase secondhand items (Xu et al., 2014), as most secondhand buyers believe they are paying a reasonable and fair price for the product, as opposed to the retail price, which is often higher than the production value (Roux & Guiot, 2008). Consequently, secondhand shopping is also an efficient way for customers with fewer financial resources to engage in sustainable fashion clothing purchases (Xu et al., 2014; Bly et al., 2015). Further, when purchasing secondhand, consumers are eager to find unique items to set themselves apart and develop a personal image of uniqueness through clothing items that are usually unavailable in regular retail stores that sell new clothing (Guiot & Roux, 2010, Reiley & DeLong, 2011). Uniqueness was first associated with fashion in the research context by Snyder and Fromkin (1977), according to whom uniqueness is the consumer's effort to stand out from the conventional majority. Finally, consumers purchase secondhand clothing for ethical and sustainable reasons, such as waste reduction and extending the life cycle of products that are still in good condition (Bekin et al., 2007; Guiot & Roux, 2010; Reiley & DeLong, 2011).

2.2 Sustainable Consumption Behavior

Sustainable consumption behavior has been the subject of previous research as it is used by brands and companies to understand consumer buying behavior and consequently use it in their marketing strategies (Pickett-Baker & Ozaki, 2008). One literature stream suggests that most consumers let their purchasing decisions be influenced by quality and price, rather than ethical values (Ehrich & Irwin, 2005; Joergens, 2006). However, according to other prior literature sources, such as Schwartz's (1973) moral norm activation theory of altruism, it is assumed that consumers behave in an environmentally friendly manner because environmental well-being is a collective good. According to Mukendi et al. (2019), sustainable purchasing behavior is only

identifiable among more ethical fashion consumers, as they can recognize the benefits to the self through the consumption of sustainable fashion. Conventional consumers, though, may not grasp this connection. Conventional consumers primarily focus on the fulfillment of previously mentioned personal needs, such as protection and economic benefits, rather than on altruistic value creation through social and environmental well-being (Zabkar & Hosta, 2013).

2.2.1 Sustainable Consumption Drivers

As more consumers become aware of environmental malpractices in the TAF industry, consumers with an ecological attitude are willing to pay a premium for sustainable products and support environmentally conscious companies (Laroche et al., 2001; Ertekin & Atik, 2015). These mindful consumers declare themselves as fatigued from overconsumption and strive to set free from the pressure to consume, through sustainable consumption of fashion (Bly et al., 2015). Due to factors such as mediocre product quality, motivation to support local businesses, and the lack of innovation and uniqueness in fashion collections from conventional fashion brands, some shoppers are already choosing to boycott fast fashion altogether (Kim et al., 2013). While the need for sustainable consumption is widely recognized, it remains unclear exactly what motives drive consumption (Sharma & Jha, 2017).

Prior literature suggests a variety of motives and intentions to engage in sustainable consumption. Two of these motives are the perception of environmental knowledge and environmental attitudes (Cowan & Kinley, 2014). Of all motives, environmental attitudes have been amongst the most significant drivers of future sustainable consumption intentions (Cowan & Kinley, 2014). In addition, environmental knowledge has a direct impact on consumers' sustainable purchasing behavior (Moisander, 2007). The higher a consumer’s knowledge of environmental issues, the stronger their sustainable purchasing behavior, assuming the consumer perceives their actions to make a substantial difference (Moisander, 2007; Cowan & Kinley, 2014).

A high level of engagement is required to enhance consumers’ knowledge and attitudes toward more sustainable consumption and purchasing behaviors (Palakshappa & Dodds, 2020). Patagonia, for example, is actively engaging with their customers by sharing their stories of environmental activism, which further increases the consumers’ environmental knowledge, fueling sustainable purchasing behaviors (Key et al., 2021; Moisander, 2007; Cowan & Kinley,

2014). Further, in terms of environmental knowledge, a study conducted by Nam et al. (2017) revealed that consumers of sustainable products are less likely to purchase sustainable clothing if there is insufficient information about the sustainability of the product, effectively portraying how environmental knowledge leads to more sustainable purchasing decisions, as knowledge needs to be met with information.

Purchasing behavior can be viewed as highly dependent on individual differences, including the influences of lifestyle and leisure activities (Ahn et al., 2018). Consumers buy not only to satisfy their needs and wants, but also to build a self-image that is coherent with their lifestyle and social practices (Giddens, 1991; Spaargaren & Van Vliet, 2000; Niinimäki, 2010). Consumers build their daily lifestyles on habitual practices based on customs, beliefs, and decisions. The more these practices are rooted in a sustainable ideology, the more likely individuals are to recognize that their actions are consistent with their inner selves, which in turn has a greater impact on sustainable consumption choices (Giddens, 1991; Spaargaren & Van Vliet, 2000; Niinimäki, 2010).

The level of one's connection with nature and a more outdoor lifestyle fostered through nature experiences, such as outdoor sports, is also likely to reinforce sustainable behaviors (Prince, 2017). Whether this nature connectedness affects more sustainable consumption decisions has been the object of limited research. Thus, it becomes important to investigate in greater depth if and how outdoor sports-oriented individuals connected to nature are more susceptible of engaging in more sustainable consumption behaviors than (other) individuals who are less oriented towards outdoor activities.

2.3 Outdoor Sports Orientation and Nature Connectedness on Sustainable Consumption Behavior

Recent research has explored the relationship between individuals with and outdoor sports oriented (e.g., outdoor athletes) and environmentally friendly behaviors (Uesugi & Kudo, 2020). However, limited attention has been given to the relationship between outdoor sports-oriented consumers with a high nature connectedness owing to their participation in outdoor sports (e.g., surfing) and sustainable consumption decisions involving fashion.

Previous research has shown that the closer an individual feels connected to nature and the outdoors, the likelier that individual will show sustainable behavior in everyday life (Geng et al., 2015). This connectedness to nature can be nurtured and fostered through repeatedly spending time outside and experiencing nature (Grimwood et al., 2015), as well as being dependent on an outdoor place (Vaske & Kobrin, 2001). Dependence and attachment to an outdoor place, as well as a deeper connection to nature can also be strengthened through the practice of outdoor sports such as rock climbing, surfing, or snowboarding as athletes' motivations for engaging in the sport shift from personal goals and motives to a greater appreciation of the values of the environment (Brymer & Gray, 2009; Uesugi & Kudo, 2022). Brymer et al. (2009) suggest that participating in outdoor sports leads to a deep confrontation with nature and a subsequent change in the athlete's behavior towards more sustainable actions. Furthermore, according to Prince (2017), outdoor experiences and lifestyles further entice more sustainable behaviors. In addition to the exceptional amount of time that outdoor athletes spend in nature, another reason for their sustainable behavior includes their presence in ecologically vulnerable areas such as mountains or the ocean, where they experience climate change-induced degradation and pollution head-on (Mihala, 2019). This is emphasized by Wheaton (2007), who noted that members of the British outdoor activist group *Surfers Against Sewage* are motivated to raise their voices against water pollution. Thus, it is expected that the more connected an athlete feels to nature and its resources, the more likely they are to engage in environmentally friendly behaviors, such as consuming more responsibly (Geng et al., 2015). Whether these environmentally friendly behaviors can be transferred to sustainable purchasing behaviors in the fashion clothing context will empirically be investigated further in this research.

3. Conceptual Framework and Hypotheses

Pickett-Baker and Ozaki (2008) suggest that the clear labeling of products as sustainable will increase the consumers' purchasing intentions, as consumers wish to receive clear information about a product's sustainability. Considering that consumers are willing to pay a price premium for sustainable products (Laroche et al., 2001; Ertekin & Atik, 2015), and that secondhand and sustainable products are currently attracting increasing interest from a wide range of consumers (Straehle & Klatt, 2017; Niinimäki, 2010), the first set of hypotheses is formulated as follows:

H1: The type of fashion clothing will impact consumers' purchasing intention and WTP for fashion products, so that:

H1a: Consumers will show higher product purchasing intention and WTP for sustainable fashion clothing compared to conventional fashion clothing.

H1b: Consumers will show higher product purchasing intention and WTP for secondhand fashion clothing compared to conventional fashion clothing.

H1c: Consumers will show higher product purchasing intention and WTP for sustainable fashion clothing compared to secondhand fashion clothing.

Brymer et al.'s (2009) findings suggest that outdoor athletes are repeatedly exposed to nature, which leads to a deeper sense of nature-connectedness and consequently pro-environmental behaviors. Uesugi and Kudo (2020) have created a scale to measure place dependence in relation to the participation in outdoor sports activities. The findings suggest that if the natural surrounding serves a functional need, which it does for outdoor athletes, heightened environmental attitudes can be observed. Based on this reasoning, the second hypothesis is as follows:

H2: Consumers with a high outdoor sports orientation embody a higher nature connectedness and higher environmental attitudes owing to their participation in outdoor leisure activities such as surfing and other outdoor sports, than conventional consumers.

