

UTRECHT UNIVERSITY
MASTER SUSTAINABLE BUSINESS AND
INNOVATION
MASTER'S THESIS

Threads of Concern: Unravelling the Relationship
Between Climate Change Anxiety and Sustainable
Fashion Behaviour

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Abstract

Climate change anxiety is a growing concern worldwide, yet its impact on consumers' sustainable fashion behaviour remains underexplored. Furthermore, the influence of cultural factors, such as collectivism, on this relationship has not been investigated. Present study aims to fill this gap by examining the association between climate change anxiety and sustainable fashion consumption among university students. The thesis addresses the following question: To what extent does climate change anxiety influence sustainable fashion consumption of university students in Poland and the Netherlands, and is this relationship moderated by an individual's level of collectivism? Utilising a cross-sectional design, an online survey was administered in the two European countries and quantitative approach was employed in the analysis. The final sample comprised 223 participants, and the data were modelled using ordinary least squares regression.

Consistent with previous related studies, the findings indicate that climate change anxiety is positively associated with sustainable fashion consumption. However, contrary to initial assumption, the moderating effect of collectivism on this relationship was not detected. These results offer valuable insights for the fashion industry, suggesting that addressing climate change anxiety could enhance sustainable consumer behaviour. Furthermore, by utilizing new understanding of the mechanisms behind sustainable fashion choices, businesses can increase transparency about their actions to mitigate climate change, thereby strengthening consumer trust. On the other hand, policymakers can use the insights to design campaigns highlighting how individual's sustainable behaviour contributes directly to reducing negative effects of climate change in the fashion industry.

Keywords: climate change anxiety, sustainable fashion behaviour, climate change, sustainable consumption

Table of contents

1. Introduction	4
1.1 Research problem and question.....	4
1.2 Study relevance	7
2. Theory	8
2.1 Sustainable Fashion Consumption	8
2.2 Climate Change Anxiety	9
2.3 Climate Change Anxiety and Pro-environmental Behaviour	10
2.4 Moderating Role of Collectivism	11
3. Methods	14
3.1 Research Design.....	14
3.2 Research Ethics	14
3.3 Participants and Recruitment.....	14
3.4 Measures.....	17
3.5 Data Analysis	19
4. Results	20
4.1 Descriptive Analysis.....	20
4.2 Climate Change Anxiety and Sustainable Fashion Behaviour	22
4.3 Moderating Effect of Collectivism.....	23
4.4 Regression Diagnostics and Robustness Checks.....	24
5. Discussion and Conclusion.....	28
5.1 Main Findings.....	28
5.2 Study Implications.....	29
5.3 Limitations and Avenues for Future Research	30
5.4 Conclusions	31
6. References	32
7. Appendix	39
Appendix A	39
Appendix B	51

1. Introduction

1.1 Research problem and question

Negative consequences for humans and ecosystems due to climate change have increased globally (Clayton, 2020). Given the limited natural resources, it is crucial to promote responsible consumption and create new consumer habits to sustain life on the planet. In 2015, the United Nations (UN) adopted the 2030 Agenda for Sustainable Development. This resolution introduced a framework of 17 Sustainable Development Goals that should be achieved together by the member states of UN to guarantee the well-being of all societies. Sustainable Development Goal 12: Ensure sustainable consumption and production patterns states the need to reduce the current consumption levels (United Nations, 2023).

Ensuring sustainable consumption is crucial for numerous polluting industries, with the fashion industry as a prominent example. The European Environment Agency (2023) reports that each year the textile industry is a significant source of pressure for land use, raw materials, and greenhouse gas emissions in the European Union. The rapidly developing fast fashion trend has reinforced such negative impacts over the past few decades. This phenomenon promotes the production of inexpensive garments made from low-quality materials. Fast fashion is further reinforced by the globalisation and the internalisation of supply chains. These factors collectively facilitate the widespread availability of cheap clothing, which leads to increased consumption (Bick et al., 2018).

Due to overconsumption the fashion industry's contribution to climate change and its associated negative outcomes is accelerated. In addition, the problems caused by climate change and its effects on society are becoming more noticeable than in previous years. As a result, consumers become aware of these issues and are thus motivated to change their behaviour (Pérez et al., 2020; Yang et al., 2024). Recently, the escalating severity of environmental problems has prompted consumers to pay greater attention to the sustainable development of the fashion industry (Yang et al., 2024).

Sustainable apparel consumption, sometimes referred to as 'slow fashion' stands in opposition to the booming fast fashion trend (Busalim et al., 2022). Sustainable fashion encourages consumers to play a more active and conscious role in promoting sustainability through their apparel purchases. Moreover, it allows for the continuous introduction of environmentally friendly products and brands prioritizing corporate social responsibility (Okur & Sariçam, 2018).

The current literature describes several factors that predict sustainable fashion consumption behaviour, such as environmental consciousness, climate awareness, or personal norms and beliefs (Lin & Chen, 2022; Yang et al., 2024). Additionally, contemporary research indicates that negative emotions associated with climate change can motivate consumers to engage more in pro-environmental behaviour, such as sustainable fashion consumption (Bouman et al., 2020).

The rising awareness about the effects of climate change increases the likelihood that people will experience negative emotional responses to climate change and act on them (Ogunbode et al., 2022). For example, in an international survey conducted among over 75,000 Facebook users in 2021, the majority of respondents reported that they were “very” or “somewhat” worried about climate change (Leiserowitz et al., 2021). Similarly, results of a survey on European Perceptions of Climate Change conducted across Norway, Germany, France and the United Kingdom in 2016 indicate that most of the participants are to some extent worried about climate change (Steentjes et al., 2017).

The term ‘climate change anxiety’ is commonly introduced in the existing literature to designate the negative emotions and feelings induced by drastically changing weather conditions. The current literature stream frequently describes this phenomenon, referring to the work of Clayton (2020), who defines it as negative responses associated with concerns about climate change. It is crucial to recognize that this phenomenon and its consequences are a social issue since climate change anxiety severely challenges mental well-being worldwide (Clayton, 2020; Ogunbode et al., 2022).

Current literature distinguishes between maladaptive and adaptive climate change anxiety (Mathers-Jones & Todd, 2023). The distinction is based on whether the anxiety is causing significant psychological distress which restricts individual from acting effectively (maladaptive) or serves as a driving force for climate activism and collective mitigation efforts (adaptive). Moreover, adaptive climate anxiety can motivate individuals to engage in pro-environmental behaviours i.e. actions undertaken to restrict harmful behaviours that can impact the physical and natural environment adversely (Mathers-Jones & Todd, 2023; Moutinho et al., 2011; Ogunbode et al., 2022). Previous studies found a positive relationship between climate change anxiety and certain types of adaptive behaviours, such as energy and water saving, or avoiding food waste (Bouman et al., 2020; Ogunbode et al., 2022).

However, despite its potential, little attention has been paid to the relationship between climate anxiety and sustainable fashion consumption. The role that climate-related emotions play as a predictor of green fashion choices is overlooked and effectively unknown. This study is the first to look into and thoroughly investigate the aforementioned association. By adopting this novel approach, it makes a significant contribution to the literature. It expands the research on psychological motives influencing pro-environmental behaviour to the context of fashion.

Understanding the relationship between emotions and behaviour can be complex, often necessitating the consideration of additional variables that may influence this dynamic. One such factor is culture, which plays a significant role in shaping pro-environmental behaviour. Moreover, the impact of culture on fashion is particularly noteworthy, as different cultures can result in diverse consumer attitudes and responses to the same stimuli (Khan et al., 2024). Following Moon et al. (2023), the individualism-collectivism dichotomy proves significant in this context. These dimensions pertain to the degree to which the life decisions of an individual are influenced by personal autonomy versus one's social circle.

The dichotomy has already been investigated in several studies on sustainable consumption (Hofstede, 1980; Khan et al., 2024; Lee, 2017). Previous research has shown that collectivism can be a predictor of pro-environmental consumer behaviour (Khan et al., 2024; Kim & Choi, 2005; Moon et al., 2023). In collectivistic cultures individuals feel responsibility towards others. This heightened sense of communal responsibility can lead to viewing sustainable behaviour, including sustainable fashion choices, as a collective duty (Khan et al., 2024). Therefore, when investigating the relationship between climate change anxiety and sustainable fashion consumption, it is crucial to consider collectivism. This cultural dimension may influence how individuals respond to climate-related emotions and make environmentally conscious decisions, providing a more comprehensive understanding of the factors driving sustainable behaviour.

In present thesis the individualism-collectivism dichotomy was employed by conducting survey in two countries: Poland and the Netherlands. According to Hofstede's country comparison tool, the Netherlands is a much more individualistic society than Poland (*Country Comparison Tool*, n.d.). The countries were deliberately selected to capture variation in these dimensions. The present research is the first to explore the influence of individualism-collectivism axis on the relationship between climate change anxiety and sustainable fashion behaviour.

Since the majority of current literature indicates that climate anxiety is more prevalent in younger adults, this study focuses on the behaviour of university students (Clayton & Karazsia, 2020; Clayton, 2020). The aim of present thesis is to find an answer to the following research question: To what extent does climate change anxiety influence sustainable fashion consumption of university students in Poland and the Netherlands, and is this relationship moderated by an individual's level of collectivism?

1.2 Study relevance

The aim of this thesis is to make a contribution to the literature by investigating the extent to which an individual's level of climate change anxiety influences their sustainable fashion consumption. Moreover, understanding the moderating effect of collectivism on the tested relationship can offer nuanced insights into cultural variations in responses to environmental concerns.

Present study not only advances the literature on psychological and cultural influences on pro-environmental behaviour but also paves the way for future research to explore other moderating factors and develop more effective strategies for encouraging sustainable fashion consumption. By understanding these dynamics, policymakers and educators can design targeted interventions to address climate-related concerns and promote sustainable fashion choices among consumers. For instance, if climate change anxiety is found to be a significant motivator, campaigns that highlight the environmental impact of fashion could be more effective.

Furthermore, exploring the understudied area of climate change anxiety's impact on sustainable fashion consumption among university students provides valuable insights into how younger generations are responding to environmental challenges. Since university students often represent future leaders and influencers, their behaviours can have long-term implications for societal trends in sustainability. Finally, this research serves to increase the consumer awareness about the environmental impact of the fashion industry and the overall benefits of making sustainable fashion choices.