Since outdoor sports-oriented consumers have a higher nature connectedness owing to their recreational activities such as surfing and other outdoor sports, they are likelier to show a higher

propensity to consume more sustainable fashion clothing than conventional consumers who are less nature connected.

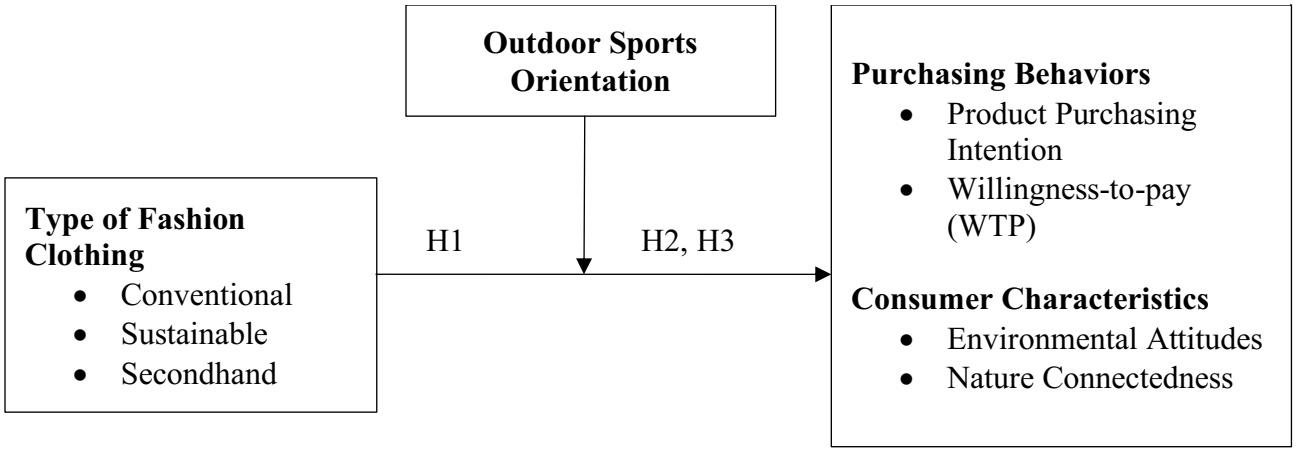
According to Niinimäki (2010), high environmental attitudes have previously been directly linked to sustainable fashion consumption. Also, previous studies suggest that conventional consumers in contrast to consumers with heightened nature connectedness are primarily focused on the quality and price of fashion, rather than ethical values (Ehrich & Irwin, 2005; Joergens, 2006). In addition, an increased nature connectedness, presumed among consumers with a high outdoor sports orientation, could lead to a commitment to purchasing secondhand clothing due to its close connection to sustainability (Roux & Guiot, 2008). Therefore, and due to the hypothesized effect mentioned above, it is expected that consumers with high outdoor sports orientation will show higher sustainable purchasing behaviors than conventional consumers, leading to the following set of hypotheses:

H3: Outdoor sports orientation will moderate the relationship between the type of fashion clothing and purchasing behaviors (product purchasing intention and WTP), so that:

H3a: The higher (vs. the lower) consumers' outdoor sports orientation, the higher (vs. the lower) their sustainable fashion purchasing behaviors.

An experimental study will be conducted to examine the impact of the type of fashion clothing (conventional, sustainable, secondhand) on surf brand consumer's sustainable purchasing behaviors measured by product purchasing intention and willingness-to-pay (WTP). In addition, the influence of outdoor sports orientation on nature connectedness and environmental attitudes is investigated. Finally, it is examined whether outdoor sports orientation acts as a moderator on the relationship between the type of fashion clothing and purchasing behaviors. Lastly, the mediating effect of environmental knowledge between outdoor sports-orientation consumers and the dependent variables (product purchasing intentions and WTP) will be tested.

Figure 1: Conceptual Model 1



4. Methodology and Data Collection

The following section gives an insight into the methods used in this thesis to answer the previously formulated research questions and describes the variables used throughout the research.

4.1 Research Method

In addition to secondary data, primary data was collected to answer the research questions of this study. For the quantitative research, the survey platform Qualtrics was used, an online platform that enables a sufficiently large number of participants to be reached via a link, easily accessible in various locations. This allows to reach an online based audience within a specific time. Moreover, it enables the participants to be flexible with giving their responses, as it can easily be answered anytime from anywhere. The web-based platform Qualtrics is attainable at low costs and allows individualization of the survey structure and type of questions. For this study, different manipulations were needed, which were then presented to the participants through randomization. This technology allows presenting three different randomly distributed experimental conditions perceived by the participants as well-developed stimuli (Tingling et al., 2003). Further, the internet-based survey provides the participants with guaranteed privacy and respects their personal boundaries, as responses are anonymous. This will lead to an increased likelihood of individuals participating (Evans & Mathur, 2005). Also, anonymity reduces the social desirability bias which can occur when individuals respond to questions revolving around ethical standards and expectations (Grimm, 2010).

4.2 Sampling

Owing to the nature of the study and the need for a significantly large number of respondents that participate in outdoor sports or surfing, the sample technique of non-probability convenience sampling was chosen. To reach a sufficiently large audience of consumers, participants were contacted through the social media platforms Instagram, WhatsApp, and LinkedIn within the authors' network. The non-probability convenience sampling technique allows for a convenient, fast, and cost-efficient way to reach a large audience easily (Malhotra et al., 1999).

4.3 Research Instruments

To answer the hypotheses through a quantitative research approach, two experimental studies were launched through the previously mentioned internet-based platform Qualtrics, namely a pilot study followed by the main study. Subsequently, a detailed description of both studies is provided, explaining the study design carried out by the author and the analysis of the variables listed in the conceptual model previously described to test the hypotheses.

4.3.1 Pilot Study

Before launching the main study, a pilot study was published on November 15th, 2022, to test the experimental conditions of the main study: type of fashion clothing (conventional, sustainable, secondhand). 25 participants completed the pilot study. The pilot study included a manipulation check for the three conditions during which the participants were asked whether the clothing shown in advertisements appeared to be sustainable or secondhand. Also, whether they were familiar with Billabong, an Australian-based leading surf fashion brand. The fashion clothing shown was a long-sleeved t-shirt from the Billabong brand. Results show that the three manipulation scenarios used in the study were understood and interpreted correctly.

4.3.2 Main Study

The main study was launched between November 16th and 20th, 2022, and 429 responses were recorded, of which only 315 were completed entirely. This came as no surprise, since it is known that internet-based self-administered surveys are subject to high rates of attrition (Reips, 2002). However, with over 100 participants going through each of the three experimental conditions (type of fashion clothing: conventional, sustainable, secondhand), the sample size can be assumed to be sufficiently large by the minimum amount needed to undertake a randomized experimental-design study (Maxwell & Delaney, 2004).

4.4 Design and Procedure

The survey began with an informative introduction to the study, as well as a brief acknowledgment to participants and assurance of their anonymity. The study followed a 3 (type

of fashion clothing: conventional, sustainable, secondhand) between-within subjects' design with outdoor sports orientation as a measured variable. All participants began the study with two multi-item scales on (1) outdoor sports orientation and (2) nature connectedness (Nisbet & Zelenski, 2013), and were randomly allocated to one of three experimental conditions. Each participant was exposed to an advertisement for (1) conventional, (2) sustainable, or (3) secondhand fashion clothing, followed by purchasing behavior measures (product purchase intention and willingness-to-pay). After, all participants were exposed to multi-item measures that assessed their environmental attitudes and knowledge (Sudbury-Riley & Kohlbacher, 2016; Ellen et al., 1991). Lastly, demographic measures were applied, and participants were thanked for their participation.

4.5 Stimuli Development

The stimuli used for this study were three fictional advertisements for a long sleeve shirt from the Billabong brand. The shirt was chosen for its simple design that can be worn by both men and women, while the brand was chosen for being one of the main competitors in the surf fashion ecosystem, also worn by conventional consumers. The stimuli were designed along the lines of conventional Billabong advertisements, using photographs taken by the author himself. Further, the stimuli were pre-tested in a pilot study before the main study took place to ensure that the participants understood the manipulations correctly.

Three different scenarios of the Billabong advertisement were designed to test three different conditions: an advertisement for a conventional, a sustainable, and a secondhand type of fashion clothing. To ensure that the only visual difference were the manipulations, all three advertisement variants were created the same in terms of images and structure. The manipulations were introduced through the wording under the product description with "newest fall collection – shop now" for the conventional one, "eco-conscious – 100% recycled material" for the sustainable one, and "pre-owned – better than new" for the secondhand clothing advertisement. Further, the sustainable and secondhand advertisement showed a green text color and a tagline such as "Billabong Recycler" and "Billabong Second Life – share your lifestyle", respectively. In contrast, the conventional one showed an orange text color and did not have a specific tagline. A clear image of each fashion item was given in all manipulations to avoid biases through misconception of the product (see Appendix 1A – 1C).