2. Theory

2.1 Sustainable Fashion Consumption

The concept of sustainability in the apparel industry is very broad. Its complexity is intertwined with the multifaceted nature of sustainability, which must be considered throughout the whole supply chain. Sustainable fashion is interchangeably referred to as ‘slow fashion’, ‘ethical clothing’ or ‘eco-fashion’ (Busalim et al., 2022). Su et al. (2019) define sustainable fashion as “clothing which incorporates one or more aspects of social and environmental sustainability such as fair trade principles with sweatshop-free labour conditions while not harming the environment or workers”.

Over the past decade, the sustainable fashion market has grown significantly. Various factors can influence the way consumers engage in sustainable fashion. The growth of this market can be attributed, in part, to the increasing consumer awareness (Busalim et al., 2022). Such changes in consumer perception and habits in the textile industry are key to counteract overconsumption. According to Granskog et al. (2020), consumer awareness regarding the environmental impact of their clothing choices is already increasing. In a survey of over 2,000 young consumers from the UK and Germany, authors found that a significant number of individuals had already begun to align their purchasing habits with ethical considerations during the Covid-19 crisis, thereby shifting towards sustainable fashion behaviour. Additionally, concern for the environment was also identified to be a driver of sustainable fashion consumption (Brosdahl & Carpenter, 2010). Increasing consumer awareness regarding the negative impacts of textile and apparel production can lead to heightened sensitivity towards such issues (Granskog et al., 2020). Individuals concerned for the environment are more prone to engage in practices good for the planet such as making environmentally responsible apparel-purchases (Brosdahl & Carpenter, 2010).

According to other authors, the main driver of apparel consumption is the consumer’s motivation to buy (Kumar & Yadav, 2021). Current literature on the shopping motivation theory distinguishes between two primary types of shopping motivation namely utilitarian and hedonic. Utilitarian motives are often linked to rationality and task-oriented goals, while hedonic motives are associated with seeking happiness, fun, and fantasy (Arnold & Reynolds, 2003; Kumar & Yadav, 2021). Kumar and Yadav (2021) surveyed over 300 people in India to explore the impact of different consumer shopping motivations on sustainable consumption in the context of green apparel. Their results show that utilitarian and hedonic motives are

significant predictors of intention to purchase sustainable apparel. The authors argue that green consumption is driven both by the functional benefits of the products and the enjoyment experienced by customers during the process. These factors will be controlled for in the present study to better isolate the relation between climate change anxiety and sustainable fashion consumption.

According to some studies, females tend to be more eco-conscious than males, exhibit more pro-environmental behaviour, and are thus more likely to engage in sustainable fashion consumption (Cho et al., 2015). For example, Kumar and Yadav (2021) examined the moderating role of gender in the context of green apparel purchasing. According to their results, gender significantly influences an individual's motivation and intentions to purchase green apparel. These results are consistent with the research conducted in Malaysia by Chekima et al. (2016). The authors found that gender has a strong moderating effect on the relation between both eco-label and environmental attitude on green purchase intention. Accordingly, gender will also be taken into account as a control variable.

Existing literature has extensively explored various predictors of sustainable fashion consumption, such as utilitarian and hedonic shopping motivations, gender differences and consumer awareness. However, climate change anxiety, a crucial psychological factor, still remains inadequately researched in this context. This thesis is set to enhance the current stream of literature by focusing on the impact climate change anxiety has on the behaviour of consumers towards sustainable fashion.

2.2 Climate Change Anxiety

According to the Intergovernmental Panel on Climate Change, the changing climate has increasing global adverse impacts on both human physical and mental health (IPCC, 2022). These mental health impacts include a range of emotional reactions collectively referred to as climate change anxiety. Climate change anxiety often called 'climate anxiety' is broadly defined as the negative response to climate change, which includes environment-related feelings of hopelessness, worry, sadness or fear (Clayton & Karazsia, 2020; Ogunbode et al., 2022). Although this anxiety is caused by drastically changing weather conditions, studies have shown that many individuals experience it even though severe weather events have not directly impacted them. According to a survey conducted across the USA in 2020, 17–27% of the respondents suffered from climate change anxiety (Clayton & Karazsia, 2020).

Previous studies have shown that climate anxiety is more prevalent among certain demographic groups. For instance, adolescents and young adults are particularly prone to experience negative emotions related to the impacts of climate change since it may affect their future more than the future of older adults (Clayton & Karazsia, 2020; Clayton, 2020; Heeren et al., 2022). Furthermore, they might have additional time to reflect on broader societal concerns, whereas adults could be more absorbed in daily responsibilities (Clayton, 2020). According to Hickman's et al. (2021) survey of 10000 young people (aged 16-25 years) from 10 different countries, 84% of respondents were at least moderately worried about climate change, while over 45% of participants stated that their negative emotions regarding climate had an impact on their daily lives.

Furthermore, the levels of climate change anxiety can differ between countries (Ogunbode et al., 2022). For example, the individual expression of emotions (including those related to climate change) is significantly influenced by a country's cultural factors and social norms. Additionally, geographical location also influences the beliefs held by their respective populations (Clayton et al., 2023).

Moreover, some studies have found gender to influence the likelihood of developing climate change anxiety. Women experience significantly higher levels of climate anxiety than men (Wullenkord et al., 2021; Heeren et al., 2022). The difference may be traced to the historical gender roles rooted in patriarchal cultural norms, particularly concerning unequal access to power and information. Additionally, women were found to be more concerned about the environment and climate change (Clayton et al., 2023).

2.3 Climate Change Anxiety and Pro-environmental Behaviour

Perhaps one of the most important ongoing debates in the climate anxiety literature revolves around the question of what kind of behaviour is induced by climate change anxiety. According to some studies, severe climate anxiety can induce a state of paralysis and restrain one's ability to act due to overpowering feelings of hopelessness and uselessness (Usher et al., 2019; Innocenti et al., 2023). This suggests that high levels of anxiety might undermine proactive environmental actions. Clayton and Karazsia (2020), for example, found climate change anxiety and pro-environmental behaviour to be unrelated, indicating that anxiety does not necessarily translate into environmentally friendly actions. Therefore, the relationship between climate change anxiety and sustainable behaviour remains complex and warrants further investigation.

However, most of the research conducted in this domain proves otherwise. Some authors argue that, instead of experiencing eco-paralysis, individuals may undertake actions to mitigate climate change as a coping mechanism (Innocenti et al., 2023). Ogunbode et al. (2022) studied the relation between climate change anxiety and pro-environmental action in 32 countries. Their findings strongly indicate that climate change anxiety can predict pro-environmental behaviour such as saving energy, choosing public transportation, avoiding food waste and overconsumption. In a study conducted across Germany, Wullenkord et al. (2021) also linked climate anxiety to pro-environmental intentions. Similar results have been obtained in studies of the student cohort in Australia (Mathers-Jones and Todd 2023) and Portugal (Sampaio et al. 2023).

In view of the research surveyed above, the following hypothesis was put forward:

H1: An individual's climate change anxiety level is positively associated with their sustainable fashion behaviour controlling for gender, hedonic and utilitarian shopping motivation.

2.4 Moderating Role of Collectivism

Various cultural factors drive consumer behaviour (Moon et al., 2023). One such cultural dichotomy is individualism versus collectivism (Hofstede, 1980). This spectrum is generally described as follows: persons characterized by high levels of individualism typically prioritize their self-interests, whereas those with high levels of collectivism tend to emphasize communal goals (Hofstede, 1980; Moon et al., 2023).

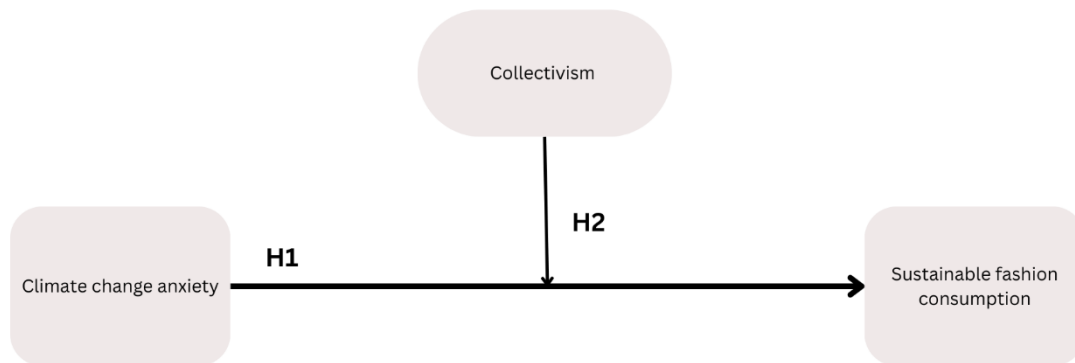
From a sustainable consumption standpoint, it has been observed that in collectivist cultures consumers tend to see sustainable products from a communal perspective (Khan et al., 2024). Collectivists are also more likely to make personal sacrifices for sustainability for the sake of entire community. Moreover, they are more concerned with environmental issues which positively influences their green purchase intention (Arisal and Atalar, 2016; Moon et al., 2023). To further elaborate on this point, previous research has demonstrated that collectivism is not only a strong predictor of pro-environmental behaviour, but can also moderate the relationship between environmental collective efficacy and pro-environmental behaviour (Lee, 2017). Conversely, in individualistic cultures, personal interests may outweigh societal concerns. Individualists are thus less likely to engage in pro-environmental behaviour (Moon et al., 2023).

Several studies show that people experiencing high levels of climate change anxiety will have different coping mechanisms, such as engaging in pro-environmental behaviour (Innocenti et al., 2023). Pro-environmental behaviours are often linked to prioritizing community goals. In collectivist cultures, individuals may be more motivated to engage in such behaviours to align with social norms. (Moon et al., 2023). Moreover, collectivists have a sense of responsibility towards others which explains why they believe their consumption choices affect wider societal and environmental issues (Czarnecka and Schivinski, 2021).

Therefore, the strength of relationship between climate change anxiety and sustainable fashion behaviour can differ depending on the individualism-collectivism dichotomy (see Figure 1.). For a collectivist, experiencing high levels of climate change anxiety may amplify feelings of collective responsibility. This heightened sense of responsibility can motivate them to take proactive measures to reduce environmental impact through sustainable behaviour (Czarnecka and Schivinski, 2021; Khan et al., 2024). In other words, collectivists might have a stronger motivation to engage in pro-environmental behaviour because they will perceive it as a way to help tackle climate change not only for themselves, but also for their community. Thus, the relationship between climate change anxiety and sustainable fashion behaviour might be stronger for people exhibiting high levels of collectivism, and consequently weaker for individuals with high levels of individualism.