4.6 Variable Descriptions

4.6.1 Manipulation Check

To confirm whether the brand shown in the advertisements was indeed well-established, brand familiarity was used as a manipulation check variable. Participants were asked to rank how familiar they were with the brand ("How familiar are you with Billabong?") on a seven-point Likert scale (1 = Not familiar at all to 7 = Extremely familiar).

Similar to the pilot study, after verifying that the three manipulation scenarios used in the study were understood and interpreted correctly, participants were asked about their perceptions concerning the product's characteristics and the brand displayed (conventional, sustainable, and secondhand) in the advertisements. Participants were asked to rate their level of agreement with three statements regarding the displayed manipulations ("I think the product displayed (Billabong shirt) is sustainable."; "I think the Billabong brand is sustainable."; "I think the product displayed (Billabong shirt) is secondhand.") on a seven-point Likert scale (1 - Strongly disagree to 7 - Strongly agree). The manipulation check results are provided in the next section.

4.6.2 Independent Variables

Type of fashion clothing - This multi-categorical variable was divided into three groups, one of which was randomly presented to participants. The three groups can be differentiated from each other by characterization, namely conventional, sustainable, and secondhand, as previously described in the stimuli development section.

4.6.3 Dependent Variables

Purchasing Behaviors

Product purchasing intention – To identify whether the participants had the intention of purchasing the product displayed in the advertisement, they were asked to state their level of agreement on their purchase intention ("I would purchase the previously shown product (Billabong shirt)."") on a seven-point Likert scale (1 – Strongly disagree to 7 – Strongly agree), adapted from Lee and Shin (2010).

Willingness-to-pay (WTP) – To measure participants' WTP, they were asked how much they would be willing to pay for the advertised product on a scale from 0 to 100 euros.

Consumer Characteristics

Nature connectedness – To assess whether the participants of the study were more connected to nature ("My relationship to nature is an important part of who I am."; "My ideal vacation spot would be a remote, wilderness area."), the nature connectedness scale (Nisbet & Zelenski, 2013), employed on a seven-point Likert scale (1 – Strongly disagree to 7 – Strongly agree).

Environmental attitudes – In order to assess the consumers' general perception of sustainable consumption and their attitudes towards purchasing sustainable fashion, they were asked to state their level of agreement with five items ("When there is a choice, I always choose the product that contributes to the least environmental damage"; "I do not buy products from companies that I know use fast fashion and contribute to an increase of waste disposal."; …) on a seven-point Likert scale (1 – Strongly disagree to 7 – Strongly agree), adapted from Sudbury-Riley and Kohlbacher (2016).

4.6.4 Moderator

Outdoor sports orientation – In the context of this study, it was essential to find out whether the participants take part in outdoor sports activities (e.g., surfing). Therefore, the participants were asked to what extent they participate in outdoor activities and what importance they attach to them ("I participate regularly in outdoor activities such as surfing, climbing, or alpine sports."; "Outdoor sports activities play an important role in my life and are part of who I am.") on a seven-point Likert scale (1 – Strongly disagree to 7 – Strongly agree), adapted from Martin et al. (1997).

5. Analysis and Results

5.1 Sample Characterization

The survey sample consisted of 315 considered responses, with more women (62.5%) than men (37.5%) participating. The nationality distribution of the sample revealed that most participants were German (51.4%), followed by Portuguese (11.8%), and Finnish (7.9%). Other nationalities with small proportions included Austria, Paraguay, and the United States. Most participants were between 18 and 25 years old (69.8%), followed by participants aged between 26 and 35 years (22.54%). In total, the age range of participants was from under 18 years old to over 65 years old. In terms of education, most of the respondents have a bachelor's (47.9%) or master's degree (29.5%) and are currently studying (56.8%) or working (33.3%). Lastly, most participants' annual income is less than €20,000 (41%) or they indicated that they did not wish to provide information (17.5%).

5.2 Scale Reliability and Factor Analysis

Most variables used in this research have been adapted from existing literature. However, it is still important to check whether these scales are reliable in the context of this study to attain accurate results. First, a factor analysis was conducted for all scales with more than two items to determine if all items measured the same construct. Both, nature connectedness and environmental attitudes are measured by more than two items, hence they were included in the factor analysis. The results show that one component was extracted for each of the two variables, which means that each variable's items can be grouped accordingly since they measure the same construct, respectively.

After, a correlation analysis was conducted for scales with two items only, namely for outdoor sports orientation and environmental knowledge. Through a Pearson correlation statistic, it was found that outdoor sports orientation indicates a strong positive correlation ($r = .824$, $N = 315$, $p < .001$), while environmental knowledge portrays a moderate positive ($r = .465$, $N = 315$, $p < .001$) (see Table 1).

Table 1: Correlation Analysis 2-Item Measures

Variables	1	2
1. Outdoor Sports Orientation	-	. 824**
2. Outdoor Sports Orientation	.824**	-

Variables	1	2
1. Environmental Knowledge	-	.465**
2. Environmental Knowledge	.465**	-

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq 1$

A reliability analysis was also conducted to check the scale reliability. Reliability analysis assessment of Cronbach's α (alpha) is commonly used to test whether a set of three or more items within a survey, measures the same construct or variable (Tavakol & Dennick, 2011). Using parameters .1 to 1, Cronbach's α measures for internal consistency and reliability of survey items used, with a score above .6 indicating high homogeneity and correlation between the items measuring the same construct, therefore acceptable for research purposes (Streiner, 2003). Within the study context, multi-item scales were tested for reliability using the alpha coefficient, namely the following variables: nature connectedness and environmental attitudes. For both scales, the alpha values of the following reliability analysis were above the acceptable minimum of 0.6, meaning no improvements through deleting items had to be undertaken (see Table 2). As all measured items showed reliability (and correlation) over the scientifically expected minimum, the items measuring the same construct were averaged into one scale for the respectful construct.

Table 2: Reliability Test for Multi-Item Scales

Scale	**Initial number of items**	**Cronbach's alpha**	**Cronbach's alpha if deleted**	**Items deleted**	**Final number of items**
Nature Connectedness	6	.893	-	-	6
Environmental attitudes	5	.812	-	-	5

5.3 Results Manipulation Check

To check the manipulations and confirm whether the participants understood which fashion clothing advertisement was conventional, sustainable, or secondhand, three independent *t-tests* at a 95% confidence level were conducted. Results show that participants perceived the sustainable manipulation to be more sustainable than the conventional one (sustainability product perceptions: $M_{conventional}$ = 3.98 vs. $M_{sustainable}$ = 5.21; $t(207) = -6.98$, $p < .001$) and neither was perceived as a secondhand product (secondhand product perceptions: $M_{conventional}$ = 2.02 vs. $M_{sustainable}$ = 2.19; $t(207) = -1.06$, $p < .001$), as intended (see Table 3). Further, the manipulation check for the secondhand manipulation also revealed that it was perceived as more sustainable than the conventional one (sustainability product perceptions: $M_{conventional}$ = 3.98 vs. $M_{secondhand}$ = 5.08; $t(206) = -5.91$, $p < .001$), while at the same time the secondhand manipulation was more likely to be perceived as a secondhand product in comparison to the conventional manipulation (secondhand product perceptions: $M_{conventional}$ = 2.02 vs. $M_{secondhand}$ = 5.02; $t(206) = -14.14$, $p = .29$), as intended (see Table 3).

Table 3: Manipulation Check for Type of Fashion Clothing

	Type of Fashion Clothing				
	Conventional		**Sustainable**		
	Mean	*SD*	*Mean*	*SD*	*t-Test*
Product appears sustainable	3.98	1.35	5.21	1.21	-6.98***
Product appears secondhand	2.02	1.05	2.19	1.21	-1.06

	Conventional		**Secondhand**		
	Mean	*SD*	*Mean*	*SD*	*t-Test*
Product appears sustainable	3.98	1.35	5.08	1.32	-5.91***
Product appears secondhand	2.02	1.05	5.02	1.88	-14.14***

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq 1$

These results show that all manipulations were perceived as intended and further analysis could be conducted with confidence.

5.4 Main Results

After successfully testing the variables for reliability and checking all three experimental conditions for a successful manipulation, the following subsection tests the hypotheses to examine the impact of the type of fashion clothing on product purchasing intention and WTP. Moreover, it also tests the impact of outdoor sports orientation on nature connectedness and environmental attitudes. Further, the moderating effect of outdoor sports orientation on the relationship of type of fashion clothing and the dependent variables is analyzed.

5.4.1 The Effect of the Type of Fashion Clothing

H1: The type of fashion clothing will impact consumers' purchasing intention and WTP for fashion products, so that:

H1a: Consumers will show higher product purchasing intention and WTP for sustainable fashion clothing compared to conventional fashion clothing.

To test the first set of hypotheses, three independent samples *t-tests* at a 95% confidence level were conducted on the two dependent variables, product purchasing intention and WTP.

To test H1a, the means of the two independent groups were compared, namely conventional and sustainable fashion clothing. Results show that there is no significant difference between the means of neither product purchasing intention ($M_{conventional} = 4.12$ vs. $M_{sustainable} = 3.89$; $t(207) = 1.03$, $p = .30$), nor WTP ($M_{conventional} = 33.28$ vs. $M_{sustainable} = 35.11$; $t(207) = .75$, $p = .37$), not validating H1a (see Table 4).