According to recent studies, the Dutch are considered to be one of the most individualistic nations, while Poles score considerably lower on the individualism scale (Individualistic Countries 2024, n.d.). Additionally, it has been reported that levels of climate change anxiety differ across countries (Bouman et al., 2020; Ogunbode et al., 2022). To investigate those differences in the present study students from these two different European countries were included.

Figure 1. The conceptual model



In present study it is expected that the relation between climate anxiety and sustainable fashion behaviour is stronger for collectivists rather than individualists. Considering the evidence that links collectivism to sustainable consumption described above, the following hypothesis was put forward:

H2: Collectivism moderates the positive relationship between climate change anxiety and sustainable fashion behaviour, such that the relationship is stronger when the level of collectivism is higher.

3. Methods

3.1 Research Design

A quantitative study was conducted to answer the research question regarding the relationship between climate change anxiety and sustainable fashion consumption and the moderating effect of collectivism on that relationship. A cross-sectional research design was chosen. Data were gathered through an anonymous, web-based survey. The unit of analysis for this study were individual consumers.

3.2 Research Ethics

In the process of data collection the consent form approved by the Faculty of Geosciences was included in the survey (see Appendix A). Only after participants gave their consent were they able to proceed to the questionnaire. Moreover, data handling and data storage in this study was done according to the GDPR. Furthermore, in line with the university guidelines regarding research data management, the questionnaire was preceded by the following information (Utrecht University, n.d.):

- Confirmation of voluntary participation
- The research aim
- The research team
- Description of data collection, usage and storage
- Participants' rights, for example guaranteed anonymity or the right to withdraw consent and to contact the University's Data Protection Officer

3.3 Participants and Recruitment

Given the research design, two inclusion criteria were adopted: being a student and studying in Poland or the Netherlands at the time of the survey. Questions regarding these criteria were posed at the start of the survey (see Appendix A.2). If participants indicated that they are not students or study in another country, they could not continue the survey. Moreover, the study had explicit exclusion criteria: participants who were unable to complete the survey online and those who refused to provide informed consent were excluded.

The study was based on a cross-sectional analysis, data were collected using self-completion online questionnaires created through Qualtrics. Questionnaires were shared through different social media platforms in Poland and the Netherlands (e.g. WhatsApp, Messenger, LinkedIn, Instagram, Facebook). The questionnaire was available only in English

to enhance the study's overall reliability and enable cross-cultural comparisons. A mix of convenience and snowball sampling procedures were applied. Participants were selected based on their accessibility and availability. Students from different Dutch and Polish universities were recruited to complete the anonymous survey between March and April 2024. For convenience sampling, the questionnaires were posted in Facebook and WhatsApp groups. They gathered students from various universities in different cities including Amsterdam, Cracow, Delft, Gdańsk, Groningen, Lublin, Poznań, Rotterdam, Utrecht, Warsaw, and Wrocław. The university groups were found through online research. Snowball sampling was employed by asking participants to share the questionnaires with their friends and university colleagues. After completing the questionnaire, participants were allowed to enter a raffle for a 15 euro Zalando Online Gift Card.

The necessary sample size was estimated by power analysis. It required setting several parameters and making some assumptions. The confidence level was assumed to be 95%; thus, the p-value was set at 0.05. Five predictor variables were taken into account when estimating the regression sample size. In a similar study Hong et al. (2024) were investigating the factors influencing sustainable fashion consumption behaviour. Following their research to estimate the sample size a power of 80% was utilized. In the present study, an effect size of 0.2 was used by adopting a conservative approach. According to the seminal paper by Cohen (1992), which introduces effect size as a standardized statistic, 0.2 is classified as small effect. All these conditions were taken into account when calculating the sample size using R package *WebPower*. These methods and computations estimated the minimal required sample size to be at least 191 participants.

A total of 311 participants filled in the survey; 72% completed the survey while 28% missed at least one response on research instruments and were excluded from the study. It was anticipated that some respondents might not complete the survey fully, so data collection continued beyond the initial target of 191 participants. The final sample for this study comprised of 223 participants. The sample size was large enough to detect the effect assumed in the power analysis.

Participants included both undergraduate and graduate students. The age median was 24 years, while the largest age cohort comprised individuals aged 15-24. In the present study's final sample, more than half were Dutch, with the remaining participants being Polish. Among those who completed the survey, 73.5% were female, and 26.5% were male. Over 50% of the participants have already obtained the Bachelor's degree and slightly over 20% obtained their

Master's degree. Another big cohort (almost 20%) had finished only High School. The level of income among the Dutch students was quite evenly distributed. Half of the people earned between 501 and 1500 EURO. In the Polish sample, slight variations were observed regarding monthly income levels. The majority (over 30%) earned between 4001 and 6000 PLN.

Table 1. Demographic structure of the sample.

Age Group (in years)	N	Percentage (%)
15-24	145	65.0%
25-34	75	33.6%
35-44	3	1.4%
Country	N	Percentage (%)
Poland	109	48.9%
The Netherlands	114	51.1%
Gender	N	Percentage (%)
Female	164	73.5%
Male	59	26.5%
Education	N	Percentage (%)
Bachelor's Degree	121	54.3%
High School Diploma	45	19.8%
Higher Professional Education (HBO)	6	2.6%
Master's Degree	46	20.2%
Secondary Vocational Education (MBO)	4	1.8%
Vocational Education	3	1.3%
Income NL	N	Percentage (%)
Less than 100€	13	11.4%
101€ - 500€	13	11.4%
501€ - 1000€	31	27.2%
1001€ - 1500€	27	23.7%
1501€ - 2000€	16	14.0%
More than 2001€	14	12.3%
Income PL	N	Percentage (%)
Less than 500 PLN	12	11.0%
501 PLN - 2000 PLN	19	17.4%
2001 PLN - 4000 PLN	19	17.4%
4001 PLN - 6000 PLN	35	32.1%
6001 PLN - 8500 PLN	14	12.8%
More than 8501 PLN	10	9.2%

3.4 Measures

Four measures were used to assess participants' levels of climate anxiety, sustainable fashion behaviour, shopping motivation, and collectivism (see Appendix A.2): the Climate Change Anxiety scale (Clayton and Karazsia, 2020), the Sustainable Consumption of Clothing Products scale (Park & Lee, 2020) the Hedonic, Utilitarian Motivation scale (Kumar & Yadav, 2021) and part of Cultural Values Scale (CVSCALE). Along with the responses on research instruments, the survey collected demographic information such as gender, age, level of monthly income, and educational background from respondents (see Table 1.).

3.4.1 Climate Change Anxiety (CCA) Scale

The self-reported CCA scale allows to assess to what extent worrying about climate change causes individual's cognitive, emotional and functional impairment (Clayton & Karazsia, 2020). It consists of 13 statements. The answers are gathered on a five-point Likert response scale (from 1 = "never" to 5 = "always"). The CCA scale has been validated and used successfully by several authors in different European countries (Clayton & Karazsia, 2020; Schwartz et al., 2022; Whitmarsh et al., 2022; Wullenkord et al., 2021).

3.4.2 Sustainable Consumption of Clothing Products (SCCP) Scale

This SCCP scale is a self-administered questionnaire that allows to assess the degree to which people engage in sustainable fashion consumption. The scale consists of 30 items categorized into six dimensions describing different aspects of sustainable fashion behaviour: Mindful Consumption Behavior of clothing products (MCB); Sustainable Purchase Behavior of clothing products (SPB); Sustainable Use and Disposal Behavior of clothing products (SUDB); Activism Behavior of SCCP (AB); Buying Less (BL); Secondhand, Vintage and Rental (SVR).

The scale was tested for reliability and validity using both qualitative and quantitative methods, and the results were encouraging (Park & Lee, 2020). Both exploratory and confirmatory factor analysis proved the scale to be valid while accurately representing actual consumer behaviour. Responses to the questionnaire are based on a seven-point Likert response scale (from 1 = "strongly disagree" to 7 = "strongly agree").

Unfortunately, some of the items from the scale have been poorly translated into English. To ensure the quality of the study, the wording of a few statements was slightly altered in the final version of the questionnaire. This was done to improve grammar and make the statements more readable and consistent. (see Table A.3). Moreover, the following item on the

original scale was found to be a double-barrelled question – “I get education or participate in a campaign for sustainable clothing consumption”. To enhance the reliability of the questionnaire this statement was split into two separate items: “I educate myself about sustainable clothing consumption” and “I participate in campaigns for sustainable clothing consumption”.

3.4.3 Shopping Motivation Scales

Utilitarian and Hedonic motivation scales are self-report questionnaires that measure consumer shopping motivation for green apparel (Kumar & Yadav, 2021). Both scales contain five statements describing different aspects and emotions related to green apparel consumption. The answers are based on a five-point Likert response scale (from 1 = “strongly disagree” to 5 = “strongly agree”).

3.4.4 Collectivism Scale

Individual’s level of collectivism was assessed using items from a well-established Cultural Values Scale (CVSCALE). This self-administered questionnaire consists of 26 statements designed to measure Hofstede’s cultural dimensions (Yoo et al., 2011). In this study, 6 items from the scale were used to measure the level of collectivism. CVSCALE has been validated in several studies worldwide and is widely present in the literature (Chekima et al., 2016; Khan et al., 2024; Yoo et al., 2011). The answers are presented on a five-point Likert scale (from 1 = “strongly disagree” to 5 = “strongly agree”).

3.4.5 Validity Assessment

The internal consistency of the scales used in this study was examined through Cronbach’s alpha (see Table 2.). All scales were found to have Cronbach’s alpha values exceeding the recommended threshold of 0.70 (Hair et al., 2010). Confidence intervals were constructed based on the 95% confidence level to assess the variability of the results. The lower bound confidence interval values were also higher than 0.70 for all items indicating that the results are robust. CCA and SCCP scales proved to have the highest internal consistency whilst Utilitarian Motivation scales proved to have the lowest reliability.

Table 2. Cronbach’s alpha results.