Table 4: Results Independent Samples T-Test of Type of Fashion Clothing (Conventional vs. Sustainable) on Purchasing Behaviors

	Type of Fashion Clothing				
	Conventional		**Sustainable**		
	Mean	*SD*	*Mean*	*SD*	*t-Test*
Product Purchasing Intention	4.12	1.63	3.89	1.60	1.03
WTP	33.28	13.93	35.11	15.34	.75

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

H1b: Consumers will show higher product purchasing intention and WTP for secondhand fashion clothing compared to conventional fashion clothing.

To test H1b, the means of conventional fashion clothing and secondhand fashion clothing were compared. Again, results show that there is no significant difference in the means for product type on purchasing intention ($M_{conventional} = 4.12$ vs. $M_{secondhand} = 4.27$; $t(206) = -.68$, $p = .50$), nor WTP ($M_{conventional} = 33.28$ vs. $M_{secondhand} = 30.75$; $t(206) = 1.25$, $p = .21$), not validating H1b (see Table 5).

Table 5: Results Independent Samples T-Test of Type of Fashion Clothing (Conventional vs. Secondhand) on Purchasing Behaviors

	Type of Fashion Clothing				
	Conventional		**Secondhand**		
	Mean	*SD*	*Mean*	*SD*	*t-Test*
Product Purchasing Intention	4.12	1.63	4.27	1.67	-.68
WTP	33.28	13.93	30.75	15.38	1.25

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

H1c: Consumers will show higher product purchasing intention and WTP for sustainable fashion clothing compared to secondhand fashion clothing.

To test H1c, the means of sustainable fashion clothing and secondhand fashion clothing were compared. A significant difference between the means was revealed on WTP ($M_{sustainable}$ = 35.11 vs. $M_{secondhand}$ = 30.75; $t(211) = 2.08$, p =.04). Marginally significant mean differences between sustainable and secondhand clothing were also found on product purchasing intention ($M_{sustainable}$ = 3.89 vs. $M_{secondhand}$ = 4.27; $t(211) = -1.72$, p =.09 (see Table 6).

Table 6: Results Independent Samples T-Test of Type of Fashion Clothing (Sustainable vs. Secondhand) on Purchasing Behaviors

	Type of Fashion Clothing				
	Sustainable		**Secondhand**		
	Mean	*SD*	*Mean*	*SD*	*t-Test*
Product Purchasing Intention	3.89	1.60	4.27	1.67	-1.72^{+}
WTP	35.11	15.34	30.75	15.38	2.08*

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

Interestingly, findings show that participants were willing to pay more for (new) sustainable fashion clothing rather than for secondhand fashion clothing. However, they showed higher purchase intention for secondhand clothing, revealing contradicting paying behaviors. Thus, partially validating H1c.

5.4.2 The Impact of Outdoor Sports Orientation on Nature Connectedness and Environmental Attitudes

H2: Consumers with a high outdoor sports orientation embody a higher nature connectedness and higher environmental attitudes owing to their participation in outdoor leisure activities such as surfing and other outdoor sports than conventional consumers.

To test H2, two subsequent linear regressions to evaluate the effect of outdoor sports orientation on nature connectedness and environmental attitudes were performed. The results of

the first linear regression show that there is a positive and significant ($p < .001$) effect of outdoor sports orientation on nature connectedness with a correlation of .46, suggesting that outdoor sports orientation moderately impacts nature connectedness. The coefficient is .30, which means that if a consumer's outdoor sports orientation increases by one unit, the consumer will have an increase in nature connectedness of .30 units if everything else stays constant. Moreover, this effect explains 20.9% of the variance of a consumer's nature connectedness (see Table 7).

Table 7: Direct Effect of Outdoor Sports Orientation on Nature Connectedness

	Coefficient	***SE***	***Correlation***	***R^2***
Outdoor Sports Orientation	.30***	0.03	.46	20.9%

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

Further, for second linear regression, a significant effect was observed ($p < .001$) with a correlation of .28, indicating a moderate impact of outdoor sports orientation on environmental attitudes. With a coefficient of .18 a positive impact can be observed, meaning that if the outdoor sports orientation of a consumer is increased by one unit, the consumer's environmental attitudes will increase by .18 units (see Table 7).

Table 8: Direct Effect of Outdoor Sports Orientation on Environmental Attitudes

	Coefficient	***SE***	***Correlation***	***R^2***
Outdoor Sports Orientation	.18***	0.04	.28	7.7%

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

The findings of these two linear regression analyses show that the higher a consumer's outdoor sports orientation, the higher their nature connectedness and environmental attitudes, fully supporting H2.

5.4.3 The Moderating Effect of Outdoor Sports Orientation

H3: Outdoor sports orientation will moderate the relationship between the type of fashion clothing and purchasing behaviors (product purchasing intention and WTP), so that:

H3a: The higher (vs. the lower) consumers' outdoor sports orientation, the higher (vs. the lower) their fashion purchasing behaviors.

The third hypothesis suggests that consumers' outdoor sports orientation moderates the relationship between the type of fashion clothing and the dependent variables, product purchasing intention and WTP. A 3 (type of fashion clothing: conventional, sustainable, secondhand) x outdoor sports orientation interaction was tested on product purchasing intention and WTP. To test for moderation, a multiple regression test using Hayes' PROCESS macro model 1 (2013, 2015) was performed. The type of fashion clothing was coded as a multicategorical variable while outdoor sports orientation was used as a continuous (mean-centered) variable. Outdoor sports orientation linearly moderates the effect of type of fashionable clothing on the dependent variables when the regression coefficient for the interaction between lower and upper confidence intervals is different from zero (Hayes, 2012; Hayes, 2018).

First, the differences between conventional and sustainable fashion clothing were analyzed. Results show that no main effects of type of fashion clothing were found on product purchasing intention (b = -.24, SE = .66, t(315) = -.36, p = .72, 95% CI [-1.54, 1.06]) nor on WTP (b = -4.17, SE = 6.04, t(315) = -.69, p = .49, 95% CI [-16.05, 7.72]). Also, no main effects of outdoor sports orientation on product purchasing intention (b = .01, SE = .09, t(315) = .15, p = .88, 95% CI [-.17, .20]) nor on WTP (b = -.62, SE = .86, t(315) = -.72, p = .47, 95% CI [-2.30, 1.07]) were significant. Further, no significant type of fashion clothing (conventional, sustainable) x outdoor sports orientation interaction effects was obtained for product purchasing intention (b = .00, SE = .13, t(315) = .01, p = .99, 95% CI [-.25, .25]) nor WTP (b = 1.23, SE = 1.16, t(315) = 1.06, p = .29, 95% CI [-1.06, 3.51]) (see Tables 9 and 10).

Table 9: Outdoor Sports Orientation as a Moderator on the Relationship Between Type of Clothing (conventional, sustainable) and Product Purchasing Intention

		Coefficient	*SE*	*Lower CI*	*Upper CI*
Outcome	*Outdoor Sports Orientation** Type of Clothing	.00	.13	-.25	.25
Conditional Value	Low *Outdoor Sports Orientation* (-1 SD)	-.23	.33	-.88	.42
	Medium *Outdoor Sports Orientation*	-.23	.23	-.67	.21
	High *Outdoor Sports Orientation* (+1 SD)	-.23	.32	-.85	.40

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

Table 10: Outdoor Sports Orientation as a Moderator on the Relationship Between Type of Clothing (conventional, sustainable) and WTP

		Coefficient	*SE*	*Lower CI*	*Upper CI*
Outcome	*Outdoor Sports Orientation** Type of Clothing	1.23	1.16	-1.06	3.51
Conditional Value	Low *Outdoor Sports Orientation* (-1 SD)	-.50	3.01	-6.42	5.43
	Medium *Outdoor Sports Orientation*	1.75	2.06	-2.29	5.80
	High *Outdoor Sports Orientation* (+1 SD)	4.00	2.91	-1.73	9.74

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

After, differences between conventional and secondhand fashion clothing were analyzed. Findings show a significant and negative main effect of type of fashion clothing on WTP (b = -12.58, SE = 5.84, $t(315)$ = -2.15, p = .03, 95% CI [-24.08, -1.08]), despite a non-significant main

effect of outdoor sports orientation also on WTP (b = -.62, SE = .86, t(315) = -.72, p = .47, 95% CI [-2.30, 1.07]). Contrary to expectations, a non-significant type of fashion clothing (conventional, secondhand) x outdoor sports orientation interaction effects was also found on WTP (b = 2.11, SE = 1.14, t(315) = 1.86, p = .06, 95% CI [-.19, .29]) despite almost reaching significance (see Tables 11 and 12). Since the interaction term in our model was almost statistically significant (p = .06), to better understand the nature of the interaction between type of fashion and WTP, further analysis was conducted. Slope analysis (Aiken et al., 1991; Fitzsimons, 2008) revealed that differences emerged at one standard deviation below the mean. That is, at -1SD (i.e., on the centered outdoor sports orientation variable representing low outdoor sports orientation), the relationship between type of fashion and WTP was negative but significant (b = -6.27, SE = 2.92, p < .05, 95% CI = [-12.01, -.52])). At, the mean (i.e., at 0) and at +1SD of the centred moderator variable (representing medium and high outdoor sports orientation), the relationship was non-significant (see Table 12). This effect shows that differences in WTP for conventional versus secondhand fashion clothing were present at low levels of outdoor sports orientation which favored conventional clothing. Yet, increases in outdoor sports orientation led to non-significant differences in participants' WTP for conventional versus secondhand fashion clothing.