Scale	Alpha	Confidence Interval Lower Bound	Confidence Interval Upper Bound
Collectivism (CVSCALE) scale	0.82	0.79	0.86
Utilitarian Motivation scale	0.79	0.74	0.83
Hedonic Motivation scale	0.88	0.85	0.90
Climate Change Anxiety scale	0.92	0.90	0.93
Sustainable Consumption of Clothing Products scale	0.91	0.90	0.93

3.5 Data Analysis

The relationship between climate change anxiety and sustainable clothing behaviour was quantified using a linear regression model. The primary independent variable was *climate change anxiety (CCA)*, while the dependent variable was *sustainable fashion behaviour (SFB)*. Moreover, the conceptual model also consisted of one moderating variable, namely *collectivism (C)*, and three controlling variables: *gender (G)*, *hedonic shopping motivation (HSM)*, *utilitarian shopping motivation (USM)*. All variables were measured on a consumer's i level. In the model a_i was the intercept and represented baseline measurement of SFB in the sample.

An additional model specification was estimated based on extensive evidence for the expected moderating effect of collectivism on the relation between CCA and SFB. This approach was undertaken to test Hypothesis 2. The equation that describes the model estimated for H2 supplemented the empirical model for H1 with an interaction term to measure the impact C has on the CCA 's association with SFB . The described empirical model is specified in the following way:

$$SFB_i = a_i + \beta_1 CCA_i + \beta_2 C_i + \beta_3 G_i + \beta_4 HSM_i + \beta_5 USM_i + \beta_6 CCA_i \times C_i$$

To ensure the robustness of the estimated model, diagnostic tests were conducted. These tests aimed to verify key assumptions underlying the linear regression model, including the linearity of outcomes and model terms, normal distribution of residuals, homoscedasticity, and absence of multicollinearity. The assessment involved conducting appropriate statistical tests, robustness checks, and visual inspections to confirm the validity and reliability of the regression results. The linearity assumption was assessed through scatterplot visualisation. The normality of residuals was checked using the histograms and Q-Q plots. Homoscedasticity was evaluated using the Breusch-Pagan test to confirm that the variance of residuals was constant across different levels of the independent variables. Multicollinearity was assessed by calculating Generalised Variance Inflation Factors (GVIFs) to ensure that the independent variables were not highly correlated.

Descriptive statistics measures such as mean, quartiles, standard deviations and standardized moments were used to assess the distribution, kurtosis and skewness of the models. Furthermore, both Spearman and Pearson correlation coefficients were presented to investigate descriptive effects and associations between the variables in this thesis.

4. Results

4.1 Descriptive Analysis

In present thesis the association between climate change anxiety and sustainable fashion behaviour was examined, along with exploration of the potential moderating effect of collectivism on this relationship. In the context of regression analysis, initial exploration involved examining the shape of variables' distributions. Understanding the distribution patterns of the data is important because it provides insights into the tendencies and characteristics of the individuals in the study. Normality assessment was essential to ensure that the conclusions drawn from the results are robust and reliable. To examine these distributions, visualizations in the form of histograms were created for all variables (see Figure B.1).

As indicated by the skewness value being negative for all control variables except gender, the histograms demonstrate a slight left skewness. Consequently, for those variables the more extreme values lie towards the low-end of the distribution. The histogram for the dependent variable SFB suggests a distribution slightly varied from a normal one. The independent variable CCA is the only variable for which the skewness value was positive, indicating a right-skew. The histogram shows the existence of more extreme values towards the high-end of the distribution. This suggests that the majority of participants in this study had low levels of climate change anxiety, though there were a few instances of individuals exhibiting extreme high levels. Furthermore, the variables showed little variation in their positive kurtosis values with lowest being 2.13 for gender and highest being 3.27 for hedonic motivation. Overall, those results indicate the distributions are more peaked than the normal distribution. Consequently, it is possible the underlying data set might contain outliers which were addressed with appropriate treatment in 4.4.2.

After discussing the distribution of the variables, it is important to consider Pearson (r_p) and Spearman (r_s) correlation measures to assess the strength and direction of relationships between variables (see Table 3). This step provided an initial indication of associations before proceeding with more complex modelling. Both correlation types were calculated to accommodate potential deviations from normal distribution, ensuring robustness in the initial assessment of relationships between the variables (Moon et al., 2023).

Climate change anxiety ($r_p = 0.14$, $p < 0.05$), hedonic motivation ($r_p = 0.53$, $p < 0.05$), utilitarian motivation ($r_p = 0.51$, $p < 0.05$), collectivism ($r_p = 0.45$, $p < 0.05$) and gender ($r_p = 0.25$, $p < 0.05$) were positively correlated with sustainable fashion behaviour (see Table 3.).

Hedonic and utilitarian were strongly positively correlated with each other at over 0.50, while collectivism seemed to be positively associated with those shopping motivations at moderate 0.24-0.29.

Table 3. Descriptive statistics, correlations, and normality tests.

<i>Variable</i>	<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>	<i>6.</i>
<i>1. Sustainable Fashion Behaviour (SFB)</i>		0.20*	0.57*	0.52*	0.25*	0.44*
<i>2. Climate Change Anxiety (CCA)</i>	0.14*		0.04	-0.09	-0.03	0.14*
<i>3. Hedonic Motivation (HM)</i>	0.53*	0.00		0.56	0.16*	0.29*
<i>4. Utilitarian Motivation (UM)</i>	0.51*	-0.16*	0.52*		0.02	0.25*
<i>5. Gender (G) (Female = 1)</i>	0.25*	-0.12	0.17*	0.01		0.04
<i>6. Collectivism (C)</i>	0.45*	0.14*	0.25*	0.24*	0.04	
<i>Mean (M)</i>	4.64	1.90	3.62	3.94	0.74	3.23
<i>Standard Deviation (SD)</i>	1.75	1.09	0.98	0.95	0.44	0.79
<i>Skewness</i>	-0.32	0.77	-0.20	-0.23	-1.07	-0.38
<i>Kurtosis</i>	2.79	2.71	3.27	2.44	2.13	3.14

Note: Coefficients below the diagonal are Pearson correlation, while coefficients above the diagonal are Spearman correlation. Statistical significance is reported in the following way: *p<0.05.

Furthermore, in this study most of the participants exhibited rather low levels of climate change anxiety (M = 1.90). The scale ranged from 1 (never) to 5 (always) in measuring responses. On average, higher levels of climate anxiety were reported in the Netherlands (M = 2.05), than in Poland (M = 1.75). Overall, the sample demonstrated a tendency for engaging in sustainable fashion behaviour (M = 4.64), rated on a scale from 1 (strongly disagree) to 7 (strongly agree). Moreover, participants were characterized by overall strong utilitarian and hedonic motivation to purchase green apparel (M = 3.62; M = 3.94), measured on a scale from 1 (strongly disagree) to 5 (strongly agree). Lastly, on average individuals in this research tended to lean towards collectivism rather than individualism values (M = 3.23). The collectivism scale ranged from 1 (strongly disagree) to 5 (strongly agree).

4.2 Climate Change Anxiety and Sustainable Fashion Behaviour

To assess the effect of climate change anxiety on sustainable fashion behaviour an ordinary least squares (OLS) estimation of linear regression was conducted (see Table 4.). Model 1 showcases the primary effects of climate change anxiety as the predictor variable on SFB and incorporates all control variables namely hedonic shopping motivation, utilitarian shopping motivation, and gender.

Table 4. Model 1: Regression results.

	<i>Dependent variable:</i>	
	Sustainable Fashion Behaviour	
	Model 1	Model 2
Climate Change Anxiety	0.263*** (0.058)	0.524* (0.273)
Hedonic Motivation	0.307*** (0.066)	0.268*** (0.063)
Utilitarian Motivation	0.483*** (0.075)	0.431*** (0.072)
Gender	0.439*** (0.100)	0.398*** (0.097)
Collectivism		0.267*** (0.057)
Climate Change Anxiety x Collectivism		-0.095 (0.081)
Constant	0.805*** (0.308)	0.826*** (0.275)
Observations	223	223
R ²	0.440	0.507
Adjusted R ²	0.430	0.493
Residual Std. Error	0.643	0.606
F Statistic	42.899***	37.048***

Note: This table reports the results from OLS regressions of Sustainable Fashion Behaviour on the climate anxiety as main explanatory variable of interest, including set of control variables. Statistical significance is reported in the following way: *p<0.1; **p<0.05; ***p<0.01

Model 1 was statistically significant, as confirmed by the high and significant F-statistic. Based on the R^2 result, Model 1 explained about 44% of the variance in SFB, suggesting only a moderate fit. According to the results of Model 1, climate change anxiety ($\beta = 0.263$, $p < 0.01$) was found to have a positive and significant effect on sustainable fashion behaviour, thus supporting Hypothesis 1: An individual's climate change anxiety level is positively associated with their sustainable fashion behaviour controlling for gender, hedonic and utilitarian shopping motivation. More to the point, increase in one point of a CCA scale of an individual is associated with an increase of 0.263 on individual's SFB scale. The Model 1 results regarding the control variables are reflecting the tendency of correlation coefficients (see Table 3.).

4.3 Moderating Effect of Collectivism

To test Hypothesis 2: Collectivism moderates the positive relationship between climate change anxiety and sustainable fashion behaviour, such that the relationship is stronger when the level of collectivism is higher, the OLS regression was conducted on sustainable fashion behaviour including the interaction effect between collectivism and climate change anxiety (see Table 4.). Model 2 build upon Model 1 by incorporating the interaction between climate change anxiety and collectivism. Including collectivism both as a main effect and in the interaction term in Model 2 was crucial to capture the direct influence of collectivism on sustainable fashion behaviour, as well as its moderating effect on the relationship between CCA and SFB.

Before running this model, the variables were centred to prevent collinearity. Centring variables in this regression involved subtracting the mean from each variable's value. This step ensured that the conclusions about the relationships between the explanatory and response variables were accurate. R^2 result is slightly higher than the goodness-of-fit in Model 1. The score of 0.51 suggests that Model 2 explains slightly over 50% of the variance in SFB. Thus, indicating that introducing the interaction effect did improve the model to some extent. F-statistic confirms that the overall model is statistically significant. However, contrary to the assumptions made in the present thesis, the moderating effect of collectivism on the relationship between CCA and SFB was not found to be significant. Thus, Hypothesis 2 was rejected.

To formally test whether the moderation effect improved the model Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) were used. These criteria allowed to compare the fit of two different model specifications: Model 1, which includes several predictors, and Model 2, which encompasses all the predictors from Model 1 and additionally incorporates collectivism as a predictor along with an interaction term between climate change

anxiety and collectivism. The AIC and BIC help to determine if the inclusion of the interaction term significantly enhances the model's explanatory power. According to the results, both the AIC and BIC values were lower for Model 2 than for Model 1 (see Table B.1). Therefore, it was concluded that Model 2 is superior to Model 1. Model 2 provides a better fit to the data and achieves this with fewer or more effectively utilized parameters, thereby avoiding overfitting more effectively than Model 1.

4.4 Regression Diagnostics and Robustness Checks

According to Ernst and Albers (2017) four fundamental assumptions form basis for every OLS regression model: linearity, normality, homoscedasticity and independence. Improper handling of these assumptions can lead to significant issues concerning the validity and power of the results. Consequently, present study conducted a series of regression diagnostics and robustness checks to ensure that these assumptions were not violated. The results of these tests indicate the level of confidence that can be placed in the inferences made from the implemented models.

4.4.1 Linearity

Applying the linear regression model to the studied phenomenon of climate anxiety and its relationship with sustainable fashion behaviour required assuming that there exists a linear relationship between the two features, as well as between the response variable and other predictors used in the model. The correlation coefficients presented in Table 3. suggested that some degree of linear association between all the variables has been recognized, both under the assumption of normal distribution (Pearson's coefficients) and monotonic relationship (Spearman's coefficients). Especially relevant were the correlation coefficients corresponding to SFB as one of the pairwise variables, as all the coefficients were significantly different than zero. This revealed a confident degree of linear association.

Further investigation into the linearity assumption was exercised by inspecting a scatterplot visualisation (Figure B.2). Based on the scatterplot, the linearity assumption of OLS regression appeared to be satisfied as the relationship between CCA and SFB is approximately linear. The regression line effectively captured the general trend in the data, and there are no obvious nonlinear patterns or clusters indicating a different type of relationship.

4.4.2 Normal Distribution for Residuals

To draw valid inferences from the model, it is crucial to have confidence in its ability to explain the relationship between the chosen variables. This confidence implies that the

unexplained variation in the response variable is random. This condition can only be met if the error term of the model (residuals) is normally distributed. It is important to note that with a large sample size, due to the law of large numbers, the normality of residuals becomes less of a concern (Schmidt and Finan 2018), but is still worth examining for the sake of rigorousness of the study.

To check the normality assumption for residuals, two visualizations were employed. Histogram of residuals from Model 2. was used to assess the shape of the distribution. Most of the data points were located between -1 and 1, with some exceptions (see Figure B.3). The visual inspection allowed to make an assumption that the data set contains some outliers and that the error terms were not normally distributed.

In order to further investigate the normality of residuals another visualisation in the form of a Q-Q plot, was employed (see Figure B.5). The plot compared the quantiles of the data sample against the quantiles of a normal distribution. Overall, the figure presented a strong case for normality of residuals in the central mass of the data as the data points fall approximately along the reference line. There was a slight deviation from the reference line at the tails of the distribution, but it is not considered a pattern of systematic deviation, especially knowing that there exists some skewness and kurtosis in the underlying data, according to Table 3.

Nonetheless, to improve on the assumption of normality and the residuals dispersion in the tails, an outlier treatment technique has been utilised. The outliers were defined as data points that are below a chosen lower bound, which is 1.5 times the interquartile range subtracted from the first quartile, or above the chosen upper bound, which is 1.5 times the interquartile range added to the third quartile. The analysis identified presence of 5 such data points. Literature identifies several methods for handling outliers. In this analysis, removing the data points from the dataset technique was employed (Aguinis et al., 2013).

Notably, the model is robust to outliers as removing those data points did not result in significant changes in the results of the regression (see Table B.2). Case in point, the interaction term remained insignificant; the strength of the effects slightly increased for all the variables but the significance did not change; the R^2 decreased by 0.007. The effects of removing outliers are also presented on a histogram of residuals and Q-Q plot in the Appendix (see Figure B.4 and Figure B.6).

4.4.3 Homoscedasticity

Homoscedasticity assumes that the variance of residuals remains consistent across all combinations of independent variable values. Failure to meet this assumption can be observed as a greater dispersion of measurements around the centre line on one side of the scatterplot compared to the other (Ernst and Albers, 2017).

In the scatterplot of residuals were plotted on the y-axis with predicted values of SFB on the x-axis. Visual inspection did not show any obvious patterns in how residuals are scattered, but rather displayed a fairly constant dispersion around the centre line (see Figure B.7). Additionally, the plot indicated presence of outliers as well as the interquartile range detection test above. Nonetheless, there are ways to conduct the diagnostic in a more rigorous way.

Therefore, further investigation into the homoscedasticity assumption was exercised by conducting the Breusch-Pagan (BP) test. According to the null-hypothesis for BP test, the underlying data is characterised by homoscedasticity. The result of the test for this study's data set yields a p-value < 0.05 , thus the hypothesis of constant variance of error terms was rejected. Mitigation technique employed for heteroscedasticity was outlier detection and treatment, exercising the abovementioned interquartile range approach. The removal of outliers significantly improved the BP test score (see Table B.3). The outlier removal helped to meet the homoscedasticity assumption (see Figure B.8). However, as seen in the regression results for the model without outliers (see Table B.2) this treatment does not significantly affect the regression results neither in terms of the effect sizes, the statistical significance or the model goodness-of-fit. That being said, Model 2. can be considered robust to heteroscedasticity.

Another approach to dealing with heteroscedasticity is modifying the outcomes of model estimation itself. This can be done through the use of robust standard errors which are less sensitive to the presence of heteroscedasticity. Therefore, they provide more accurate estimates of the standard errors of the regression coefficients (Croux et al., 2004). Present thesis made use of heteroscedasticity-consistent estimation of the covariance matrix (HC3) recommended by Long & Ervin (2000). Including those robust standard errors in the model resulted in increased standard errors for the variables overall, implying the model is more stringent in its inferences (see Table B.4). However, it did not affect the results obtained before based on statistical significance.

4.4.4 Multicollinearity

To verify the independent and control variables are not excessively correlated with each other, the Generalised Variance Inflation Factor (GVIF) was calculated (Fox, 2008). Additionally, precautions were taken prior to introducing the interaction term by centering the variables. This step was essential for mitigating potential multicollinearity issues and ensuring the accuracy and reliability of the model's outcomes. The highest GVIF score was recorded for UM (1.50) and the lowest for G (1.10). However, the scores for neither of the values was higher than generally accepted values for variance inflation factor indices which indicates that multicollinearity was not an issue in this study and does not require further investigation (see Table B.5).

5. Discussion and Conclusion

5.1 Main Findings

Present thesis explored people's shopping behaviour and its association with climate change. It aimed to shed light on the relationship between individual's level of climate change anxiety and sustainable fashion behaviour among the target group of students. Additionally, present study investigated the moderating role of collectivism in that relationship. The results showed that climate change anxiety was positively associated with sustainable fashion behaviour. On the other hand, the expected moderation effect of collectivism was not found to be significant. Expanding the understanding of how climate change anxiety influences daily life and consumption can offer valuable insights into its far-reaching societal effects. Therefore, the findings carry significant theoretical implication for climate change anxiety and sustainable fashion behaviour, as well as definitive practical implications both for industry stakeholders and academic researchers.

This study was the first to thoroughly investigate the relationship between climate change anxiety and sustainable fashion behaviour as well as the role of collectivism as a moderating factor on that relationship. Previous studies have extensively examined the association between climate anxiety and pro-environmental behaviour. However, none have specifically focused on its link with sustainable fashion. CCA was proven to have a positive relationship with behaviours such as energy saving, recycling, pro-environmental buying intentions or activism (Mathers-Jones and Todd, 2023; Ogunbode et al., 2022; Wullenkord et al., 2021). Corroborating previous studies, in present research a significant positive relationship between climate change anxiety and PEB, specifically sustainable fashion behaviour, was found. This finding also aligns with previous research about the potential adaptive function of climate anxiety (Mathers-Jones and Todd, 2023). It is plausible that people suffering from higher levels of CCA are more likely to adopt behaviours they believe counteract climate change. This could serve as a coping mechanism, helping them manage their anxiety by taking proactive steps towards environmental sustainability. Such behaviours could provide a sense of control and contribution to mitigating climate issues (Innocenti et al., 2023). In the context of sustainable fashion consumption it includes actions such as deliberately opting for more environmentally friendly brands, scrutinizing for greenwashing, educating others on the pitfalls of the fashion industry, engaging in recycling, purchasing second-hand or vintage items, and limiting overall clothing consumption.

Another important finding of this thesis is that, contradictory to the initial assumption, collectivism was not found to moderate the relationship between CCA and SFB. Possible explanation lies in the broader socioeconomic and cultural context in which the study was conducted. The concept of collectivism varies significantly across cultures, with different societies emphasizing various aspects of collective behaviour and social responsibility. It is plausible that only specific aspects of collectivism interact with climate change anxiety and these were not adequately captured in present study. If there had been more variance in collectivism, the moderation effect might have been observed. On the other hand, another possible explanation is that the effect of collectivism as a moderator on the relationship between CCA and SFB does not exist at all. Perhaps other cultural or socioeconomic factors might play a more significant role in influencing sustainable fashion behaviour. This variation underscores the need for further cross-cultural research to understand the diverse ways collectivism can affect pro-environmental behaviours.

5.2 Study Implications

Present thesis discovered that individuals who are anxious about climate change are more likely to make environmentally conscious fashion choices. This insight can have several practical implications. Policymakers can frame climate change as an issue that individuals can address through their fashion choices, thereby making communication strategies more resonant with audiences and inspiring meaningful action. For example, campaigns could highlight how choosing eco-friendly brands or reducing clothing consumption contributes directly to reducing negative effects of climate change.

Considering the fact that levels of climate change anxiety are growing in the society, businesses that already are targeting more eco-conscious consumers may want to be even more transparent about how their actions mitigate the negative effects of climate change to enhance the trust of the consumers. By engaging in sustainable fashion behaviours, individuals can feel empowered and more in control, potentially reducing anxiety and improving overall well-being.