Table 11: Outdoor Sports Orientation as a Moderator on the Relationship Between Type of Clothing (conventional, secondhand) and WTP

		Coefficient	*SE*	*Lower CI*	*Upper CI*
Outcome	*Outdoor Sports Orientation** Type of Clothing	2.11^{+}	1.14	-.13	4.24
Conditional Value	Low *Outdoor Sports Orientation* (-1 SD)	-6.27*	2.92	-12.01	-.52
	Medium *Outdoor Sports Orientation*	-2.40	2.06	-6.46	1.66
	High *Outdoor Sports Orientation* (+1 SD)	1.47	2.95	-4.33	7.27

Note: ***p < .001, **p < .01, *p < .05, $^{+}p \leq .1$

Concerning product purchasing intention, a non-significant main effect of type of fashion clothing was found (b = -.65, SE = .64, t(315) = -1.01, p = .31, 95% CI [-1.09, .61]). Additionally, a non-significant main effect of outdoor sports orientation was found on product purchasing intention (b = .01, SE = .09, t(315) = .15, p = .88, 95% CI [-.17, .20]). The same non-significant pattern emerged when considering the type of fashion clothing (conventional, secondhand) x outdoor sports orientation interaction effect on product purchasing intention (b = .17, SE = .12, t(315) = 1.37, p = .17, 95% CI [-.07, .42]).

Table 12: Outdoor Sports Orientation as a Moderator on the Relationship Between Type of Clothing (conventional, secondhand) and Product Purchasing Intention

		Coefficient	*SE*	*Lower CI*	*Upper CI*
Outcome	*Outdoor Sports Orientation** Type of Clothing	.17	.12	-.07	.42
Conditional Value	Low *Outdoor Sports Orientation* (-1 SD)	-.13	.32	-.76	.49
	Medium *Outdoor Sports Orientation*	.18	.23	-.27	.62
	High *Outdoor Sports Orientation* (+1 SD)	.49	.32	-.14	1.13

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

Overall, results show that outdoor sports orientation does not moderate the relationship between type of fashion clothing and consumers' purchasing behaviors (product purchasing intention and WTP). Hence, H3 is not validated. Yet, outdoor sports orientation seems to directionally moderate the effect of type of fashion clothing on WTP when analyzing conventional versus secondhand clothing separately.

5.5 Further Analysis

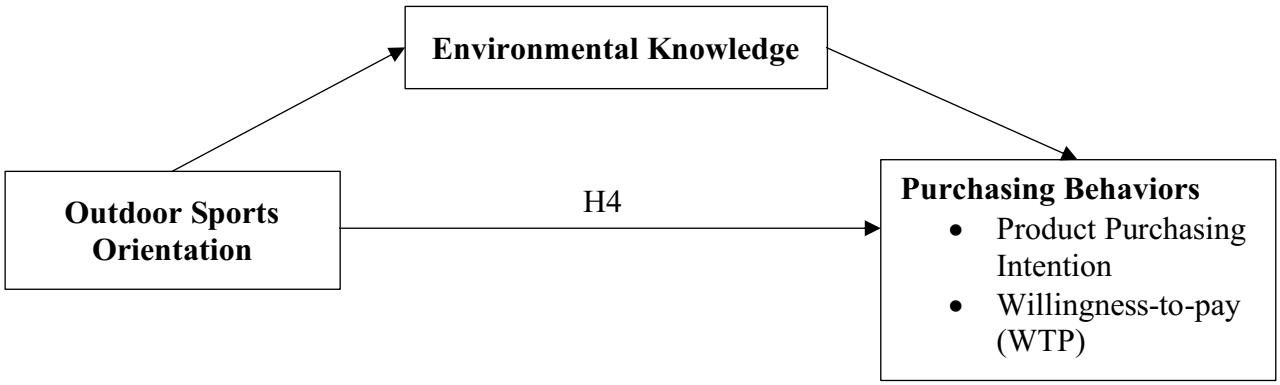
According to the findings of Cowan and Kinley (2014), individuals with a higher environmental knowledge are more likely to consume sustainable fashion. Therefore, environmental knowledge plays a role within the purchasing behaviors. Hence, an addition

analysis was conducted to understand in greater detail how the information processing mechanism (via environmental knowledge) of outdoor sports-oriented consumers behaved when faced with sustainable and secondhand clothing. For the following analysis only sustainable and secondhand fashion items were of interest, as the relationship between outdoor sports orientation and sustainable purchasing behaviors is in focus. Sustainable purchasing behaviors include the product purchasing intention and WTP for fashion clothing that can be considered sustainable, which in the case of this dissertation is sustainable and secondhand fashion clothing behaviors (Fletcher, 2008; Straehle & Klatt, 2017). Yet, conventional fashion clothing is irrelevant in this context and will therefore be disregarded, reducing N to 213.

Specifically, a fourth hypothesis is formed and tests the mediating role of environmental knowledge on the relationship between outdoor sports orientation and purchasing behaviors, also leading to a second conceptual model:

H4: Environmental knowledge will mediate the relationship between consumers' outdoor sports orientation and sustainable purchasing behaviors (product purchasing intention and WTP).

Figure 2: Conceptual Model 2



Environmental knowledge was used as a mediating variable and was included to understand consumers' perception of their own environmental knowledge. Participants were asked to rate their level of knowledge on environmental issues and sustainable fashion ("How would you rate your knowledge on environmental issues in general?"; "How would you rate your knowledge

on sustainable fashion?") on a seven-point Likert scale (1 – Not at all informed to 7 – Very well informed) adapted from Ellen et al. (1991).

To test hypothesis four, a simple mediation analysis was conducted using Hayes' PROCESS macro model 4 (Hayes, 2013; 2015). Bootstrap analysis indicates that if the confidence intervals comprise zero, a non-significant effect is observed (Hayes, 2013, 2015). Further, a mediating effect can be either full or partial, depending on the relation between the independent and dependent variables. A full mediation is obtained if the direct effect between the independent and the dependent variable is no longer significant. In contrast, a partial mediation is indicated by a significant reduction of the effect (Hofmann et al., 2020).

Bootstrapping results (based on 5,000 samples) confirmed a significant and positive indirect effect of outdoor sports-orientation through environmental knowledge on the product purchasing intention variable (*indirect effect* = .03, SE = .02, $p < .05$, 95% CI = [.00, .07]). Both the impact of outdoor sports orientation on environmental knowledge ($b = .10$, SE = .04, $p < .05$, 95% CI = [.02, .18]) and the impact of environmental knowledge on product purchasing intention ($b = .28$, SE = .10, $p < .01$, 95% CI = [.07, .48]) were significant. When both outdoor sports orientation and environmental knowledge were entered into the regression, the conditional direct effect of outdoor sports orientation on the product purchase intention became non-significant (direct effect = .07, SE, $p > .1$, 95% CI = [-.04, .19]) (see Table 13).

Table 13: Environmental Knowledge as a Mediator on the Relationship Between Outdoor Sports Orientation (OSO) and Product Purchasing Intention

Outcome	**Indirect Effect Paths**	**Indirect Effect**	**Lower CI**	**Upper CI**
1	OSO → Environmental Knowledge	.10*	.02	.18
2	Environmental Knowledge → Product Purchasing Intention	.28**	.07	.48
3	OSO → Environmental Knowledge → Product Purchasing Intention	.03*	.00	.07
	Direct Effect Paths	**Direct Effect**	**Lower CI**	**Upper CI**
4	OSO → Product Purchasing Intention	.07	-.04	.19

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

Yet, consumers' environmental knowledge did not mediate the effect of outdoor sports orientation on WTP (*indirect effect* = .07, SE = .12, $p < .1$, 95% CI = [-.15, .34]) (see Table 14).

Table 14: Environmental Knowledge as a Mediator on the Relationship Between Outdoor Sports Orientation (OSO) and WTP

Outcome	**Indirect Effect Paths**	**Indirect Effect**	**Lower CI**	**Upper CI**
1	OSO → Environmental Knowledge	.10*	.02	.18
2	Environmental Knowledge → WTP	.74	-1.19	2.66
3	OSO → Environmental Knowledge → WTP	.07^{+}	-.15	.34
	Direct Effect Paths	**Direct Effect**	**Lower CI**	**Upper CI**
4	OSO → WTP	1.05^{+}	-.07	2.17

Note: ***$p < .001$, **$p < .01$, *$p < .05$, $^{+}p \leq .1$

Overall, findings suggest that an individuals' environmental knowledge fully mediates the relationship between the consumers' outdoor sports orientation (independent variable) and product purchasing intention, although partially validating H4.