On the other hand, findings of this thesis present controversial implications: while climate change anxiety appears to motivate individuals to adopt sustainable behaviours, it raises ethical questions about whether we should actively stimulate such anxiety. Encouraging it could lead to increased stress and mental health issues, potentially causing more harm than good. Therefore, it is crucial to balance raising awareness about environmental issues with promoting solution-oriented approaches that inspire sustainable behaviour without exacerbating anxiety.

5.3 Limitations and Avenues for Future Research

Some limitations of present thesis related to study design, the sample structure and model specification should be considered. Firstly, the Sustainable Consumption of Clothing Products scale used for concept measurement ought to be addressed. It is important to note that while the scale covers multiple aspects of SFB, its original translation from Korean to English left some room for improvement. Despite the best efforts to reformulate some items and achieve a good Cronbach's Alpha score for the scale, there remains uncertainty regarding whether the results might have differed had the original scale been translated more accurately by the authors.

Secondly, the age component should be considered a limitation of present study. This thesis focused on analysing the behaviour of university students. However, previous studies have shown that on average climate anxiety levels differ among demographic groups (Clayton, 2020; Heeren et al., 2022). Therefore, future research should consider including diverse age groups in the study. This could provide a more comprehensive understanding of the relationship between climate change anxiety and sustainable fashion consumption. By incorporating a wider age range, future research could capture a broader spectrum of consumer behaviours and motivations, potentially leading to more generalizable and nuanced findings.

Furthermore, the finding that most participants exhibited low levels of CCA should be considered a limitation of this study. This skewed distribution of CCA levels may limit the generalizability of the results, as it does not fully capture the experiences of individuals with moderate to high levels of climate anxiety. Consequently, the study might not adequately represent the full spectrum of how varying levels of climate anxiety in the population influence sustainable fashion consumption. Future research should aim to include a more balanced sample in terms of CCA levels to provide a more comprehensive understanding of the relationship between climate anxiety and sustainable fashion consumption.

Thirdly, the variation of SFB is explained by CCA and other predictors in this study's model only in 50%. Future research should investigate other potential determinants of SFB which may have been omitted in this study. For instance, environmental concern (Dangelico et al., 2022), social and personal norms, environmental attitudes and awareness (Lin and Chen, 2022; Yang et al., 2024) have been found to be significant predictors of sustainable fashion consumption in previous studies. Exploring these concepts could provide a more comprehensive understanding of the drivers behind SFB.

Lastly, future research on the topic could benefit from a longitudinal approach, which was not utilized in this study. As climate change anxiety is constantly evolving on individual-level, tracking changes over time would allow to better understand how shifts in climate change perception influence consumer behaviour. For example, a longitudinal study could involve surveying the same group of participants at multiple points in time to observe how their anxiety levels and consumption behaviours evolve and influence the inferences made in present thesis. This approach would provide insights into the temporal dynamics of climate change anxiety and its long-term impact on consumer behaviour.

5.4 Conclusions

Sustainable fashion consumption has gathered notable recognition within developed countries in recent years (Yang et al., 2024). Sustainable fashion behaviour as a type of pro-environmental behaviour has a significant potential to mitigate the effects of climate change. Thus, it is important to investigate the role of different factors, such as CCA, as predictors of such behaviour (Moon et al., 2023). Present thesis is the first study to provide exploratory insights into the role of individual's climate change anxiety as a motivating factor for their sustainable fashion behaviour. Additionally, present research introduced novelty in the literature by investigating the moderating role of collectivism on the CCA-SFB relationship. Addressing this research gap makes a significant contribution to the literature. The evidence provided in this study indicates that climate change anxiety is positively associated with sustainable fashion behaviour which can have several implications for different industry stakeholders. Findings of this thesis can be utilised by researchers to further investigate this phenomenon, businesses to capitalize on the trend and enhance their sustainability profiles, and policymakers to promote community engagement. Collectively, these actions prompted by the findings of present thesis can contribute to a more sustainable and psychologically resilient society.

6. References

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7. Appendix

Appendix A

A.1 Informed consent form

In this study we want to learn about the relationship between climate anxiety and sustainable fashion behaviour. Participation in this survey is voluntary and you can quit the survey at any time without giving a reason and without penalty. Your answers to the questions will be shared with the research team. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act). Everything you say or write will be confidential, and anonymous. This means that we do not ask for your name, and no one will know which respondent said what. Please respond to the questions honestly and feel free to say or write anything you like.

I confirm that:

- I am satisfied with the received information about the research;
- I have no further questions about the research at this moment;
- I had the opportunity to think carefully about participating in the study;
- I will give an honest answer to the questions asked.

I agree that:

- the data to be collected will be obtained and stored for scientific purposes;
- the collected, completely anonymous, research data can be shared and re-used by scientists to answer other research questions;

I understand that:

- I have the right to withdraw my consent to use the data as long as they can be identified;
- I have the right to see the research report afterwards.

Do you agree to participate? Yes No

A.2 Thesis survey

Start of Block: Informed consent form

I confirm that: I am satisfied with the received information about the research; I have no further questions about the research at this moment; I had the opportunity to think carefully about participating in the study; I will give an honest answer to the questions asked.

I agree that: the data to be collected will be obtained and stored for scientific purposes; the collected, completely anonymous, research data can be shared and re-used by scientists to answer other research questions;

I understand that: I have the right to withdraw my consent to use the data as long as they can be identified; I have the right to see the research report afterwards.

I consent

I do not consent

Start of Block: General information

Q1 To participate in this study you must be enrolled at a university. Please indicate are you currently a student?

Yes

No

Q2 In order to participate in this study you need to be a student either in Poland or the Netherlands. Please indicate in which of these countries are you studying?

Poland

The Netherlands

Other

Q3 Which of these categories describes your personal income last month?

- Less than 100€
 - 101€ - 500€
 - 501€ - 1000€
 - 1001€ - 1500€
 - 1501€ - 2000€
 - More than 2001€
-

Q4 Which of these categories describes your personal income last month?

- Less than 500 PLN
 - 501 PLN - 2000 PLN
 - 2001 PLN - 4000 PLN
 - 4001 PLN - 6000 PLN
 - 6001 PLN - 8500 PLN
 - More than 8501 PLN
-

Q5 How old are you? (Please enter your age in whole years)

Q6 Which gender do you most identify with?

- Male
 - Female
 - Non-binary / third gender
 - Prefer not to say
-

Q7 What is the highest level of education you have obtained?

- High School Diploma
 - Vocational Education
 - Secondary Vocational Education (MBO)
 - Higher Professional Education (HBO)
 - Bachelor's Degree
 - Master's Degree
 - Doctoral Degree
 - Other _____
-

Start of Block: Climate change anxiety

Q8 Please indicate to what extent do you agree with following statements:

	Never	Rarely	Sometimes	Often	Almost always
Thinking about climate change makes it difficult for me to concentrate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking about climate change makes it difficult for me to sleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have nightmares about climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find myself crying because of climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think, "why can't I handle climate change better?"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I go away by myself and think about why I feel this way about climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I write down my thoughts about climate change and analyse them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think, "why do I react to climate change this way?"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My concerns about climate change make it hard for me to have fun with my family or friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have problems balancing my concerns about sustainability with the needs of my family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My concerns about climate change interfere with my ability to get work or school assignments done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My concerns about climate change undermine my ability to work to my potential.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends say I think about climate change too much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Start of Block: Sustainable fashion behaviour

Q9 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When buying clothes I try to purchase eco-friendly products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think it is important whether a garment was produced using eco-friendly practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When buying clothes I consider whether labour rights were guaranteed during production.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When buying clothes it's important to me whether the production process of a garment contributes to promoting fair gender culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to avoid purchasing garments that violate intellectual property rights by checking for imitations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When buying clothes I stress the importance of whether production processes involved the unnecessary killing of animals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When buying clothes I consider whether a garment was produced by an ethical company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I prefer to purchase a garment with “green”, “eco” or “fair trade” label, when comparing it to one without such a label.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When buying clothes I prioritize buying from companies that make an effort to produce their garments in an eco-friendly or pro-social way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually purchase a garment after reviewing information about social issues for example labor, animal or intellectual property rights.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually purchase a garment after reviewing eco-friendly aspects for example organic cotton, eco-friendly dyeing methods or upcycling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When buying clothes I avoid impulse buying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that purchasing new garments should be kept to a minimum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I buy garments only after assessing their durability, ensuring they will last for a long time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I refrain from purchasing garments that do not complement the ones I already own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I often use clothing rental services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often purchase secondhand or a vintage garments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When buying clothes I firstly consider getting them second hand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I maintain garments carefully, following the instructions provided on the laundry label.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When disposing of clothes, I make sure to separate items for recycling and disposal accordingly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When disposing of clothes I either donate them or pass them on to acquaintances in need.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often rearrange my closet to know what garments I own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to create new combinations of my clothes when deciding what to wear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wear garments even if they are slightly worn, whether or not they have been repaired.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I store and care for garments with consideration for the materials they are made of to prevent damage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 Sustainable clothing also referred to as sustainable fashion or green apparel is the concept of creating fashion items in a way that reduces the environmental impact and promotes social responsibility throughout the entire production process. Please indicate to what extent do you agree with following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I educate myself about sustainable clothing consumption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I joined an online community or an offline group meeting regarding sustainable clothing consumption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often get new information about sustainable clothing consumption through social media networks or online portal searches.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I actively encourage my family or acquaintances to engage in sustainable clothing consumption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I share my knowledge about sustainable clothing and brands with people around me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I participate in campaigns for sustainable clothing consumption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Start of Block: Hedonic motivations

Q15 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Buying sustainable clothing is fun.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is thrilling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is delightful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is exciting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Start of Block: Utilitarian motivations

Q16 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Buying sustainable clothing is effective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is necessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is practical.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is functional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying sustainable clothing is helpful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Start of Block: Collectivism

Q17 Please indicate to what extent do you agree with following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Individuals should stick with the group even in difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group welfare is more important than individual rewards.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group success is more important than individual success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuals should only pursue their goals after considering the welfare of the group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuals should sacrifice self-interest for the group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group loyalty should be encouraged even if individual goals suffer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Start of Block: Raffle

Q18 If you want to take have a chance to win Zalando online gift card please follow the link on the next page and use password: CLIMATE to enter your details.