6. Conclusions and Implications

The present study aimed to answer a set of research questions, namely whether different types of fashion clothing (conventional, sustainable, and secondhand), offered by surf brands, lead to different purchasing behaviors (product purchasing intention and WTP). Also, whether increased outdoor sport orientation leads to higher environmental attitudes. Thirdly, to close another gap in the literature, the relationship between outdoor sports orientation and purchasing behaviors in the context of sustainable and secondhand fashion was examined. An experimental study was performed to test the three research questions and underlying hypotheses.

RQ1: Do different types of fashion clothing offered by surf brands, namely conventional, sustainable, and secondhand fashion clothing, trigger different consumer purchasing behaviors regarding product purchasing intention and willingness-to-pay?

Concerning the first research question, findings show counter-intuitive results since secondhand fashion clothing was more positively evaluated than sustainable fashion clothing on product purchasing intention, underlining the rise in interest in secondhand fashion (Straehle & Klatt, 2017). This effect may be driven by the mean average of the outdoor sports orientation of participants in the sample being slightly higher than the midpoint ($M = 4.83$, $SD = 1.84$). However, participants were more inclined to pay for (new) sustainable clothing than for secondhand clothing, which is consistent with previous studies that found that consumers prefer to buy secondhand clothing at lower prices (Roux & Guiot, 2008). Yet, no significant purchasing behavior differences were observed between conventional and sustainable, nor conventional and secondhand fashion clothing. From this it can be concluded that sustainable and secondhand fashion clothing trigger different purchasing behaviors compared to one another, but not to conventional fashion clothing.

RQ2: Does the outdoor sports orientation of consumers lead to a heightened nature connectedness and environmental attitudes owing to their participation in leisure activities such as surfing and other outdoor sports compared to conventional consumers?

Previous research findings implicated that individuals with a high nature connectedness should portray heightened environmental attitudes (Geng et al., 2015). Further, outdoor sports-orientated individuals should also show sustainable behavior in their everyday life (Brymer et al.,

2009). The present study contributes to these findings and reports a positive relationship between outdoor sports orientation and increased nature connectedness, suggesting that the more a person focuses on outdoor sports such as surfing, climbing, or alpine winter sports, the more connected they feel to nature. Further, the study finds a positive relation between outdoor sports orientation and environmental attitudes. This suggests that outdoor sports-oriented consumers not only feel more connected to nature than conventional consumers, but also translate this connectedness to nature towards higher environmental attitudes related to sustainable behaviors. Therefore, positively responding to the second research question and confirming that outdoor sports orientation of consumers leads to a heightened nature connectedness and environmental attitudes owing to their participation in leisure activities such as surfing and outdoor sports compared to conventional consumers.

RQ3: Do outdoor sports-oriented consumers show higher sustainable fashion purchasing behaviors and a heightened interest in sustainable and secondhand fashion compared to conventional consumers?

Answering the third research question, although it was previously found that outdoor sports orientation has a positive correlation with nature connectedness and environmental attitudes, there is no significant type of fashion clothing x outdoor sports orientation interaction effect on purchasing behaviors. That is, no moderating effect of outdoor sport orientation on the relationship between type of fashion clothing and purchasing behaviors. However, a further analysis was conducted based on previous literature which suggests that sustainable purchasing behaviors are influenced by consumers' environmental knowledge (Cowan & Kinley, 2014). Mediation analysis shows that environmental knowledge fully mediates the relationship between the consumers' outdoor sports orientation and product purchasing intention for sustainable and secondhand fashion clothing. Hence, the level of a consumer's environmental knowledge fully explains the relationship between outdoor sports orientation and the product purchasing intention. The environmental knowledge mediator presents a powerful insight into how the effect between outdoor sports-orientation and product purchasing intention is indirectly positively affected by this mediator. Indeed, prior research in the sustainable consumption domain highlights how knowledge and education are indispensable means for consumers to be able to make more pro-environmental decisions (Moisander, 2007; Cowan & Kinley, 2014). Hence, outdoor sports-oriented consumers

show a heightened purchasing behavior in sustainable and secondhand fashion compared to conventional consumers, explained through the positive influence of environmental knowledge.

6.1 Theoretical Implications

This study is pertinent since it addresses one of the largest issues facing modern society, namely combating the depletion of resources through fast fashion and the conventional production of fashion items (Straehle & Mueller, 2017; Shen, 2014). Moreover, this dissertation contributes to the previous literature on sustainable fashion consumption (Niinimäki, 2010; Mukendi et al., 2019; Zabkar & Hosta, 2013), outdoor sports orientation, and nature connectedness (Brymer et al., 2009; Geng et al., 2015). Those previous studies examined consumer behaviors related to sustainable fashion, as well as the relationship between outdoor sports orientation and nature connectedness and its impact on environmental attitudes and sustainable behaviors. However, there remained a research gap in combining the aforementioned research topics, which was addressed in this paper.

In the field of sustainable fashion consumption, the study contributes towards understanding the effect of different types of fashion clothing (conventional, sustainable, secondhand) on the consumers' purchasing behaviors. More specifically, the dissertation aims to shed light on whether consumers are inclined to purchase and pay a price premium for sustainable or secondhand fashion clothing, as previous research has proposed (Nam et al., 2017; Niinimäki, 2010). The results indicate that consumers are more inclined to purchase secondhand fashion clothing rather than sustainable fashion clothing. However, they are willing to pay more for the (new) sustainable fashion clothing. It is important to note, that the findings offer no reason to believe that consumers are inclined to purchase more sustainable options at higher prices when compared to conventional fashion clothing.

Furthermore, the research findings contribute majorly to understanding the importance of outdoor sports orientation for sustainable purchasing behavior. It complements previous findings that underscore a positive relationship between outdoor sports orientation and sustainable behavior, resulting from high environmental attitudes (Brymer et al., 2009). By defining a relationship between outdoor sports orientation and sustainable purchasing behavior, this study

not only strengthened previous studies on outdoor sports orientation, but also ventured into a completely under-researched area of outdoor sports orientation and fashion.

Lastly, by exploring the mediating effect of environmental knowledge on the relationship between outdoor sports orientation and sustainable purchasing behaviors, the study replicated prior findings, that a heightened environmental knowledge positively impacts sustainable purchasing behaviors (Moisander, 2007; Cowan & Kinley, 2014). Thus, this dissertation further explores the relationship between outdoor sports orientation and sustainable consumption behaviors (Brymer et al., 2009), particularly by incorporating the fashion context, and explains how outdoor sports orientation impacts sustainable consumption behaviors through environmental knowledge.

6.2 Practical Implications

This dissertation and its findings provide interesting practical implications for marketers, advertisers, and fashion brands, especially in the outdoor sports and lifestyle fashion niche (e.g., surf fashion brands).

To begin with, the results of this dissertation show a rise of interest in secondhand fashion clothing, which is interesting for fashion brands in terms of incorporating secondhand fashion clothing into their value chains. The increased product purchasing intention of secondhand fashion clothing, when compared to (new) sustainable fashion clothing, highlights and supports the decision of brands such as Patagonia that have previously established secondhand platforms to resell their products (Hvass, 2015). Yet, WTP for secondhand fashion clothing was lower than for (new) sustainable fashion clothing, which is reasonable as consumers perceive secondhand fashion as a way to pay lower prices for still-intact clothes (Xu et al., 2014; Roux & Guiot, 2008). There are no differences regarding product purchasing intention and WTP between conventional fashion clothing and sustainable fashion clothing, hence an opportunity for fashion brands to promote and sell more sustainable fashion clothing without needing to fear that consumers will be unwilling to make purchases.

In addition, this dissertation demonstrates the importance for fashion brands to have a thorough understanding of their customer base, as significant differences in environmental attitudes were found across different levels of consumers' outdoor sports orientation. This is

particularly interesting for outdoor sports and lifestyle niche brands such as surf fashion brands (e.g., Billabong), snowboard fashion brands (e.g., Burton), and outdoor fashion brands in general (e.g., Patagonia), as these brands tend to have large customer bases with high outdoor sports orientation. Therefore, it is advisable for outdoor sports and lifestyle brands to make use of these findings and incorporate sustainability deeper into their value chain, as Patagonia is already successfully doing (Nanji, 2022).

Lastly, the results further highlight the importance of consumers' environmental knowledge in the context of purchasing intentions for sustainable and secondhand fashion clothing. As product purchasing intention for sustainable and secondhand fashion clothes increases among consumers with greater environmental knowledge, fashion brands should use their power and see it as their duty to educate consumers about sustainable purchasing behavior, but also about environmental issues in general. This will increase consumers' environmental knowledge and consequently promote their sustainable purchasing behavior. An example would again be Patagonia who share stories about activism, sustainable practices, and further topics with their consumers to increase their environmental knowledge (Michel et al., 2019; Key et al., 2021).