End of Block: Raffle

Table A.3 Changes to Sustainable Consumption of Clothing Products scale

Original scale items	Transformed scale items
MCB1. I put emphasis on eco-friendly in clothing consumption.	When buying clothes I try to purchase eco-friendly products.
MCB2. I think it is important whether a garment was made in an eco-friendly manner.	I think it is important whether a garment was made in an eco-friendly manner.
MCB3. I greatly consider on whether rights of a laborer were guaranteed in the production when buying a garment.	When buying clothes I consider whether labour rights were guaranteed during production.
MCB4. I put stress on whether a garment was produced by a moral company when buying.	When buying clothes I consider whether a garment was produced by an ethical company.

MCB5. I emphasize on whether production was involved in unnecessary animal killing when making purchase.	When buying clothes I stress the importance of whether production processes involved the unnecessary killing of animals.
MCB6. I try not to buy a garment violated the intellectual property right(check if it is an imitation).	I try to avoid purchasing garments that violate intellectual property rights by checking for imitations.
MCB7. It is important for me to see whether a garment is helpful for establishing the just gender culture when buying.	When buying clothes it's important to me whether the production process of a garment contributes to promoting fair gender culture.
SPB1. I prefer to purchase a garment with "Green" or "fair trade" mark.	I prefer to purchase a garment with "green", "eco" or "fair trade" label, when comparing it to one without such a label.
SPB2. I usually purchase a garment after checking information related to eco-friendly including organic cotton, eco-friendly dyeing and upcycling.	I usually purchase a garment after reviewing eco-friendly aspects for example organic cotton, eco-friendly dyeing methods or upcycling.
SPB3. I purchase a garment after checking information about social issues including labor, animal and intellectual property rights.	I usually purchase a garment after reviewing information about social issues for example labor, animal or intellectual property rights.
SPB4. I give priority to a company making efforts for eco-friendly/pro-social production and distribution of garments when buying.	When buying clothes I prioritize buying from companies that make an effort to produce their garments in an eco-friendly or pro-social way
SUDB1. I keep a garment well according to instructions on a laundry label.	I maintain garments carefully, following the instructions provided on the laundry label.
SUDB2. I store and keep a garment considering its kind to prevent damage.	I store and care for garments with consideration for the materials they are made of to prevent damage.
SUDB3. I wear a garment a little ragged with or without repair.	I wear garments even if they are slightly worn, whether or not they have been repaired.
SUDB4. I try to wear clothes with a new combination.	I try to create new combinations of my clothes when deciding what to wear.
SUDB5. I often rearrange my closet to know what garments I have.	I often rearrange my closet to know what garments I own.
SUDB6. I donate clothes or give them to an acquaintance who needs it when disposing of clothes.	When disposing of clothes I either donate them or pass them on to acquaintances in need.
SUDB7. I separate items for recycling and disposal when disposing of clothes.	When disposing of clothes, I make sure to separate items for recycling and disposal accordingly.
AB1. I get education or participate in a campaign for sustainable clothing consumption.	I educate myself about sustainable clothing consumption.
	I participate in campaigns for sustainable clothing consumption.
AB2. I joined an online community or an offline group meeting for sustainable clothing consumption.	I joined an online community or an offline group meeting regarding sustainable clothing consumption.
AB3. I often get new information about sustainable clothing consumption through SNS or portal search.	I often get new information about sustainable clothing consumption through social media networks or online portal searches.
AB4. I actively encourage my family or acquaintances to practice	I actively encourage my family or acquaintances to engage in sustainable clothing consumption.

the sustainable clothing consumption.	
AB5. I share my knowledge about sustainable clothing and brand with people around me.	I share my knowledge about sustainable clothing and brands with people around me.
BL1. I avoid impulse buying when purchasing a garment.	When buying clothes I avoid impulse buying
BL2. I think that purchase of a new garment has to be done to a minimum.	I think that purchasing new garments should be kept to a minimum.
BL3. I purchase a garment after checking its durability to use for a long time.	I buy garments only after assessing their durability, ensuring they will last for a long time.
BL4. I do not purchase a garment which does not match the one I have.	I refrain from purchasing garments that do not complement the ones I already own.
SVR1. I consider a secondhand clothing firstly when buying a garment.	When buying clothes I firstly consider getting them second hand.
SVR2. I often purchase an old or a vintage garment.	I often purchase secondhand or a vintage garments.
SVR3. I often use clothing rental services.	I often use clothing rental services.

Appendix B

Table B.1 Results of the AIC and BIC

<i>Model</i>	<i>AIC</i>	<i>BIC</i>
<i>Model 1</i>	442.6006	463.0436
<i>Model 2</i>	418.2829	445.5403

Table B.2 Model 3: Regression results for the hypothesized relationships excluding outliers

	<i>Dependent variable:</i>
	Sustainable Fashion Behaviour
Climate Change Anxiety	0.602* (0.298)
Hedonic Motivation	0.274*** (0.064)
Utilitarian motivation	0.421*** (0.071)
Collectivism	0.285*** (0.058)
Gender	0.382*** (0.095)
Climate Change Anxiety x Collectivism	-0.115 (0.089)
Constant	0.811***

	(0.287)
Observations	218
R ²	0.500
Adjusted R ²	0.486
Residual Std. Error	0.587
F Statistic	35.212***

Note: Statistical significance is reported in the following way: *p<0.1; **p<0.05; ***p<0.01

Table B.3 Results of the Breusch-Pagan test

<i>Model</i>	<i>BP statistic</i>	<i>P-value</i>
<i>Model with outliers</i>	16.96	0.009
<i>Model without outliers</i>	7.62	0.267

Figure B.1 Histograms of features used in the models.

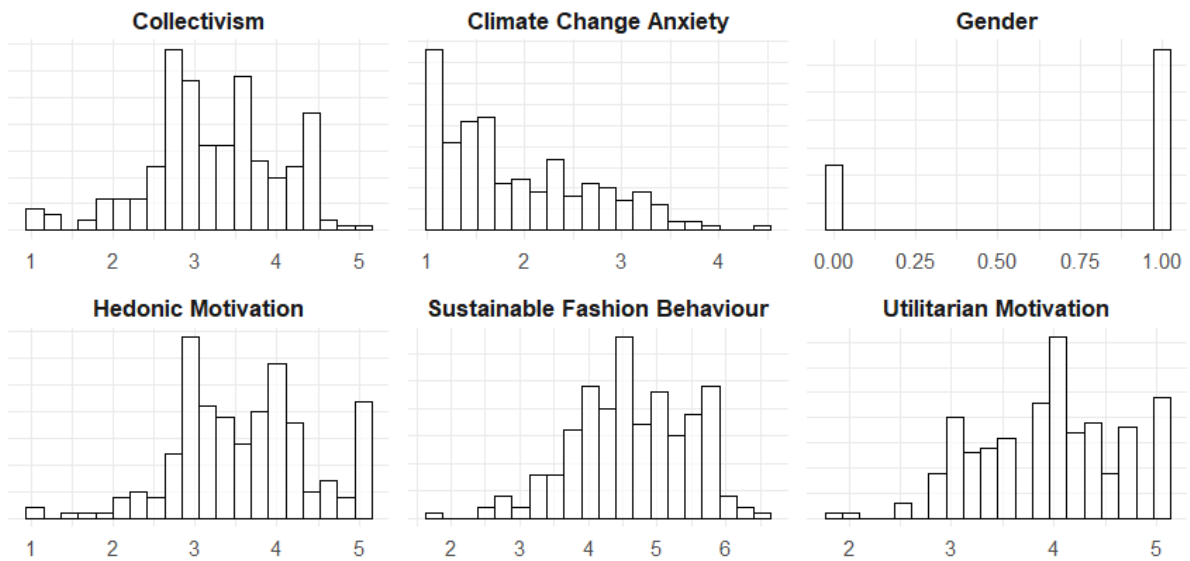


Figure B.2 Histogram of residuals for Model 2.

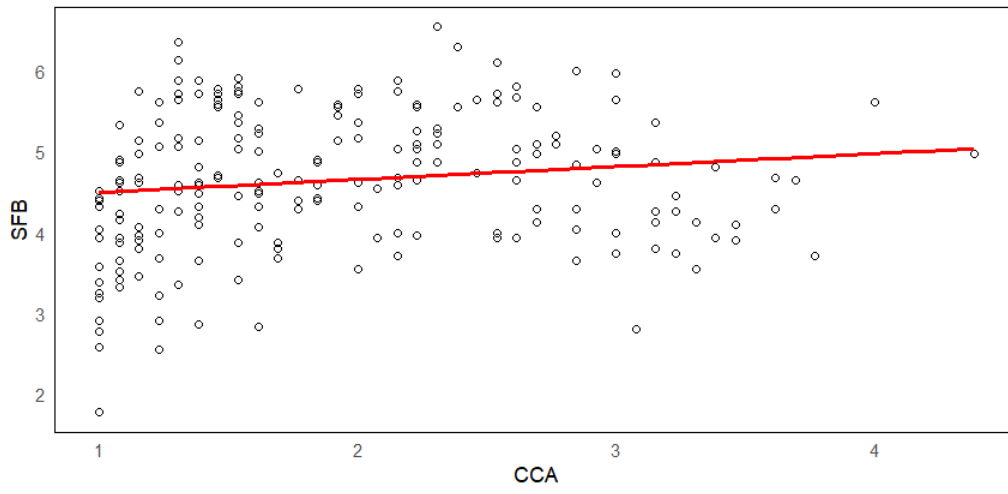


Figure B.3 Histogram of residuals for Model 2.

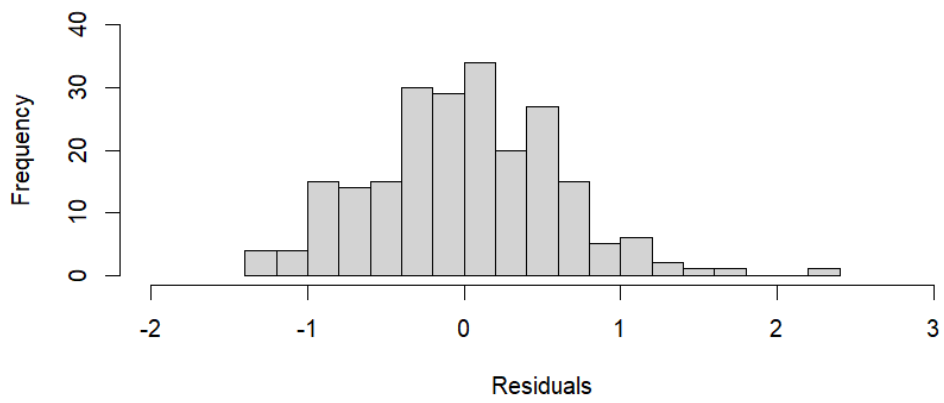


Figure B.4 Histogram of residuals for Model 2. excluding outliers

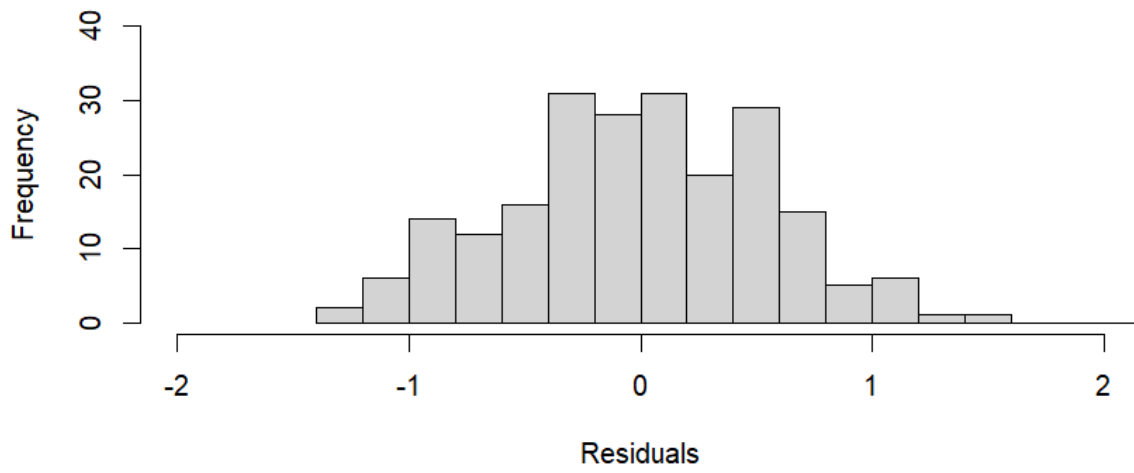


Figure B.5 Q-Q plot for Model 2.

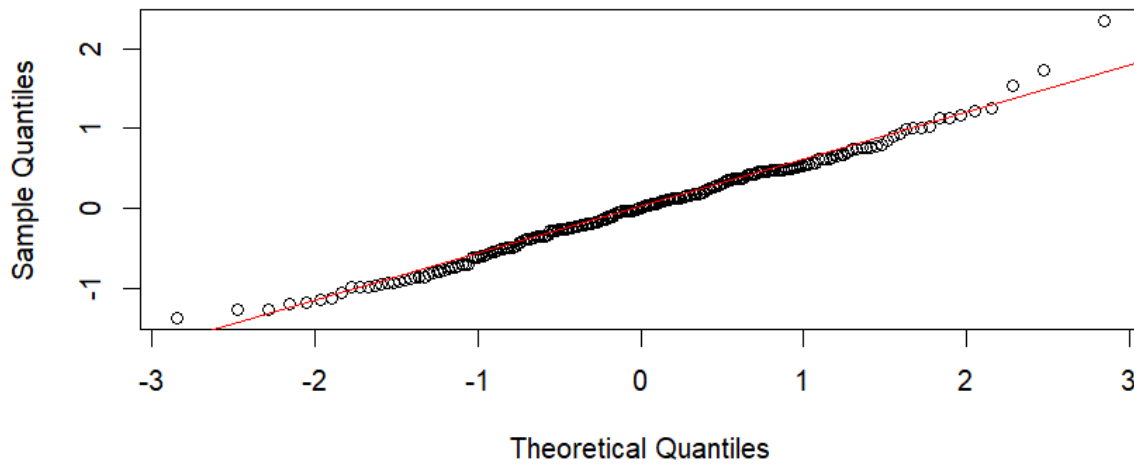


Figure B.6 Q-Q plot for Model 2. excluding outliers

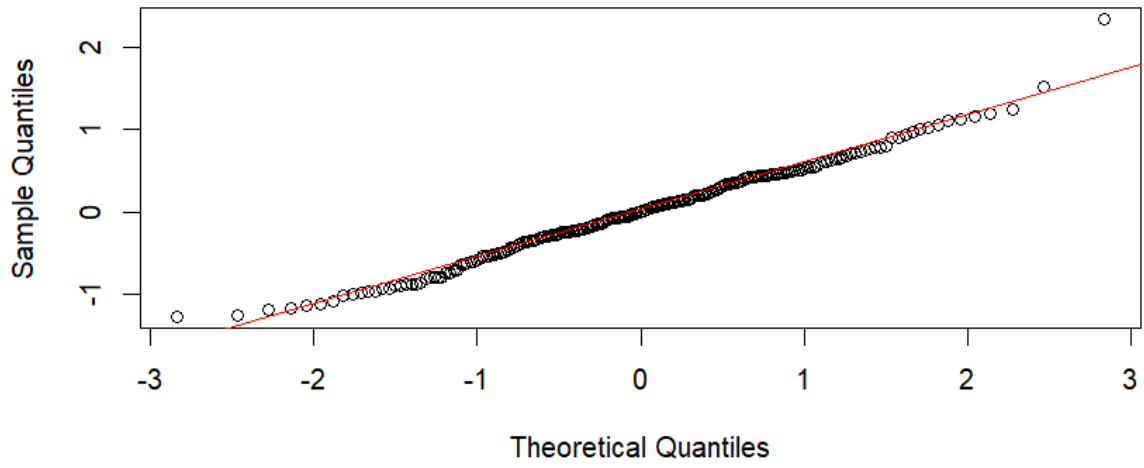


Figure B.7 Scatter plot of residuals

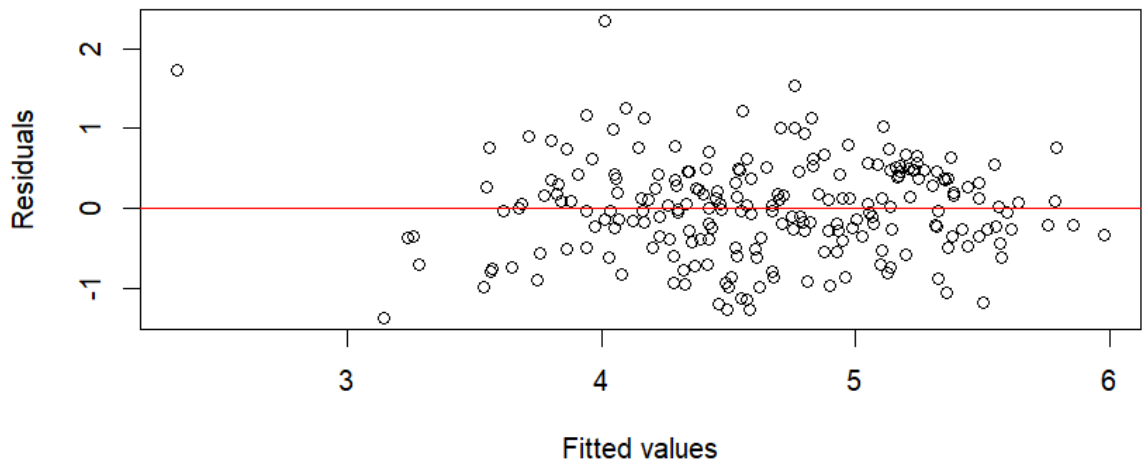


Figure B.8 Scatter plot of residuals excluding outliers

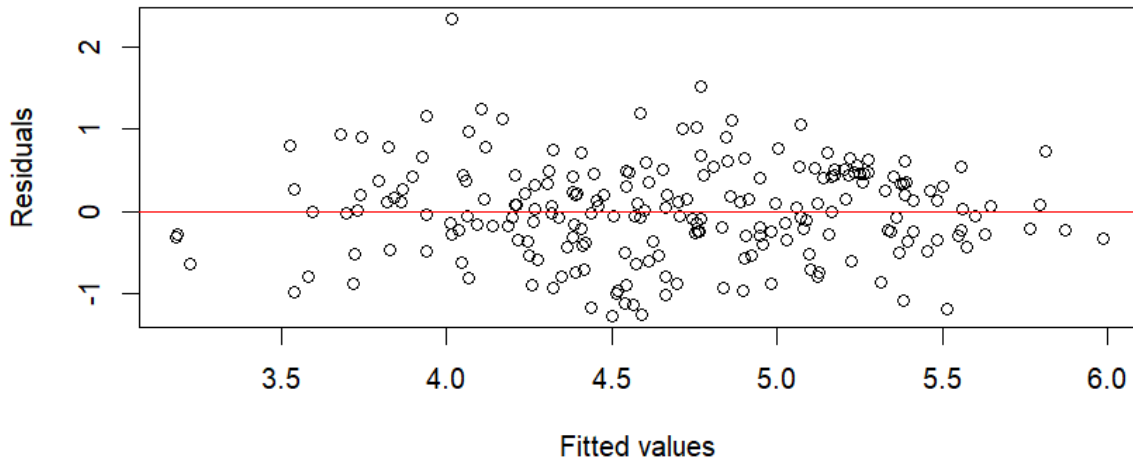


Table B.4 Model 3: Regression results including robust standard errors

	<i>Dependent variable:</i>
Climate Change Anxiety	0.524* (0.309)
Hedonic Motivation	0.268*** (0.079)
Utilitarian motivation	0.431*** (0.074)
Collectivism	0.267*** (0.060)
Gender	0.398*** (0.100)
Climate Change Anxiety x Collectivism	-0.095 (0.091)
Constant	0.826*** (0.315)
Observations	223
R ²	0.507
Adjusted R ²	0.493
Residual Std. Error	0.606
F Statistic	37.048***

Note: Statistical significance is reported in the following way: * p<0.1; ** p<0.05; *** p<0.01

Table B.5 Results of GVIF test.

<i>Variable</i>	<i>GVIF statistic</i>
Climate Change Anxiety (CCA)	1.24
Hedonic Motivation (HM)	1.48
Utilitarian Motivation (UM)	1.50
Collectivism (C)	1.24
Gender (G)	1.10