7. Limitations and Future Research

Although this dissertation makes a considerable contribution to understanding the impact of different types of fashion apparel and outdoor sports orientation, there are still limitations that need to be considered.

Firstly, the online questionnaire used in this study was shared with the participants via a variety of social media channels, namely Instagram, LinkedIn, and WhatsApp, making it difficult to control the factors surrounding the participation (respondent's focus, time spent on survey, participant's honesty, environmental distractions, etc.). Hence, the internal validity of the study tends to be inferior compared to in-depth studies in labs where all factors can be controlled to their best ability (Wiersma, 2013). Furthermore, although the survey was designed to encourage participants to answer as honestly as possible, it is common for participants to answer ethical or sensitive questions in the most desirable way for society, i.e., reflecting behavior as respondents would like it to be rather than as it actually is, the so-called social desirability bias (Grimm, 2010).

In addition, the participants' demographics offer potential biases, as over one-third of the participants were in the 18-25 age group, and over three-quarters of the sample had at least a bachelor's degree. These aspects of a rather young and educated respondent likely have influenced the results. Therefore, future research should focus on a broader sample of participants with different educational, generational, and cultural backgrounds.

The experimental manipulations in the survey were three different versions of the same long-sleeved T-shirt, which is intended for a male audience but can also be worn as a unisex garment. Tendencies toward a lower product purchasing intention among female customers are possible and could be prevented in future studies by adding gender-specific manipulations.

Future research is needed to further explore the connection between outdoor sports orientation, nature connectedness, and sustainable purchasing behaviors, as drastic change is needed within the TAF industry. The present research discovered a directional moderating effect of type of fashion clothing on WTP when analyzing conventional versus secondhand clothing. This finding is relevant and worth exploring further to evaluate the nature of outdoor sports orientation more closely. The effect shows that when the level of outdoor sports orientation is low,

conventional clothing is preferred. However, when the level of outdoor sports orientation is high, non-significant differences in consumers' WTP in favor of secondhand clothing are observed. Future research can follow up on these findings and investigate in more detail how this effect behaves in a large-scale study. This could be done to follow up on previous studies combining secondhand fashion and brands with a focus on outdoor sport-oriented customers (Hvass, 2015; Hepburn, 2013).

This dissertation shows that outdoor sports orientation and the respective nature connectedness led to heightened sustainable purchasing behaviors. Furthermore, one of the leading fashion brands in terms of sustainability comes from the outdoor fashion niche, namely Patagonia, and the customer base agrees with all the brand's sustainable measures (Hepburn, 2013). This study and a real-world example of success therefore encourage interest in further research into whether and how the outdoor sports orientation and nature connectedness can be transferred to conventional fashion brands and consumers to potentially increase sustainable purchasing behavior.

Appendices

Appendix 1: Stimuli

A: Conventional Fashion Clothing

B: Sustainable Fashion Clothing

C: Secondhand Fashion Clothing

Appendix 2: Survey Questionnaire

Introduction to the survey

Hello,

Welcome to my master's thesis survey and thanks for dropping everything you were doing to participate.
Without your help, I would not be able to finish my thesis, which would be quite unfortunate.
Therefore, please complete the ENTIRE survey, which will take about 6 to 7 minutes.
All data obtained will be anonymous and confidential, so just answer honestly and how you truly feel. There are no right or wrong answers!!!!

Thank you in advance!!
David

Q1: Please rate your level of agreement with the following statements:

	1 – Strongly disagree	2 – Disagree	3 – Somewhat disagree	4 – Neither agree or disagree	5 – Somewhat agree	6 – Agree	7 – Strongly agree
I participate regularly in outdoor activities such as surfing, climbing, or alpine sports.	○	○	○	○	○	○	○
Outdoor sports activities play an important role in my life and are part of my personality.	○	○	○	○	○	○	○
Surfing is part of my lifestyle, and I would consider myself a surfer.	○	○	○	○	○	○	○

Q2: Please rate your level of agreement with the following statements:

	1 – Strongly disagree	2 – Disagree	3 – Somewhat disagree	4 – Neither agree or disagree	5 – Somewhat agree	6 – Agree	7 – Strongly agree
My ideal vacation spot would be a remote, wilderness area.	○	○	○	○	○	○	○
I always think about how my actions affect the environment.	○	○	○	○	○	○	○
My connection to nature and the environment is a part of my spirituality.	○	○	○	○	○	○	○
I take notice of wildlife wherever I am.	○	○	○	○	○	○	○
My relationship to nature is an important part of who I am.	○	○	○	○	○	○	○
I feel very connected to all living things and the earth.	○	○	○	○	○	○	○

On the next page you will see an advertisement. Please take a moment to have a careful look, as you will only be exposed to it once.

Randomized Stimuli

Take a good look at the advertisement for a Billabong shirt. Take your time and then head on with the questions.

Example: conventional fashion clothing

Q3: Please rate your level of agreement with the following statements:

	1 – Strongly disagree	2 – Disagree	3 – Somewhat disagree	4 – Neither agree or disagree	5 – Somewhat agree	6 – Agree	7 – Strongly agree
I think the product displayed (Billabong shirt) is sustainable.	○	○	○	○	○	○	○

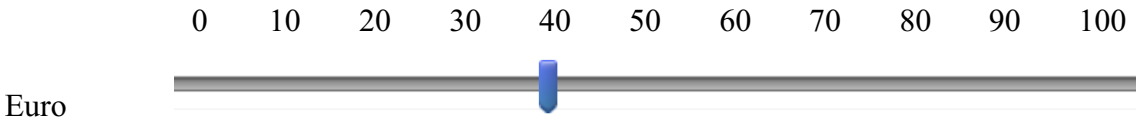
I think the Billabong brand is sustainable.	○	○	○	○	○	○	○
I think the product displayed (Billabong shirt) is secondhand.	○	○	○	○	○	○	○
I am familiar with the Billabong brand.	○	○	○	○	○	○	○
I have previously purchased anything from Billabong ("1 - Never" to "7 - Very often").	○	○	○	○	○	○	○

Q4: Please rate your level of agreement with the following statements:

	1 – Strongly disagree	2 – Disagree	3 – Somewhat disagree	4 – Neither agree or disagree	5 – Somewhat agree	6 – Agree	7 – Strongly agree
I would purchase the previously shown product (Billabong shirt).	○	○	○	○	○	○	○
I would purchase from the Billabong brand in general.	○	○	○	○	○	○	○

I would purchase secondhand items in general.	○	○	○	○	○	○	○

Q5: Independent from your financial situation, how much would you be willing to pay for the product (Billabong shirt) shown before?



Q6: Now, please rate your level of agreement with the following statements:

	1 – Strongly disagree	2 – Disagree	3 – Somewhat disagree	4 – Neither agree or disagree	5 – Somewhat agree	6 – Agree	7 – Strongly agree
When there is a choice, I always choose the product that contributes to the least environmental damage.	○	○	○	○	○	○	○
I have switched products for environmental reasons.	○	○	○	○	○	○	○
I do not buy products from companies that I know use fast fashion and contribute to an increase of waste disposal.	○	○	○	○	○	○	○

I have paid more for sustainable products when there is a cheaper alternative.	○	○	○	○	○	○	○
If I understand the potential damage to the environment that some products can cause, I do not purchase those products.	○	○	○	○	○	○	○

Please continue, you are almost done!!!

Q7: Please rate your knowledge on the following issues?

	1 – Not at all informed	2	3	4 – Somewhat informed	5	6	7 – Very well informed
How would you rate your knowledge on environmental issues in general?	○	○	○	○	○	○	○
How would you rate your knowledge on sustainable fashion?	○	○	○	○	○	○	○

Q8: Please rate your level of agreement with the following statements:

	1 – Strongly disagree	2 – Disagree	3 – Somewhat disagree	4 – Neither agree or disagree	5 – Somewhat agree	6 – Agree	7 – Strongly agree
I enjoy buying secondhand because I don't like objects being thrown away that can still be of use.	○	○	○	○	○	○	○
By buying secondhand, I feel I'm helping to fight against waste.	○	○	○	○	○	○	○
I buy secondhand to come across items that nobody else has.	○	○	○	○	○	○	○
I buy secondhand to come across original articles that are not found in mainstream stores.	○	○	○	○	○	○	○
Please select "2 - Disagree", so I know you are still paying attention.	○	○	○	○	○	○	○
I enjoy the knowledge that the secondhand item has a story and portrays the personality of the previous owner.	○	○	○	○	○	○	○

I feel like I belong to a community if I buy secondhand clothes of sellers embodying the same lifestyle as me.	○	○	○	○	○	○	○
I can afford more things because I pay less secondhand.	○	○	○	○	○	○	○
I don't want to pay more for a product just because it's new.	○	○	○	○	○	○	○

Demographics

You have pretty much made it! Just some more questions about yourself and you will be done!

Q9: What is the gender you identify as?

- ○ Male
- ○ Female
- ○ Non-binary / third gender

Q10: What is your age?

- ○ < 18
- ○ 18 – 25
- ○ 16 – 35
- ○ 36 – 45
- ○ 46 – 55
- ○ 56 – 65
- ○ < 65

Q11: What is your occupation?

- ○ Student
- ○ Employed
- ○ Self-employed
- ○ Unemployed
- ○ Retired

Q12: What is your highest level of education (completed)?

- ○ Less than High School
- ○ High School
- ○ Bachelor's Degree
- ○ Master's Degree
- ○ Doctoral Degree

Q13: What is your country of origin?

∇ Drop down menu with all countries

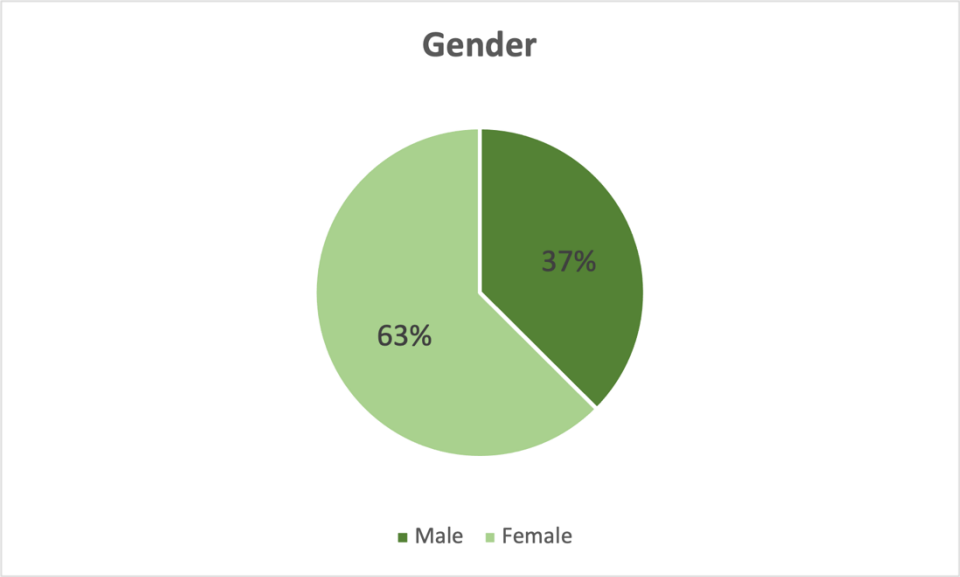
Q14: What is your annual household income before taxes?

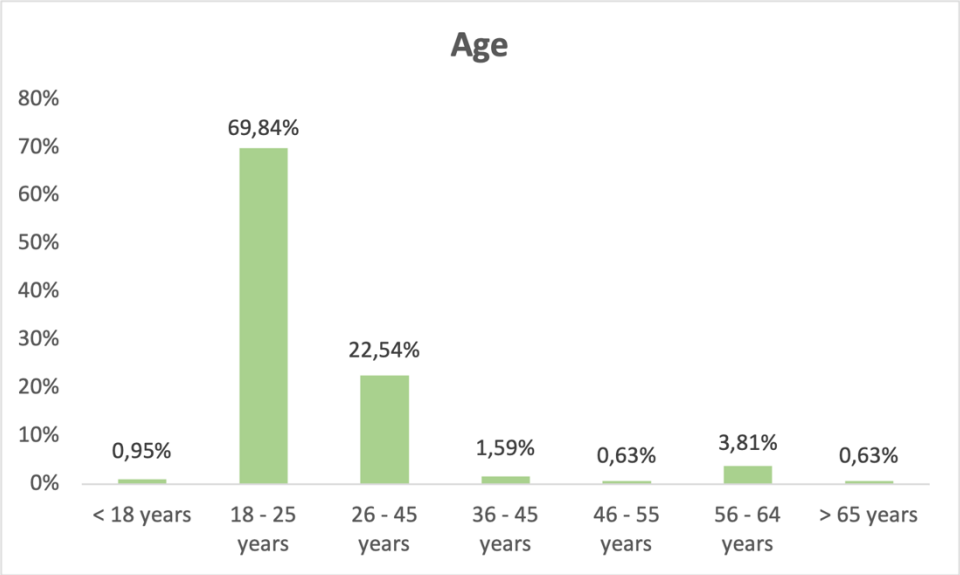
- ○ < 20.000€
- ○ 20.000€ - 30.000€
- ○ 30.000€ - 50.000€
- ○ 50.000€ - 70.000€
- ○ 70.000€ - 100.000€
- ○ 100.000€ - 150.000€
- ○ > 150.000€
- ○ Prefer not to answer

We thank you for your time spent taking this survey.

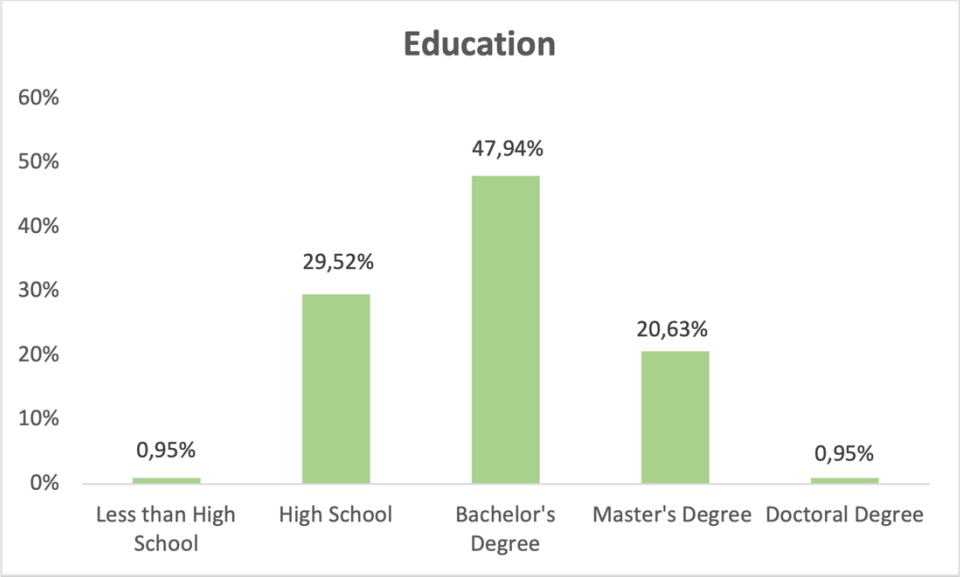
Your response has been recorded.

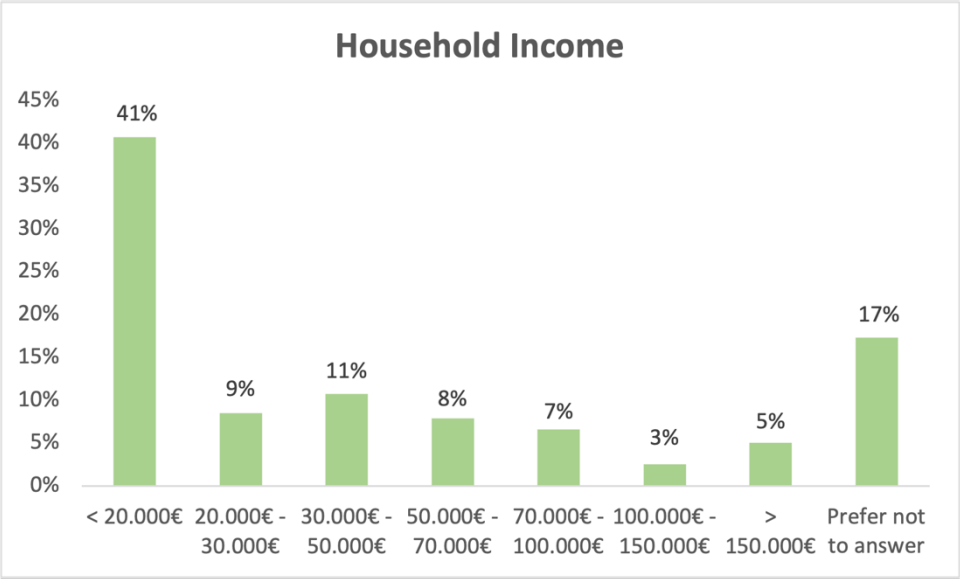
Appendix 3: Sample Characteristics






Occupation
60%
50%
40%
30%
20%
10%
0%
56,83%
33,33%
6,67%
2,22%
0,00%
Student
Employed
Self-employed
Unemployed
Retired


Education
60%
50%
40%
30%
20%
10%
0%
0,95%
29,52%
47,94%
20,63%
0,95%
Less than High School
High School
Bachelor's Degree
Master's Degree
Doctoral Degree


Household Income
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
41%
9%
11%
8%
7%
3%
5%
17%
< 20.000€
20.000€ - 30.000€
30.000€ - 50.000€
50.000€ - 70.000€
70.000€ - 100.000€
100.000€ - 150.000€
> 150.000€
Prefer not to answer

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